FAO/GLOBAL ENVIRONMENT FACILITY

PROJECT DOCUMENT

PROJECT TITLE: Implementing the Socio-Ecosystem Approach to Conserve and Sustainable Use Biodiversity in the Caribbean Region of Colombia **PROJECT SYMBOL: GCP/COL/041/GFF**	
Recipient Country/ies: COLOMBIA	
Resource Partner: GEFTF	
FAO project ID: 621536	**GEF/LDCF/SCCF Project ID: 5288**
Executing Partner(s): MINISTRY OF ENVIRONMENT AND SUSTAINABLE DEVELOPMENT (MADS)	
Expected EOD (starting date): FEBRUARY 2015	
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Contribution to FAO's Strategic Framework[1]	**a. Strategic objective/Organizational Result:** Strategic objective 2 (SO2): Organizational Results 1 (OO1) and 2 (OO2) **b. Regional Result/Priority Area:** Climate change and environmental sustainability[2] **c. Country Programming Framework Outcome:** Priority area II Environment, Sustainability and Climate change results i and ii
GEF Focal Area/LDCF/SCCF: BIODIVERSITY	
GEF/LDCF/SCCF Strategic Objectives: BD-1, BD-2,	
Environmental Impact Assessment Category (insert √): A B C	

Financing Plan: GEF/LDCF/SCCF allocation:	USD 6,052,114
Co-financing: MADS	USD 773,058
PNN (CTD)	USD 3,545,847
PNN (PTD)	USD 369,141
SIRAP	USD 64,134
MADR	USD 740,010
Departmental Gov. of Antioquia	USD 2,073,642
Departmental Government of Bolivar	USD 8,643,783
Departmental Government of Chocó	USD 452,977
Departmental Government of Cordoba	USD10,218,122
Departmental Government of Sucre	USD11,430,960

[1] For projects operated by country offices, it is necessary to link projects in FPMIS at OR level. For all other projects, linkage at product/service level is necessary

[2] Based on *Areas of Priority Actions for Latin America and the Caribbean for the Following Biennium (2014–2015), taking into account the summary of recommendations of regional technical commissions*, 32va FAO Regional Conference for Latin America and the Caribbean. Buenos Aires, Argentina, 2012.
Source: http://www.fao.org/docrep/meeting/024/md240e.pdf

CORPOURABÁ	USD 3,897,384
CARDIQUE	USD 2,375,432
CODECHOCÓ	USD 760,000
CVS	USD 202,070
CARSUCRE	USD 5,141,422
FAO	USD 380,000
Subtotal Co-financing:	USD 51,067,982
Total Budget:	**USD 57,120,096**

EXECUTIVE SUMMARY

Colombia ranks among the 17 most biodiverse countries in the world, hosting around 15% of the endemic species of the planet. The Caribbean Region of Colombia (CRC) is one of the six geographic regions of Colombia, it has an area of 134,509 km2 and is inhabited by 23.1% of Colombia's total population, equivalent to approximately 9.7 million people, of which 59.8% have unmet basic needs. The CRC is also composed by coastal and insular areas, which cover 13% of the national continental territory and 63% of the national maritime territory. The region has access to the Caribbean basin and articulates with the Pacific Ocean through the Panama Canal.

The main threats to biodiversity in the CRC consist of: 1) Anthropogenic and natural pressures within protected areas and their buffer zones; 2) fragmentation between protected areas and buffer zones in the Western area of the region. The barriers that in the current scenario impede obtaining environmental benefits: 1) weaknesses of policies and institutions in addressing the fragmentation of strategic ecosystems and degradation of natural resources both within protected areas and in zones surrounding them, and their consequences in the CRC; 2) gaps in conservation of representative ecosystems[3] and ineffective management of existing terrestrial and marine protected areas, due to isolation and high pressure on natural resources; and 3) the model of economic development in the region that promotes economic activities with high environmental impact that endanger the provision of ecosystem services provided by terrestrial and marine and coastal biodiversity.

In order to address these barriers, the project aims at reducing the degradation and fragmentation of strategic ecosystems in the CRC by implementing a strategy of socio-ecosystem connectivities (SEC) that include inter-institutional articulation, territorial planning, social participation with an intercultural vision, effective management of existing protected areas (PAs), creation of new PAs and the promotion of sustainable production models.

The project´s **Global Environmental Objective** is: To reduce the degradation and fragmentation of strategic ecosystems in the Caribbean Region of Colombia. The **Project Objective** is to implement a strategy of socio-ecosystem connectivities that include inter-institutional articulation, territorial planning, social participation with an intercultural vision, effective management of existing protected areas (PAs), creation of new PAs and the promotion of sustainable production models.

[3] The great environmental richness of the Caribbean region is given by the presence of Ecosystems such as: Mangroves (halohelobiomas), sweet and salty coastal lagoons, marshes, sub xerophytic forest, coral reefs, seagrass meadows, flooded forests and swamps (helobiomas), savannas (peinobiomas), dry lowland forest (or tropical alter hydric sub xerophytic zonobioma), desert formations (xerophytic zonobioma), wet lowland forests (tropical wet zonobioma), forests associated with mountain formation (Sub-Andean, Andean and high Andean orobiomas) and paramos (paramo orobioma)

The project will be implemented through the following components:

1. Strengthening institutional coordination and mainstreaming the socio-ecosystem approach in land-use planning, to reduce the degradation and fragmentation of strategic ecosystems in the Caribbean Region of Colombia.
2. Creating new protected areas (PAs) and improving the effectiveness of existing PAs in the CRC.
3. Alternative models of sustainable production and strategies to ensure the supply of local and global ecosystem services.
4. Project progress monitoring and evaluation and information divulgation.

Expected outcomes include the following: i) 1,023,519 ha of terrestrial ecosystems and 181,918 ha of marine ecosystems have contributed to increase the area of socio-ecosystem connectivity in the Western part of the RCC by direct effects of the project; ii) additional 1,694,563 ha of land/seascape have effectively contributed to the socio-ecosystem connectivity as indirect effect (replication) of the project; iii) one (1) monitoring program of flagship species of biodiversity for each socio-ecosystem corridor, inter-institutional and with community participation, designed and implemented (Baseline: There are no inter-institutional programs for monitoring species associated with socio-ecosystem corridors); iv) 70% of the targeted population has improved its perception of biodiversity and socio-ecosystem connectivities, measured through surveys that include gender disaggregation (Baseline: to be defined at inception /Project Year 1); v) 50% of key stakeholders (producers, community leaders, entrepreneurs, policy-makers, indigenous and Afro-descendant leaders, among others) have improved their knowledge, attitudes and practices for the management and conservation of biodiversity, measured by surveys that include gender disaggregation (Baseline: to be defined at inception /Project Year 1); vi) 725,418 ha of existing and new Protected Areas (PAs) have developed management actions improving connectivity in forest, swamp and coastal and marine ecosystems (at least 10,000 hectares of new PAs and 715,418 ha of existing PAs) (Baseline: 72,000 ha PAs); vii) 3,000 hectares of PAs used by indigenous and Afro-descendants under agreements of resources use and management incorporating the Socio-Ecosystem Connectivity (SEC) approach (Baseline: 3,000 hectares under use and management agreements); viii) 2,500 ha in buffer zones under sustainable production plans incorporating SEC approach (Baseline: 2,500 hectares under plans for sustainable production); ix) 2,429 ha of mosaics of conservation and sustainable use of natural resources have contributed effectively to the socio-ecosystem connectivities in the CRC (Baseline: Two existing mosaics: *Morrosquillo* Gulf with 167,826 ha and The Peak with 1122.78 ha).

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GLOSSARY OF ACRONYMS

ASOCARS	Association of Regional Autonomous and Sustainable Development Corporations
AWP/B	Annual Work Plan and Budget
BH	Budget Holder
CAR	Regional Autonomous Corporation
CARDIQUE	Regional Autonomous Corporation of Canal del Dique
CARSUCRE	Regional Autonomous Corporation of Sucre
CBD	The UN Convention on Biological Diversity
CEO	Chief Executing Officer (GEF)
CIPAV	Centre for Research on Sustainable Farming Systems
CEUMUP	Coastal Environmental Unit Management and Use Plans
CODECHOCO	Regional Autonomous Corporation for the Sustainable Development of Chocó
CORPOICA	Colombian Corporation of Agricultural Research
CORPOURABA	Corporation for the Sustainable Development of Urabá
CRC	Caribbean Region of Colombia
CSNR	Civil Society Nature Reserve
CVS	Regional Autonomous Corporation of Valles del Sinú y San Jorge
EISC	Environmental Information System of Colombia
NEP	National Executing Partner
FAO	Food and Agriculture Organization of the United Nations
FIC	Forest Incentive Certificate
NFC	Nature Foundation of Colombia
FPMIS	Field Project Management Information System (FAO)
GAP/GLP	Good Agricultural Practices / Good Livestock Practices
GEBs	Global Environmental Benefits
GEF	Global Environment Facility
GEFSEC	GEF Secretariat
GIS	Geographic Information System
GoC	Government of Colombia
GSR	General System of Royalties
ICA	Colombian Agricultural Institute
INCODER	Colombian Institute for Rural Development
IUCN	International Union for Conservation of Nature
LRU	Land Restitution Unit
LTO	Lead Technical Officer
LTU	Lead Technical Unit
LUP	Land Use Plans
LUS	Land Use Scheme
MADR	Ministry of Agriculture and Rural Development
MADS	Ministry of Environment and Sustainable Development
M&E	Monitoring and Evaluation
NCESP	National Council for Economic and Social Policy
NNP	National Natural Park
NSPES	National Strategy of Payment for Ecosystem Services
NPIMBES	National Policy for Integrated Management of Biodiversity and Related Ecosystem Services
ONUREDD	United Nations Programme on Reducing Emissions from Deforestation and Forest Degradation
PA	Protected Area
PIF	Project Identification Form (GEF)
PIR	Project Implementation Review
PNN	National Natural Parks of Colombia
PPG	Project Preparation Grant (GEF)
PPR	Project Progress Report
PMC	Project Management Committee

PRODOC	Project Document
PSC	Project Steering Committee
PT	Project Team
PY	Project Year
RLC	FAO Regional Office for Latin America and the Caribbean
REMP	Regional Environmental Management Plans
SEC	Socio-Ecosystem Connectivities
SFF	Sanctuary of Flora and Fauna (Colombia)
SFM	Sustainable Forest Management
SIDAP	Departmental System of Protected Areas
SILAP	Departmental System of Protected Areas
SINA	National Environmental System
SINAP	National System of Protected Areas
SIRAP Caribbean	Caribbean Regional System of Protected Areas
STAP	Scientific and Technical Advisory Panel
TCI	Investment Centre Division (FAO)
TOR	Terms of Reference
UBN	Unmet Basic Needs
UNDP	United Nations Development Program
UNFCCC	United Nations Framework Convention on Climate Change
UPRA	Rural Agricultural Planning Unit
USD	United States Dollar

SECTION 1 – RELEVANCE

1.1 GENERAL CONTEXT

a) General development context related to the project

Colombia has a surface area of 2,070,408 km^2 and a total population of 43 million inhabitants. The country is politically and administratively divided into 32 departments, 1096 municipalities, 5 districts and 20 *corregimientos departamentales* (nucleus of population which do not reach the category of municipality and do not belong to any of the existing). It adjoins with five countries in its territorial borders and with 11 countries in its maritime borders and is the only South American country with coastlines on both the Pacific Ocean and the Atlantic Ocean. The country ranks among the 17 most biodiverse countries in the world, hosting around 15% of the endemic species of the planet. It has 18 ecoregions and 65 types of ecosystems. Protected Areas (PA) and indigenous territories represent 41% of the nation´s total territory, containing some of the highest levels of biodiversity in the world.

The Caribbean is one of the six geographic regions of Colombia. The Caribbean Region of Colombia (CRC) has an area of 134,509 km2 and is inhabited by 23.1% of Colombia's total population, equivalent to approximately 9.7 million people, of which 59.8% have unmet basic needs. The CRC is also composed by coastal and insular areas, which cover 13% of the national continental territory and 63% of the national maritime territory. The region has access to the Caribbean basin and articulates with the Pacific Ocean through the Panama Canal.

The CRC hosts 24 major ecosystems (or biomes), including: mangroves (halohelobiomas), sweet and salty coastal lagoons, marshes, sub-xerophytic forests, coral reefs, seagrass meadows, flooded forests and swamps (helobiomas), savannas (peinobiomas), lowland dry forests (zonobioma-alternohígrico o sub-tropical xerophytic), desert formations (zonobioma xerófila), lowland rain forests (tropical wet zonobioma), mountain–associated forest formations (sub-Andean, Andean, high-Andean orobiomas) and *paramos* (paramo orobioma). The rich natural environment of the CRC is organized in 3 Biosphere Reserves, 1 Ramsar Site, 5 Forest Reserves, 13 Areas of the Natural National Parks system, 18 protected areas (PAs) comprising approximately 1,378,000 hectares, municipal conservation areas and Civil Society Nature Reserves (CSNRs). All these areas provide ecosystem services such as water supply, nutrient flows to marine ecosystems, coastal accretion and littoral protection from coastal erosion, carbon sequestration, oxygen production, water and climate regulation, wildlife refuge, food source for migratory birds, fish production and sediment trap, among others.

The natural resources of the CRC have been heavily exploited since pre-colonial times, due to its topographical characteristics. In the Western zone of the CRC, which is the project intervention area, the development model has particularly focused on large-scale agricultural production (in fact the region is the area of greatest agriculture potential of the country with 4.7 million hectares, equal to the 46% of the national total). The main agricultural production systems in the western area of the CRC include: 1) Traditional Agriculture, represented by crops grown by small-scale farmers, mainly yucca, *ñame*, rice and plantain, with production for own consumption and commercialization of

surpluses; 2) Mechanized agriculture for permanent and transitory banana and plantain crops, carried out by large-scale producers with use of technology for crop management; 3) Mechanized agriculture for transitory crops developed by medium-scale and large-scale producers with corn, rice, *yuca* and cotton crops; 4) Extensive cattle ranching on natural and improved pastures, occupying the largest extension in the entire area; it is developed by both small-scale and large-scale producers. Small farmers work with dual-purpose cattle while medium and large-scale producers work with beef cattle; and 5) Extractive artisanal maritime fishing conducted by local fishermen for subsistence. Additionally, the construction of road works and the concession of mining and energy exploitations are also relevant in the region. The exploitation and utilization of natural resources generated economic growth, contributing to social welfare, but also caused considerable environmental degradation.

From a socio-economic perspective, poverty rates in the CRC are higher than the national average: 59.8% of the population have unmet basic needs. Female-led households in the region generally have higher poverty rates. The percentages of female-led households in the project intervention are are 27% in Sucre, 32% in Choco, in Cordoba 24%, in 28% Bolivar, 32% and Antioquia.

The Government of Colombia recognizes the existence of four (4) ethnic groups in Colombia: Indigenous (the following groups are settled in the CRC: *Embera*, *Embera Chamí*, *Embera Katío*, *Tule* and *Senu*), Afro-colombian, *Raizales*[4] and Roma people. Table 1 details the distribution of ethnic groups in the project intervention area.

Table 1. **Distribution of ethnic groups by department – CRC** (in % of total population)

Departament	Indigenous	Afro-colombian	*Raizales*	Roma
Antioquia	0.5	10.9	0.0	0.0
Bolivar	0.1	27.6	0.1	0.1
Choco	12.7	82.1	0.0	0.0
Cordoba	10.4	13.2	0.0	0.0
Sucre	11.0	16.1	0.0	0.0

Source: Department of Statistics of Colombia (DANE), National Census 2005 (last update)

b) Global Environmental Benefits (GEB) status, threats and causes

On a global scale the Caribbean is considered within the 25 terrestrial ecoregions of the planet that possess an exceptional biological richness whose integrity is highly endangered, which places it among the regions that deserve priority attention of the global community. The main threats to biodiversity consist of: 1) Anthropogenic and natural pressures within protected areas and their buffer zones; 2) fragmentation between protected areas and buffer zones in the Western areas of the CRC.

1) Anthropogenic and natural pressures within protected areas and their buffer zones: the degradation of biodiversity in terrestrial and marine areas in the Western zone of the CRC

[4] Inhabitants of the Archipelao of San Andrés, Providencia and Santa Catalina.

In the Western zone of the CRC the development has particularly focused on large-scale livestock and agricultural (banana, rice and cotton monoculture) production, the construction of road works, and the concession of mining and energy exploitations, resulting in the conversion and fragmentation of ecosystems (forests and wetlands), carrying negative externalities as uncontrolled deforestation and the depredation of plant and animal species. The original habitat has been transformed into a vast intervened matrix made of homogeneous pastures and monocultures, mainly in sedimentary plains, hill and mountain landscapes, covering most of the territory. Ecosystems in original condition have been changed almost entirely (over 90%) except in some preserved and isolated areas that are in constant danger of intervention[5].

The exploitation and utilization of natural resources generated economic growth, contributing to social welfare, but it was also accompanied by a noticeable environmental degradation. As evidence of this, 85% of the production systems of the region are located in areas vulnerable to desertification[6]. The soil has lost its original cover and compaction, while erosion is rapidly moving towards desertification[7]. Although national legislation prohibits the development of mining, forestry and agroforestry systems with commercial goals in ecologically important areas, often the delimitation of these areas and the zoning and management of national forest reserves have not been respected within the region. The Western zone of the CRC has been particularly affected by forest resources degradation due to the unsustainable practices of the timber industry. It is important to highlight the agricultural, livestock, fishing and illegal logging pressures on Katíos Natural National Park, a World Heritage Site, which place it on the list of endangered parks. Similar pressures are experimented by NNP Paramillo, very important for constituting a hinge that allows communication among strategically important areas and ecosystem such as the Andes, the Caribbean coastal area, the Chocó biogeographic region and *Cauca Nechí*. These PAs have a high ecological significance because of their strategic location, which makes them as a hinge area between the Caribbean, Pacific, Andean and *Cauca Nechí* Regions and the Mesoamerican Corridor. Both PAs are crucial to the strategy of conservation of large mammals such as the jaguar, the tapir, the American Puma, among others.

In 2009, the SIRAP Caribbean identified as significant threats to biodiversity in the region: 1) the population density in the riparian strips, 2) the indicator of economic activity, 3), accessibility (through roads and rivers), 4) the percentage of household using woods as rough material for walls in in homes, 5) illicit crops, 6) municipal areas with predominance of grasses, 7) oil production and areas in the process of technical assessments for the development of oil industry. Based on the identification of significant threats, SIRAP Caribbean defined the Index of State Conservation Targets (ISCT). In the CRC, SIRAP Caribbean found that 88.89% of the eco-regions are in critical condition. Table 1 below shows the probability of critical condition for each eco-region.

[5] Wingarden-Fandiño-Lozano, 2006
[6] MADS, 2011
[7] Conservation International, 2008.

Table 2. Index status, threats and conservation goals by eco-region, Western zone of the CRC

Eco-region	Conservation target			
	State	Threat	Goal	
	Status Index (ISCT)	Probability (Threat)	Goal	Goal adjusted
Helobioma Atrato floodplain forest	7,07	0,04	6,12	10
Halohelobioma Sinú and Urabá marsh vegetation.	30,2	0,91	50,82	50,82
Zonobioma humid tropical of Sinú. Forest in the mountain, Urabá	34,16	0,12	26,71	26,71
Halohelobioma Caribbean. Coastal Hidrofitia.	44,83	0	29,76	29,76
Pedobioma Sinú. Grasslands in hills.	47,89	0	31,79	31,79
Halohelobioma Sinú and Urabá Mangrove forest.	49,21	0,68	55,72	55,72
Zonobioma alternohígrico and/or tropical subxerofitico Sinú. Forest and shrubland in hill and piedmont zones	55,76	0,94	68,74	68,74
Helobioma of Sinú. Marsh vegetation.	68,46	0,99	68,78	78,96
Zonobioma humid tropical of Sinú and Urabá. Forest in hills and piedmont zones.	76,7	0,54	69,05	69,05

Note: In red. Conservation targets in critical condition. Source: SIRAP Caribbean – TNC, 2010.

The marine and coastal areas in the Western and island zones of the CRC have also been severely deteriorated and are threatened by 4 main factors: 1) overexploitation, 2) sedimentation[8], 3) contamination and nutrient loading, and 4) climate change. The sea level in this area of the Caribbean Sea has an average increase of 3.5 mm/year[9]. This increase of magnitude has resulted in generalized setback of the Colombian coastline that is already causing erosion of beaches, cliffs and terraces, and loss of ecosystems. Increased sea temperatures, salinity variation and marine PH changes are also affecting the marine and coastal biodiversity in the CRC.

[8] The Magdalena River has the greatest amount of suspended sediment being transported to the Caribbean Sea (144 million tons per year). The discharges of this river heavily influence on nutrient fluxes, biogeochemical cycles, morphodynamic stability and dynamics of the coastal ecosystem. Numerous studies have highlighted the role of fluvial discharges over the morphodynamics of large areas in the Caribbean coast of Colombia (from the *Cienaga Grande de Santa Marta* to the peninsula of Baru) and have related the variability of fluvial discharges with the adverse effects over highly sensitive ecosystems such as coral reefs and sea grasses (*Universidad del Norte*, 2012).

[9] Measured by the tide gauge station of Cartagena, and reported in the Second National Communication on Climate Change (SNC), 2010.

Unsustainable practices and weak planning put pressure on and have affected the integrity of highly vulnerable ecosystems[10] (coral reefs, seagrass, mangroves herbs, shrubs and coastal lagoons) and their species, altering food chains and favoring the establishment of invasive alien species. Such is the case of the "*lionfish"*, an Indo-pacific species that currently abounds in the Caribbean Sea in absence of its potential predator, the *Mero*.

Although key areas have been prioritized by their representativeness or risk situation, the lack of concrete actions is threatening biodiversity and ecosystems. The five departments in the western zone of the CRC (continental area) show alarming signs of: i) lack of concrete conservation actions in 85% (620,801 ha) of the prioritized areas by SIRAP (e.g.: in the departments Antioquia and Chocó)[11]; ii) in the department of Cordoba, conservation and sustainable management actions have been applied to only 15% (104,494 ha.) of the total priority area[12]; iii) in the department of Sucre, concrete conservation actions are missing in 97% (311,974 ha) of the prioritized areas[13]; and iv) in the department of Bolivar, concrete conservation and management actions are missing in 99.5% (1,211,690 ha) of the prioritized areas of the department[14].

2) Fragmentation between protected areas and buffer zones in the Western area of the CRC

Protected areas located in the Western zone of the CRC are in a state of isolation, caused by high rates of transformation[15] of strategic ecosystems, the increasing deterioration of the ecological structure and the fragmentation of habitats, which threatens the provision of ecosystem services in large areas of national and global environmental significance (wetlands, mangroves, and coral reefs, among others). This deterioration is due to growing pressures on national and regional PAs and protection zones, as well as the absence of integral strategies for conservation and sustainable production.

The majority of productive lands are used for unsustainable and extensive cattle ranching, impairing the agrological capacity of the CRC and damaging areas that

[10] National Climate Change Strategy for the National Park System of Colombia, UAESPNN, Technical Branch, 2011 – pg.33

[11] In these two departments, SIRAP identified 26 priority conservation sites (727,375 ha), that include 2 nationally declared PAs: the NNP Katíos and NNP Paramillo (total area: 106,574 ha). The Corporation for Sustainable Development of Urabá (Corpourabá) declared 4 regional PAs: the Natural Regional Park *System of Mangroves in Atrato river delta*, the Integrated Management District (IMD) *Ensenada del Río Negro*, the IMD *Alto de Indsor* and the Wetlands Protection and Forest Reserve Suriqui.

[12] The department of Córdoba has 19 priority sites for conservation (700,553 ha), comprising 596,059 hectares that have been included in the NNP Paramillo, and in 3 PAs declared by the Regional Autonomous Corporation of the valleys of Sinú and San Jorge (IDM Cispatá, the lagoon complex *Bajo Sinú* and the *Ayapel* Wetlands Complex).

[13] The department of Sucre has 6.4% of the priority areas located in the CRC, including 13 identified sites (321,403 hectares). Of them, 9,433 hectares are included in the Sanctuary of Flora and Fauna (SFF) Corchal Mono Hernández (national PA) and in two regional PAs declared by the Autonomous Corporation of Sucre (Carsucre): IMD *Cienaga de la Caimanera*, and the Regional Park of *Boca Guacamaya*. In addition, in the coastal zone the larger site is *Punta Comisario – Punta San Bernardo*, with an area of 18,811 hectares, which are part of the priority sites for conservation of mangroves mixohalinos, marine and coastal lagoons.

[14] The department of Bolivar has formally protected 5,802 hectares in 3 national PAs: the SFF *Los Colorados*, the SFF Mono Corchal Hernandez and the NPP *Corales del Rosario* and San Bernardo.

[15] In the NNP Paramillo, for example, the coverage has been transformed in 37,800 hectares over 460,000 hectares of the park.

surround PAs[16]. The continuous intervention and occupation of lagoon areas is generating the loss of habitats and unique species in the marshes. These ecosystems are recipients of large rivers, which in turn are affected (eg: Magdalena River) by increasing floods, generating loss of vegetative cover and native biodiversity. Such decomposition of the ecological structure and the reduction of ecosystem services (i.e.: regulation of water flows, marshes and wetlands, through the capture of excess of water from the rivers) have caused significant socio-economic losses in the vulnerable population. For example, during the intense rainy season of 2010, dozens of settlements were flooded, 1,500,000 people were affected (in 2010-2012) and large tracts of land were submerged under water.

Fragmentation has created a critical situation for biodiversity. A study[17] has shown that in the CRC there are:

- Plants: 33 threatened and endemic species, 5 species at global level and 20 at national level, whose most common family is palms (*Arecaceae*);
- Birds: 40 species (belonging to 23 families - the most representative are *Parulidae* and *Trochillidae*, *Psittacidae* and *Anatidae*, under great pressure in the CRC - and 35 genera), of 26 are globally threatened, 32 are nationally threatened and 15 are endemic of Colombia;
- Amphibians: 15 threatened species (9 genera and 7 families), 13 are globally threatened, 1 is nationally threatened and 9 are endemic;
- Reptiles: 5 threatened species, 3 species are contained in the IUCN listings and 2 are endemic and nationally threatened;
- Mammals: 20 species (12 families and 16 genera), 8 are globally threatened, 2 are endemic of Colombia and 19 are in the list of nationally threated species – here primates are groups more nourished mainly *Atelidae* families (5 species) and *Aotidaes* (3species):
- Fish: 13 species (11 genera and 8 families), the totality of selected species are nationally threatened and 10 species are endemic of Colombia.
- For NNP Los Katíos and its area of influence the presence of more than 700 vertebrate species (excluding fish) was estimated, 401 species of birds, 163 species of mammals, 78 amphibians, 90 species of reptiles and 421 butterfly species (Gaviria, 2012). The problem of fragmentation is also present in this important PA which is designated as a World Heritage Site.

In the western area of the CRC (continental zones), priority conservation areas threatened by fragmentation are: i) the humid forest of *Alto Sinú*[18], which is the habitat of threatened endemic species like *carranchina* turtle *(Batrachemys dalhi),* red *verdelimón guacamaya* (*Ara ambiguus*) , puma, monkey sambo (*Alouatta palliata*) and the parrot *cariamarilla (Gypopsitta pyrilia)*. This area also includes 4,551 hectares of the indigenous reserve Alto Sinú *Esmeralda Cruz Grande* and *Iwagado*, which corresponds to

[16] Soil analysis of the Caribbean Region, MADS, 2011

[17] Galindo, G., Marcelo, D., Bernal, NR., Vergara LK., and Betancourt, JC., 2009. Ecorregional planning for the conservation of biodiversity in the continental Colombian Caribbean. Series Ecorregional Planning for Biodiversity Conservation, No 1. Research Institute Alexander Von Humboldt Biological Resources, national Hydrocarbons Agency, The Nature Conservancy and Institute of Hydrology, Meteorology and Environmental Studies. Bogotá DC, Colombia.

[18] These forests are distributed North of NNP Paramillo and around Reservoir Urrá (116,799 ha.). They are located in the municipalities of Tierralta (Córdoba), Valencia (Córdoba), Carepa and Apartadó (Antioquia).

the Embera katio ethnicity. The hydrological balance of the Reservoir Urrá and the Sinú basin also depends on the state of conservation in the humid forests of *Alto Sinú*; ii) the Forests and Dry Srhublands Corridor of the *Serranía de San Jerónimo*, which if properly protected would guarantee preservation of 47%of this ecosystem type in the CRC[19]; iii) the Sinú Wetlan Complex, which includes part of the Sinú River and its surrounding marshes and puddles[20]. This complex is suffering two main threats: the losses of riparian forests of the Sinú helobioma (that have practically disappeared from the basin) and the building of infrastructure projects that affects the dyanmics of the river and muddy bodies, altering local specie and ecosystem stability[21]; and iv) the Sucre Department that houses endemic or threatened species: the *pato golondrino (Sarkidiornis melanotos*) and Chavaría *(Chauna chavaria)*; mammals like the mantee *(Trichechus manatus manatus)*; fish as sardinata *(Brycon moorei)* and totumito (*eques Abramites);*plants like bitter palm *(Sabal mauritiiformis)* and Noli *(Elaeis oleifera)*; and reptile like river turtle *(Podocnemis expansa)*; and v) the rainforest landscape of Los Katíos.

Fragmentation has generated a loss of connectivity between different landscape units, affecting animal populations. In the CRC, the gallery forests, *per se* natural corridors, are now represented by dashed narrow bands and small patches between 2 and 4 meters wide, formed by secondary forests in the early stages of succession and isolated trees along feces or interspersed with grasslands. This configuration does not provide the conditions needed by different species – more or less sensitive to the effects of the absence of coverage and/or the matrix on the edges – to displace around vegetative cover or remaining patches of vegetation. Thus, confinement and pressure on the animal population triggers the scarcity of this species, leading to dramatic decrease in animal population until local extinction. A typical case takes place in the department of Sucre which reported in 2010 the lack of large mammals, in particular some species of felines (*Panthera onca, Puma concolor*) and canids (*Urocyoncinereoargenteus y Speothos venaticus*)[22], as happened in the Montes de María area (departments of Sucre and Bolivar)[23]. These species have low levels of tolerance to transformed areas and areas with human activities, due to competition for space and resources. The absence of large predators is an indicator of the high level of human intervention in the area, which is also reflected in the abundance of species mesopredator[24], in particular the ocelot,

[19] This corridor includes portions of the territory of 12 municipalities in the departments of Córdoba (96%) and Sucre (4%). It is characterized by forests and shrubs in hillocks and has an area of 13,343 hectares.

[20] It extends from the Quebrada el Nevado, in the municipality of Valencia (Córdoba) until a few miles before flowing into the Caribbean Sea. Its ecosystem marsh vegetation shows the highest goal of conservation of Córdoba (79%). In the coastal area, le Long beach stands with an area of 1,053 ha comprising mixohalino mangrove ecosystems, with a conservation target of 100%.

[21] Institute Humboldt, Colombia

[22] It takes into account the results of a Needs Assessment and Potential of Mammals Study, by the Regional Autonomous Corporation of Sucre (CARSUCRE) and Caribbean Environmental Heritage Foundation, 2010.

[23] Castaño et al., 2010.

[24] Recent studies have shown that large predators also affect carnivorous species that lie just below them in the food chain, known by the term "mesopredator". An article published in 2010 in the journal Ecology letters titled "*Interactions between predators, releasing mesopredators and biodiversity conservation*" reviwed 94 studies related to large and mesopredator, revealing how big is the impact of those on the immediately below species. The article defines mesopredators as "general versatile hunters, with the ability to reach high densities and to cause major impacts on a wide range of species of prey". However, sometimes the situation becomes much more complicated. When large predators are exterminated, the mesopredators ascend to the top pf the food chain, which makes them super-predators, although the mesopredators hardly have the same habits, or possess the same hunting abilities of the great hunters of the continent. In reviewing the field

located in the Forest reserve Protection of Serranía de Corza-Colosó (L. *pardalis*), the fox dog (*Cerdocyonthous*) living in the *Guacamayas* Forest and the Raccoon (*Procyon cancrivorus*) present in the *Los Novas* forest. The presence of patches provides refuge and food for large carnivorous species, but the lack of connection to other areas through patches of forest may be preventing their presence in the region.

c) Institutional and policy framework

Institutional framework

The **National Environmental System (SINA)**[25] of Colombia was established by Law 99/1993 with the aim of providing a better hierarchy, resources and instruments to environmental management. SINA integrates different public, social and private actors involved in environmental issues in order to promote a model of sustainable development through a decentralized, democratic and participatory environmental management. SINA is headed by the Ministry of Environment and Sustainable Development (MADS), which together with the National Natural Parks of Colombia (PNN) and the National Environmental Licensing Authority (ANLA) constitute the central level. The decentralized level is constituted by ascribed and affiliated entities; the Institute of Hydrology, Meteorology and Environmental Studies (IDEAM[26]), the Institute of Marine and Coastal Research José Benito Vives de Andreis (INVEMAR[27]), the Research Institute of Biological Resources Alexander Von Humboldt (IAvH), the Amazon Scientific Research Institute (SINCHI), and the Pacific Environmental Research Institute John Von Neumann (IIAP[28]). At the regional level there are autonomous bodies, among which the Regional Autonomous and Sustainable Development Corporations (CAR).

The **MADS** is the government agency responsible for defining the national environmental policy and promote recovery, conservation, protection, planning, management, use and exploitation of renewable natural resources in order to ensure sustainable development and guarantee the right of all citizens to enjoy and inherit a healthy environment. One of the priority areas of work of MADS is the Forests, Biodiversity and Ecosystem Services Area, including management actions on biodiversity, fauna and flora, strategic ecosystems, GHG emissions reduction, biosphere reserves, sustainable development of forests, genetic resources and related regulations.

PNN is a MADS unit with administrative and financial autonomy and national jurisdiction. It is the agency responsible for the administration and management of the National Natural Parks system and the coordination of the National System of Protected Areas (SINAP, by its initials in Spanish). The SINAP consists of the set of public, private and community protected areas, of public national, regional and local levels, the social actors and the strategies and management instruments that articulate them. The SINAP is organized into four major groups: 1) Protected areas of national level: National Natural Parks (NNP), Sanctuaries of Fauna and Flora (SFF), Nature Reserve (NNR),

studies, it was found that a reduction of large predators allows a disproportionate increase in the mesopredator , sometimes up to four time increase. This ecological phenomenon, known to scientists as the release of the mesopredator, in turn affects many other species (Hance, J., 2010).

[25] From its name in Spanish.
[26] From its name in Spanish.
[27] From its name in Spanish.
[28] From its name in Spanish.

Unique Natural Area (UNA) and Park Way; 2) protected areas of regional level that comprise the Regional Systems (SIRAP[29]) and the Departmental System (SIDAP[30]) of Protected Areas; 3) Protected Areas of local level conformed by municipal reserves that integrate the Local System of Protected Areas (SILAP[31]); and 4) Private protected areas that conform the Network of Civil Society Natural Reserves (RNSC).

The **Ministry of Agriculture and Rural Development** (**MADR**, by its name in Spanish) has the mission to develop, coordinate and evaluate policies that promote competitive, equitable and sustainable development of forestry, fisheries and agricultural processes and rural development, with decentralization, consultation and participation criteria, to help improve the level and quality of life of the Colombian population. To fulfill its mission, MADR implements the "Rural Development with Equity Program" which aims at improving the competitiveness and productivity of the agricultural sector and contributing to reduce inequalities in rural areas; the "Rural Property Formalization Program" to promote access to the property of rural land and improve the quality of life of farmers, and the project "Rural Entrepreneurial Capacity Building, Trust and Opportunity" that seeks to improve the quality of life of rural settlers of prioritized municipalities who are in extreme poverty. It has several attached entities: Land Restitution Unit, Rural Agricultural Planning Unit (UPRA[32]), the Colombian Institute for Rural Development (INCODER[33]) and the National Authority for Aquaculture and Fisheries (AUNAP[34]).

Departmental Governments have the mandate to manage and promote the comprehensive development of all their inhabitants, through the adoption and implementation of plans and programs that promote economic growth and sustainable social development and create the conditions for peaceful coexistence, in coordination with national, regional and local public authorities and civil society. The departments of Antioquia, Bolivar, Chocó, Cordoba and Sucre comprise the intervention area of the project, and their respective Governments are partners of the project.

The **Regional Autonomous Corporations** (**CARs**) and **Sustainable Development Corporations (SDC)** are the main environmental authorities in their respective regions. They are corporate bodies composed of local authorities that, for their characteristics, geographically constitute the same ecosystem or make a geopolitical, biogeographical or hydrogeographical unit. CARs are provided with administrative and financial autonomy, own assets and legal capacity; they are responsible for managing the environment and renewable natural resources within their area of jurisdiction and working for sustainable development, in accordance with the laws and policies of MADS. The buffer zones of PAs are under the jurisdiction of the CARs, which coordinate with PNN. Departmental PAs are under the jurisdiction of the CARs, if a municipal area is considered to be important for the conformation of SIDAP, CARs coordinate with municipal councils that are responsible for declaring it, in order to raise it to a regional category. CARs also implement local initiatives focused on the conservation and

[29] By its name in Spanish.
[30] By its name in Spanish.
[31] By its name in Spanish.
[32] By its name in Spanish.
[33] By its name in Spanish.
[34] By its name in Spanish.

sustainable use of natural resources, water resources and strategic ecosystems management and biodiversity conservation. The CARs involved in this project are: **Regional Autonomous Corporation of Sucre (CARSUCRE)**, the **Regional Autonomous Corporation for the Sustainable Development of Chocó (CODECHOCO)**, the **Corporation for the Sustainable Development of Urabá (CORPOURABÁ)**, **Regional Autonomous Corporation of Canal del Dique (CARDIQUE) and Regional Autonomous Corporation of Valles del Sinú y San Jorge (CVS)**.

SIRAP Caribbean, is the Colombian Caribbean Regional System of Protected Areas which is composed of the 16 environmental authorities of the region, through an agreement, (CORPOGUAJIRA, CORPAMAG, CRA, DADMA, DAMAB, CORPOCESAR, CVS, CARSUCRE, CARDIQUE, CORALINA, EPA, CORPOURABA, CODECHOCO, CORPOMOJANA, CSB, PNN). Under this framework, SIRAP Caribbean promotes regional projects to design and implement conservation strategies and protected areas, connectivity and sustainable productive projects, among others, to help maintain the ecological function of the region and ecosystem goods and services for the well-being of the population. It also promotes management tools that allow coordinate preservation processes to land use planning.

In the private sector, small, medium and large-scale farmers are represented by a number of associations, which act at national, regional and local levels. The **Colombian Federation of Livestock Producers (FEDEGAN)** groups, as affiliates, regional and local livestock guild organizations, as well as other entities related to national livestock activity. The **Horticultural Association of Colombia (ASOHOFRUCOL)** aims at strengthening and boosting the development of fruit and vegetable subsector of Colombia. The **National Federation of the Tobacco Producers (FEDETABACO)** is the union of the tobacco producers of Colombia. The **National Federation of Oil Palm Producers (FEDEPALMA)** supports palm producers in the defense of their interests and in ensuring the competitiveness of palm oil agribusiness in order to transform the quality of life of the communities who host it, and promotes progress and welfare. The **National Federation of Wood Industry (FEDEMADERAS)** represents the forestry, wood and furniture sector in the country, binds together suppliers of goods and services for this sector in Colombia, and includes in its organization reforestation entrepreneurs, processors, manufacturers and traders of furniture, structures and products of wood and derived from it, as well as Afro-Colombian communities responsible of natural forest. The **Banana Producers Association of Colombia (AUGURA)** represents the interests of the exporting banana industry of the country of the regions of Urabá and Magdalena and of producers dedicated to this activity before public and private, national and foreign entities. The **National Federation of Rice Producers (FEDEARROZ)** is dedicated to defending and representing rice producers nationwide, promoting technological development and seeking higher economic efficiency and competitiveness. The **National Cereals Growers Federation (FENALCE)** represents and defends the interests of cereals and legumes farmers nationwide, promotes the improvement of competitiveness of the sector and contributes to ensuring the production of food for the Colombian population, alleviating hunger and malnutrition, and hence guaranteeing greater food security and sovereignty of the country. The **Colombian Confederation of Cotton (Conalgodon)** represents the collective interests of farmers and enterprises engaged in cotton growing and ginning, to achieve sustainability and competitiveness in

the production and commercialization of cotton and cotton seed at national and international level.

Several Non-Governmental Organizations (NGOs) engage in activities related to socio-economic and environmental development in CRC. The **Foundation Development and Peace Network of Montes de Maria** seeks to create conditions for comprehensive development, human rights and peace in the Montes de María area. The **Corporation for Community Social Development (CORSOC-ASVIDAS),** based in Montería, Cordoba, works in awareness, organization and participation processes for community self-management. The **Colombian Network of Natural Reserves of Civil Society Association (RESNATUR)** is composed of landowners, farmers and NGOs with the aim of achieving conservation and practical learning on how to coexist happily, consistently and productively with a biodiverse territory in nature reserves. The **Observatory of the Caribbean** is a research center that seeks to generate excellence knowledge, promote discussion and provide proposals to improve the quality of life of the inhabitants of the Colombian Caribbean, widely disseminate their intellectual output, and participate effectively in building a collective vision for the region. **PBA Corporation** works in participatory innovation processes to help small farmers to improve production, income, knowledge, coexistence and the environment in rural communities in the departments of Cordoba, Sucre and Bolivar. **Omacha Foundation** is an environmental NGO aimed at the study, research and conservation of fauna and aquatic and terrestrial ecosystems in Colombia. The **Caribbean Environmental Heritage Foundation** manages programs of conservation of natural and cultural heritage, conservation of felines in the Colombian Caribbean, participation and environmental education. Conservation International (CI) focuses its efforts in the Caribbean Region of Colombia on restoration of degraded ecosystems projects, environmental education initiatives and the establishment of a conservation corridor for the Jaguar, plus an ecotourism alternative production program.

Furthermore, indigenous peoples and Afro-descendant communities form organizations representing their interests at the national, regional and local levels. The **Indigenous Organization of Antioquia (OIA[35])** is a grassroots social organization responsible for the political representation of indigenous communities in Antioquia. The **National Indigenous Organization of Colombia (ONIC[36])** seeks among multiple objectives to strengthen and support self-government of indigenous peoples; social and institutional recognition of ethnic and cultural identity of indigenous peoples; facilitate and manage the participation of indigenous peoples and their representatives in decision making and execution of public policies, and position the organization as legitimate representative and interlocutor of Indigenous Peoples and their organizations; participate in the construction of an alternative social and economic model for the country, with other indigenous and social movements both nationally and internationally. The **National Conference of Afro-Colombian Organizations (CNOA)** works for the human rights of Afro-Colombian people and their collective interests, articulates the various initiatives of Afro-Colombian organizations through capacity building in policy and legislative advocacy; organizational strengthening; strategic communication, territory and territoriality. The **Women's Network of the Colombian Caribbean** has the following lines of work: strengthening and empowerment of women's organizations in the region;

[35] By its initials in Spanish.
[36] By its initials in Spanish.

strengthening advocacy; impetus to the process of regionalization of the Caribbean; partnerships to implement sisterhood and safety of women at risk; search for co-financing; support for the peace process in the country and at regional level. The **Afro-Caribbean Women's Network (REMA)** seeks the creation and strengthening of the 16 member organizations of Afrodescendant women in the Colombian Caribbean region. Local organizations include the Major Indigenous Council of San Andrés de Sotavento of the Zenú People, 21 councils belonging to the Embera-Katío Upper Sinú Reserve (Major Indigenous Council of Ríos Sinú y Verde and the Alliance of Minor Councils of Río Sinú), the Major Indigenous Council of Chigorodó and the Major Indigenous Council of Mutatá, all locate in the area of influence of NNP Paramillo.

d) Problems the project will address

Changes in land use, land occupation and fragmentation of ecosystems are drivers of biodiversity loss. The rate of deforestation in the country in the periods 1990-2000 and 2000-2005, was 322,705 ha/year and 273,334 ha/year respectively due to the expansion of the agricultural frontier (73.3%), logging (11.7%), wood consumption (11%) and forest fires (2%). In Colombia near 16,136,983 ha are degraded nationwide.

The main causes that lead to the loss and degradation of biodiversity in the region include intensive deforestation, degradation and habitat destruction, overexploitation of species of fauna and flora, fragmentation, contamination, salinization and desertification of soils, the introduction of exotic species and in recent decades, the impact caused by climate change.

The fragmentation of natural ecosystems in the western Caribbean has generated a loss of connectivity between different landscape units that contribute to the reduction of biodiversity of flora and fauna and have drastically affected the provision of ecosystem services. Much of the natural corridors, such as gallery forests, have been logged or reduced to narrow discontinuous belts formed by a row of secondary forest, which does not guarantee the dispersal of biota and facilitate genetic exchange between populations. SIRAP Caribbean has recognized that a fundamental aspect of land use planning is to restore connectivity between protected areas to reduce isolation and to ensure their functioning and provision of ecosystem goods and services.

In this scenario, the project aims to reduce the degradation and fragmentation of strategic ecosystems of CRC, by implementing a strategy of socio-ecosystem connectivity including: inter-institutional articulation, territorial planning, social participation with an intercultural vision, effective management of existing protected areas (PAs), creation of new PAs and the promotion of sustainable production models.

1.1.1 Rationale

a) Baseline projects and investments for the next 3-5 years addressing the identified GEB threats and causes (main co-financing sources of the project)

The Government of the Republic of Colombia (GoC), departmental and municipal governments, the Regional Autonomous and Sustainable Development Corporations are actors that implement several initiatives aimed at or contributing to the conservation of

biodiversity and sustainable productive development. These initiatives are described below grouped by project component. The co-financing figures are detailed in Section 4.3 of this Project Document.

1. Planning, land use management and capacity building for the implementation of the SEC approach.

National Natural Parks (PNN):

1. *Convention 006 SIRAP Caribbean*: seeks to gather human, technical and financial efforts in order to undertake studies that allow the development and implementation of the SIRAP Caribbean, and for the creation of the roundtable of the SIRAP of the Colombian Caribbean for the conservation, control and monitoring, research, education, ecotourism, sustainable systems, environmental and land use planning of the PAs to consolidate regional, sub regional and local protected area system in the region.
2. The Information System Programme – KFW, focused on the SFF Los Colorados, SFF El Corchal and SFF La Playona Acandi, aims at developing an information system that facilitates decision-making, follow up and monitoring of PAs, coordinated with the Environmental Information System[37].
3. The Information System of the Caribbean Territorial Division (CTD) and Pacific Territorial Division (PTD) seeks to generate a system of interoperable geographic information for the 13 PAs under the jurisdiction of CTD and the departments that form the Colombian Caribbean.
4. The Project *Canal del Dique– Dique Consortium* seeks to obtain, compile and analyse environmental information for the characterization of terrestrial and aquatic, continental and marine baseline in the *Canal del Dique* Ecoregion, located in the western part of the delta of the Magdalena River, in its mouth to the Caribbean Sea, where NNP Corales del Rosario and San Bernardo and SFF El Corchal are located.
5. The Information Systems and Radio Communications Group (ISRC) of PNN has a database of official information from the GIS platform in the country, the *Geovisor* tool (a module that provides basic information of the PAs from the spatial component) and different interfaces for consultation.
6. The *Ecopetrol Project*, implemented in the SFF El Corchal *El Mono Hernández* and its area of influence, seeks to raise awareness among decision makers and the general public about the negative impacts that sedimentation and contamination of the Magdalena River, among other pressures, produce on the PA in order to define alternative solutions at different scales.
7. PNN is designing the *Implementation of Environmental Education - Obligation of the Environmental License URRA Program,* to implement a strategy of environmental education in the upper basin of the Sinu River with differential approach and collective consciousness. It will be directed to indigenous and rural communities of Upper Sinu, the municipality of Tierralta, URRA SA E.S.P., NNP Paramillo and security forces.

[37] It includes the design of the liaison system of the different subjects that form the Information System, development of the application for the setup of the information system, surveying technical requirements of the subjects of the system, design of the database for AMEPASP at the central level and of the online application articulated to the general information system, and training for officials responsible for taking and recording information that feed the AMEPASP indicators

8. The PNN Connectivity Portfolio: management of resources from compensation for biodiversity losses and investment. The Portfolio identifies priority conservation areas and restore them in the context of the Use and Tenure Strategy. It also restores some PAs of the CTD.
9. In addition, PNN is planning with local channels and radio stations in the municipalities of Turbo, Apartadó, Chigorodó and Carepa the production of audio-visual communication materials, to disseminate the SEC approach in the region.

SIRAP Caribbean

1. The SIRAP *Communication Strategy*: aimed at promoting public value, and social ownership of biodiversity knowledge and binding and involving national, regional and local actors in promoting the conservation and implementation of the Regional System of Protected Areas. The strategy includes the creation and management of a communications network to connect all the stakeholders involved in the different roundtables at regional, sub-regional and municipal levels, campaigning for conservation and social marketing. It is implemented in the CRC and is addressed to environmental authorities, departmental governors and mayors in the region, the media and the community.
2. The SIRAP *Environmental Education Agenda*: aims to: i) Promote awareness of conservation priorities in the region; ii) Foster best practices, the sense of belonging and a culture of conservation in society, and iii) facilitate public access to information on environmental matters. The Agenda includes the School Strategy, the Pride Campaign, and the Environment Forgers Strategy. As the communication strategy, the Agenda is implemented in the CRC and directed to the authorities, the media and the community, as well as to teachers and ICEE[38]-ESP[39].

The **Government of Bolivar:**

1. The Sub-program *Environmental Education Risk Protection*: promotes awareness-raising on local environmental problems among the population, to ensure sustainable development. The subprogram has facilities that will be shared with the proposed Project.
2. The *Centers for Civic Coexistence* Programme: implemented in El Carmen de Bolivar and Arjona, to promote peaceful coexistence in the sub-region of Montes de María. It includes dialogues on the preservation of ecosystem services. The programme has facilities that will be shared with the proposed Project.

The **Government of Antioquia:**

1. The Strategic Document "Vision Uraba, biodiversity and ecosystem services as a basis for the development, sustainability and well-being", is currently being developed in coordination with the Institute for Development of Antioquia, and the Institute Alexander von Humboldt. The department government is investing public resources for preparing this biodiversity strategy in 2014/15.
2. The project "Applied Research on biodiversity and ecosystem services as a basis for land management in Urabá", which is being developed together with the Institute von Humboldt and financed by public resources.

[38] Inter-Institutional Committees for Environmental Education.
[39] Environmental School Projects

CVS implements several programs in the Department of Cordoba related to SEC approach:

1. The *Land Planning for Environmental Sustainability Program*, implemented at the departmental level, seeks to incorporate the Territorial Ecological Structure (TES) approach: definition, characterization and planning of the regional ecological structure; watershed management; and forest use planning for sustainable management.
2. The Program *Biodiversity for Ecosystem Services and Sustainability of the Territory* aims at defining the components and the limits of the ecological structure of the Cordoba's territory, to promote land use planning. The Program has several lines of work: 1) protected areas and strategic ecosystems as guarantee of ecosystem functionality; 2) conservation and sustainable use of biodiversity; 3) ecosystem restoration, connectivity, and support to the ecological structure; and 4) conservation of hydrobiological and fisheries resources.
3. The Programme *Territory adapted to cope with climate change and risk minimization* promotes the preservation and maintenance of the ecological basis of development and habitability, increasing social and ecological capacity to cope with change through the following actions: adapting to climate change and variation in the department; implementation of a pilot adaptation project in wetlands; support to risk management.
4. The Project *Environmental education as a structural basis for regional policy and governance in the department of Cordoba* that supports education campaigns, promotes participation and communication, and is focused on environmental management and sustainable development.

CARDIQUE has several programs in the framework of its Action Plan, including:

1. The *Programme 1: Administration and Management of Water Resources*, comprising Projects *1.03 Groundwater Waters* and *1.04 Coastal and Marine Waters*. The first project is implemented in five municipalities and aims at gathering baseline information on groundwater resources for regulatory, management, use and monitoring purposes. The second seeks to regulate and adopt the use and integrated management plan of the Coastal and Marine Ecoregion of the jurisdiction, including the preparation of management plans for coastal environmental units, campaigns of water quality sampling, and a program for the conservation and monitoring of insular wetlands.
2. The *Program 2: Administration and Management of Biodiversity, Project 01 Forest Use and Management*, which regulates the management and utilization of forest resources. It includes the forest management plan, restoration with mangrove species in degraded areas, reforestation and maintenance of protective-producing species in degraded micro-watershed, and the establishment of regional community tree nurseries.
3. The *Program 4: Environmental and Land Management, Project 1 Planning and Comprehensive Risk Management*, which supports the municipalities in climate risk management based on an effective environmental planning. The project conducts studies, risk-based reduction cartography compatible with GIS, and provides advice for the design and implementation of municipal and/or community networks in risk management.

CORPOURABA

1. The Project *Formulation and Implementation of the Management Plan of the Darien Coastal Environmental Unit (CEU),* which supports the formulation of the Darien CEU management plan, the implementation of research strategies, monitoring, control and surveillance of the Darien coastal areas, and the Darien administration and management at the Committee on Integrated Coastal Zone Management level. These actions benefit more than 229,000 people in six municipalities of the sub-region.
2. CORPOURABA has an action line to strengthening participatory mechanisms within the framework the Inter-Institutional Committees for Environmental Education (ICEE), Environmental School Projects (ESP) and Environmental University Projects (EUP). This action line includes a Communication Strategy for dissemination, environmental education and awareness-raising. CORPOURABA provides technical support to the environmental component of the land-use plans (LUP), Management Plans and Partial Plans.
3. The *WWF - CORPOURABA Wetlands Management Plan* provides technical, economic and logistic support. It is focused on the wetlands connected to the Leon River and the *Tumaradó* Marsh, including ecological assessment, monitoring of wetlands' health, and implementation of farm and fisheries sub-projects at family-scale.

CODECHOCO

1. The Project *Education, Training and Community Participation for Environmental Management* that promotes communication and public participation among leaders and organizations of afro-descendants, indigenous and rural communities in environmental education processes. It includes environmental and production sub-projects carried out with organizations, community groups training, and strengthening of community leaders on environmental promotion.

CARSUCRE

1. The *Forest Management and Governance Plan* that supports the preparation of the Forest Management Plan, in the municipalities of Coveñas Tolú, San Onofre, Toluviejo, San Antonio de Palmito, Colosó, Chalán, Los Palmitos, Ovejas and Sincelejo, including guidelines and strategies that will benefit 50,000 people.

2. Management of Protected Areas

SIRAP Caribbean

1. The SIRAP *Portfolio of Priority Areas for Conservation in the Colombian Caribbean* is a programme that seeks to establish conservation priorities in the Caribbean Region of Colombia, identifying such priorities for each of the departments within the region.
2. The SIRAP *Ecorregional Planning Studies* is an initiative that selects priority tools for *in situ* conservation, specifies the targets for biodiversity conservation, and supports the design of strategies to mitigate biodiversity loss in all ecosystems of the CRC. The studies include the state of the art of conservation processes, baseline data in the PAs, identification of relevant areas to be conserved, the integration of information and analysis about different ecosystems, and

conservation strategies. These instruments provide key information to a wide range of stakeholders, including environmental and control authorities, governors and mayors, universities, research institutes, community and economic sectors.

PNN implements various initiatives to improve the effectiveness of PAs management:

1. The Management Plans of the five PAs included in this project: 1) NNP Paramillo; 2) SFF *El Corchal El Mono Hernández*; 3) NNP *Los Corales del Rosario* and San Bernardo; 4) SFF *Los Colorados*; and 5) NNP Katíos. covering a total area of 656.850 ha.
2. The *CTD Community Collective Initiative,* which is implemented in the SFF El Corchal, the NNP Los Corales del Rosario and San Bernardo, the SFF *Los Colorados*, and NNP Paramillo. The beneficiaries are local stakeholders living in PAs and buffer zones. The Initiative supports community-based communication and environmental education in the framework of the Management Plans of PAs.
3. The KFW Program aims to strengthen and expand the National Parks System of Colombia under criteria of integrity, representativeness and effectiveness. It is implemented in the SFF *Los Colorados*, the SFF El Corchal, and the SFF Playona Acandi. It includes the improvement of Management Plans, encourages ecotourism (Ecotourism Plans, construction of look-out, adaptation and signalization of pathways), promotes agroforestry and silvopastoral systems in SFF *Los Colorados*, as well as strengthening of surveillance and control (signalization and acquisition of equipment), construction and improvement of the administrative infrastructure of the PAs, and farm rehabilitation.
4. The *Sustainable Forest Management Project* benefits the indigenous population of the Upper Sinu Reserve (6,500 people, about 800 families in 23 communities) in order to recover 4,000 hectares of degraded areas in the zone of overlap of NNP Paramillo and the Upper Sinu Reserve, under participatory ecological restoration and sustainable systems for conservation approaches. It incorporates traditional production techniques. It supports the creation of an inter-institutional committee, training, restoration, dissemination of results, and tracking and monitoring.
5. The Project *Restoration in the Surroundings of URRA Reservoir* aims to implement a participatory ecological restoration in the surroundings of the URRA reservoir, that supports ecological connectivity with the NNP Paramillo. The Project includes an environmental diagnosis to define scenarios of ecological connectivity, conservation strategies and agreements with communities as well as financial investment in participatory ecological restoration models and sustainable systems, in dialogue with beneficiary rural communities.
6. The *Turtle Project TOTO - PNN Partnership* aims at monitoring and conserving sea turtles in the NNP Tayrona.

The **Government of Bolivar**:

1. The Sub-program *Administration for Conservation and Management of Strategic Ecosystems* supports the recovery and delimitation of strategic ecosystems that contribute to biodiversity conservation and ensure the provision of environmental goods and services.
2. The Sub-program *Strengthening the SIDAP* is aimed at the consolidation of the Departmental System of Protected Areas through a department roundtable, the

identification of new areas, the formulation of management plans, the formulation and launch of portfolios of protected areas, and the support to local initiatives for setting local systems of protected areas -SILAP.

3. The Project *Conservation of strategically important areas that supply water to municipalities, villages or rural districts, through the purchase of land or payment for environmental services* aims to conserve areas of strategic importance that supply water to municipal aqueducts. The project is currently demarcating areas within the municipalities of San Jacinto, San Juan Nepomuceno and Marialabaja that will be acquired by the Departmental Government, with the aim of benefiting more than 26,000 residents with quantity and quality water provision.

The **Government of Antioquia:**

1. The Management of Red Mangrove (Rhizophora mangle) in the Gulf of Uraba Initiative, financed by the Department of Antioquia, and the National University of Colombia.
2. The *Research Project for the development of productive alternatives with promissory species of biodiversity in the Middle Atrato of Antioquia*, being implemented by the Department of Antioquia, and the Espavé Foundation.
3. The *Analysis of Effectiveness of the SIDAP Antioquia and the PAs that integrate it,* being supported by the Government of Antioquia and WWF .
4. The *Strategic Plan for Sustainable Tourism and Local Development for the Uraba region of Antioquia*, being supported by the Cooperative Tourism Research Centre, and the Institute for the Development of Antioquia.

CARSUCRE

1. The *Use and Management Plan of Coastal Environmental Units* (CEU), mainly aimed at updating the diagnosis of CEUs Rio Sinú - Morrosquillo and Magdalena. The Plan includes coastal and marine areas and will benefit 30,000 people.
2. The Project *Generating Sustainable Livelihood Alternatives, San Onofre Municipality, Coastal Zone - Marine Protected Area,* which aims to: 1) Support local capacities for low-environmental impact development; 2) Deploy pilot alternative systems for sustainable use of natural resources; and 3) Use ancestral knowledge. The project is expected to benefit 12,000 people through productive sub-projects for local community-based groups.
3. The Project *Mangrove management and recovery* aims to contribute to environmental planning and development of sustainable practices in the Zones of Sustainable Use *Cienaga de la Caimanera*, *Bocacerrada* and *La Barcés* and Recovery Zone of *Berrugas*, in the municipalities of Coveñas, Tolú and San Onofre. For this purpose, the project seeks to complement the implementation of Comprehensive Management Plans of the aforementioned areas; adjust and implement management plans for remaining zoned areas under the current regulatory framework; and strengthen advisory committees to promote the processes of participation and agreement of management plans in the remaining Recovery and Preservation Areas.
4. The Project *Consolidation of the Subregional System of PAs in CARSUCRE* seeks to promote coordinated work in conservation with responsibility, land use planning and effective social participation criteria in the Savannas*, Montes de María* and *Golfo de Morrosquillo* subregions, which together cover an area of approximately 5,100 km^2 where 854,000 people live. The main areas of intervention include

strengthening the management of the Working Roundtable of the Sub-regional System of Protected Areas, supporting the creation and consolidation of the existing SILAPs; implementing management plans of PAs declared within the SISAP, including risk management and conservation targets; and conduct biodiversity inventories, aimed at identifying patterns of connectivity.

5. The Project *Comprehensive Plan for Groundwater Management. Aquifers of Toluviejo and Morrosquillo* includes the implementation of the management plans of the Morrosquillo and Morroa aquifers and the formulation of the management plan for the Toluviejo aquifer, covering an area of 1,427 km^2, with the following objectives: 1) to contribute to the sustainability of groundwater supply; 2) to properly manage aquifers; and 3) to reduce the drop rates of piezometric levels in the Morroa aquifer, benefiting 755,000 people.

CARDIQUE

1. Under the aforementioned *Project 2: Forests Use and Management*, it implements the management plan of the regional protected area *Perico Laguna*, in the municipality of San Juan Nepomuceno, as well as dissemination, identification and characterization of potential areas for Civil Society Nature Reserve.

CORPOURABÁ

1. The Project *Formulation and Implementation of Management Plans of Regional and National Protected Areas* which comprises the management plans of IMD Ensenada Rio Negro, IMD Alto del Insor, Protection Forest Reserve (PFR) Suriqui, and PFR León River and includes PAs management, community conservation and sustainable use strategies, environmental management to strengthen resource administration, directly benefiting about 3,500 people located in the PAs and surrounding areas.

CODECHOCO

1. The Project *Strengthening Departmental System of Protected Areas (SIDAP)of Chocó,*. The Project is implemented in the IMD Lago Azul, and supports IMD diagnosis, zoning and formulation of the management plan. It has a participatory approach. It also finances research and monitoring for conservation of the Manatee, the *Babilla* and other species in the PA; awareness-raising, environmental education; logistical resources, infrastructure, communications, and actions for sustainable production. The Project is also implemented in the IMD *La Playona y la Loma de Caleta* where supports a program of research and monitoring of fauna and flora; restoration strategies; environmental education; strengthening local culture and traditions; social organization of the afro-Colombian minorities; administration and basic infrastructure.
2. The Project *Consolidating the Departmental System of the PAs of Choco* seeks to safeguarding representative samples of ecosystems, biotic communities, species of flora and fauna and cultural and historical events, through a SIDAP in Choco. It support ecological connectivity by including the IMD *La Playona and la Loma de Caleta*, IMD *Lago Azul* and IMD *Golfo de Tribuga Cabo Corriente*.
3. The Project *Implementation of Management Plans for Coastal Environmental Units of Choco* is being implemented through the CEUs Darien (Acandí and Unguia), North Pacific of Choco (Jurado, Bahia Solano, Nuqui), Baudo - San Juan (Lower Baudo and coastline of San Juan). Its objectives are to establish administrative

management models and the integrated management of coastal and marine zones, and undertake actions for monitoring, control and surveillance in coastal and marine areas in Choco.

3. Sustainable productive development

Ministry of Agriculture and Rural Development (MADR)

1. The Project *Improving the sustainability of agricultural and livestock production in the face of climate phenomena,* which aims at strengthening the capacity of the agricultural sector to identify and adopt sustainability, mitigation and adaptation measures within a context of changing climate. It aims to benefit small-scale and medium-scale farmers and local technicians through the validation and adaptation of techniques for sustainability in agricultural and livestock production, in line with the efficient use of land for productive purposes; strengthen the generation and management of agro-climatic information as a tool for developing adaptation and mitigation measures to climate phenomena, and education and training on topics related to sustainable production. The project is implemented nationwide; the RCC is a potential area of intervention.

2. Among MADR programs in support of agricultural and livestock production and productivity, it should be mentioned the *Rural Development with Equity Program*, which main purpose is to improve the competitiveness and productivity of small and medium agricultural and livestock producers and to contribute to reducing inequalities in the country. The program has several incentive mechanisms to achieve its goals:

    a) **Special Credit Line (SCL)** is a program aimed at improving financing conditions for agricultural projects associated with the sowing and maintenance of short-cycle crops that are part of the basic food basket, such as: *achira*, sesame, cotton, irrigation rice, rainfed rice, oats, barley, beans, short cycle fruits, vegetables, maize, peanuts, potatoes, plantain, sorghum, soybeans, black tobacco, blonde tobacco, wheat and *yuca*.
    b) **Rural Capitalization Incentive (RCI):** A monetary incentive to encourage investment capitalization to improve productivity and competitiveness of agricultural producers. The value of the incentive corresponds to a percentage of the value of total investment, which is defined according to the classification of the type of producer. Intended for: long term crops, forest species and renovation of coffee plantations in areas that have completed their useful economic cycle, land improvement and irrigation systems, purchase of machinery and equipment for production, infrastructure for production and for primary processing and marketing of goods, development of biotechnology and its incorporation in productive processes, silvopastoral production systems.
    c) **Economic Incentive for Rural Direct Technical Assistance (EIRDTA)**: Consists of financial support for co-financing up to 80% of the costs of implementing the General Plans for Rural Direct Technical Assistance, developed by prioritized municipalities or associations of municipalities in each department, in order to provide service to small scale and medium scale

producers. Technical assistance is provided through Agriculture Services Providers Companies - EPSAGRO[40], contracted by municipalities with EIRDTA resources. In 2013, this incentive benefited 2,930 producers in the departments of Antioquia and Cordoba, with an approximate amount of USD 296,000. The incentive continues to be in place during this GEF-financed project implementation period.

d) **Incentive for Guild Technical Assistance**: consists of financial support to the guilds of agricultural sector for 50% of the costs of the provision of technical support and training and updating of technical assistants.
e) **Incentive for Special Technical Assistance**: it includes the provision of technical support to small-scale agricultural and livestock producers located in areas of territorial consolidation and rural development.
f) **Incentives for the Execution of Associative Land Improvement Projects**: it is an incentive for associated users of irrigation districts wishing to build, modernize, rehabilitate or expand irrigation and drainage infrastructure. The incentive is delivered through a public call and consists of up to 80% of the total value of the investment.
g) **Incentive for the Development of Studies and Design of Associative Projects for Land Improvement**: Aimed at constituted associated users of irrigation districts irrigation that are interested in conducting studies and project designs that already have pre-feasibility studies and an estimated budget. These resources finance up to the 80% of the cost of studies and designs.

3. MADR also is in charge of regulating the **certification of ecological production**, which is framed within a third-party certification scheme, meaning that the operators must be certified by a certifying agency duly accredited by the National Accreditation Body (NAB) and authorized by the Ministry of Agriculture and Rural Development. There are several rules in this field: Resolution 0187 (2006) which adopts the regulation on ecological production and creates the national control system and Resolutions 148 and 036 (2004) that create and regulate the use of the Ecological Food Label. The Ecological Food Label aims to: a) Promote the production, commercialization and consumption of foods obtained from ecological production systems; b) Provide the consumer with timely, reliable and sufficient information to differentiate ecological from conventional agricultural products. The label is awarded to: a) unprocessed agricultural livestock food products; b) processed products for human consumption derivative from the products referred to in the previous paragraph; and c) Alimentary products imported for that purpose. MADR authorize certification bodies to certify organic products under Colombian law and to manage the use of the Ecological Food Label of the Ministry of Agriculture and Rural Development. The label certification is valid for three years. The area under ecological production at national level in 2013 amounted to about to 46,000 hectares certified as ecological and in conversion period. However, this figure represents only about 0.12% of the area for agricultural and livestock use and for coffee, brown sugar, sugarcane, cocoa, fruit, vegetables and palm oil products. The scheme does not

[40] By its name in Spanish.

have much diffusion in the Caribbean Region. In 2011, only 329 ha were certified, mainly cocoa, coffee and sugar in Antioquia, Cordoba and Choco.

The **Government of Cordoba:**

1. The Project *Implementation, isolation and maintenance of agroforestry systems as a strategy for water regulation* is implemented in 11 municipalities of the department and is aimed at soil conservation and improving productivity. The project seeks to promote agroforestry production, and keep soil quality . The Project supports agroforestry arrangements with cloned cacao, banana and timber species. It benefits 100 families that allocated a minimum of three hectares of their property to the implementation of these activities.
2. The Project *Rubber Transformation Plant in URE* aims to improve the production of rubber in the rubber corridor of Cordoba by strengthening producer organizations. It promotes investment in land, buildings and equipment for processing raw materials, funding of operating costs, and support to producer associations. The project helps 711 rubber producers, who are members of the Association of Rubber producers of Antioquia and Cordoba (HEVEANCOR)[41] in the municipalities of San Jose de Ure, Montelibano, Puerto Libertador and Ayapel.
3. The Project *Storage Center, Lower Sinu - Agrarian Pact* is executed in the municipalities of Lorica, San Bernardo del Viento, Cotorra, Purisima, Momil and Chima and aims at promoting sustainable aquaculture and fishery production, by synchronizing goods production and supply, food quality and safety. It finances the construction and equipping of a storage centers for fishery and aquaculture products, in coordination with local organizations of the Lower Sinu Sub-region. Its beneficiaries are small-scale fisheries producers associations and fishermen in the region.
4. The Project *Support to productive partnerships* is implemented in the municipalities of Tierralta, Valencia, San José de Ure, Puerto Libertador, San Bernardo and Moñitos, Cordoba with financial resources that are annually allocated by the MADR. The Project links organized smallholders to the private sector (traders, agribusiness) in order to develop projects in the medium and long-term for fish farming, beekeeping, cocoa, plantain and pineapple production.

The **Government of Antioquia:**

1. The Project *Contribution to food security of vulnerable families in Antioquia through capacity building for the development of local supply plans and implementation of sustainable entrepreneurship, aimed at increasing consumption of fruits and vegetables and generation of family income*. The project promotes the development of commercial entrepreneurship in tomato, vegetables, rice, beans, seeds, and composting; the implementation of family integrated production systems; the design of plans for municipal supply; institutional strengthening of municipalities in matters of food supply.

The **Government of Bolivar** supports the Project *Cocoa and Plantain Agroforestry*, that provides technical and financial assistance to 1,200 farmers in planting 360 hectares of cocoa, plantain and timber species.

[41] From its name in Spanish.

CORPOURABÁ

1. The Project *Forest Management,* which aims to achieve 200 hectares of established and/or enriched forests and maintain 276 hectares as a strategy for forest management in 19 municipalities, benefiting over 229,000 people.
2. The Initiative *Agreements for cleaner production and conversion,* that promotes cleaner production in the productive sectors and sustainable natural resources use. The Initiative promotes the implementation of best practices, innovation, the design of clean technology development plans, and sectoral plans for climate change adaptation. The Initiative benefit 188,514 rural people.

CODECHOCO implements the Project *Biotrade and Sustainable Production in the Department of Choco,* which supports Afro-descendants, indigenous and mestizo population located in IMD Lago Azul - Manatees, Playona Caleta Loma, and Network of Civil Society Nature Reserves UNGANDI in sustainable production, through the development of four biotrade value chains, related with ecosystem goods and services.

FAO implements several regional projects that support sustainable rural production and include Colombia among the countries of intervention:

1. The Project *Policies on Food Security and Nutrition and Indigenous Peoples in Colombia, Ecuador, Guatemala and Paraguay* (TCP/RLC/3403) seeks to incorporate Food Security and Nutrition (FSN) in public policies and programs. As well, it has supports information, analysis and recommendations related to indigenous peoples and their needs. The project includes capacity building and national dialogues.
2. The Project *Strengthening agro-environmental policies in Latin America and the Caribbean through dialogue and exchange of national experiences* (GCP/RLA/195/BRA) is aimed at strengthening the agro-environmental policies in Colombia, through dialogue and exchange of national experiences; the elaboration of studies on agricultural and livestock and environmental policies; and exchange of experiences in successful agro-environmental policies among countries of the region.
3. The project S*trengthening the cotton sector through South-South cooperation* (GCP/RLA/199/BRA)*,* will start implementation in 2015, and will contribute to the development of the cotton sector in Colombia, based on technology, technical assistance and past lessons learned. The priority focus will be on family farmers.
4. The Project *Recovering food security of vulnerable populations affected by violence in isolated rural areas in the departments of Cordoba and Putumayo* (OSRO/COL/402/EC)*,* aimed at the creation of appropriate conditions for rapid food production and the restoration agriculture and livestock livelihoods in rural communities affected by violence, supporting the rapid production of staples, according to cultural priorities of communities and agroecological priorities of their territories. It includes capacity development activities to support the communities in sustainable food production.

Regarding the baseline initiatives addressing the compensation schemes and/or payment for environmental services (PES) in the CRC, Table 3 shows a summary:

Table 3:

Compensation Schemes / Payment for Environmental Services in the Caribbean Region of Colombia

Departament	Initiative related with Environmental Services	Supporting Agencies
Bolivar	PES. The project *Sustainable Livestock* in Colombia aims to improve livestock production through environment friendly work by using agroforestry systems and conservation of native forests in farms. It pays up to 6,500 USD in total per farmer. It applies for small and medium farms located in areas with payment for environmental services and connectivity corridors, and large farms located in connectivity corridors.	Livestock National Fund, FEDEGAN, Action Fund, Center for Research on Sustainable Systems for Livestock Production (CIPAV), TNC
Northern Antioquia	Compensation ES – The IICA-Finland initiative *Sustainable Forest Management in the Andean region* develops the project *Generating Economic Alternatives for Chigorodo indigenous communities*, *Colombia* by strengthening governance, production diversification and voluntary forest certification.	*Cabildo Mayor* de Chigorodó – Municipality of Chigorodó
Northern Choco	PES – Compensation Initiative on Forest Carbon - Choco -Darien Corridor. Project´s main activities include: 1) Building local governance capacity; 2) Reduce carbon emissions; and 3) Investing in green production. It is expected that over its foreseen 30-year duration, the project will avoid the emission of 2.8 million tons of CO_2 into the atmosphere. It works with 31 forest-dependent communities organized in 8 local councils in 13,458 hectares.	Municipality of Acandí, Anthrotect, COCOMASUR, Carnegie Science, Environmental Action and Childhood Fund, Medellin Botanical Garden

b) Remaining barriers to address threats on GEB

Despite the efforts made in recent times by the GoC, departmental governments, PNN, indigenous, rural and producers' organizations and CARs, there are barriers that still block the sustainable use and conservation of biodiversity in the buffer zones, as well as the effective management of existing protected areas in the Western area of the RCC. Baseline studies and assessment conducted during the design phase of the project identified three major barriers:

Barrier 1: Weak inter-institutional coordination, lack of enough scientific information at the regional level, and low environmental culture among local government actors, farmers, and civil society. Land planning system with no environmental component; weaknesses of policies and institutions in addressing strategic ecosystem fragmentation and degradation of natural resources in the zones around PAs; and lack of enough knowledge of natural connectivities, of the level of fragmentation of ecosystems and its consequences in the CRC.

As described in the Sub-section 1.1.1 above, policies and projects are being implemented. Unfortunately they are fragmented, sectorial, and inter-institutional coordination is still weak. The operationalization, financing and implementation of

sustainable development in the territory of the CRC have fallen short. Globally- and locally-important biodiversity use and conservation have not been sufficiently mainstreamed into policies, land use plans, institutional action plans, nor departmental and municipal development plans in the CRC. Biodiversity management and environmental-friendly production systems frequently are not prioritized by the entities outside the National Environmental System (SINA). Although monetary and non-monetary incentive mechanisms for conservation do exist in the CRC (see Sub-section 1.1.1), planning in the agriculture, hydrocarbons and mining sectors is completely isolated and has a high environmental impact. Policies and plans have not succeeded in addressing the fragmentation of strategic ecosystems and the degradation of natural resources in PAs and buffer zones of the CRC. In many cases, the institutional weaknesses have also hindered the implementation of concrete conservation activities. At local level, municipalities have not been sufficiently involved in PA management and their buffer zones.

Various causes underlie this problem and are related to: i) the insurgent presence and armed conflict, ii) lack of inter-sectoral coordination (public/private sectors), iii) lack of scientific information at the regional level and of an effective system of environmental information in the Western CRC; iv) Lack of capacity for communication, dissemination and education, which in turn leads to an environmental culture prone to unsustainable practices of natural resources use (extensive cattle ranching on steep lands and high mountain, clean crops in areas of high slope, indiscriminate use of agrochemicals, wildlife hunting for commercial purposes, etc.), among local government actors, farmers and civil society; v) lack of trained human resources and insufficient budget.

Before 2004, the insurgent presence in the Western area of the CRC and the consequent insecurity did not allow the development of extensive biological studies in the area (with the exception of some isolated studies of non-governmental organizations and the University of Cordoba). In recent years, however, the insurgency has "significantly reduced, and [insurgents] have even been expelled from most of the regions of the Atlantic Coast. Their presence has also been reduced in the departments of Antioquia and Choco"[42]. Since 2004, security conditions have been restored, leading to a massive demobilization of rebel groups, and this is an encouraging sign of the decline in violence[43].

Past violence, technical, financial and institutional weaknesses, have left information gaps on: i) the current status and trends of PAs in the CRC; and ii) the identification and assessment of environmental goods and services data that would support decision-making. Environmental authorities, research institutes and the academia have begun to develop a database on the status of ecosystems in the CRC. However, the available information is mainly found at large scale and does not include all variables needed for the definition of management strategies at local level. The research is usually not relevant with regard to regional needs. Access to research products is limited to universities, research institutes, the SINA and the Institute of Natural Sciences. For this reason, there is an evident lack of knowledge about the socio-ecological systems at regional and local scales, restricting the effective decision-making. These information

[42] Policy report, International Crisis Group, *Working for preventing conflict worldwid*e, Bogotá / Brussels, Latin America Report N ° 23, June 2010.
[43] UNDP *Report on MDG Goal 1 "Eradicate extreme poverty and hunger*", 2010

gaps impede inter-institutional and inter-sectoral coordination, and detain the design of effective mechanisms that would mitigate ecosystem pressures and promote sustainable natural resources management.
Another information gap is related to the absence of cartography at landscape scale. The data is atomized in individual products and projects, there is no information at regional scale that would support an integrated analysis. There is no thematic cartography information, and available information is not officially updated. There is little field verification of existing official and thematic cartography. Criteria for delivery protocols and information capture are not unified among agencies. The lack of information also prevents from conducting a proper economic valuation of ecosystem services that would support a PES system in the region.

Capacities at local level are very limited. Municipalities have poor knowledge regarding environmental management and land use planning. There is little participation of the social actors in the articulation between protected areas and land use planning. The projects implemented in the area tend to be improvised without a coordinated strategic thinking. Local actors tend to view natural resources as an inexhaustible source, due to their low level of environmental education.

The lack of environmental awareness is a big cultural barrier. Concrete institutional actions for changing the behaviour model of the inhabitants of the CRC is very limited. Although the formulation of Environmental School Projects (ESP[44]) is mandatory at national level, it has many shortcomings in the CRC, due to: the lack of specific local information, little inter-disciplinarity, absence of solid didactic proposals based on local biodiversity, little reflection on the issue of biodiversity, among others. In most cases, teachers has no knowledge of environmental issues or natural connectivities.

Barrier 2: Ecosystem conservation gaps and ineffective management in existing terrestrial and marine protected areas of the CRC, due to isolation and high pressure on natural resources.

The CRC covers areas of three bio-geographic districts: Choco-Magdalena, North Andean arid, and pre-Caribbean belt, as well as eleven biomes representing at least 50 terrestrial and continental ecosystems. The CRC coastal and marine area includes three ecoregions and ten ecosystems. Several studies on the SINAP biomes and ecosystem representativeness identified conservation gaps, that should be addressed by creating new PAs.

At regional level, the declaration of new PAs is very limited due to the confluence of different interests in the same territory (conservation priorities vs. high potential for economic development). Consultation processes have not yet been fully conducted in the CRC. The registration of Civil Society Nature Reserves (CSNR) requires a verification process that usually takes long time due to capacity constraints of the local

[44] The Environmental School Projects (ESP) constitutes one of the strategies implemented to promote environmental education, incorporated in the curriculum of educational institutions. They are school research projects that identify an environmental diagnosis problem, relevant to the community in which the school is inserted, and develop a pedagogical-didactic proposal for the incorporation of this problem in the curriculum design.

environmental authorities[45]. Furthermore, there are no legal incentives to support the creation of CSNRs[46], and there have been only incipient experiences of local tax incentives to support the CSNRs.

With regard to the management of existing PAs, in 2000 an Analysis of Management Effectiveness of Protected Areas with Social Participation (AMEPASP) was developed in order to support PNN, its technicians and operators, and other stakeholders. AMEPASP facilitates PA management, planning and implementation processes, monitoring of achieved objectives, effects and impacts, and is based on the social participation in conservation approach. The tool has been applied three times (2004, 2006 and 2012) to assess the management effectiveness in all national marine and terrestrial PAs. The last application exercise in 2012 identified the following common weaknesses in the PAs of the Western CRC:

i) Governance: The State's influence in the PAs is limited, as a result of the presence of armed groups operating outside the law (guerrillas, paramilitaries, drug traffickers), which exert territorial and economic pressure. Communities living in the buffer zones or inside the PAs use natural resources, usually in an unsustainable way. This situation is magnified by the shortage of staff for effective controlling vast areas, and results in illicit activities (hunting, illegal fishing and selective logging of fine woods, invasion and illegal occupation of the PAs).

ii) Legal and Policy Framework: The responsibilities for the application of fishery regulations in the coastal-marine PAs, and the competencies in the declaration and management of local and regional PAs are not clearly distributed. The role of the NPP Units in the formulation and implementation of Watershed Use and Management Plans (WUMP) that affect PAs is not clearly defined.

iii) Research and PA databases: Simple protocols to assess the status of the threatened and/or endemic species (fine filter targets) are missing. There is no consolidated database nor GIS system that effectively support the PA monitoring (thick Filter - changes in coverage and land use) or provide indicators of change within PAs.

iv) Financial management of PAs: Financial resources are insufficient to address a proper PA management and staff job instability is high. The effectiveness of PA financial management needs to be strengthened. A staff training plan is missing and very needed.

v) Social participation in the management of PAs is low. This absence affects the environmental education process, the consolidation of community conservation agreements, the introduction of income generation alternatives (ecotourism, sustainable rural production, valuation of environmental goods and services), among other priority issues.

Although the AMEPASP is an useful tool, it needs to be strengthened by including: 1) quantitative and verifiable variables on the state of conservation targets, 2) the involvement of a greater variety of internal[47] and external[48] stakeholders in the

[45] Municipalities and departments do not have enough capacity or availability of staff to perform these functions.
[46] Although this issue is considered in Decree 1996/1999.
[47] NNP professionals, park guards, management committees, scientists working in the National Planning Agency, administrative staff.
[48] Universities, NGOs, private sector.

evaluation process, in order to avoid subjective perceptions, enhance transparency, and enable information-sharing.

Barrier 3: The model of economic development in the region promotes economic activities with high environmental impact that generate greater ecosystem fragmentation and isolation of PAs in the Western CRC, jeopardizing the provision of ecosystem services from the terrestrial and marine-coastal biodiversity and habitats.

The main production systems present in the CRC are implemented by small-, medium- and large-scale producers, covering: 1) traditional agriculture, 2) extensive cattle ranching; 3) artisanal extraction of marine fisheries; 4) mechanized permanent bananas and plantains crops; and 5) mechanized agriculture with transitional mixed crops. Table 4 illustrates them:

Table 4:
Main rural production systems, Caribbean Region of Colombia

Production system	Description
Traditional agriculture	Present in all connectivity corridors. Represented by crops grown by small-scale producers, mainly yuca, maize, ñame and plantain. Production for own consumption with commercialization of surpluses. It is the basis of the Food Security in the CRC.
Extensive cattle ranching	The production system that occupies the largest area. Developed by both small- and large-scale producers. Smallholders breed dual-purpose cattle. Medium- and large-scale producers breed beef cattle only. Natural and improved pastures are used.
Artisanal extraction of marine fisheries	Very important for the economies of the coastal-marine corridors of North Western Caribbean, Continental, and Coastal Northwest of Uraba and the Sinu river. Performed by native subsistence fishermen. Fundamental for Food Security of these communities.
Mechanized permanent agriculture of bananas and plantains crops	Basic to the economy and only present in Continental and Coastal corridor of Northwest Uraba. Top technology in the crop management. Only developed by large-scale producers.
Mechanized agriculture of transitional mixed crops.	Important in the Sinu river corridor. Powered by medium- and large-scale farmers with corn, rice yuca and cotton crops.

Unsustainable production practices are widely applied in the agriculture, livestock, forestry and fisheries sectors of the CRC. Poor smallholders have low productivity levels, and lack crop diversification and rotation, which generate increasing pressures on natural resources. The agricultural frontier tends to be expanded. Due to the need to meeting basic needs, smallholders tend to opt for productive activities with higher short-term returns, that are linked to inadequate soil management and nutrient loss. The production system at medium- and large-scale is also based on monocultures (e.g. banana and plantain crops account for 90.6% of agricultural activity in the Gulf of Uraba), agricultural frontier expansion, unsustainable livestock practices (logging natural vegetation and draining marshes and wetlands for growing pasture for ranching), commercial exploitation of timber species, and overfishing. All these activities generate greater ecosystem fragmentation and isolation of PAs in the Western area of the CRC, jeopardizing the provision of ecosystem services from terrestrial and marine-coastal biodiversity and habitats.

The main constraints to the implementation of sustainable production practices by small-scale farmers relate primarily to the lack of access to information and knowledge, lack of alternative productive activities, capital and infrastructure constraints and lack of training and technical assistance. Large-scale producers, while having access to capital, technology and infrastructure, are constrained by the lack of information and training and technical assistance for sustainable production. While certification schemes such as the Ecological Food Label, Good Agricultural Practices and Good Livestock Practices (GAP and GLP) and the Forestry Incentive Certificate (FIC) have been developed in Colombia, their diffusion in the CRC is limited. The Ecological Food Label has not much diffusion yet, and in the case of GAP and GLP only 41 properties (3,977 ha) for GAP and 8 farms for GLP have been certified in CRC in the period 2013/14. The main constraints that producers face to access these certification schemes are the lack of access to information; lack of training to implement the processes required; the costs involved (need for investments in property, audit costs) for accessing the certification; and lack of knowledge of existing incentives that could potentially serve to support the implementation of sustainable practices with certification schemes. In 2011 a total of 329 ha obtained ecological certification in the departments of Antioquia, Cordoba and Choco (mainly cocoa, coffee and sugarcane).

c) Incremental reasoning (added value of the GEF financing)

In order to remove the above mentioned barriers and achieve global environmental benefits, GEF funds will be invested incrementally to the aforementioned baseline initiatives, as detailed below:

Component 1: Strengthening institutional coordination and mainstreaming the socio-ecosystem approach in land-use planning, to reduce the degradation and fragmentation of strategic ecosystems in the Caribbean Region of Colombia.

In order to overcome barrier # 1 (see subsection 1.1.1.b), Component 1 will strengthen inter-institutional coordination and incorporation of socio-ecosystem approach in land use planning. Component 1 will support the participatory development of a Socio-Ecosystem Connectivities (SEC) Regional Strategy, which will be the conceptual basis for all project activities. The SEC Strategy is expected to be adopted by all relevant regional stakeholders to guide their action planning at territorial level. Component 1 will also promote capacity development among key stakeholders, SEC mainstreaming into institutional and management planning at departmental and municipal level, and the development of tools to support the implementation of the SEC strategy, including incentive schemes for socio-ecosystem services, and an inter-sectorial knowledge-sharing platform for information, M&E. Component 1 will support awareness-raising for key stakeholders and the CRC population on the importance of biodiversity and socio-ecosystem connectivities, promoting access to information and knowledge.

Component 1 will be co-financed by the project partners as follows:

- MADS will provide USD 228,959 (in-kind).

- PNN will provide the sum of USD 202,456 (in cash) and USD 363,456 (in-kind) through its Caribbean Territorial Division (CTD) and a sum of USD 84,854 (in-kind) through its Pacific Territorial Division (PTD).
- The SIRAP Caribbean will provide USD 23,554 (in-kind).
- The Government of Antioquia will provide USD 1,302,203 (in cash).
- The Government of Bolivar will provide USD 3,538,112, of which USD 432,761 in cash and USD 3,105,351 in-kind.
- CORPOURABÁ will provide USD 2,602,180, of which USD 2,152,143 in cash and USD 450,037 in-kind.
- CARDIQUE will provide USD 2,280,589, of which USD 1,207,793 in cash and USD 1,072,796 in-kind.
- CVS will provide USD 37,957 (in-kind).
- CODECHOCÓ will provide USD 66,812 (in cash) and USD 195,898 (in-kind), amounting to the sum of USD 262,710.
- CARSUCRE will provide USD 2,249,216, of which USD 1,794,931 (in cash) and USD 454,285 (in-kind).

GEF incremental financing of USD 1,798,450 for Component 1 will address the provision of technical assistance for the participatory design of the SEC Strategy, the study of supply and demand of socio-ecosystem services, support the mainstreaming of the SEC approach in regional, departmental and municipal planning instruments; the design of a communication strategy and the adaptation of the SIRAP environmental education strategy, incorporating in both cases the SEC vision.

In addition, GEF resources will support the design of a training program for stakeholders and the implementation of training activities (courses and workshops); conducting participatory workshops for the validation of the SEC strategy and SEC mainstreaming in planning tools; the design and implementation of an information platform, including the purchase of computer equipment to implement the platform; and implementation of communication and environmental education activities on the SEC approach and biodiversity conservation.

Component 2: Creating new protected areas (PAs) and improving the effectiveness of existing PAs in the CRC.

In order to remove barrier # 2 (see subsection 1.1.1.b), Component 2 will strengthen the management and conservation of marine and coastal ecosystems (mangroves, seagrass beds and coral reefs), rainforests, wetlands and swamp complexes. To do this, the project will promote the creation of regional protected areas that contribute to fill conservation gaps and increase representativeness of protected ecosystems. Furthermore, the management of existing protected areas that have problems and administration weaknesses will be improved through training of managers of protected areas, departmental and municipal institutions in the areas of influence of the PAs, as well as local communities located in buffer areas; improving the infrastructure and equipment, monitoring flagship species of biodiversity and implementing the AMEPASP Tool with SEC approach. Likewise, the component will promote sustainable production practices in buffer zones, working with local communities located within them. Thus, the current threats to protected areas will be reduced, contributing to PA management and conservation.

Component 2 will be co-financed by the project partners as follows:

- The MADS will provide USD 296,004 (in-kind).
- PNN will provide USD 616,675 (in cash) and USD 1,699,383 (in-kind) through its Caribbean Territorial Division (CTD) and a sum of USD 123,335 (in cash) and USD 101,751 in-kind through its Pacific Territorial Division (PTD).
- The SIRAP Caribbean will provide USD 38,016 (in-kind).
- The Government of Antioquia will provide USD 29,686 (in cash).
- The Government of Bolivar will provide USD 1,391,377, of which USD 1,386,313 (in cash) and USD 5,064 (in-kind).
- CORPOURABA will provide USD 473,418 of which USD 284,371 (in cash) and USD 189,047 (in-kind).
- CVS will provide USD 42,641 in-kind.
- CODECHOCÓ will provide USD 95,564 in cash and USD 95,560 in-kind, amounting to the sum of USD 191,124.
- CARSUCRE will provide USD 1,811,128, of which USD 1,697,043 in cash and USD 114,085 in-kind.

GEF incremental financing of USD 1,993,750 for Component 2 will support technical studies and social consultation for the creation of new regional protected areas and participatory design of the respective management plans; supporting the improvement of administration and management effectiveness of PAs through the delimitation, development of agreed proposals for buffer areas, design and implementation of use and management agreements with ethnic communities; workshops for the circulation of management plans, reinforce the control, surveillance and monitoring strategy, purchasing equipment (computer, signage, monitoring, outboard motors, boats for river and marine areas, telecommunications, motorcycles, trucks) and adaptation of PAs infrastructure. In addition, the Project will conduct feasibility studies of value chains and incentives for sustainable production in buffer zones, design and implementation of training for traditional fishermen in coastal and marine PAs, and monitor activities of flagship species. All institutional and political players will participate in the development of this component, agreeing the new areas declaration process through instances of cooperation that will allow breaking political, administrative and jurisdictional barriers[49].

Component 3: Alternative models of sustainable production and strategies to ensure the supply of local and global ecosystem services.

In order to remove the barrier # 3 (see sub-section 1.1.1.b), Component 3 will be aimed at developing alternative production models and sustainable strategies to ensure the provision of local and global ecosystem services. In order to do this, Component 3 will promote the participatory development of four mosaics for conservation and sustainable natural resources management of and will encourage the adoption of sustainable production systems through sustainable production plans that include existing and/or new certification schemes. These schemes will be implemented with the Extension and Transfer Program of the Sustainable Crop Production Intensification

[49] A good example of this type of exercise that can be taken as a model is the water resource management in Abibe Mountains – Uraba, Antioquia, that will integrate all regional stakeholders in a common front.

(SCPI) approach. These actions will strengthen connectivity, restore natural vegetation altered by land use changes, and ensure the sustainability of agricultural production, improving local populations' livelihoods while conserving biodiversity.

Committed co-financing for the implementation of Component 3 is detailed follows:

- MADR will co-finance with USD 710,464 in-kind.
- The Government of Antioquia will provide USD 658,873 in cash.
- The Government of Bolivar will provide USD 3,369,178 in cash.
- The Government of Chocó will provide USD 432,732 in-kind.
- The Government of Cordoba will provide co-financing of USD 9,810,148 in cash.
- The Government of Sucre will provide USD 10,974,022 in-kind.
- CORPOURABÁ will provide USD 666,177of which USD 476,151in cash and USD 190,026 in-kind.
- CVS will provide USD 113,596 in-kind.
- CODECHOCÓ will provide USD 86,004 in cash and USD 186,196 in-kind, amounting to the sum of USD 272,200.
- CARSUCRE will provide USD 875,799 in cash.
- FAO will provide co-financing of USD 160,000 in cash.

GEF incremental financing of USD 1,796,888 for Component 3 will be aimed at the provision of technical assistance for participatory building and agreement of mosaics for conservation and sustainable use; developing GIS mapping for the implementation of SEC approach at community-level. In addition, Component 3 will promote restoration activities of riparian forests, including training in restoration techniques (analogy forestry, productive restoration) and establishing nurseries for plant production. GEF resources will be also used to encourage sustainable production through the development of plans for sustainable production and implementation of the Farmer Field Schools methodology, including the acquisition of tools and agricultural inputs to establish schools, conducting field day, training and extension to farmers; and purchase of motorcycles and vans for outreach activities within the production plans.

Component 4: Project M&E and information dissemination

Further to the three technical components a fourth component has been prepared for project monitoring, evaluation, and systematizing and dissemination of lessons learned that might be useful for future BD initiatives in the country and in other countries. Accordingly, Component 4 will support project M&E, and will address the creation and/or improvement of institutional M&E capacities of executing partners.

The implementation of this component will be co-financed with the following contributions:

- PNN will provide a sum of USD 134,188 in-kind through its Caribbean Territorial Division (CTD).

Incremental GEF financing of USD 120,454 will support through Component 4: M&E of project progress and achievement of targets, monitoring of risk mitigation measures and identification of new measures to address unforeseen risks, progress reports, mid-term

and final evaluations, systematization of lessons learned, and preparation of information materials. Once systematized, lessons learned (successes and failures) will be disseminated throughout the country and might be useful for projects to be implemented in similar regions or countries.

FAO will provide USD 220,000 (in-kind) to support the Project Management structure. See details in the Financial Plans, Section 4.3 of this Project Document.

1.1.2 FAO's comparative advantages

FAO has comparative advantages to implement actions in the connectivity areas of the project, mainly land use planning, and sustainable land and water management. FAO has a long experience in promoting the sustainable management of natural resources and ecosystem services in agricultural and fishery systems, providing technical and regulatory support at global, regional and national levels. FAO has UN mandate to operate in the fishery sector, and has led the creation of the Code of Conduct for Responsible Fisheries, which integrates international agreements and precautionary principles to conserve biodiversity impacted by the fisheries sector. In addition, FAO has recently carried out internal transformational changes and shares the idea that the close linkages among hunger, poverty and degradation of biodiversity and ecosystem services underscore the need for multidimensional approaches for their reduction. The proposed project and the innovative SEC concept intend to address these multi-linkages through interdisciplinary and intersectoral work.

1.1.3 Participants and other stakeholders

The following table summarizes the main stakeholders that will be involved in the implementation of the project and their respective roles and responsibilities in it.

Table 5: Key stakeholders for project implementation

Stakeholders	Interests/Roles/Responsibilities in the project
Government	
Ministry of Environment and Sustainable Development (MADS)	National Environmental Authority and Operational Focal Point to GEF. Co-financier. Overall coordination between project objective, outcomes and institutional agreements, and policies and plans of the Government of Colombia, with regard to environmental issues. Executing partner of the project.
National Natural Parks of Colombia (PNN)	Entity responsible for the administration and management of the National Natural Parks system and the coordination of the National System of Protected Areas. Co-financier. Component 1: Mainstreaming the SEC criteria in public policy; technical support in the construction of the SEC Regional Strategy, technical assistance for the setup of the Biodiversity information and M&S platform, support to the environmental education strategy Component 2: Studies on conservation priorities (related to protected areas), implementing the agreements of sustainable use of biodiversity with ethnic communities, development of control and surveillance strategies; Component 3: Studies in conservation and sustainability in the use of necessary corridors in CRC, technical support in the definition of the corridors and mosaics (GIS) and support the construction of conservation mosaics.
Regional System of the Protected Areas of the Colombian Caribbean (SIRAP	Alliance of 16 authorities of the CRC promoting the conservation of representative and strategic ecosystems in the region. Co-financier. Component 1: Coordination and support in the construction of the SEC

Stakeholders	Interests/Roles/Responsibilities in the project
Caribbean)	Regional Strategy and related control system. Defining priority areas according to the SIRAP Caribbean portfolio. Lead the implementation of environmental education and communication strategies; Component 2: Support the creation of new regional protected areas under the jurisdiction of SIRAP-Caribbean; Component 4: Monitoring of project progress.
Ministry of Agriculture and Rural Development (MADR) and ascribed units: UPRA, INCODER, AUNAP	MADR formulates policies for the development of the Agricultural, Livestock and Fisheries Sectors and for Rural Development. Co-financier. Strategic partner for the implementation of Component 3 (development of sustainable production initiatives, certification, incentives for production, technical assistance).
Ministry of National Education (MEN)	MEN formulates policy guidelines on education and environmental education, among other sectors. Strategic role in the implementation of the environmental education strategy.
National Training Service (SENA)	It offers free training through technical, technological and complementary programs focused on economic, technological and social development. Important role in the implementation of component 3 (training and technology transfer).
Governments of Antioquia, Bolivar, Choco, Cordoba and Sucre	Departmental Governments. Project partners supporting the implementation at local level. Co-financiers. Regional coordination among project objectives, outcomes and institutional arrangements and policies and plans at the departmental level, considering the Departmental Development Plans 2012-2015.
Autonomous Regional Corporations (CARs): • Codechocó • Corpourabá • CVS • Carsucre • Cardique.	Local environmental authorities. Project partners supporting the implementation at local level. Co-financiers. Component 1: Coordination of land use plans and incorporation of SEC criteria. Component 2: Biodiversity Studies. Component 3: Development of production initiatives for local social ecosystem
Municipalities	Local Governments. Project partners supporting the implementation at local level.
Inter-Institutional Committees for Environmental Education (ICEE)	Responsible for design, advice, guide, follow up and evaluate the Environmental Education Plan. They will support the implementation and dissemination of environmental education strategy taking over the training of teachers.
Research Institutes: • Institute of Marine and Coastal Research • Humboldt Institute • Agustín Codazzi Geographical Institute	Research institutes linked to government agencies. They provide information and data for the formulation of the baseline and the monitoring of SEC strategy.
International Cooperation	
FAO	GEF Implementing Agency. Provision of technical assistance on land use planning, sustainable management of natural resources, rural development, biodiversity preservation, land degradation, sustainable livestock and fishery production. Support of methodologies according to international standards. Support and monitoring project implementation.
Private sector	
Guilds: • Fedegan • Asohofrucol • Fishermen and fish farmers guilds • Fedetabaco • Fedepalma	They represent at the national level producers (mainly medium and large scale producers, in some cases include small-scale) and the most significant productive sectors of the CRC. They will participate in the process of building the SEC Strategy. They will support the dissemination of information on the strategy among their members at both regional and national level. Dissemination of information on sustainable production among their members.

Stakeholders	Interests/Roles/Responsibilities in the project
• Fedemaderas • Augura • Fedearroz • Fenalce • Federalgodon, Conalgodon)	
URRA S.A. ESP Company	Manages the URRA I Hydroelectric Plant, located in the south of Tierralta municipality in the department of Cordoba and has a program of social and environmental responsibility.
Grassroots / civil society organizations	
Indigenous Organization of Antioquia (OIA)	Political representation of indigenous communities in Antioquia. Participation in the construction of the SEC strategy. Technical and operational support in characterization activities and organizational strengthening. Support the implementation of all project components. Fundamental role in the proposed Abibe Mountains mosaic of the Paramillo-Katios corridor. (Component 3).
National Indigenous Organization of Colombia (ONIC)	Participation in the construction of the SEC strategy, to represent the point of view of indigenous communities. Coordinating role among different communities. Social audit of project implementation.
National Conference of Afro-Colombian Organizations (CNOA)	Participation in the construction of the SEC strategy, to represent the point of view of Afro-Colombian communities. Coordinating role among the different communities. Social audit of project implementation.
Indigenous organizations: • Indigenous Major Council of *San Andrés de Sotavento* • Indigenous Major Councils of the Upper Sinu Reserve: 21 Minor Councils and 80 Local Councils • Indigenous Major Council of the *Quebrada Cañaveral del San Jorge* Reserve • Indigenous Major Council of Chigorodo	Represent indigenous people in the region. Component 1: Participation in the construction of the SEC strategy. Component 2: Social Participation in APs protection. Component 3: Sustainable production models.
NGO	
Omacha Foundation	Dedicated to the study, research and conservation of fauna and aquatic and terrestrial ecosystems in Colombia. Experience in conservation and sustainable production projects in the Colombian Caribbean, it executes an agreement with CVS. It will participate in the construction of the SEC Strategy and bring lessons learned in the development of the project components in the field.
Caribbean Environmental Heritage Foundation	It manages programs of conservation of natural and cultural heritage, conservation of felines in the Colombian Caribbean, and participation and environmental education. It will participate in the construction of the SEC Strategy. Support to all Project components with information exchange and research.
Conservation Internacional	Programs of conservation of natural and cultural heritage, conservation of felines in the Colombian Caribbean, and participation and environmental education. It will participate in the construction of the SEC Strategy.
Development and Peace Network of Montes de Maria Foundation	Support to the coordination of initiatives in the Mosaic of Montes de Maria, it can also provide lessons learned in the implementation of field activities (component 3)
Corporation for Community	Dedicated to awareness raising processes, organization and participation

Stakeholders	Interests/Roles/Responsibilities in the project
Social Development (CORSOC-ASVIDAS)	for community self-management, based in Monteria, Cordoba. Technical support and provision of lessons learned on organizational strengthening and production processes (component 3). Coordination of smallholder organizations.
Women's Network of the Colombian Caribbean and REMA- Afro-Caribbean Women's Network	Women Organizations. Participation in the construction of the SEC Strategy, in order to provide a gender perspective. Social audit of project implementation.
Colombian Network of Natural Reserves of Civil Society Association (RESNATUR)	Support and coordination in the creation of new Civil Society Nature Reserves (Component 2)
Observatory of the Caribbean	Research Center for the Colombian Caribbean. It will participate in the construction of the SEC Strategy. Strategic ally for the quantity and quality of the studies conducted on the CRC.
PBA Corporation	PBA works on participatory innovation processes with small farmers in the departments of Cordoba, Sucre and Bolivar. Technical support and contribution of lessons learned in the development of the field components of the project (Component 3).
Natural Heritage, Biodiversity and Protected Areas Fund	Its purpose is the development of strategies to allow the financial sustainability of the national protected area system - SINAP. Technical support in the implementation of conservation mosaics and lessons learned from the processes already developed in this area and in creation of incentives for conservation (Component 3)

1.1.4 Lessons learned from past and related work, including evaluations

GEF Project "Conservation Mosaics" (2006-2011)

- By involving society in developing conservation actions the project addressed one of the major constraints faced by protected areas: the perception that they are the only instrument for conservation and therefore the state agency responsible for their administration is the only responsible for it.
- The definition of actions to be implemented through a horizontal dialogue allows overcoming the perception of incompatibility between strict conservation measures and communities' proposals for use.

Eco-Andean Sustainable Development Project - PNN and World Food Programme (2000-2004)

- Progress in the implementation of sustainable conservation systems must be supported by organizational processes. The creation and strengthening of community organizations ensures levels of autonomy, decision arenas for the regulation of impacts on the environment and community self-management.
- Offering training is a strong incentive for small farmers to adopt sustainable production systems.
- The establishment of working groups where several disciplines are integrated, knowledge and approaches are shared enriched the experiences and was fundamental when undertaking the processes. It is important to integrate different views of the territory and cultural references.
- Land use plan at farm level and use and management agreements with each landowner are the cornerstone and the key to success of in situ conservation

exercises. Only when the owners or possessors of the land assume voluntary commitments the proposals sustainability is guaranteed.

- Technical and organizational support is essential. In order to show results, processes must have a component of permanent technical assistance at least during the first three years, especially when the processes are developed in areas affected by armed conflict. Furthermore, the inhabitants of marginalized areas are often sceptical about the fulfilment of the commitments made by institutions. This point must be a dogma, since the credibility of the institutions depends on this, in areas where scepticism is the first thing to break and restore the principle of compliance in what is promised.

GEO Juvenil Programme - United Nations Environment Programme (1999)

- The participatory methodology with a strong Research – Action – Participation component, through the preparation of an environmental assessment by the young participants and the design and implementation of environmental projects, ensures the active participation of youngsters, which learn by doing.
- The creation of local networks is an effective and efficient tool for disseminating knowledge and contributes to sustainability.

FAO Project Río Las Ceibas Basin UTF/COL/030/COL (2007-2013)

- It is advisable to handle a comprehensive and multidimensional vision of the territory, which considers the environmental, social and productive development not as isolated issues, but as totally interdependent.
- Community participation, skills and leadership in all of the actions undertaken were success factors for achieving environmental conversion and management of natural resources, leaving organizations and communities in advanced management process and community participation.
- To ensure active and thoughtful community participation, it is necessary to set clear organization guidelines and provide groups and farmers associations with training through methods such as learning by doing, processes of sharing experiences, tours, field days, farmer to farmer transfer and demonstration farms.

Project "Integrated silvopastoral approaches to ecosystem management" (2005-2009) World Bank, FAO and CIPAV[50]

- Silvopastoral practices play an important role in rural development efforts. In future efforts to expand the adoption of silvopastoral practices, they should not necessarily be considered as environmental projects that also have benefits for rural development, but rather as rural development projects that also have environmental benefits.

[50] The World Bank, 2008. Implementation completion and results report on a grant in the amount of SDR 3.7 million equivalent (US$ 4.5 million) to CATIE for the Integrated Silvopastoral Approaches to ecosystem management project in Colombia, Costa Rica and Nicaragua.

- Some of the silvopastoral practices that achieve best results in terms of biodiversity, such as riparian reforestation, are not equally attractive to farmers, so that incentives may be needed.
- Training and empowerment of farmers leads to an increased adoption of silvopastoral practices.

GEF/World Bank Project Conservation and Sustainable Use of Biodiversity in the Colombian Andes: Rural Landscapes Strategy (2001-2005)

- In order to achieve the incorporation of landscape management tools into population's daily practices, it is important to disseminate the concept of biodiversity and the actions and methodologies proposed through multiple paths. For this reason, a communications strategy based on workshops, seminars, field visits, conferences, tutoring services and assistance is required. Adjusting methodologies with partners improves ownership.

1.1.5 Links to national development goals, strategies, plans, policy and legislation, GEF and FAO's Strategic Objectives

a) Alignment national development goals and policies

The Project is consistent with the new Government of Colombia's plan (August 2014), and two strategic lines "*A better environment, taking care of the future*" and "*Let´s go for the recovery of agriculture*" that prioritize actions based on the socio-ecosystem governance (i.e.: the conservation of areas of high biodiversity value, the protection of water resources, reforestation, restoration and sustainable production).

The project is also consistent with the National Biodiversity Policy (NBP, 1996), the mechanism by which compliance is given to the CBD mandates. The NBP promotes the the declaration of PAs for under-represented ecosystems and the reduction of biodiversity loss processes. The NBP foresees the following elements: training, education and dissemination, public participation, institutional development, and establishment of information systems. The latest update NBP is based on a socio-ecosystem vision, the cornerstone of this Project.

The project is also aligned with the Policy for the Integrated Management of Biodiversity and Ecosystem Services (2012), which considers the maintenance of the structure and functioning of ecosystems for the provision of ecosystem services as a strategic objective in a context where human activities are the main driver of biodiversity loss. This Policy has 6 strategic areas: 1) Biodiversity, conservation and nature care; 2) Biodiversity, governance and creation of public value; 3) Biodiversity, economic development, competitiveness and quality of life; 4) Biodiversity, knowledge management, and information technology; 5) Biodiversity, risk management and provision of ecosystem services; and 6) Biodiversity shared responsibility and global commitments.

The project is also aligned with the National Environmental Policy for the Sustainable Development of Oceanic Spaces and Coastal and Island Zones of Colombia (2000), the Forest Policy, National Environmental Research Policy (2001), National Policy on Interior Wetlands (2001), National Environmental Education Policy (2002), National Programme on Sustainable Use of Mangroves (2002), National Policy on Green Markets

(2002), National Water Resources Policy (2010), National Risk Management Policy (2012) and National Restoration Plan (2013), National Policy on Climate Change (2012), Decree 1640 of 2012 (Watershed Planning), National Policy for the Allowance of Environmental Compensation for Loss of Biodiversity (2012).

The project is also consistent with the 2010-2019 SINAP Action Plan and its objectives: 1) to ensure the ecological representativeness of SINAP and connectivity between protected areas that integrate it; 2) strengthen the institutional capacity and develop skills and abilities of stakeholders involved in the administration and management of SINAP; 3) raise public awareness of the importance and the role of conservation of SINAP protected areas and sustainable development; 3) effectively coordinate the planning and management of protected areas in land use planning and environmental management; 4) create an inter-sectorial scenario favourable to actions for the conservation and management of SINAP protected areas; 5) generate knowledge on biological, cultural and social attributes of protected areas and systems that articulate them; and 6) monitoring target values of conservation to support decision-making on administration and management of SINAP.

The project is consistent with the 2008-2019 SIRAP Caribbean Action Plan and related programs: 1) planning; 2) conservation of biodiversity; 3) sustainable use of biodiversity; 4) institutional strengthening; 5) research and monitoring; 6) education and communication; 7) control and surveillance; and 8) financial sustainability.

The project is also consistent with the following development plans of departmental governments and the action plans of the CARs:

- Antioquia: Development Plan "Antioquia The Most Educated" with its strategic lines "Antioquia is green and sustainable" and "Regional comprehensive project for the development of Urabá"; 2012-2015 Corporate Action Plan of CORPOURABA, with the program "Management in Sustainable Production Processes".
- Bolivar: 2012-2015 Development Plan “Bolivar the Winner”, and its program “Supporting departmental environmental management”; as well as the 2010-2019 Regional Environmental Management Plan of CARDIQUE including the programs "Environmental Sustainability of Urban and Rural Development" and "Environmental Education, Communication and Citizenship".
- Chocó: the 2012-2015 Development Plan “A New Chocó to live” of the Government of Chocó, strategic area "A new Chocó to live with human and environmental safety"; the 2015 Action Plan of CODECHOCO, components “Sustainable Production” and “Institutional Strengthening and Social Participation for Environmental Management”.
- Cordoba: Management Plan for Development and Governability for the prosperity and the environmental sustainability of Cordoba 2012-2015; the CVS 2012-2015 Action Plan and its programs "The urban, productive and marine sectors aligned with environmental supply", "Strengthened institutions for regional environmental management and good governance."
- Sucre: Development Plan for 2012-2015 “Clear Actions to Leave Trace” with its focus "Sucre in harmony with nature"; and CARSUCRE 2012-2015 Action Plan, with its program “Income generation and green jobs”.

b) Alignment with NAPA, NAPs, NBSAP, NIPs, NAMA

Colombia ratified the Convention on Biological Diversity (CBD) by resolution 165 of 1994. The Project is consistent with the Fourth National Report to CBD (2010), which identified as priorities: i) the management of the country strategic ecosystems (such as wetland, *paramos*, mangroves, coral reefs); and ii) the progress in the integration of local and regional ecosystem approach as a tool for planning and environmental management.

c) Alignment with GEF focal area and strategies

The project is consistent with the following strategic objectives of the Biodiversity Focal Area: BD-1: Increase sustainability of protected area systems, and BD-2: Mainstream biodiversity conservation and sustainable use into production landscapes/seascapes and productive sectors.

Component 1 aims at achieving the expected outcome BD-2.2 *Measures to conserve and sustainably use biodiversity incorporated in policy and regulatory framework*. Component 1 will support the mainstreaming of the concept of *Socio-Ecosystem Connectivity* (SEC) (see its definition in Section 2.1) into policy instruments (land use plans and regional planning), reducing the fragmentation and improving the management and conservation of globally significant biodiversity in buffer zones between protected areas (defined as mosaics) located in six departments of the Western CRC. This component will promote socio-ecosystem connectivity corridors, covering 1,023,519 hectares in terrestrial ecosystems and 181,918 hectares in marine ecosystems.

Component 2 will focus on the expected outcome BD-1.1 *Improved management effectiveness of existing and new protected areas*. Component 2 will support the achievement of improved status and conservation management for key coastal-marine ecosystems, rainforests, wetlands, and swamp complexes. In this line, Component 2 will promote the creation of 6 new PAs (that were identified as conversation gaps) and the design of their management plans, increasing the surface of connectivity corridors of at least 10,000 hectares. The component will also support improvement in the management of seven (7) existing PAs under the sub system of protected areas at national and regional levels, covering a total of 715,418 ha; and will work with local communities through agreements for use and management of resources in 3,000 ha and the promotion of plans for sustainable production in 2,500 ha in buffer zones of PAs, reducing pressure and thus consolidating the conservation status of biodiversity in these PAs.

Component 3 will be in line with the expected outcome BD-2.1 *Increased in sustainably managed landscapes and seascapes that integrate biodiversity conservation*. The component will support the implementation of alternative models of sustainable production and strategies to ensure the supply of global ecosystem services in the CRC. This includes 2.429 ha of mosaics of conservation and sustainable use of natural resources that will contribute to strengthen the socio-ecosystem connectivity under the biodiversity conservation approach in production landscapes and seascapes. Participatory agreements for the creation of mosaics will be signed, and plans for

sustainable production will be designed and implemented in 3.200 ha benefiting 300 families, including new and/or existing certification schemes. The project will restore 100 linear km of riparian forest in the basin of the Sinu and Leon Rivers in buffer zones as a strategy for sustainable landscape management and will promote a program of technology extension and transfer of the sustainable crop production intensification approach to promote the replication of experiences and lessons learned from this component in other geographic areas of the CRC. The component is also in line with outcome BD-1.1 since the implementation of sustainable production plans will help improve the management of Civil Society Nature Reserves (CSNR), which are protected areas in a broad sense.

d) Alignment with FAO Strategic Framework and Objectives

This project is in line with FAO Strategic Framework (2014-2019), especially with Strategic Objective 2 (SO2) *Increase and improve provision of goods and services from agriculture, livestock, forestry and fisheries in a sustainable manner*, in particular with Outcome 1 (OO1) *Producers and natural resource managers adopt practices that increase and improve the provision of goods and services in agricultural sector production systems in a sustainable manner*; and outcome 2 (OO2*) Member countries strengthen governance – the policies, laws, management frameworks and institutions that are needed to support producers and resource managers in the transition to sustainable agricultural sector production systems*.

Likewise the project is consistent with regional priorities for Latin America and the Caribbean, aligning with the priority area *Climate change and environmental sustainability* [provide assistance to governments to] strengthen national programs for sustainable management of natural resources, the reduction of agro-climatic risks, mitigation of emissions and adaptation of agriculture sector to climate change in the new context of low-carbon development[51].

Finally, the project is aligned with the FAO National Priority Framework for Technical Assistance in Colombia (2012-2014)[52], Priority Area II Environment, Sustainability and Climate Change: Strengthening technical capacities in the development and implementation of measures for mitigation and adaptation to climate change, sustainable management of biodiversity and natural resources, as well as integrated risk management and watershed management, Outcome i: National / local government and entities of the public sector design and implement strategies and tools for sustainable use of natural resources and adaptation to climate change; and Outcome iii: national / local institutions and grassroots communities define and implement strategies that promote the sustainable management of natural resources, integrated land use planning, integrated watershed management and recovery of strategic ecosystems.

[51] See *Areas of Priority Actions for Latin America and the Caribbean for the Following Biennium (2014–2015), taking into account the summary of recommendations of regional technical commissions*, 32va FAO Regional Conference for Latin America and the Caribbean, Argentina, 2012.
Source: http://www.fao.org/docrep/meeting/024/md240e.pdf

[52] See FAO National Priority Framework for Technical Assistance in Colombia (2012-2014) Source: http://www.fao.org/fileadmin/user_upload/faoweb/colombia/docs/CPF.pdf

SECTION 2 – PROJECT FRAMEWORK AND EXPECTED RESULTS

2.1 PROJECT STRATEGY

Project strategy aims to achieve a reduction in the degradation and fragmentation of strategic ecosystems of CRC, by implementing a of Socio-Ecosystem Connectivity (SEC) strategy which includes inter-institutional coordination, land use planning, social participation with an intercultural vision, effective administration and management of existing protected areas, the creation of new regional protected areas and the promotion of sustainable production models. In this way the project will complement the actions of SIRAP Caribbean and contribute effectively to the development of a SEC Regional Strategy to overcome institutional weaknesses (barrier # 1), which creates inefficiencies in the management of protected areas and biodiversity loss (barrier # 2), and allow the persistence of a development model with high environmental impact (barrier # 3).

The concept of SEC is defined as the "*collective construction of mosaics of conservation and the use of spaces of socio-cultural integration to promote recovery of degraded ecosystems through the Environmental and Land Use Planning and the use of participatory management tools among institutions, communities and the productive sectors"*[53]. The *mosaic* is defined as "*the overlapping and coordination of different conservation categories in the same territory*". This approach promotes integrated conservation, restoration and sustainable use practices at the landscape level and is suitable for the local population that supports ecological viability of the PA, as well as the provision of goods and ecosystem services to surrounding communities. The mosaic is built with a bottom-up approach, prioritizing needs, opportunities and proposals responding to local interests, perspectives and initiatives, without excluding the national and global relevance of the PA.

Working with the SEC approach, the project will generate global environmental benefits developing actions at the institutional level and catalyzing the participation of civil society to the socio-ecosystem governance at two levels: 1) at the regional level through the promotion and strengthening of coordination and consultation processes and the collective creation of the SEC Regional Strategy and incorporating the SEC concept in policy planning tools and land use plans, and 2) locally or at pilot level, through the implementation of the SEC Regional Strategy in selected intervention areas (corridors and mosaics).

The Project is structured in 4 components, as detailed in sub-section 1.1.1 c) above.

The project intervention areas have been selected in continental and marine-coastal polygon of 2,900,000 hectares, in a highly degraded context composed of rainforests, dry

[53] Geographically, regional connectivity is a variable that depends on the spatial structure of the landscape and the permeability of the landscape components. The main areas are the sources of dispersion and the rest of the space components increase or decrease the flow of matter and energy through the landscape. The connectivity between two core areas also depend mainly on three properties of the landscape: the permeability of the mosaic, the presence of ecological corridors and the presence of cross points or stepping stones. From the structural point of view, biological corridors and connectivity between them are largely determined by the extension, continuity and quality of habitat (Bennett, 2004).

forests, wetlands, marshes and coastal and marine ecosystems. About 1.5 million hectares of the total are priorities areas for conservation identified by the SIRAP Caribbean Portfolio. Only 650,000 hectares are under some form of protection (PNN, Regional Integrated Management Districts, CSNR, national protection forest reserves).

Within the intervention polygon the following connectivity corridors were selected: 1) Marine corridor of *Corales del Rosario* and SB - Morrosquillo; 2) Corchal-Colorados; 3) Lower Sinu-Colorados; 3) Katios-Paramillo; and 4) Paramillo-Sinu. Table 4 below summarizes the main characteristics of these corridors. Appendix 8 includes location maps and characterization of each corridor.

Table 6:
Features of selected connectivity corridors, Caribbean Region of Colombia

	Targeted connectivity corridors				
	Marine of *Corales del Rosario and SB* – Morrosquillo Gulf	**Corchal-Colorados**	**Bajo Sinu-Colorados**	**Katios-Paramillo**	**Paramillo-Sinu**
Area	181,918 ha	50,199 ha	121.986 ha	121.875 ha	729.459 ha
Departaments	Bolivar and Sucre	Bolivar and Sucre	Bolivar, Sucre, Cordoba	Antioquia, Chocó	Cordoba
Nº of municipalities included	5	6	19	10	3
PAs	Marine Area of National Natural Park Corales del Rosario, until the area adjacent to the following points: Punta San Bernardo, Santuario of Fauna and Flora El Corchal-Mono Hernández, Forest and Zoologic Park Cacique Dulio, Integrated Management District Ciénaga La Caimanera, Regional Park Boca de Guacamaya	Santuario of Fauna and Flora El Corchal. Santuario of Fauna and Flora Los Colorados	1) Santuario of Fauna and Flora Los Colorados (NNP area selected for improving management effectiveness), 2) The Soil Conservation District of the Bañó swamp, 3) IMD Swamp complex of Bajo Sinú; 4) IMD Cispatá, 5), The swamp complex on the left bank of the lower Sinu is also included: Bañó-Los Negros, Pantano Severá-Pantano Bonito, Charco Pescao and the Civil Society Nature Reserve of Nueva Belén.	NNP Katios, NNP Paramillo, Collective territories (indigenous and black communities), Municipal and Civil Society Nature Reserve, wetlands of the lower basin of the Rio Atrato rainforest corridors Atrato -Paramillo and the forests of the western foothills of the Abibe mountains.	NNP Paramillo, Pacific Forest Reserve Zone (PFRZ), Surroundings of URRA reservoir, Indigenous Reserve of Upper Sinu.
Biological significance	• Presence of protected areas • There are 8 priority sites for conservation. • Relevance for coastal and aquatic birds.	• High biodiversity in hygrotropophytic forests of the coastal plain.	• > 50 threatened species • High diversity (more than 1,300 species of vascular plants, 101 fish and 752 vertebrate tetrapod) • Under-representation	• Located in the Chocó-Darien-Abibe ecoregion and part of the Chocó-Darien Ecoregional Complex, of high Global significance	• High endemism • Convergence zone of several bio-geographical regions (Andean, Caribbean and Chocó) • Upper Sinu has one of the best preserved forest masses of northwestern

	Targeted connectivity corridors				
	Marine of *Corales del Rosario and SB* – Morrosquillo Gulf	**Corchal-Colorados**	**Bajo Sinu-Colorados**	**Katios-Paramillo**	**Paramillo-Sinu**
	• Ecosystems and communities relevant to fisheries		of the Cartagena Biogeographic District (<2%) in the protected area system • Existence of the largest populations of migratory waterbirds in the Western Caribbean • Significance of subsistence hunting and fishing • Strategic location for the connectivity of the Sinu River corridor with NNP Paramillo	• High diversity: 487 species of plants, 177 mammals, 294 of birds, 61 of reptiles and 87 freshwater fish • Meeting point and limit of dispersion for Choco and Caribbean species • Katioa and Paramillo are key nuclear areas in the national strategy for jaguar conservation.	Colombia • 115 threatened trees species • 386 species of birds, 72 amphibians, 86 reptiles, 48 fish
Sociocultural aspects	Artisanal and industrial fishers, Afro-descendants, farmers, ranchers, traders and industrialists. Oil and coal trade. Tourism	Farmers and ranchers. Presence of indigenous councils (Zenú). Area affected by processes of violence and displacement of rural	Producers' guilds represented by loggers, fishermen, artisans, ranchers, farmers and traders. Settlements of the ancient Zenú Aboriginal culture. Indigenous	Afrodescendant, settlers and indigenous (mainly Katíos and Embera Chami). Farmer's groups. Area affected by armed conflict[54].	Mestizo population. Colonization process underway. Embera Katío indigenous settlement[55]

[54] Importance as a supplier of ecosystem services, the water supplied by the conservation mosaic is crucial to the economic sustainability of the banana agribusiness and rice crops. In addition, the drinking water in the banana district depends almost 100% on the water supply of the drainages that originate in the upper part of the western slope of the Abibe Mountains, which behaves like a water constellation distributing water to the basins of the Atrato and Leon rivers, among others. Great potential for implementing alternative projects in Yaberaradó-Polines, Chontadural Cañeros, Coribí-Bedo, Jaikerzabí indigenous territories. These territories contain more than 46,000 collective hectares, of which at least 30,000 are in very good state of conservation and should form the basis of socio-ecosystem corridor. The territory of these indigenous communities gives the opportunity to build responsible agreements, because they comprise much of what remains of the rainforest in the Urabá region of Antioquia. At least 4,000 to 5,000 hectares of these collective territories would be available for the implementation of sustainable production alternatives that allow people not to touch the natural base they possess and thus ensure the perpetuation of the great water constellation (the work constellation is used in spite of the word star because it behaves as a long line through which innumerable clean water drainages

	Targeted connectivity corridors				
	Marine of *Corales del Rosario and SB* – Morrosquillo Gulf	**Corchal-Colorados**	**Bajo Sinu-Colorados**	**Katios-Paramillo**	**Paramillo-Sinu**
		population.	communities Embera and Embera-Chami Katíos.		
Existing production systems	• Artisanal and industrial fisheries • • Tourism • Agriculture (coconut, fruit) • Extensive cattle ranching • Exploitation of mangrove	• Agriculture (yuca, ñame, maize, cocoa, avocado, beans, tobacco, plantain, fruit). • Extensive cattle ranching • Seasonal drought widespread throughout the corridor	• Mechanized Agriculture: maize and cotton • Small-scale farming: yuca, ñame, plantain, maize • Production of shrimp • Artisanal extraction of mangrove • Improved Extensive cattle ranching	• Livestock • Technified agriculture: maize, plantain, yuca, ñame, rice, cocoa, banana for export • Artisanal fisheries • Forest plantations • Traditional production systems of indigenous communities in the reserves located in the area • Logging by indigenous and peasant communities	• Traditional agriculture and to a smaller extent mechanized agriculture, (maize, rice, banana, yuca, cocoa, papaya, watermelon, vegetables, rubber and fruit) • Traditional extensive cattle ranching and improved extensive cattle ranching • Commercial Reforestation • Fishing in the Urra reservoir and rivers of the Sinu basin • Selective extraction of native forest species of high commercial value
Key stakeholders identifies	Municipality of San Antero, Municipality of San Bernardo del	Rural Table of Montes de María, Fundación Red de Desarrollo y	Asprocig, Ecombiba, Municipality of Lórica, Municipality of Cereté,	JAC Lomas Aisladas, Municipality of Turbo, Major Council of	URRA Company, Territorial Consolidation Unit – Cordoba, CERROMATOSO, GECELCA,

scatter, resembling a constellation in the landscape). Another strong aspect is the level of social and organizational cohesion of these indigenous peoples, demonstrated by their resistance and permanence on the territory despite all the vicissitudes

[55] Importance as a supplier of ecosystem services, the water supplied by the mosaic conservation is crucial for the sustainability of hydropower production (Urra I) and to maintain environmental flows of the Sinu River. This area produces a large percentage of the water supply to the flow of the Sinu River, which is critical to local communities, economic activities and to ensure ecological processes downstream (reproduction of reophylic fish, etc.). This conservation mosaic gathers indigenous population of the Upper Sinu Reserve and rural population that have been affected for many years from the rigors of the internal armed conflict. There is great potential for implementing agroforestry and silvopastoral arrangements, as well as projects of commercial plantations with native species since there is a strong forest culture and cocoa alternative projects are being implemented. Great potential for growing rubber and fruit trees like avocado, pineapple, *borojó*, citrus, guava, among others.

	Targeted connectivity corridors				
	Marine of *Corales del Rosario and SB* – Morrosquillo Gulf	**Corchal-Colorados**	**Bajo Sinu-Colorados**	**Katios-Paramillo**	**Paramillo-Sinu**
during preparation phase	Viento, Major Council Zenú, Covicompagra, Acartia Group. NNP Corales del Rosario y San Bernardo, SFF El Corchal el Mono Hernández, CVS, CARDIQUE, Government of Cordoba, Sucre and Bolivar.	Paz de los Montes de María, Zenú Major Council of San Andrés de Sotavento, University of Sucre, CARSUCRE, CARDIQUE, Municipalities of Sincelejo, Carmen de Bolivar, Governments of Sucre and Bolivar.	Municipality of San Bernardo del viento, Municipality of San Antero, Asocaimán, Asomanglebal, Activa G10, Corsoc-Asvidas, Dioceses of Montería, Municipality of Montería, CVS, Government of Cordoba.	Chigorodó, Major Indigenous Council of Mutatá, Community Council La Larga Tumaradó, Civil Society Nature Reserves Network UNGANDI, NNP Los Katios, NNP Paramillo, Municipality of Apartadó, Municipality of Chigorodó, Government of Antioquia, Government of Chocó, Codechocó, Corpourabá. Guild of banana producers, cattle-ranchers, entrepreneurs of the wood sector, palm producers, small-scale producers (pineapple, rubber, etc.). University of Antioquia, the National University of Colombia, Technological University of Choco. INCODER IGAC	CARBONES DEL CARIBE, ISA Interconexiones, INCODER, departmental cadastre, cattle ranchers guild, Chamber of Commerce of Cordoba,; Government of Cordoba, University of Cordoba, Public utility providers, Presidents of the Community Action Committees of associated municipalities. Indigenous authorities of the Upper Sinu Reserve, Quebrada Cañaveral del San Jorge. Rural and fishermen organizations.

The project will promote women empowerment through Farmer Field Schools aimed at improving female-led farm productivity, incomes and living conditions. Besides, knowledge and organizational capacity of women's networks and associations will be strengthened to improve their participation in decision-making. To this end, women networks and associations will be involved in the development of the SEC Regional Strategy, in training, technical assistance, and incentives for sustainable production. At least 30% of beneficiary farmers of Component 3 will be women.

Indigenous and Afro-descendant communities have a strong ownership of their territories with world views compatible with conservation and sustainable development patterns. The Project will strengthen the ties between culture and the environment through diverse regional identities, and will promote dialogue and exchange between technical knowledge, and traditional and ancestral knowledge. In accordance with the GEF Principles and Guidelines for Action with Indigenous Peoples, and FAO Policy on Indigenous and Tribal Peoples, the full and effective participation of different communities in project validation, development, implementation, monitoring and evaluation has been and will be promoted. Their expressions, values and socio-cultural traditions have been included in the project framework. Participation in the design and validation of the SEC Regional Strategy, the management of protected areas, and the implementation of sustainable production practices, will be ensured throughout the three project components.

2.2 PROJECT OBJECTIVES

Global Environmental Objective

To reduce the degradation and fragmentation of strategic ecosystems in the Caribbean Region of Colombia.

Development Objective

To increase and improve the provision of goods and services from agricultural, livestock and forestry production in a sustainable manner in the CRC.

Project Objective

To implement a strategy of socio-ecosystem connectivities that include inter-institutional articulation, territorial planning, social participation with an intercultural vision, effective management of existing protected areas (PAs), creation of new PAs and the promotion of sustainable production models.

2.3 EXPECTED PROJECT OUTCOMES

Outcome 1.1: The Socio-Ecosystem Connectivity approach (SEC) has been incorporated into public policy instruments (land use plans and regional planning) to improve the management and conservation of biodiversity in five departments (Bolivar, Sucre, Cordoba, Antioquia and Chocó) located in the western area of the CRC. Targeted values for this outcome are:

- 1,023,519 ha of terrestrial ecosystems and 181,918ha of marine ecosystems have contributed to increase the area of socio-ecosystem connectivity in the West CRC by direct effects of the project[56].
- Additional 1,694,563 ha of land/seascape have effectively contributed to the socio-ecosystem connectivity as indirect effect (replication) of the project.[57] (Baseline for previous indicators: The SIRAP Steering Committee is a regional body for inter-institutional and inter-sectorial coordination composed of environmental and administrative authorities, but it does not include other actors such as authorities of indigenous and Afro-descendant territories, rural communities and producers, and requires support for its consolidation as a setting of consultation and articulation).
- One (1) monitoring program of flagship species of biodiversity for each socio-ecosystem corridor, inter-institutional and with community participation, designed and implemented. (Baseline: There are no inter-institutional programs for monitoring species associated with socio-ecosystem corridors)

Outcome 1.2: The population and the different stakeholders of connectivity corridors have increased awareness of the importance of biodiversity and socio-ecosystem connectivity. Targeted values for this outcome are:

- 70% of the population has improved its perception of biodiversity and socio-ecosystem connectivities measured through surveys that include gender disaggregation.
  (Baseline: to be defined at inception /Project Year 1).
- 50% of key stakeholders (producers, indigenous and afro-descendant authorities and community leaders) have improved their knowledge, attitudes and practices for the management and conservation of biodiversity, measured by KAP[58] surveys that include gender disaggregation.
  (Baseline: to be defined at inception /PY1).

Outcome 2.1: marine and coastal ecosystems (mangroves, seagrass beds and coral reefs), forests, wetlands and swamp complexes have improved their management and conservation status. Targeted values are:

[56] Surfaces of selected connectivity corridors (see details in Table 4)

[57] The intervention area comprises a polygon of 2,900,000 hectares, made up of a highly degraded area consisting of rainforests, dry forests, wetlands, marshes and coastal marine ecosystems. Within this area are located the selected connectivity corridors, with a total area of 1,205,437 ha. The remaining area comprises indirect project intervention area (1,694,563 ha).

[58] The KAP survey measures changes in Knowledge, Attitude and Practice of a community. The first KAP survey will be conducted in PY 1, when key local actors will be identified, and will be repeated in Year 4 to measure change as a result of project interventions.

- 725,418 ha of existing and new Protected Areas (PAs) have enhanced their management and conservation status improving connectivity in forest, marsh and coastal and marine ecosystems (at least 10,000 hectares of new APs and 715,418 ha of existing APs)
  (Baseline: 72,000 ha PAs)
- 3,000 hectares of AP used by indigenous, farmers and Afro-descendants under agreements of use and management of resources incorporating SEC approach
  (Baseline: 3,000 hectares under use and management agreements)
- 2,500 ha in buffer zones covered by plans for sustainable production incorporating the SEC approach.
  (Baseline: 2,500 hectares covered by plans for sustainable production).

Outcome 3.1: The development of four (4) mosaics of conservation and sustainable use of natural resources has contributed effectively to the socio-ecosystem connectivity in the CRC. Targeted value for this outcome is:

- 2.429 ha of mosaics of conservation and sustainable use of natural resources have effectively contributed to the socio-ecosystem connectivities in the CRC (Baseline: There are two mosaics: Morrosquillo Gulf with 167,826 ha and The Peak with 1122.78 ha).

Outcome 4.1: Project implementation based on Results Based Management approach. Facilitation of the application of lessons learned from the project in future operations. Outputs corresponding to outcome 4.1 are detailed in the following Section 2.4

2.4 PROJECT COMPONENTS AND OUTPUTS

Project overview

In order to achieve the abovementioned objectives and outcomes, the project has been structured into 4 components with their respective products described hereafter:

Component 1: Strengthening institutional coordination and mainstreaming the socio-ecosystem approach in land-use planning, to reduce the degradation and fragmentation of strategic ecosystems in the Caribbean Region of Colombia.

Please see sub-section 1.1.1 c) for the Component 1 objectives. The work plan of Component 1 is fully detailed in Appendix 2 of this Project Document.

Output 1.1.1: A study of multi-criteria valuation of socio-ecosystem services and a proposal of application of incentive schemes for conservation and sustainable production.

Activities

In Project Year 1 (PY1) the Project will provide technical support for conducting a study on ecosystem services supply and demand in prioritized connectivity corridors. As part of the study the following services will be assessed: 1) provision of water, 2) water resources, 3) pollination, 4) ecotourism 5) flood control, and 6) carbon sequestration. The study will be conducted in the NNP Los Corales del Rosario and San Bernardo for tourism and recreation activities; NNP Paramillo for water supply; Soil Management

District Ciénaga de Bañó and IMD swamp complex of the Lower Sinu for flood control; RFP Serrania de La Coraza and Montes de María for the pollination service; NNP Katíos for carbon sequestration and IMD Lower Sinu for provision of hydro-biological resources.

The study will include the following sub-activities: 1) identify and map the ecological units providing services in the main ecological structure; 2) characterize biodiversity and establish service baseline; 3) analyse the socio-economic structure of the area providing the service; 4) identify the beneficiaries of the services generated by biodiversity; 5) identify and characterize the services provided by biodiversity, conduct service assessment[59].

Based on the results of the multi-criteria valuation, the Project will analyse the feasibility of the implementation of existing incentive schemes and/or PES to promote sustainable production, and will develop a proposal for applying them through Components 2 and 3[60]. The existing incentive schemes for sustainable production (MADR) will be linked with environment friendly certification/verification schemes. In this process, the project will work with MADR, with the Colombian Corporation of Agricultural Research (CORPOICA), the CARs and other relevant institutions.

The project will support the Departmental Governments in operationalizing the guidelines of the joint agenda MADR /ASOCAR to incorporate environmental issues in agricultural and rural development projects. Sixteen (16) local workshops on compensation schemes will be organized in PA buffer zones. The idea is to identify opportunities and barriers to access this type of schemes with feedback from the target population, as well as to build local capacity to design proposals for incentives access.

These actions will seek to make available to landowners, tenants, family farm units, fisheries and aquaculture nodes and other players in rural development various financing flows to promote the transition towards different sustainable production systems in Components 2 and 3.

Output 1.1.2: A Regional Strategy of Socio-Ecosystem Connectivity for reintegrating fragmented ecosystems in CRC, designed with participatory and gender approaches, implemented and monitored.

Activities

The SEC Regional Strategy will be designed in a participatory way in PY1. The construction process of the strategy will be based on the General Guidelines of the SEC Regional Strategy in the Colombian Caribbean[61].

[59] Methodological Guide for the design and implementation of payment for environmental services economic incentive –PES, Ministry of Environment (MADS,2012).

[60] This activity will take into account for example PES validated by GEF projects implemented by the United Nations Program for Development (UNDP) and the World Bank, PES for water resources in the micro watershed supplying the Municipality of Coveñas in the department of Cordoba, and in Upper Sinu in the connectivity area of NNP Paramillo and the Municipalities of Tierralta[60] and Valencia.

[61] The General Guidelines of the SEC Regional Strategy identify the vision, mission and strategic priorities of the strategy. **Vision**: By 2018 The Caribbean Region of Colombia has maintained and increased the provision of ecosystem goods and services within the National Ecological Structure through the implementation of the Socio Ecosystem Connectivity Strategy among Departments, Municipalities and

A concept paper on the SEC Regional Strategy will be developed, in order to propose and agree a replicable methodological proposal of SEC Regional Strategy. This document shall comprise the strategy's conceptual elaboration, and the methodological development. The conceptual elaboration will include: (i) the legal and political framework, management plan and Territorial Governance; and (ii) the module of SEC Strategy institutionalization and sustainability. The methodological section will include: (i) integration of participatory, gender, intercultural, intergenerational, interaction spaces approaches; and (ii) the design of a methodological guide.

Then, a GIS SEC Caribbean cartographic analysis document will be developed in coordination with the PNN CTD and the SIRAP Caribbean Steering Committee. This analysis will identify nodes of regional connectivity and define spatial management units at microwatershed and rural district scale. An initial assessment of the core area will include: (i) prioritized conservation species and areas: status, ecological integrity; (ii) opportunities for conservation: conservation status and strategic importance; (iii) threats to the core area and the macro-connectivity environment; (iv) management opportunities; (v)geo-referencing of stakeholders; (vii) economic and socio-institutional processes. The Preliminary Intervention Area will be defined by including: (i) sector of intervention; (ii) opportunities for conservation and sustainable production to be enhanced by the mosaic; (iii) management opportunities; and (iv) implementation of GIS prospective models to define mini-corridors and nodes.

The Project will undertake consultation processes at regional, departmental and municipal levels, comprising workshops, forums and virtual dialogues. One facilitator by department plus local promoters, will support the consultation at local level.

The Project will develop a monitoring program for flagship species of biodiversity, by each of the four socio-ecosystem connectivity corridors, with an inter-institutional and community-based approach. During full project preparation the jaguar - *Panthera onca* -, the *chavarri* -*Chauna chavaria* -, and hawksbill -*Eretmochelys imbricata*- and leatherback – *Dermochelys coriácea* – sea turtles have been considered as indicators of the health of inland and marine ecosystems. Flagship species will be confirmed in PY1. Baseline data will be gathered in PY1 by an institution which will sign a contract[62] of services with the executing agency (FAO). In PY2 the project will undertake the purchase of major equipment for the implementation of monitoring. In PY2 to PY4 protocols will be implemented, including measurement and collection, data analysis and reports, alerts, documents or publications will be elaborated.

CARs of its jurisdiction, incorporating the Regional Economic Development and Socio-Cultural Caribbean identities have received a renovated boost, integrating biodiversity protection and climate change mitigation as a commitment to Peace and Social Cohesion. **Mission**: To mainstream the Socio-ecosystem Connectivity Approach in the political and cultural agenda of the Caribbean Region of Colombia through the use of innovative instruments within the territorial development planning and financing mechanisms to promote social dialogue for change through Participatory Governance. **Strategic Priorities**: 1) territorial planning and management of socio-ecosystem connectivity; 2) Governance of socio-ecosystem connectivities; 3) Sustainable production systems for socio-ecosystem connectivity.

[62] The contract will cover GIS analysis, monitoring and verification of field coverage, mosaics and population viability analysis of selected species.

Output 1.1.3: Planning instruments at regional, departmental and municipal levels incorporate the Socio-ecosystem Connectivity Strategy, implemented and monitored

Activities

This output will contribute to departmental and municipal land-use planning for guaranteeing supply of ecosystem goods and services. Figures set out in the SIRAP Caribbean Portfolio and Departmental SIDAP will be used as a basis.

In PY1 the Strategic Environmental Assessment (SEA) of plans, programs and projects of agricultural and rural development will be carried out, focusing in the area of socio-ecosystem connectivity, in order to identify actions or projects that departments and municipalities should perform to overcome the difficulties in land use planning. The SEA shall include the following items: (i) strategic environmental framework of the agricultural and livestock sector in the Western CRC, preliminary assessment of policies, plans and programs that should be established; (ii) summary of the SEA to be consulted with key local stakeholders; (iii) environmental analysis and evaluation of cumulative impacts; (v) environmental assessment of alternatives; (vi) development of tools for the support of decision-making; and (vii) dissemination of results, feedback and lessons learned, communication mechanism.

Between PY1 and PY2, and using the results of the SEA, the Project will support the mainstreaming of SEC in the updating process of 5 Departmental Development Plans, 5 Municipal Land Use Plans, 5 Action Plans of Environmental Authorities, the PNN Action Plan and the SIRAP Caribbean Action Plan. Planning instruments with CSE approach will be implemented from PY2 until the end of the Project, and the implementation will be monitored during the same period.

Output 1.1.4 Inter-sectorial Platform for Information, Monitoring and Evaluation of the SEC Strategy, interoperable with the information systems of the participating entities and providing strategic guidance for decision-making, designed and functioning

Activities

This output will seek to develop an interoperable GIS-based platform for inter-sectorial information management, monitoring and evaluation of the SEC Strategy. The platform will be developed through a contract and will be based on the existing information management systems. The development of the platform will consist of four steps.

In PY1 an analysis of requirements, including the attainment of information, data quality analysis, and evaluation of thematic information needs, will be conducted. Subsequently, organization and analysis of geographic information will be undertaken. In PY2 maps, spatial data, remote sensing and other sources will be converted into a digital format. Two data will be entered into the GIS: geographical references and attributes.

In PY2-3, geo-databases, information sharing protocols, system architecture and applications, including storage, manipulation and output of data, will be designed.

In PY3-4, a pilot GIS online will be implemented. The general reference maps and information on natural hazards and natural resources will form a "knowledge library" for any GIS. Once the pilot is tested online, training and media dissemination, will be in place. Workshops have three user levels and will be planned in PY2-3 in selected locations in the Caribbean region depending on equipment facility and software advantages.

Output 1.1.5: One training program for capacity building for the management and implementation of the SEC Regional Strategy and the AMEPASP tool designed, implemented and monitored

Activities

The project will develop a training program in order to promote and strengthen local environmental governance through tools and methodologies for the management and implementation of the SEC Regional Strategy.

The training program will benefit a total of 60 representatives of the Departmental Governments of ChocO, Antioquia, Cordoba, Sucre and Bolivar, of CODECHOCO, CORPOURABA, CVS, CARSUCRE, CARDIQUE, Regional Autonomous Corporation of Magdalena (CORPAMAG), Regional Autonomous Corporation of Cesar (CORPOCESAR), Regional Autonomous Corporation of La Guajira (CORPOGUAJIRA) and Regional Autonomous Corporation of Atlántico (CRA), SIRAP Caribbean, PNN, the municipalities involved in the project in addition to SILAPs, where existing, and the traditional authorities of ethnic minorities.

In PY1 a virtual and face-to-face course will be designed by an University, through a Letter of Agreement with FAO of six-months duration. The course will include: 1) a platform for E-learning with features for online communication and collaboration; 2) a handbook containing teaching materials for each module; and 3) a training manual containing the materials, tools for dissemination and replication in different entities. The design will also take into account the implementation of a participatory and collaborative approach. The course will also include tools as discussion groups, testimonies, exchange of experiences and best practices, social mapping exercises and theoretical -practical reflection tasks.

The course will be implemented in PY 2 through virtual classroom modules and face-to-face workshops. The contents of the diploma will be planned around four main axes: 1) presentation of the Project: the Socio-ecosystem Connectivity concept, continental and marine ecosystems of the CRC, Portfolio of Priority Sites for Conservation in the Colombian Caribbean, Strategy for Socio-Ecosystem Connectivity; 2) Rights, Identity, and Citizenship: National and international legal framework, environmental and cultural rights, inter-cultural and gender matters, cultural identity; 3) Tools for the connectivity: conservation mosaics, ecosystem services, sustainable production systems, monitoring and tracking; and 4) Environmental Governance: tools for territory management, instruments for guiding decisions related to SEC, participation, coordination of different actors, negotiation and conflict management.

Three face-to-face workshops will aim at launching the training program, and training on socio-ecosystem approach (1st); exchange experiences and training on Environmental Governance through participatory methodologies (2nd); jointly develop a proposal for the implementation of new conservation mosaics (3rd).

Between PY3 and PY4, this team of trained technicians will perform replicas of training at the departmental and municipal levels in order to increase the capacity of at least 100 officers.

Output 1.2.1: **A communications strategy for positioning and dissemination of the SEC Strategy among different actors, designed in a participatory manner, implemented and monitored.**

Activities

In PY1 a communications strategy will be designed to position and disseminate the SEC Regional Strategy and give visibility to its actions, stakeholders and achievements. In a first phase, communication messages should aim at familiarizing the public with the SEC concept and its key elements (biodiversity, conservation, corridors, conservation mosaics). In a second phase, communication will focus on ongoing activities and achieved results and benefits. Messages should also highlight the cultural aspects of the connectivities. Moreover, the strategy will take into account different tools and languages for different audiences of the project. Communications will be targeted at audiences that differ by age, level of education, knowledge of the project and use of media. The project will subscribe contracts for the production, design and printing of information and communication materials.

The implementation of the strategy will be coordinated by the SIRAP Caribbean, in collaboration with PNN, MADS, INCODER CORPOICA, Departmental Governments, CARs, Indigenous and Afro-descendant Authorities, guilds and research institutes. The strategy will include the following elements: i) Project web page: will be located on the SIRAP Caribbean website, ii)_Newsletters: they will be prepared quarterly; iii) Management with the media: including contacts with the media, press releases, tours with journalists, press conferences; articles published in local and national press; iv) Social networks (Facebook and Twitter): primarily aimed at young people with permanent updating of photos, videos, news and links related to the project; v) Ads in national, local and community radio: 52 radio ads will be prepared and issued in order to inform and sensitize the population; v) Television Shows: 10 mini-documentaries of 5 minutes. Documentaries will also show the results and success stories of pilots under Component 3, in PY3-4; vi) Posters: to be placed in strategic locations and distributed to the beneficiaries; vii) Tours and field days: field visits to pilot activities implemented under Component 3 for officials from national, regional and local institutions.

Output 1.2.2: SIRAP Caribbean Environmental Education Strategy adapted to different levels, implemented in educational institutions and monitored.

Activities

The project will support the incorporating the SEC approach into the environmental education strategy[63] "*SIRAP in the School*". In PY1 the education strategy will be updated, and pilot educational institutions will be selected seeking the best possible representation between public and private, rural and urban institutions. The Inter-Institutional Technical Committees for Environmental Education (ICEE) will be trained to implementing the strategy in targeted education institutions.

A toolbox will be designed comprising 15 modules with the following topics: 1) Recognition of the environment, 2) Ownership of environmental issues knowledge, 3) Environmental Rights, 4) Cultural Rights, 5) Development of the ability to participate in the resolution and 6) Prevention of environmental problems. Each module will include a theoretical part and a practical part (games and experiential activities, dynamics, research).

The project will hire an NGO to disseminate the toolbox between PY2 and PY4. The training course will be one-year long. The Project will train 2 teachers per institution, who will then train about 40 students/institution. The latter will replicate the training to other students through a methodology called *replication to pairs in the context of required student social service*[64] The groups of the trained students will be responsible for transmitting the acquired knowledge to new groups of students, generating a multiplier effect. A total of 50 educational institutions will be beneficiaries (10 in PY2, 20 in PY3 and other 20 in PY4), providing training for 100 teachers and 2,000 students who will receive a certificate of leadership in SEC. At the completion of each annual training cycle, a formulation/update workshop will be held, and students' input will be collected.

Trainings in 50 educational institutions will be complemented by non-formal / informal educational activities (such as visits to protected areas or parks, research activities and biological pathways). Participation in these activities (both during school hours and after school) will help meet the required number of hours of student social service. The project team, in coordination with teachers and ICEEs, will identify possible activities that can be carried out in the area of influence of each institution. Thus, the articulation of the SEC initiative with other initiatives regarding environmental education in the territory will be further promoted.

Component 2: Creating new protected areas (PAs) and improving the effectiveness of existing PAs in the CRC.

[63] The SIRAP in the School Strategy seeks to integrate environmental education in the life of schools through core educational projects, stage curriculum projects, educational programs, etc. Through this space specific objectives are formulated so that from the classroom and from the school students are bound to the solution of environmental problems in a specific location or region, allowing the generation of common spaces for reflection, development of criteria of equity, tolerance, search for consensus autonomy and, last, preparing for self-management in search for an improved quality of life, which is the ultimate purpose of environmental education.

[64] The required student social service (Act 115 of 1994) is a curricular component required for the integral development of students at various levels and cycles of formal education. It aims to integrate the student to society and encourage, through their active and committed participation, the generation of lines of work and projects to address the educational, cultural, recreational, social, environmental and time efficiency needs of the population that benefits of these programs, in which young people are involved in secondary education.

Please see sub-section 1.1.1 c) for the Component 2 objectives. The work plan of Component 2 is fully detailed in Appendix 2 of this Project Document.

Output 2.1.1 Six (6) new PAs created and their management plans prepared (3Pas and 3 Civil Society Nature Reserves - CSNR)

Activities

The Project will support the creation of six new APs on the basis of the Portfolio of Priority Continental and Marine Areas for Conservation of the CRC (2009, 2010) and the guidelines for the consolidation of the National System of Protected Areas (MAVDT-National Natural Parks - PNN, 2010). Between PY1 and PY2, a research centre will be contracted to identify sites for creating RNSC and regional PAs, to hold consultation workshops with stakeholders for validation of the studies and agreement for the creation of the areas. Once obtained the PA declarations, the respective management plans will be designed.

Potential areas for the creation of proposed new APs, identified during the preparatory phase of the project, are summarized in the following table:

Table 7:
Potential areas for the creation of new regional PAs and CSNR, Caribbean Region of Colomba

Connectivity corridor	Potential area
Corchal-Colorados	Wetland complex of Canal del Dique
Lower Sinú-Colorados	Relicts of Subhumid forest Los Navas
	Basin of the Villeros Stream
	Swamp of Martinica
	Caño de La Tigrera
	Los Negros: Swamp
	Betancí Swamp
	La Pacha Swamp
	Corralito Swamp
Paramillo-Sinú	Area between the Urra dam reservoir and 40 miles downstream until the site known as "Carrizola
	Forests of the foothills of Cerro Murrucucú
	Forests of the upper eastern slopes of the Serrania de Abibe
	IMD Perico-Laguna
	DCS La Martinica
	El Bembe
	Aguapanela
	El Porvenir
Katíos-Paramillo	Northern forests of the Serranía de Abibe
	Protected Area in the buffer zone of NNP Katíos (Community Council La Larga Tumaradó)

Output 2.1.2: Improved management effectiveness of 7 existing protected areas (5 national PAs and 2 regional PAs)

Activities

The project will support the improvement of the management effectiveness of the following national PAs: 1) NNP Corales del Rosario and San Bernardo, 2) NNP Paramillo 3) NNP Katíos 4) SFF Los Colorados 5) SFF Corchal Mono Hernández ; and regional APs 6) IMD Ensenada de Río Negro, 7) IMD Cispata – La Balsa - Tinajones, all included in the selected corridors.

The selection of these PAs has been based on the following criteria: 1) These areas host most of the Western CRC biodiversity, and provide ecosystem goods and services vital for regional development, such as water regulation and provision of water resources; 2) the governance of these PAs is compromised by the strong influence of illegal groups and poverty conditions of human communities settled within or on the periphery of the areas; 3) Little or no social/municipal recognition of PAs and its potential to ensure strategic ecosystem services; PAs are perceived as obstacles to development; 4) The processes of deterioration and transformation of ecosystems and conservation targets are high in these PAs; 5) There is a need to strengthen the management of IMDs.

Table 8 illustrates the features of targeted PAs where the Project will intervene.

Table 8
Characteristics of the selected PAs of the National Park System, Caribbean Region of Colombia

PROTECTED AREA	AREA ACCORDING TO RESOLUTION (ha)	RELEVANCE	ECOSYSTEMS	MANAGEMENT PRIORITIES
PNN Paramillo	460.000	Estrella Hídrica. Biogeographic Refuge. Choco Caribbean Connection area. Source area of dispersion of the jaguar Support for strategic ecosystems such as swamps and mangroves. Territory of indigenous peoples Support to hydroelectric production	Tropical rain forest, sub-Andean forest High Andean forest, Paramo	Land Use, Occupancy and tenure. Land use management. Special management strategies. Control and monitoring.
SFF El Corchal "El Mono Hernández"	3.850	Sediment filter that protects the NNP Los Corales del Rosario y San Bernardo. Unique stand of cork. IBA recognized for the abundance of *chavarías*, ducks and herons.	Mangrove forests Swamp forests of cork.	Environmental management Control and Surveillance Research and Monitoring
PNN Los Corales del Rosario y de San Bernardo	120.000	Refuge and breeding site for maintaining trophic flows in ecosystems that enhance productivity in the region. Breeding site for colonial birds Unique landscapes of natural beauty Park with major tourists influx favoring socio-cultural development of the surrounding populations Environmental management Control and Surveillance Research and Monitoring	Coral reefs, rocky shores, sedimentary bottoms, sandy beaches, mangroves, wetlands, seagrass beds and tropical dry forest.	Regulation: Control and Surveillance Ecotourism Planning Research and Monitoring.
SFF Los Colorados	1.000	Only protected dry forest in the Montes de María best preserved relict. Strategic Pioneer Node of SILAP San Juan Nepomuceno. Important Bird Area – IBA	Tropical dry forest with transition elements to rainforest and gallery forest that increase species diversity.	Land Use, Occupancy and tenure. Regulation: Control and Surveillance Research and Monitoring.
PNN Katíos	72.000	Area declared World Heritage Site since 1994 due to its unique and exceptional value and to its importance in the exchange of fauna and flora between Central and South America. Second AP with the largest ecosystem richness of the biogeographic region of Chocó, with high degree of endemism. Reports about 30% of the birds recorded for Colombia. It is the only NNP with direct connection between a complex of marshes and wetlands and tropical rainforest. Important Bird Area – IBA	Tropical rainforest, wetlands	Control and Surveillance Research and Monitoring Special management strategies. Restoration and SSC.

PROTECTED AREA	AREA ACCORDING TO RESOLUTION (ha)	RELEVANCE	ECOSYSTEMS	MANAGEMENT PRIORITIES
DMI Cispata – La Balsa-Tinajones and surrounding areas	27.808	Mangrove conservation Genetic bank Biological indicator of climate change. Protection against floods and storms. Sediment capture Livelihood for communities Wetland with international recognition (sustainable use of mangrove wood and project of conservation of the American crocodile *Crocodylus acutus* by local communities)	Mangroves Swamps Beaches Alluvial beaches	Strengthening the capacity of participation of communities and institutions Participatory monitoring Design of a management strategy in the continental sector of the DMI
DMI Ensenada de Río Negro	30.760	Wetland complex associated with inland and sea water Dry Refuge Coastal Caribbean Plain Importance of the region as a refuge for birds and as the first rest, shelter and feeding site for migratory flocks of boreal birds, reproduction of fish species on which artisanal fishermen depend. Environmental services of water supply for human consumption for the population of Necocli Confluence of populations of five different species of primates. Presence of species of mammals and reptiles in the category of critically endangered (CR) and Endangered (EN),	According to Corine Land Cover methodology following Coverage exist: Arracachal – Bosque abierto alto Dense high forest –framented forest with pastures and cultivation –Fragmented forest with secundary vegetation – Sedimentary bottoms - Helechal No Acrostichum aureum - Dense wooded floodable grassland - Lagoons lakes and natural marshes - Mangrove Crops mosaic, pastures and natural areas pasture mosaic with natural areas - wooded pastures - weedy pastures - Clean Pastures – plantation of broadleaved - Beaches - Rios - discontinuous urban fabric	Restoration of ecosystems Sustainable production systems Management, control and surveillance Environmental education and communication Research and monitoring Ecotourism

PROTECTED AREA	AREA ACCORDING TO RESOLUTION (ha)	RELEVANCE	ECOSYSTEMS	MANAGEMENT PRIORITIES
			- high secondary Vegetation	
TOTAL (ha)	**715.418**			

The effectiveness in PA management will be improved by: i) strengthening use, occupation and tenure strategies, monitoring and control strategies; io) training PA officials, local authorities and neighboring communities; iii) integration of the SEC approach in the AMEPASP Tool; and iv) monitoring flag species.

In PY1, management plans will be developed for selected regional PAs. Between PY1 and PY4 investments will be made, including the acquisition of computer equipment and specialized software (ArcGIS Spatial Analisys -Sensors Remotes, statistical analysis for monitoring), and laboratory and monitoring equipment (photo-trapping cameras) and other equipment for monitoring flagship species (tables, stereo-microscopes, analytical balances, digital recorders), outboard engines, wooden boats for river, telecommunications equipment, pick-up trucks, solar panels. In PY2-PY4, the control and monitoring program of each PA will be developed as defined in the respective management plans.

The project will support PNN in strengthening the AMEPASP tool. Quantitative and verifiable variables on the state of conservation targets will be included. Exercises for measuring management effectiveness using this tool will be scheduled annually. The application of AMEPASP Tool will also serve as input for the compilation of the GEF BD Tracking Tool at midterm and end of project.

Output 2.1.3: Sustainable production plans incorporated into the management plans of at least 2 Regional PAs, with socio-ecosystem approach, implemented and monitored.

Activities

Sustainable production plans (PPS) with SEC approach will be incorporated in the management plans of regional PAs of marine and coastal areas. In PY1, regional PAs will be selected in a concerted manner. In PY1, a feasibility study of value chains and incentives with SEC approach will be conducted through a contract, as a basis for the development of PPS. The results of the study will be incorporated into the PPS. In PY2, SPPs on agroforestry, responsible fisheries and organic beekeeping will be designed.

A contracted institution will in PY1 design a training program in responsible fisheries (including, closures, minimum size and fishing gear), models of sustainable harvest, analog forestry and productive restoration of riparian forests. Training programs will be incorporated into the PPS. Potential incentives applicable to this activity will be based on the results of the study on incentives conducted under Output 1.1.1 (see above). Besides providing training to the beneficiaries, in PY2 to PY4 seeds and seedlings, tools and agricultural inputs will be provided to smallholders to implement the activities identified in the PPS.

Component 3: Alternative models of sustainable production and strategies to ensure the supply of local and global ecosystem services

Please see sub-section 1.1.1 c) for the Component 3 objectives. The work plan of Component 3 is fully detailed in Appendix 2 of this Project Document.

Output 3.1.1: Four (4) agreements for the creation of mosaics of conservation and sustainable natural resources use, involving key local actors

Activities

In each of the selected connectivity corridors, the Project will create mosaics[65]. Mosaics will constitute the demonstration areas to implementing alternative models, with combined strategies of sustainable production and biodiversity conservation. Mosaics will be created in a participatory manner, including a wide range of territorial stakeholders among which municipalities, environmental authorities, land owners, producers associations and grassroots organizations.

Areas with production systems contributing to socio-ecosystem connectivity have been identified within the corridors. Layers of conflict and use of the Codazzi Institute (IGAC) show information resulting of the discrepancy between the actual use of the environment made by humans and the appropriate one according to the environmental offer, or on land under or over utilization. Based on the study on "Conflicts of Land Use in Colombia" conducted by CORPOICA and IGAC, the following criteria were selected: i) conflicts in areas of water bodies, ii) conflicts in swamp areas with permanent crops, iii) conflicts in swamp areas with pasture; iv) other Artificial Coverage surfaces (urban and suburban), v) severe over-utilization, and vi) misuses in burned areas. Through this information, the affected surface area for each mosaic was obtained, totaling 48,579 ha of which the project is intended to intervene 2,429 ha[66], as detailed in Table 9.

Table 9
Mosaics and estimated surfaces of intervention, Caribbean Region of Colombia

Mosaics	Affected area	Intevention area
Corchal Colorados	8.129	406
Sinu Colorados	19.926	996
Paramillo Sinu	16.750	837
Paramillo Katios	3.774	189
Total	**48.579**	**2.429**

A research institution will be contract in PY1 to design and implement the start-up phase of the mosaics. Mosaics will be created in four phases[67]: 1) Preparatory phase: in PY1, expected duration: six months, during which the following activities will be carried

[65] As indicated in Section 2.1, the mosaic is defined *as the overlap and coordination of different conservation categories in the same territory.*

[66] For the total area of 48,579 ha three possible intervention scenarios were identified: i) 5% of intervention, equivalent to 2,429; ii) 10% of intervention, equivalent to 4,858 ha; and iii) 20% of intervention, equivalent to 9716 ha. The first scenario has been defined as the goal of the first project stage. During project implementation and under the collective process of construction of mosaics the scenarios will be periodically reviewed, adjusting surfaces if pertinent, according to the results of the process.

[67] Adapted from Montenegro et al, Patrimonio Natural, 2007, Methodological Proposal Conservation Mosaics Program, World Bank, GEF, Embassy of the Netherlands.

out: 1) adaptation of the conceptual framework to the current Colombian context and identification of ecological opportunities/threats for conservation of core areas; 2) analysis of economic and socio-institutional potential; 3) synthesis of opportunities and constraints of the project preliminary intervention area; and 4) definition of the methodology for the management of the SEC Regional Strategy with emphasis on each area of pilot intervention.

The second phase, called collective construction of the mosaics will start once the previous phase is completed and will continue permanently until the end of the project. In this phase the following activities will be undertaken: 1) collective construction including information dissemination, awareness raising and motivating of participants, 2) information / motivation, definition of a common agenda aimed at mosaic management and creation of a Mosaic Local Action Group; 3) coordination to strengthen local capacities; 4) analysis and selection of critical sites in the area covered by the program; and 5) construction of current and desired future scenarios of potential intervention areas of the SEC Regional Strategy, and systematization and organization of the information generated.

The third phase corresponds to the phase of decision making, including: 1) coordination of a shared vision of the territory; 2) formulation of subprojects; and 3) integrated incentive schemes management. The fourth phase is the implementation phase, from PY2 to PY4, covering: 1) implementation of subprojects; 2) evaluation and monitoring, including the capture and management of information, analysis of results, use of local mapping tools, and feedback and learning.

Output 3.1.2: Riparian forests in buffer zones and protected streams and canals connected with the mosaics in the basins of the Sinu and Leon rivers restored.

The project will promote the restoration of 100 km of buffer riparian areas[68] in riparian forests in the basins of the Sinu and Leon rivers. The project will support the Government of Antioquia and the Municipalities of Turbo, Chigorodó, Mutatá (Leon River axis) and the Government of Cordoba and Municipalities of Tierralta, Monteria and Cereté (middle Sinu River basin) in the development and implementation of a plan for restoration of riparian forests in the mentioned basins.

Restoration activities will be held from PY1 to PY3 and will include: 1) selection and geo-referencing of the lands where the gallery forest restoration will be performed; 2) acquisition and disinfection of seedlings, cuttings and trees; 3) weeding and seedling planting; 4) fencing planted areas as a protection mechanism, and 5) maintenance and replacement of dead trees. Seedlings will be provided by the CVS or community tree nurseries installed in demonstration farms under the FFS to be established under Output 3.1.4. Reforestation will be promoted in strips of at least 30 meters on either side of the watercourses, as prescribed in the Code of Natural Resources. As far as possible, the width of the stripes will extend to 100 meters. With respect to species to be planted, blocks formed by different species will be designed, trying to imitate the natural

[68] Buffer riparian areas form parallel protection stripes of water sources and water bodies such as rivers, creeks, streams, springs, lagoons, lakes, meanders, wetlands, marshes, etc.

conformation of the forest, for this purpose trees and shrubs native of the riparian forest will be used[69].

The project will place emphasis on promoting motivation of local stakeholders for the success of restoration activities. The mechanisms to be implemented to encourage participation of communities and land owners contemplate conducting explanatory, comprehensive and participatory workshops, as well as days of environmental awareness and education where economic, social and cultural benefits originated by restoration of riparian forests for the whole population will be justified, as well as their importance for the maintenance of biodiversity and ecosystem services.

Output 3.1.3: Sustainable production plans (SPP) in private, communal or public land, designed, implemented and monitored.

Activities

In each of the selected mosaics, the project will promote the design and implementation of sustainable production plans (SPP). In project year 1, the SPP will be prepared including: 1) selection of intervention sites; 2) an assessment of equivalence of Landscape Management Tools (LMT) and technological improvements; 3) presentation and awareness raising with potential beneficiaries; 4) LMT design (menus, biological and socioeconomic characterization) such as mini-corridors planning, forest enrichment, multi-layered living fences, agroforestry systems designs, multipurpose forest, wood storage bank, dispersed trees in pastures; 5) negotiation, implementation and maintenance of conservation activities in the territory; 6) diagnosis of technology needs; and 7) farm planning.

Table 10 summarizes the main features of the proposed production systems for each selected connectivity corridor.

Table 10
Main features of production systems, Caribbean Region of Colombia

Connectivity corridors	Proposed sustainable system	Basic characterization of current and/or proposed sustainable systems
Marine Area Corales del Rosario y SB, Morrosquillo Gulf	Aquaculture – Fishing	Through artisanal fishing for subsistence and local market supply, actions such as mangrove recovery, oyster farming, mangroves planting and farming of native species will be encouraged. Furthermore, in activities related to water bodies and marine area, community nurseries will be developed and sun-and-beach tourism and ecotourism will be promoted.

[69] Examples of potential species for restoration: Guama de mico (*Inga affinis*) and/or pichindé (*Zygia longifolia*), Achiote, montuno variety (*Bixa orellana*), Higo sato (*Ficus dendrocida*), Nigua (*Muntingia calabura*), Chengue o palo de agua (*Erythrina fusca*), Hoja ancha o Vomitón (*Coccoloba nutans*), Quina indígena (*Picramnia latifolia*), Caracolí (*Anacardiun excelsum*), Nacedero (*Trichanthera gigantea*), Carbonero (*Calliandra haematocephala*), Bajagua (*Cassia spectabilis*), Orejero (*Enterolobium ciclocarpum*), Guamos (*Inga* sp.), Guasimo (*Guazuma ulmifolia*), Camajón (*Sterculia apetala*), Hobo (*Spondias bombin*) y Olla de mono (*Eschweilera* sp.)

	Agroforestry	Area that involves traditional systems of terrestrial production mainly traditional agriculture and extensive cattle ranching, so agroforestry and silvopastoral activities are planned, involving the production of fruit and vegetables that will provide the other major production system in the area, the artisanal tourism.
Corchal-Colorados	Agroforestry	The predominant production system is traditional agriculture, resulting in extensive experience of farmers in agricultural activities, which will be enhanced through agroforestry and silvopastoral systems focused on crops of wider acceptance and projection in this corridor. In the top layer the project will work with dispersed trees, living fences, mini-forest and / or fruit trees corridors, located in the land or planted; in the middle layer with current annual or promising crops such as maize, yuca, *ñame*, *topito* peppers, eggplant, hot peppers, biofortified cowpea, diversified vegetable species, West Indian pumpkin, tobacco. Systems involving avocado, cocoa, and management and conservation practices of soil and water in the corridor are essential to deal with drought and degradation as well as with the already observed effects of Climate Change (Synergy SEC GEF - GEF support decision making Sustainable Land Management SLM.
Lower Sinú-Colorados (Montes de María area) 160 families 4.800 ha	Agroforestry	The predominant production system is traditional agriculture, resulting in extensive experience of farmers in agricultural activities, which will be enhanced through agroforestry and silvopastoral systems focused on crops of wider acceptance and projection in this corridor. In the top layer the project will work with dispersed trees, living fences, mini-forest and / or fruit trees corridors, located in the land or planted; in the middle layer with current annual or promising crops such as maize, yuca, *ñame*, *topito* peppers, eggplant, hot peppers, biofortified cowpea, diversified vegetable species, West Indian pumpkin, tobacco. Systems involving avocado, cocoa.
Lower Sinú-Colorados (Lower Sinú area) 160 families 4.800 ha	Agrosilvopastoral	In the same Lower Sinu sector there are mechanized agricultural production systems of transient mixed crops, especially in the Irrigation District La Doctrina, in addition to traditional agriculture, traditional extensive cattle ranching and silvicultural extractive especially mangrove.
	Silvopastoral	In the middle basin of the river in the tract Montería - Valencia, traditional and improved extensive cattle ranching systems predominate, medium and large scale producers.
	Agrosilvopastoral	In the upper basin of the river, in Tierralta and upstream of the Urra reservoirit is foreseen the use of agroforestry systems according to production systems identified in this sector, currently supported by FAO projects for livelihood recovery.
	Restoration of riparian forests	Corridors of the UTT in this area will be the dimensions required by riparian forests, in order to meet the expected results of 50 linear km of buffer riparian area. Sinu FFS, being implemented in the area of the river, would be necessarily working in riparian forests, in close collaboration with the work of professional and technical under component 2.
Paramillo-Sinú 250 familias 10.000 ha	Aquaculture	The topography of the area surrounding the Paramillo Park allows the development of fishponds aquaculture in bodies of water, streams and rivers, and in the tails of Urra I Reservoir Higher Sinu in a sustainable manner; generating knowledge for the improvement in the production, management, manipulation, processing and marketing of fishery and aquaculture products.
	Agroforestry	The predominant production system is traditional agriculture, resulting in extensive experience of farmers in agricultural activities, which will be enhanced through agroforestry and silvopastoral systems focused on crops of wider acceptance and projection in this corridor. In the top layer the project will work with dispersed trees,

		living fences, mini-forest and / or fruit trees corridors, located in the land or planted; in the middle layer with current annual or promising crops such as maize, yuca, *ñame*, *topito* peppers, eggplant, hot peppers, biofortified cowpea, diversified vegetable species, West Indian pumpkin, tobacco. Systems involving avocado, cocoa, and management and conservation practices of soil and water in the corridor are essential to deal with drought and degradation as well as with the already observed effects of Climate Change (Synergy SEC GEF - GEF support decision making Sustainable Land Management SLM)
	Silvopastoral	The other system that prevails in this mosaic, though on a smaller scale, is the traditional extensive cattle ranching which also results in experience for rural producers that will be enhanced through silvopastoral systems focused on pasture crops in the area surrounding the park and within it in zone of overlap with the reserves.
	Agrosilvopastoral	In the upper basin of the river, in Tierralta and upstream of the Urra reservoir it is foreseen the use of agroforestry systems according to production systems identified in this sector, currently supported by FAO projects for livelihood recovery.
Katíos-Paramillo 80 families 3.600 ha	Agroforestry	Agroforestry arrangements with species of great commercial and environmental relevance (cocoa, rubber, among others).
	Silvopastoral	In the area of El Tigre extensive cattle ranching is performed, so silvopastoral and agroforestry approaches can be proposed.
	Aquaculture	Sustainable fisheries and aquaculture in the area of Lomas Aisladas.
	Reforestation / Restoration of riparian forests	Recovery and restoration of buffer riparian areas and gallery forests. Productive - protector reforestation for floodplain area (with native species and in some cases exotic species in previously established sites).
	Ecotourism	In the NNP area several human groups coexist (farmers, indigenous and black communities) who may be interested in developing ecotourism projects.

The SPP will be implemented on the basis of the Farmer Field Schools methodology (for Agriculture, Livestock and Aquaculture) (FFS)[70] incorporating the concepts of socio-ecosystems connectivities (SEC) and sustainable production under the FFS-SEC denomination, in order to contribute not only to improving quality of life of rural families in the project area but also their environment and livelihoods.

For this purpose, in PY1 and PY2 the project will establish six Technology Transfer Units (TTU), whose location will be defined in PY1. Each TTU will be responsible for several farms, of which three (average) will function as FFS-SEC, totaling 18 FFS-SEC for the five intervention corridors. Each FFS-SEC will consist of 10 to 20 families, totaling 300

[70] The FFS approach is based on concepts and principles of people-centred learning; uses innovative and participatory methods to create a learning environment that includes learning networks, in which land users have the opportunity to learn for themselves the special problems of crop production and ways to address them, through his own observation, discussion and participation in practical field exercises. The "learning by doing" approach ensures that the dialogue of knowledge is improved based on practice, deepening and building capacity. This methodology allows to improve prior learning and to assume capacity building as an ongoing process and highly values the participation of young people, with special consideration of gender equity (http://www.fao.org/nr/land/gestion-sustainable-de-la-tierra/escuela-country-for-agricultores/es/)

families with who the adoption of sustainable intensification approach under the PPS will be promoted; at least 30% of this total will be women (female-led households, and women networks) and 30% belonging to ethnic groups. This approach is expected to directly cover 3200 ha. Table 11 below summarizes the main aspects of the implementation of the methodology.

Table 11
Main aspects of the implementation of Technology Transfer Units (TTU)/ Farmer Field Schools (FFS), in Project intervention areas

Connectivity corridor	Production systems	Number of TTUs	Number of FFS	Numbre of families	Covered surface (ha)
Marine Corales del Rosario y SB – Morrosquillo Gulf	Aquaculture – Fishing Agroforestry	1	3	50	533
Corchal-Colorados	Agroforestry	1	3	50	533
Corridor Lower Sinú – Colorados; Montes de María Region	Agroforestry	1	3	50	533
Corridor Lower Sinú-Colorados, Bajo Sinú Region	Silvopastoral, agrosilvopastoral, Aquaculture, Restoration of riparian forests	1	3	51	534
Paramillo-Sinú	Silvopastoral, agrosilvopastoral, Aquaculture	1	4	75	800
Katíos-Paramillo	Silvopastoral, agrosilvopastoral, Aquaculture, Restoration of riparian forests	1	2	24	257
		6	18	300	3.200

Training subjects of FFS-SEC will be defined after a rapid diagnosis conducted with families in each TTU, in which issues of subject to the group will be included. Through these consultations, agriculture and use of natural resources practices and gaps felt by families will be characterized. Based on the results, sessions and training materials will be designed in order to respond to the real context of farming families. The Best Agricultural Practices and Responsible Fisheries will be key subjects to be included in the training program.

The sessions of the FFS-SEC will be implemented between PY 2 and 4 in the farms of families selected as promoters. An agricultural technician in each TTU will act as facilitator, connecting with the producers, supporting the development of skills, providing materials and explaining the subjects established in the training program for farmers, as well as giving support to producers for the establishment of the LMT and implementation of best practices. The socio-ecosystem connectivity at this level will be managed between the farms that make up the FFS-SEC, where participant producers build connectivity corridors as they consider appropriate for the area. The idea is to

promote in these corridors both sustainable production systems as corridors to be implemented. Each FFS-SEC will have a community-run tree nursery, which will provide the vegetal material required for production systems and corridors to be implemented.

The project will coordinate the implementation of the FFS-SEC with the Rural Agricultural Planning Unit (UPRA) that will implement in the region the project "Strengthening planning of efficient rural land use and land improvement at national level"; with the Colombian Corporation for Agricultural Research (CORPOICA) for training activities and technology transfer to extension technicians on existing expertise in the region, and with INCODER, which works in the region through the programs Economic Incentive for Rural Direct Technical Assistance (EIRDTA), with annual calls through competitive grants, and Incentive for Special Technical Assistance in the area of Montes de Maria and in the municipalities of Tierralta and Valencia.

The project will conduct a feasibility analysis of the implementation of certification schemes for sustainable production under the SPP, and in particular the promotion of national level schemes, such as the Ecological Food Label of MARD and the ICA GAP-GLP certification. Moreover, based on the results of the feasibility analysis of implementation of incentive schemes and compensation / payment for environmental services conducted under the Output 1.1.1, the project will disseminate information on the applicable schemes in the project connectivity corridors so that they can be known by the producers, who may have greater access to these schemes in order to implement best practices of sustainable production under the SPP.

The implementation of the SPP will be monitored taking into account aspects such as the number of rural households that validate sustainable and socio-ecosystem connectivity technologies, number and area of plots for sustainable intensification, institutions adopting the approach of sustainable intensification, socio economic aspects of the farms, among others. Monitoring will allow comparing the background knowledge, the final constructions, the application of practices in the farms and follow up to facilitators and organizations, seeking a feedback that will allow adjustments in the teaching-learning process.

Output 3.1.4: Program for the extension and transfer of the sustainable crop production intensification approach in priority corridors designed, implemented and monitored

Activities

This output seeks to encourage the replication of project experiences and lessons learned on sustainable production and conservation to other areas of SEC corridors. In order to do this, in PY 2 the project will design a program for the extension and transfer of the sustainable intensification of production approach (SCPI), incorporating the SEC vision and including the interventions related to the promotion and dissemination of integrated incentive scheme sustainable production.

This program will include the following components: 1) market analysis of four prioritized value chains; 2) selection of rural districts and farms, and formulation of strengthening and marketing strategy; 3) development of partnerships among

producers, processors, distributors, authorities and supporting institutions; 4) dissemination and training through various public and private organizations and GAP/GLP and Responsible Fisheries pilot sites, and the establishment of agreements for the development of local experiences among MADR and the area of Ecological Food Label, certifying companies selected according to the priority chains and farmers; 5) development of an IT tool to monitor the levels of advancement –opportunities – barriers in the implementation of the GAP/GLP and responsible fishing, as well as certification and verification standards promoting conservation and sustainable use of biodiversity; 6) capacity building aimed at departments, municipalities and associations, for the design and implementation of financial incentive schemes such as the Rural Technical Assistance Incentive incorporating LMT, promoting access to rural credit in ways that support sustainable production, for example IRC and FIC; design and implementation of property tax exemption incentive in SEC territories. (Survey of cadastral information, coverage and soil suitability); 7) design of proposals for new credit lines with Public and Private banking sector (MARD FINAGRO, FINDETER, Agricultural Bank) directed the producers to promote certification, verification and implementation of reforestation for environmental services (water and carbon) and transition or conversion to ecological farming; 8) Negotiation of incentive scheme, socioeconomic viability and development of municipal agreements; 9) coordination of farm certification and verification, promotion of value chains, property tax exemption with the tools of landscape management and pilot compensation scheme for ecosystem services. The program will be implemented and monitored as of year 3.

Component 4: Project M&E and information dissemination

Output 4.1.1: Monitoring system project operating and providing systematic information on progress in reaching expected outcomes and targets

Activities

Between PY 1 and PY4, the Project Coordinator will prepare six-monthly Project Progress Reports (PPRs). The PPRs include the project results framework with project outputs and outcomes indicators, baseline and six-monthly target indicators, the monitoring of the risk matrix, and identifies potential risks and mitigation measures to reduce those unexpected risks. At the end of each year, the Project Technical Chief will provide appropriate inputs to the Lead Technical Officer (LTO). The LTO-FAO will be responsible for preparing the yearly Project Implementation Review (PIR). The PIR includes the project results framework with project outputs and outcomes indicators, baseline and yearly target indicators, the monitoring of the risk matrix, and will identify potential risks and mitigation measures to reduce those unexpected risks. The project will issue a publication on lessons learned.

Output 4.1.2: Mid-term and final evaluations

Activities**:**

After 24 months of project implementation, a mid-term project evaluation will be conducted by an external consultant, who will work in consultation with the project team including the FAO Independent Evaluation Office (OED), the FAO-GEF Coordination Unit, the LTO, and other partners. Three months before the end of project

implementation (month 45) a final project evaluation will be conducted by an international external consultant under the supervision of FAO OED, in consultation with the project team including the FAO-GEF Coordination Unit, the LTO, and other partners.

2.5 GLOBAL ENVIRONMENTAL BENEFITS/ADAPTATION BENEFITS

The project will contribute to the capacity building of MADS, PNN, SIRAP Caribbean, departmental governments of the western part of the CRC and CARs and municipalities involved, to the increase in environmental awareness and education of civil society, and to the improvement of knowledge, attitudes and practices of farmers and local communities, so that the following global environmental benefits will be generated:

i) Incorporation of socio-ecosystem connectivity in 1,205,437 ha of corridors to be established by the project (1,023,519 hectares corresponding to terrestrial ecosystems and 181,918 hectares corresponding to coastal and marine ecosystems) through participatory strategies and decision making processes that incorporate the SEC approach to strengthen the capacity of these ecosystems to provide ecosystem services.

ii) Improvement of the conservation status and management of marine and coastal ecosystems (mangroves, seagrass beds and coral reefs), forests, wetlands and swamp complex and increased connectivity in:

   a. 10,000 has been included for six (6) new AP located in ecosystems and areas of biodiversity nationally and globally significant and that were not represented or protected;

   b. 715,418 ha in seven (7) existing APs have improved management effectiveness, increasing APs sustainability;

   c. 3,000 hectares of APs used by indigenous and Afro-descendant communities under to resource use and management agreements incorporating the SEC approach;

   d. 2,500 ha with models of sustainable production and use of natural resources incorporating the SEC approach in buffer zones (e.g. sustainable fishing and aquaculture practices, silvopastoral practices and others) to reduce the impact on terrestrial and coastal and marine protected ecosystems;

   e. 2.429 ha of mosaic of conservation and sustainable use of natural resources constituted within connectivity corridors as demonstration areas to promote development initiatives that reconcile the conservation and sustainable use.

iii) A program for monitoring flagship species of biodiversity in each connectivity corridor, inter-institutional and with community participation will help to monitor the health of continental and marine ecosystems in the corridors.

iv) The restoration of 100 linear km of riparian forests for reconnecting forest relicts in the area of project intervention and the provision of shelter and food to large carnivore species.

v) The integration of the SEC approach for the conservation and sustainable use of biodiversity in public policies of 5 departments (Antioquia, Bolivar, Chocó, Cordoba and Sucre), including departmental development plans, land use plans, and action plans of the environmental authorities involved.

The project will also generate global environmental benefits contributing to the Aichi Biodiversity Targets # 1, 5, 7 and 11 through the following outcomes:

Aichi Biodiversity Targets	**Project outputs**	**Selected SMART Indicators**
***Target** 1 - By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.*	One training program for capacity building for the management and implementation of the SEC Regional Strategy and the AEPMAPPS tool (60 staff directly trained and 100 additional via replica) Communication strategy for positioning and dissemination SEC Strategy among different actors SIRAP Caribbean Environmental Education Strategy adapted to different levels, implemented in educational institutions and monitored.	70% of the population has improved its perception of biodiversity and socio-ecosystem connectivities measured through surveys that include gender disaggregation. 50% of key stakeholders (producers, community leaders) have improved their knowledge, attitudes and practices for the management and conservation of biodiversity, measured by surveys that include gender disaggregation.
***Target** 5: By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.*	Six (6) new PAs created and their management plans prepared (3Pas and 3 Civil Society Nature Reserves - CSNR) Enhanced management effectiveness of 7 existing protected areas (5 national PAs and 2 regional PAs) 50 linear Km of riparian forests in buffer zones and protected streams and canals connected with the mosaics in the basins of the Sinu and Leon rivers, restored. Platform for Information, Monitoring and Inter-sectorial Evaluation of the SEC Strategy, interoperable with the information systems of the participating entities and providing strategic guidance for decision-making, designed and functioning	725,418 ha of existing and new Protected Areas (PAs) have improved their management and conservation status improving connectivity in forest, marshy and coastal and marine ecosystems (at least 10,000 hectares of new APs and 715,418 ha of existing APs) 3,000 hectares of AP used by indigenous and Afro-descendants under agreements of use and management of resources incorporating SEC approach

Aichi Biodiversity Targets	Project outputs	Selected SMART Indicators
***Target** 7: By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.*	Sustainable production plans (SPP) in private, community or public land, designed, implemented and monitored One program for the extension and transfer of the sustainable intensification approach in priority corridors designed, implemented and monitored	2.500 ha in buffer zones covered by plans for sustainable production incorporating the SEC approach. 3.200 ha under sustainable production plans with existing and new certification schemes in private, community or public land, designed, implemented and monitored (300 producers - 30% women and 30% members of ethnic groups)
***Target** 11: By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.*	Six (6) new PAs created and their management plans prepared (3Pas and 3 Civil Society Nature Reserves - CSNR) Enhanced management effectiveness of 7 existing protected areas (5 national PAs and 2 regional PAs) 4 agreements for the creation of mosaics of conservation and sustainable use involving key local actors (municipalities, environmental authorities, landowners and producer organizations) Regional Strategy for Socio-Ecosystem Connectivity for reintegrating fragmented ecosystems in CRC, designed with participatory and gender approaches, implemented and monitored 17 planning instruments at regional, departmental and municipal levels incorporate the Socio-ecosystem Connectivity Strategy, implemented and monitored (5 Departmental Development Plans, 5 Land use Plans, 5 Action plans of the environmental authorities, 1 Action plan o SIRAP Caribbean, 1 Institutional Action Plan of PNN)	1,023,519 ha of terrestrial ecosystems and 181,918ha of marine ecosystems have contributed to increase the area of socio-ecosystem connectivity in the West CRC by direct effects of the project. Additional 1,694,563 ha of land / seascape have effectively contributed to the socio-ecosystem connectivity as indirect effect (replication) of the project 4,858 ha of mosaics of conservation and sustainable use of natural resources have contributed effectively to the socio-ecosystem connectivities in the CRC

2.6 COST EFFECTIVENESS

The proposed project has the primary objective of ensuring long-term sustainability of ecosystem and globally relevant biodiversity in the Caribbean Region of Colombia. To achieve this goal, the project has identified three main types of interventions. First,

strengthening inter-institutional coordination and incorporation of socio-ecosystem connectivities approach in territorial planning in order to reduce degradation and fragmentation of strategic ecosystems of the Caribbean Region. Second, the creation of new protected areas and the improvement of management effectiveness of existing protected areas in the region. Finally, the development of alternative models of sustainable production and strategies to ensure the supply of local and global ecosystem services. These three types of interventions are a cost/effective way of removing the barriers and addressing the threats to global environmental benefits identified during full project preparation. The project is cost-effective because it complements the baseline initiatives, skills and infrastructure, national and local policies. The project have identified a number of strategies and methodologies that are complementary and synergic among them:

i) The generation of a regional SEC strategy will provide a framework for long-term sustainable development throughout the region.
ii) Strengthening capacities to improve inter-institutional and inter-sectorial coordination will enhance synergies, avoid duplication of efforts, and reduce the implementation costs.
iii) The participation of key stakeholders will ensure that decision-making and project implementation will be aligned to local development priorities and initiatives in priority connectivity corridors.
iv) Training and awareness-raising of producers and local communities will contribute to sustainable production and the application of appropriate technologies.
v) The synergy generated by the improved management of existing PAs and the creation of new PAs will strengthen biodiversity protection in the SINAP, regional and local sub-systems.
vi) The area of protected ecosystems that are underrepresented and the connectivity between them will increase.
vii) Promotion of best production practices following the concept of sustainable intensification of production with SEC approach, agroforestry, agrosilvopastoral and silvopastoral systems, and forest restoration will contribute to sustainable natural resources management in the connectivity corridors, reducing pressures on ecosystem services within and outside protected areas.
viii) The promotion of traditional knowledge of farmers, indigenous peoples and Afro-descendant communities regarding the management and use of natural resources will contribute to the sustainability of production practices.
ix) The feasibility analysis of the implementation of incentives (monetary and non-monetary), compensation schemes / payments for environmental services and production certification, allow to identify the long-term financial sustainability.
x) The communication strategy includes tools that allow low cost dissemination of the SEC Regional Strategy. Project partners have partnerships with community-based radio stations which will allow reaching a wide audience in a cost-effective way.
xi) The implementation model of sustainable production plans through Technology Transfer Units will cover important areas, and participating farmers will be trained to be promoters of sustainable production practices, ensuring their cost-effective dissemination.

xii) The generation of an extension and transfer program will contribute to the scale-up of sustainable production, helping the effective management of natural resources and biodiversity at the regional level.
xiii) The systematization of experiences and lessons learned made available to project executing partners and key stakeholders will also contribute to a cost/ effective replication of project results in the region.

2.7 INNOVATIVENESS

Project innovativeness lays on the promotion of environmental governance with a vision of socio-ecosystem connectivity. The Project is innovative by promoting the integration of the SEC approach in policy planning, including the development of a regional strategy,; and capacity building of stakeholders for the socio-ecosystem environmental governance.
The Project also will be innovative in promoting sustainable agricultural and fisheries production, incorporating the socio-ecosystem approach at farm and community level. To complement these activities, the project will contribute with surveys and feasibility analysis of potential incentives and certification schemes. The Project will improve the farmers' and communities' livelihoods through sustainable production systems.

The Project recognizes the importance of intercultural aspects, the linkages between culture and the environment through diverse regional identities, and promotes dialogue and exchange between technical knowledge and traditional and ancestral knowledge. The expressions, values and socio-cultural traditions of ethnic communities are properly valued.

Project results will serve to inform and share experiences with future programs, projects and initiatives at national and local level on socio-ecosystem connectivities and biodiversity conservation (including the central government, departmental and municipal governments, civil society and private organizations).

SECTION 3 – FEASIBILITY (FUNDAMENTAL DIMENSIONS FOR HIGH QUALITY DELIVERY)

3.1 ENVIRONMENTAL IMPACT ASSESSMENT

Following FAO's *Environmental Impact Assessment (EIA): Guidelines for FAO Field Projects*[71], the proposed Project is classified under category B[72]. The corresponding Environmental and Social Review Form[73] is attached in Appendix 9.

3.2 RISK MANAGEMENT

Project risks have been identified and analysed during the full project preparation and mitigation measures have been incorporated into the project design (see Risk Matrix in Appendix 4). With the support from and under the supervision of FAO, the Project Management Committee (PMC) will be responsible for the day-to-day management of these risks and the effective implementation of mitigation measures. The project´s M&E system will serve to monitor project outcomes and outputs indicators, project risks and mitigation measures. The PMC will also be responsible for monitoring the effectiveness of mitigation measures and adjusting mitigation strategies as needed, and identify and manage any eventual new risks not foreseen during project development, in dialogue with other project partners.

Project risks have been identified and analysed during the full project preparation and mitigation measures have been incorporated into the project design (see Risk Matrix in Appendix 4). With the support from and under the supervision of FAO, the Project Management Committee (PMC) will be responsible for the day-to-day management of these risks and the effective implementation of mitigation measures. The project´s M&E system will serve to monitor project outcomes and outputs indicators, project risks and mitigation measures. The PMC will also be responsible for monitoring the effectiveness

[71] See http://www.fao.org/docrep/016/i2802e/i2802e.pdf

[72] Category B projects should not entail significant (or potentially irreversible) negative environmental (and associated social) impacts, but may still have adverse effects which can be mitigated with suitable preventive actions. An indicative list of projects that would normally be assigned to Category B includes: i) Agro-industry projects of small and medium scale; ii) Water impoundment, irrigation and drainage schemes of small scale; iii) Small and medium-scale agricultural and animal husbandry production schemes which involve the use of "exogenous" technology and/or inputs (i.e. cultivation or animal husbandry techniques, agricultural or post-harvest machinery, disease and pest control, seeds, fertilizer, and tools that are not commonly used/traded in the project area); iv) Watershed management or rehabilitation, river basin management planning, international water management, and agreements for medium-size projects; v) Range and pasture management and livestock management, including waste control and livestock health aspects; vi) Small and medium-size aquaculture, including small and medium-scale industrial and artisanal fisheries; vii) Limited bioenergy projects; viii) Climate change adaptation projects; ix) Small and medium-size plantations for bioenergy or pulp or other agricultural use; x) Reforestation/afforestation; xi) Forest industry development including industrial and community uses; xii) Introduction of genetically modified organisms; xiii) Small and medium-size road construction, maintenance and rehabilitation; xiv) Significant changes in plant and animal gene pool; xv) Land use changes affecting biodiversity; xvi) Projects that may have potentially minor adverse impacts on physical cultural resources

[73] Ranking under Category B is to be certified by the FAO Lead Technical Officer (LTO) who can proceed to final design and implementation phases. The FAO LTO should carefully fill-in the FAO Environmental and Social Review Form – attached in Appendix 8.

of mitigation measures and adjusting mitigation strategies as needed, and identify and manage any eventual new risks not foreseen during project development, in dialogue with other project partners.

The six-monthly Project Progress Report (see section 4.5.3) is the main tool for project risk monitoring and management. The reports include a section on systematic follow-up of risks and mitigation actions identified in previous reporting periods. The PPRs also include a section for identification of eventual new risks or risks that still need attention, their rating and mitigation actions, as well as the responsible for monitoring those actions and the expected timeline. FAO will monitor the project risk management closely and follow up if needed by providing support for the adjustment and implementation of risk mitigation strategies. Reporting on risk monitoring and rating will also be part of the annual Project Implementation Review (PIR) prepared by FAO and submitted to the GEF Secretariat (see section 4.5.3).

3.2.1 Risks and mitigation measures

The table in Appendix 4 summarises the risks identified and analysed during the full project preparation, its probability of occurrence and proposed mitigation measures.

3.2.2 Fiduciary risk analysis and mitigation measures (only for NEX projects)

N/A

SECTION 4 – IMPLEMENTATION AND MANAGEMENT ARRANGEMENTS

4.1 INSTITUTIONAL ARRANGEMENTS

a) *General institutional context and responsibilities*

Besides FAO as GEF agency, the main institutions involved in the project will be the Ministry of Environment and Sustainable Development, National Natural Parks of Colombia, the Regional System of Protected Areas (SIRAP) Caribbean, the Ministry of Agriculture and Rural Development, the Departmental Governments of Antioquia, Bolivar, Chocó, Cordoba and Sucre, the Autonomous Regional Corporation of Sucre, the Autonomous Regional Corporation for the Sustainable Development of Chocó, the Corporation for the Sustainable Development of Urabá, the Regional Autonomous Corporation of Canal del Dique and the Regional Autonomous Corporation Sinu and San Jorge Valleys.

The Ministry of Environment and Sustainable Development (MADS) will be the project implementing partner. MADS will be responsible for ensuring the general coordination of the project, as well as coordination and collaboration with departmental governments, the CARs, local community organizations and other entities participating in project.

b) Coordination with other ongoing and planned related initiatives

FAO and the project executing partners will collaborate with the GEF implementing agencies of other GEF-supported programs and projects to identify and facilitate synergies, as well as with other agencies that support projects financed by other donors. Collaboration will be undertaken through: (i) informal communications among GEF agencies and implementing partners of other programs and projects; and (ii) exchange of information and dissemination materials between projects. In order to guarantee an effective coordination and collaboration between different initiatives, specific coordination responsibilities have been assigned to the Project Management Implementation Unit (see below) and included in the terms of reference of the Project Management Committee, which results shall be explicitly reflected in the Project Progress Reports (PPRs).

The project will coordinate actions with the following GEF projects:

- Project GEF-UNDP # 4772: "*Sustainable use and conservation of biodiversity in dry ecosystems to ensure the flow of ecosystem services and mitigate deforestation and desertification*," which seeks to reduce deforestation and desertification processes in dry forest ecosystems of Colombia, strengthening the institutional framework and policy management. Indirectly, these actions will enable the development of connectivity with other types of ecosystems in the region, especially coastal marine and humid located upstream, which will be covered by the project proposed by FAO.
- Project GEF-IADB # 4849 "*Sustainable Management and Biodiversity Conservation in the Magdalena River Basin*", whose purpose is the restoration of the Magdalena basin. The department of Antioquia is covered by this project, although the implementation of field actions in this area is not planned. This confluence territory within the Magdalena River Basin represents 14% of the area to be covered by the project of socio-ecosystem

connectivity (FAO).

- Project GEF-UNDP #4916 "*Biodiversity Conservation in Landscape Impacted by Mining in the Chocó Biogeographic Region*", which aims to safeguard the biodiversity of this biogeographic region from the direct and indirect impacts of mining gold, silver, and platinum. The FAO project proposal will work in the Chocó Department, only covering the National Natural Park Katios (Component 2), to ensure the mainstreaming of the SEC concept into the Land Use Plans and other policy tools, in coordination with the departmental government (Component 1).

4.2 IMPLEMENTATION ARRANGEMENTS

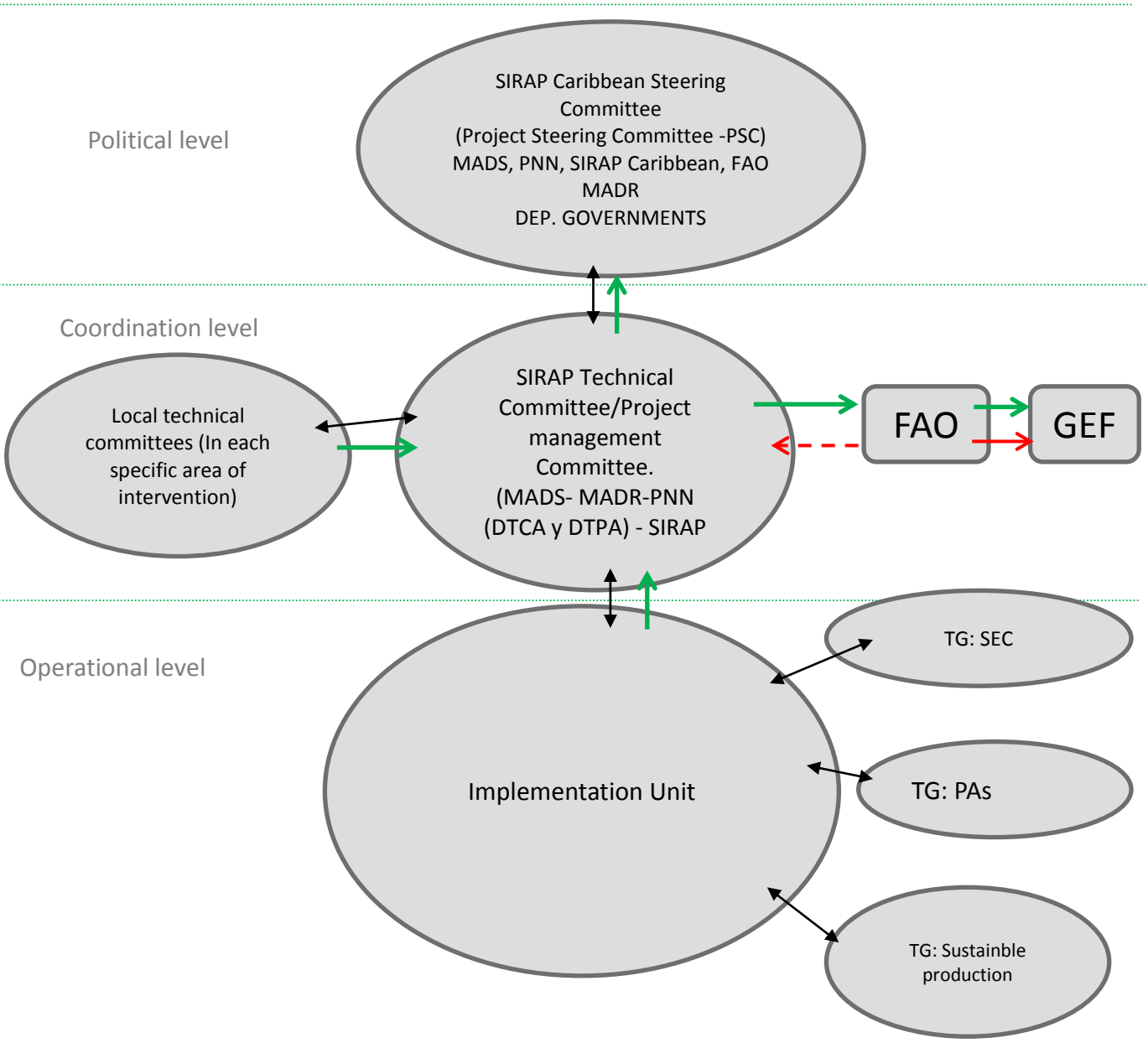
FAO will be the GEF Agency responsible for supervision and provision of technical guidance during project implementation. In addition, FAO will act as financial and operational Executing Agency, and will be responsible for the financial and operational execution of the project in addition to being the GEF implementing agency. FAO will delivery procurement and contracting services to the project using FAO rules and procedures, as well as financial services to manage GEF resources.

For the execution of the project, a **Project Steering Committee (PSC)** will be set up to provide oversight of and coordinate the planning of project implementation, and will comprise MADS, NPP, SIRAP Caribbean, the Ministry of Agriculture and Rural Development, the Departmental Governments of Antioquia, Bolivar, Choco, Cordoba and Sucre, the Autonomous Regional Corporation of Sucre, the Autonomous Regional Corporation for the Sustainable Development of Choco, the Corporation for the Sustainable Development of Uraba, the Regional Autonomous Corporation of Canal del Dique and the Regional Autonomous Corporation Sinu and San Jorge Valleys and FAO (subsection 4.2.3 below details the functions of the PSC). The Project Steering Committee will meet within the framework of SIRAP Caribbean Steering Committee, extended to members who do not normally participate in this committee (FAO, MARD, and Departmental Governments).

More specifically, the project will be executed through the **Project Management Committee (PMC)** made up of delegates of the following institutions: MADS, the Direction of PNN Caribbean Territorial Division, the Direction of PNN Pacific Territorial Division, the Technical Secretariat of the SIRAP Caribbean, MADR, each one of the Departmental Governments participating in the project, FAO and at least one representative of the civil society. The Technical Committee is responsible for decision-making, give guidelines and oversee the actions of the Project Implementation Unit, led by the Regional Coordinator of the Socio-Ecosystem Connectivity Strategy. The Project Management Committee will meet within the framework of SIRAP Caribbean Technical Committee, extended to members who do not normally participate in this committee (FAO, MARD, and Departmental Governments).
The Project Team responsible for the daily execution will be based in FAO offices in Monteria (subsection 4.2.3 below details the functions of the Project Management Committee).
The project will be technically executed by the project team in close coordination with competent partner authorities. Particularly, component 1 (SEC strategy, education and

communication) will be led by the SIRAP Caribbean, component 2 (PAs) by PNN and component 3 (sustainable production) by MADR.

Figure 4.1: Institutional Arrangements for Project Implementation



Coordination
Financial reports
Progress reports

To undertake these activities, the MADS, PNN, SIRAP Caribbean and FAO will designate a **National Project Director (NPD)**. The NPD will be a government staff and will have the responsibility of supervising and guiding the Regional Coordinator of the Socio-Ecosystem Connectivity Strategy (see below) with regard to policies and priorities framework. He/she will also be responsible for coordinating the activities with all institutional bodies related to the different project components, as well as with the project partners. He/she will be responsible for requesting FAO the timely disbursement of GEF resources that will allow the execution of project activities, in strict accordance with the Project Results-Based Budget and the approved Annual Work Plan and Budget (AWP/B) for the current project year.

A **Project Implementation Unit** made up of a GEF-financed **Project Team (PT)** will be established. The main responsibility of the PT, following the directives and decisions of the Project Steering Committee and the Project Management Committee (see Figure 4.2 below) and under the supervision of the NPD, is to ensure coordination and execution of the project through the rigorous and effective implementation of the AWP/B.

Under the supervision of the NPD, the PT will be headed by the **Project Coordinator /** Coordinator of the Regional Strategy of Socio-Ecosystem Connectivity **(CRS)** (financed by GEF funds) who will be in charge of project daily management and technical supervision including: i) coordinate and closely supervise the implementation of project activities; ii) day-to-day project management; iii) coordination with related initiatives; iv) ensuring collaboration between the participating national, provincial and local institutions and organizations; v) implement and manage the project M&E plan and its communication program; vi) prepare the Project Progress Reports (PPRs), containing information on the activities carried out and the progress in the achievement of outcomes and outputs; vii) organize annual project workshops and meetings to monitor project progress and will prepare the Annual Work Plans and Budgets (AWP/B); vii) submit PPRs together with the AWP/B to the Project Management Committee (PMC) for approval and presentation to the Project Steering Committee (PSC) and FAO; viii) act as secretary to the PMC, PSC, and Steering Committees and the Partners´ Coordination and Support Group; ix) supporting the preparation of PIRs, mid-term and final evaluations.

Moreover, following FAO rules and regulations and in accordance with the Project Document and the AWP/Bs, the CRS will assist the NPD in the identification of targeted expenditures and disbursements that should be requested to FAO for timely project execution. The CRS will supervise the work of, provide technical backstopping, and assess the reports and outputs produced by project national consultants (financed by GEF funds).

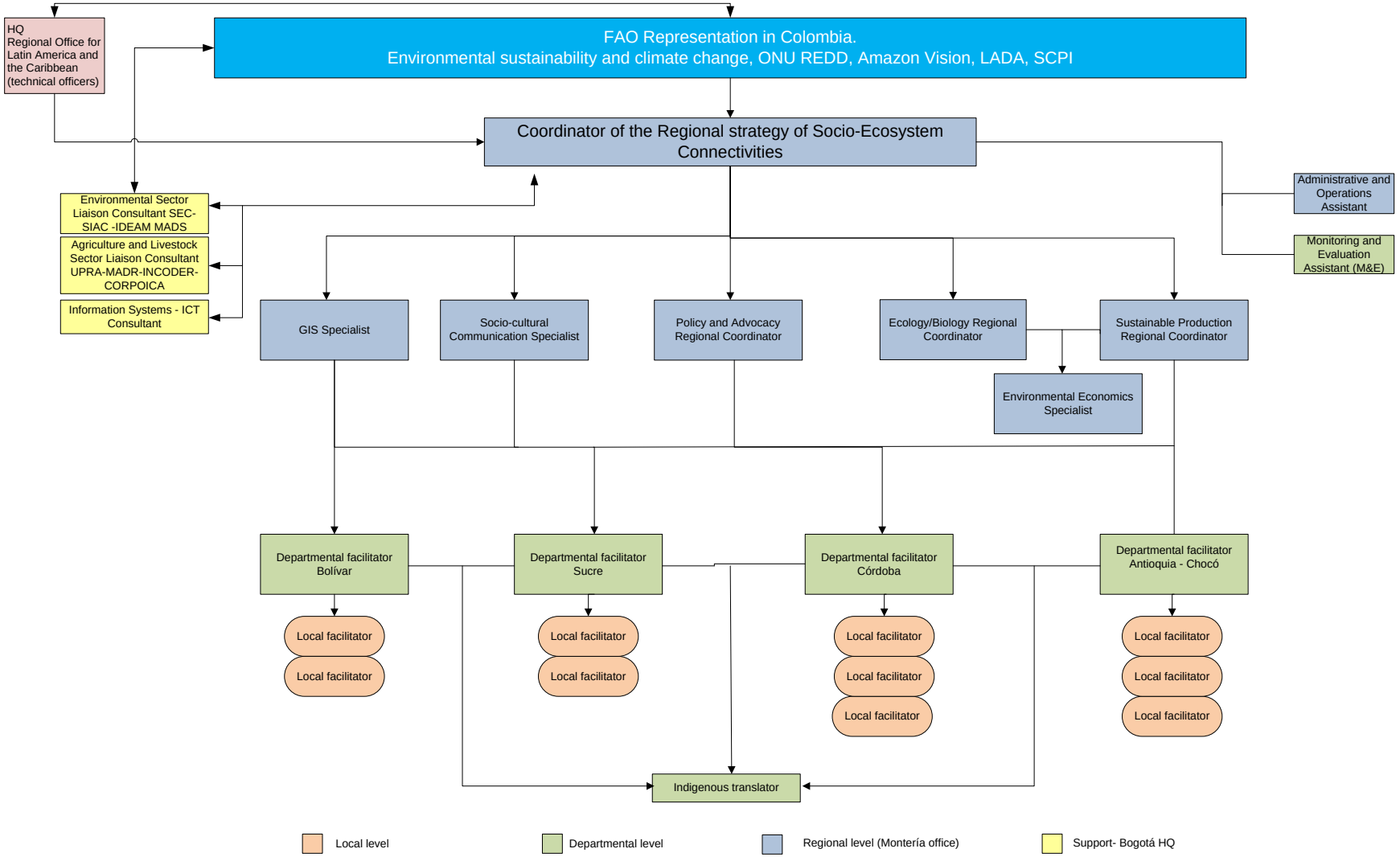
The **National Budget and Operations Officer** will be responsible for the day-to-day financial management and operation of the project including raising contracts and procure other needed inputs in accordance with the approved budget and annual work plans. The Budget and Operations Officer will work in close consultation with the NPD, PTC, Budget Holder (BH, see below), Lead Technical Officer (LTO, see below) and project executing partners, particularly with the FAO Representation in Colombia (FAOCO), and will take the operational responsibility for timely delivery of needed inputs to produce project outputs.

The Draft Terms of Reference (TORs) of the Project Coordinator and the Project team are attached in Appendix 6. Before the commencement of project implementation, these

TORs, contract(s) and Letter(s) of Agreement to be signed in PY1, will be reviewed and approved by the Project Steering Committee and/or the Project Technical Committee.

Figure 4.2 illustrates the Project Team composition.

Figure 4.2: Project Team composition



Co-financed staff

The following government staff will be assigned to the Project:

- National Project Director (NPD)

4.2.2 Roles and responsibilities of the GEF agency

FAO will be the GEF Agency of the Project as well as the financial and operational executing agency. As the financial and operational executing agency FAO will provide procurement and contracting services and financial management services of GEF resources. As the GEF Agency FAO will supervise and provide technical guidance for the overall implementation process. Administration of the GEF grants will be in compliance with the rules and procedures of FAO, and in accordance with the agreement between FAO and the GEF Trustee. As the GEF agency for the project, FAO will:

- Administrate funds from GEF in accordance with the rules and procedures of FAO;
- Oversee project implementation in accordance with the project document, work plans, budgets, agreements with co-financiers and the rules and procedures of FAO;
- Provide technical guidance to ensure that appropriate technical quality is applied to all activities concerned;
- Carry out at least one supervision mission per year;
- Report to the GEF Secretariat and Evaluation Office, through the annual Project Implementation Review, on project progress and provide financial reports to the GEF Trustee.

Based on a request from the Government of Colombia, FAO will also be the financial and operational executer of the GEF resources including financial management, procurement of goods and contracting of services following FAO rules and procedures. As the financial executer, FAO will provide six-monthly financial reports including a statement of project expenditures to the NPD Project Steering Committee (PSC) and the Project Management Committee (PMC). In accordance with the present project document, progress in the financial execution of the project, and the Annual Work Plan and Budget approved by the PSC, FAO will prepare budget revisions to maintain the budget current in the financial management system of FAO. The budget revisions will be provided to NDP, PMC, and the PSC to facilitate project planning and execution. FAO will, in collaboration with PT and the PMC, participate in the planning and execution of contracting and procurement processes. FAO will also process due payments for delivery of goods, services and products upon approval by the PMC in consultation with the PMC.

The FAO Representative in Colombia will be **the Budget Holder (BH)** and responsible for the management of the GEF resources. As a first step in project start-up, the FAO Representation in Colombia will establish an interdisciplinary Project Task Force (PTF) within FAO to guide the implementation of the project. In consultation with the LTO (see below) the FAO Representative will be responsible for timely operational, administrative and financial management of the GEF project resources, including in particular: (1) contracting and procurement processes based on the request from NPD

and in accordance with the approved Annual Work Plan and Budget; (2) process the payments corresponding to delivery of goods, services and technical products based on the prior clearance of the same by NPD and in consultation with PMC; (3) provide six-monthly financial reports including a statement of project expenditures to NPD, PMC and the PSC; and (4) at least one time per year or more frequent if required, prepare Budget Revisions for submission to TCI/GEF Coordination Unit for approval, maintaining the budget current in the financial management system of FAO.

The FAO Representative will in consultation with the LTU, LTO and the FAO-GEF Coordination Unit give no-objection to AWP/B submitted by the Project Management Committee as well as to the Project Progress reports which should be approved by the LTO before they are submitted to the FAO-GEF Coordination Unit for final approval and upload in FPMIS.

The FAO Lead Technical Unit (LTU) will be the Land and Water Division. The LTU will designate a Lead Technical Officer (LTO) for the project, with experience in sustainable forest management and integrated landscape management.

Under the general technical oversight of the LTU, the Lead Technical Officer (LTO) will provide technical guidance to the project team to ensure delivery of quality technical outputs. The LTO will coordinate the provision of appropriate technical backstopping from all the concerned FAO units represented in the Project Task Force responding to requests from the SIRAP and the Project Management Committee. The Project Task Force is thus composed of technical officers from the participating FAO units and of operational officers and is chaired by the BH. The LTO, supported by the LTU when needed, will be responsible for:

- Review and give no-objection to TORs for consultancies and contracts to be performed under the project, and to CVs and technical proposals short-listed by the Project Management Committee for key project positions, goods, minor works, and services to be financed by GEF resources;
- Supported by the FAO Representation in Colombia, review and clear final technical products delivered by consultants and contract holders financed by GEF resources before the final payment can be processed;
- Assist with review and provision of technical comments to draft technical products/reports on request from the Project Management Committee during project execution;
- Review and approve project progress reports submitted by the CRS, in coordination with the BH;
- Support the FAO Representative in reviewing, revising and giving no-objection to AWP/B submitted by the PTC for approval by the Project Steering Committee;
- Prepare the annual Project Implementation Review report with inputs from the CRS and the PT, which will be presented to the BH and the FAO-GEF Coordination Unit for approval, finalization and submittal to the GEF Secretariat and Evaluation Office as part of the Annual Monitoring Review report of the FAO-GEF portfolio. The LTO must ensure that the CRS and the PT has provided information on co-financing provided during the course of the year for inclusion in the PIR;
- Undertake field annual (or as needed) supervision missions;

- Review the TORs for the mid-term evaluation, participate in the evaluation mission including the mid-term workshop with all key project stakeholders, development of an eventual agreed adjustment plan in project execution approach, and supervise its implementation.
- Review the TORs for the final evaluation; participate in the mission including the final workshop with all key project stakeholders, development and follow-up to recommendations on how to insure sustainability of project outputs and results after the end of the project.
- The FAO-GEF Coordination Unit will review and approve Project Progress Reports, project reviews, financial reports, and budget revisions based on the AWP/B. This FAO GEF Coordination Unit will review and clear the annual PIR and undertake supervision missions if considered necessary. The PIRs will be included in the FAO GEF Annual Monitoring Review submitted to GEF by the FAO GEF Coordination Unit. The FAO GEF Coordination Unit will also participate in the mid-term and final evaluations and the development of corrective actions in the project implementation strategy in the case needed to mitigate eventual risks affecting the timely and effective implementation of the project. The FAO GEF Coordination Unit will in collaboration with the FAO Finance Division request transfer of project funds from the GEF Trustee based on six-monthly projections of funds needed.
- The FAO Finance Division will provide annual Financial Reports to the GEF Trustee and, in collaboration with the FAO-GEF Coordination Unit, request project funds on a six-monthly basis to the GEF Trustee.

4.2.3 Project decision-making mechanisms

The Project Steering Committee (PSC) will have the following functions: 1) Approve project AWP/B; 2) Approve the six-monthly PPRs; 3) Approve project final report; 4) Approve the adjustments to the total amounts of the budget lines; 5) Review and approve changes to the goals and outcomes of the project; 6) Propose and agree any amendments to the Agreement; 7) Invite relevant people according to the subject of each meeting8) Approve the Terms of Reference of the Project Team; 9) approve the nominations of the Regional Strategy Coordinator (RSC) and Project Team (EP).

Decisions shall be taken by consensus. The PSC will meet on notification by any of its members and at least twice a year. At the end of each meeting a report should be drafted and circulated for the information of all participants and support decisions. Each report will be approved through an email in which the respective member approves the minutes and makes appropriate adjustments. Appendix 7 includes the detailed Terms of Reference for PSC.

The Project Management Committee (PMC) will have the following functions: 1) Follow up on the progress of activities in the four components of the project, analyzing targets achieved and difficulties; 2) Review and propose to the PSC budget transfers from different budget lines; 3) Follow up on Project indicators; 4) Follow up on the obligations of the material execution of the project and its implementation rate; 5) Review the new TORs for different charges to existing ones; 6) Invite people per competence, according to the subject of the meeting.

Decisions shall be taken by consensus. Any dispute should be duly consulted to the PSC for final approval. The Technical Committee will meet prior to the Steering Committee

twice a year as minimum schedule and shall be convened by the Project Coordinator, or in special session whenever any member so requests. After each meeting, a report shall be prepared and circulated for the information of all participants. Each report will be approved through an email in which the respective member approves the minutes and makes appropriate adjustments. The participation of civil society in meetings of the Technical Committee shall be ensured through the Local Technical Committees, one for each mosaic (4).

One Local Technical Committee (LTC) was established in each connectivity corridor, with the following functions: 1) Follow up on the progress of activities in the respective areas of intervention; 2) Support the planning of project activities at the level of each specific area of intervention; 3) Promote the participation of local stakeholders in project activities; 4) Promote the dissemination of sustainable production practices, taking into account the experience and local knowledge. The composition of the LTC will include - among others - representatives from municipalities, organizations and local communities, women's organizations, productive organizations.

4.3 FINANCIAL PLANNING AND MANAGEMENT

The total cost of the project is USD 57,120,096 of which USD 6,052,114 will be financed by the GEF grant and USD 51,067,982 will be co-financed by the MADS, PNN, SIRAP Caribbean, MADR, Departmental Governments of Antioquia, Bolivar, Chocó, Cordoba and Sucre; CORPOPURABÁ, CARDIQUE, CODECHOCÓ, CVS, CARSUCRE, and FAO.

4.3.1 Financial plan (by component, outputs and co-financier)

Table 4.2 includes the cost by component, output and co-financier and Table 4.3 includes the sources and types of confirmed co-financing. FAO as GEF implementing agency will be responsible for the execution of the GEF resources and FAO co-financing.

Table 4.2. Project costs by component, outputs and co-financier

Financial Plan
Colombia Connectiviti

Table 4.3. Confirmed sources of co-financing

Sources of co-financing	Name of Co-financier	Type of Co-financing	Co-financing Amount (US$)
National Government	MADS	In-kind	773,058
National Government	PNN (CTD)	Cash	819,210
		In-kind	2,726,637
National Government	PNN (PTD)	Cash	123,335
		In-kind	245,806
National Government	SIRAP CARIBBEAN	Cash	-
		In-kind	64,134
National Government	MADR	Cash	-
		In-kind	740,010
Local Government	Government of Antioquia	Cash	2,073,642
Local Government	Government of Bolivar	Cash	5,405,675
		In-kind	3,238,108
Local Government	Government of Chocó	In-kind	452,977
Local Government	Government of Cordoba	Cash	10,218,122
Local Government	Government of Sucre	In-kind	11,430,960
Local Government	CORPOURABÁ	Cash	3,034,040
		In-kind	863,344
Local Government	CVS	Cash	-
		In-kind	202,070
Local Government	CARDIQUE	Cash	1,258,017
		In-kind	1,117,415
Local Government	CODECHOCÓ	Cash	260,000
		In-kind	500,000
Local Government	CARSUCRE	Cash	4,549,415
		In-kind	592,007
GEF Agency	FAO	Cash	380,000
			51,067,982

* USD: COP exchange rate of the United Nations System (October 2014): USD 1 = 2027 COP

4.3.2 GEF inputs

GEF resources will be directed towards strengthening the institutional framework and capacities of actors in the Western Caribbean Region (institutions of regional, departmental and municipal levels) to improve environmental governance in the region by applying the socio-ecosystem connectivities approach and including participatory development of a SEC Regional Strategy, mainstreaming of the approach in regional, departmental and municipal planning instruments, training of governmental actors and civil society to enhance their knowledge and management skills, the development of an

IT platform for information management and monitoring of the regional strategy, and implementation of communication and environmental education strategies. The GEF resources will also be used in actions aimed at improving the conservation status of biodiversity in selected corridors connectivity for intervention through the creation of new protected areas, improved management effectiveness of existing protected areas. Furthermore, GEF resources will be used to promote sustainable production practices (agroforestry, silvopastoral, aquaculture, forestry), including technical assistance and training for sustainable intensification of production.

4.3.3 Government inputs

The MADS, PNN, SIRAP Caribbean, MADR, the Governments of Antioquia, Bolivar, Chocó, Cordoba and Sucre, CORPOURABÁ, CARDIQUE, CODECHOCÓ, CVS and CARSUCRE will provide contributions in cash and in-kind. These contributions correspond to actions related to activities that each institution implements under its respective plans, programs and projects. As regards Component 1, contributions include actions in environmental and land use planning; administration and management of continental and coastal and marine natural resources; GIS, models and information systems for decision-making; institutional strengthening and training; and environmental education. As regards Component 2, contributions include actions such as formulation and implementation of management plans for protected areas; creation of new protected areas; acquisition of priority areas for conservation of water resources; conservation and sustainable use of biodiversity; promotion of socio-ecosystem connectivity; investments to improve the management of protected areas; and joint efforts with local communities for the conservation of biodiversity in protected areas and buffer zones. In relation to Component 3, contributions correspond to actions to promote socio-ecosystem connectivity, sustainable forest management, forest restoration, improvement of agricultural production and productivity, ensuring the marketing of agricultural products, and promoting the sustainable intensification of agricultural production approach.

4.3.4 FAO inputs

FAO will provide technical assistance, support, training and supervision of the implementation of the activities financed with GEF resources. The GEF project will complement and will be co-financed by the Project *Policies on Food Security and Nutrition and Indigenous Peoples in Colombia, Ecuador, Guatemala and Paraguay,* that seeks to incorporate information, analysis and recommendations related to the benefit of indigenous peoples in Food Security and Nutrition public policies. The Project *Strengthening agro-environmental policies in Latin America and the Caribbean through dialogue and exchange of national experiences* is aimed at strengthening the agro-environmental policies in Colombia. In addition, the project S*trengthening the cotton sector through South-South cooperation,* in the process of formulation, will contribute to the development of the cotton sector in Colombia, with bases on technology, technical and human resources and relevant experiences, prioritizing family farmers. At the national level, FAO implements the Project *Recovering food security of vulnerable populations affected by violence in isolated rural areas in the departments of Cordoba and Putumayo,* in order to create appropriate conditions for rapid food production and the restoration agriculture and livestock livelihoods in rural communities affected by

violence. These projects will complement component 3 and in particular products 3.1.3 (sustainable production plans) and 3.1.4 (program for extension and transfer of the sustainable intensification of production approach).

4.3.5 Other co-financiers inputs

N/A

4.3.6 Financial management of and reporting on GEF resources

Financial management and reporting in relation to the GEF resources will be carried out in accordance with FAO's rules and procedures, and in accordance with the agreement between FAO and the GEF Trustee. On the basis of the activities foreseen in the budget and the project, FAO will undertake all operations for disbursements, procurement and contracting for the total amount of GEF resources, as per the request of the NPD.

Financial Records. FAO shall maintain a separate account in United States dollars for the Project's GEF resources showing all income and expenditures. Expenditures incurred in a currency other than United States dollars shall be converted into United States dollars at the United Nations operational rate of exchange on the date of the transaction. FAO shall administer the Project in accordance with its regulations, rules and directives.

Financial Reports. The BH shall prepare six-monthly project expenditure accounts and final accounts for the project, showing amount budgeted for the year, amount expended since the beginning of the year, and separately, the un-liquidated obligations as follows:

1. Details of project expenditures on a output-by-output basis, reported in line with project budget codes as set out in the Project document, as at 30 June and 31 December each year.
2. Final accounts on completion of the Project on a component-by-component and output-by-output basis, reported in line with project budget codes as set out in the Project document.
3. A final statement of account in line with FAO Oracle Project budget codes, reflecting actual final expenditures under the Project, when all obligations have been liquidated.

Financial Statements. Within 30 working days of the end of each semester, i.e. on or before 31 July and 31 January, the FAO Representation in Colombia shall submit six-monthly statements of expenditure of GEF resources to the Project Management Committee and Project Steering Committee, which will be included in the PPRs. The purpose of the financial statement is to list the expenditures incurred on the project on a six monthly basis compared to the budget, so as to monitor project progress and to reconcile outstanding advances during the six-month period. The financial statement shall contain information that will serve as the basis for a periodic revision of the budget.

The BH will submit the above financial reports for review and monitoring by the LTO and the FAO GEF Coordination Unit. Financial reports for submission to the donor (GEF) will be prepared in accordance with the provisions in the GEF Financial Procedures Agreement and submitted by the FAO Finance Division.

Responsibility for cost overruns. The BH shall utilize the GEF project funds in strict compliance with the project document. The BH shall be authorized to make variations not exceeding 20 per cent on any total output budget line or any cost category line of the project budget provided that the total allocated for the specific budgeted project component is not exceeded and the reallocation of funds does not impact the achievement of any project output as per the project Results Framework (Appendix 1). Any variations exceeding 20 per cent on any total output budget line or any cost category line, which may be necessary for the proper and successful implementation of the project, shall be subject to prior consultations with the LTO and the FAO-GEF Coordination Unit. In such a case, a revision to the FAO-GEF budget in FPMIS should be prepared by the BH and approved by the LTO and the FAO-GEF Coordination Unit. Cost overruns shall be the sole responsibility of the BH.

Audit

The Project shall be subject to the internal and external auditing procedures provided for in FAO financial regulations, rules and directives and in keeping with the Financial Procedures Agreement between the GEF Trustee and FAO.

The audit regime at FAO consists of an external audit provided by the Auditor-General (or persons exercising an equivalent function) of a member nation appointed by the Governing Bodies of the Organization and reporting directly to them, and an internal audit function headed by the FAO Inspector-General who reports directly to the Director-General. This function operates as an integral part of the Organization under policies established by senior management, and furthermore has a reporting line to the governing bodies. Both functions are required under the Basic Texts of FAO which establish a framework for the terms of reference of each. Internal audits of imprest accounts, records, bank reconciliation and asset verification take place at FAO field and liaison offices on a cyclical basis.

4.4 PROCUREMENT

As per the request of the NPD and managed by the RCS, FAO will procure the equipment and services foreseen in the budget (Appendix 3) and the AWP/B, in accordance with FAO rules and procedures.

Careful procurement planning is necessary for securing goods, services and works in a timely manner, on a "Best Value for Money" basis, and in accordance with the Rules and Regulations of FAO. It requires analysis of needs and constraints, including forecast of the reasonable timeframe required to execute the procurement process. Procurement and delivery of inputs in technical cooperation projects follow FAO's rules and regulations for the procurement of supplies, equipment and services (i.e. Manual Sections 502 and 507). *Manual Section 502*: "Procurement of Goods, Works and Services" establishes the principles and procedures that apply to procurement of all goods, works and services on behalf of the Organization, in all offices and in all locations, with the exception of the procurement actions described in Appendix A – Procurement Not Governed by Manual Section 502. *Manual Section 507* establishes the principles and rules that govern the use of Letters of Agreement (LoA) by FAO for the timely acquisition of services from eligible entities in a transparent and impartial manner,

taking into consideration economy and efficiency to achieve an optimum combination of expected whole life costs and benefits ("Best Value for Money").

As per the guidance in FAO's Project Cycle Guide, the BH will draw up an annual procurement plan for major items which will be the basis of requests for procurement actions during implementation. The plan will include a description of the goods, works, or services to be procured, estimated budget and source of funding, schedule of procurement activities and proposed method of procurement. In situations where exact information is not yet available, the procurement plan should at least contain reasonable projections that will be corrected as information becomes available.

Before commencing procurement, the RCS will update the project´s Procurement Plan (Appendix 5) for approval by the Project Management Committee. This plan will be reviewed during the inception workshop and will be approved by the FAO Representative in Ecuador. The RCS will update the Plan every six months, request the approval of the NPD and submit the plan to the FAO Representative in Colombia for approval.

4.5 MONITORING AND REPORTING

Monitoring and evaluation of progress in achieving project results and objectives will be done based on the targets and indicators established in the Project Results Framework (Appendix 1 and described in section 2.3 and 2.4). The project Monitoring and Evaluation Plan has been budgeted at USD 110.450 (see Table 4.4). Monitoring and evaluation activities will follow FAO and GEF monitoring and evaluation policies and guidelines. The monitoring and evaluation system will also facilitate learning and replication of project results and lessons in relation to integrated management of natural resources.

4.5.1 Oversight and monitoring responsibilities

The monitoring and evaluation roles and responsibilities specifically described in the Monitoring and Evaluation Plan (see below) will be undertaken through: (i) day-to-day monitoring and project progress supervision missions (RCS and NPD); ii) technical monitoring of indicators to measure the introduction of technologies for integrated natural resources management and project areas and the surface covered by conservation agreements and management plans (RCS and NPD in coordination project partners); (iii) specific monitoring plans for implementation of sustainable production plans (components 2 and 3); (iv) mid-term and final evaluations (independent consultants and FAO Evaluation Office); and (v) monitoring and supervision missions (FAO).

At the initiation of GEF project implementation, the NPD and the PT will set up a project progress monitoring system. Participatory mechanisms and methodologies for systematic data collection and recording will be developed to support outcome and output indicator monitoring and evaluation. During the inception workshop (see section 4.5.3 below), M&E related tasks to be addressed will include: (i) presentation and clarification (if needed) of the Project Results Framework with all project stakeholders; (ii) review of the M&E indicators and their baseline; (iii) drafting the required clauses to

include in consultants' contracts to ensure they complete their M&E reporting functions (if relevant); and (iv) clarification of the respective M&E tasks among the Project different stakeholders. One of the main outputs of the workshop will be a detailed monitoring plan agreed to by all stakeholders based on the monitoring and evaluation plan summary presented in section 4.5.4 below.

The day-to-day monitoring of the Project implementation will be the responsibility of the RCS and will be driven by the preparation and implementation of an AWP/B followed up through six-monthly PPRs. The preparation of the AWP/B and six-monthly PPRs will represent the product of a unified planning process between main project stakeholders. As tools for results-based-management (RBM), the AWP/B will identify the actions proposed for the coming project year and provide the necessary details on output targets to be achieved, and the PPRs will report on the monitoring of the implementation of actions and the achievement of output targets. Specific inputs to the AWP/B and the PPRs will be prepared based on participatory planning and progress review with all stakeholders and coordinated and facilitated through project planning and progress review workshops. These contributions will be consolidated by the RCS in the AWP/B draft and the PPRs.

An annual project progress review and planning meeting should be held with the participation of the Project Management Committee to finalize the AWP/B and the PPRs. Once finalized, the AWP/B and the PPRs will be submitted to the Project Steering Committee for approval (AWP/B) and revision (PPR) and to FAO for approval. The AWP/B will be developed in a manner consistent with the Project Results Framework to ensure adequate fulfillment and monitoring of project outputs and outcomes.

Following the approval of the Project, the PY1 AWP/B will be adjusted (either reduced or expanded in time) to synchronize it with the annual reporting calendar. In subsequent years, the AWP/Bs will follow an annual preparation and reporting cycle as specified in section 4.5.3 below.

4.5.2 Indicators and information sources

To monitor project outputs and outcomes including contributions to global environmental benefits, specific indicators have been established in the Project Results Framework (see Appendix 1). The Project Results Framework indicators and means of verification will be applied to monitor both project performance and impact. Following FAO monitoring procedures and progress reporting formats, data collected will be sufficiently detailed that can track specific outputs and outcomes, and flag project risks early on. Output target indicators will be monitored on a six-monthly basis, and outcome target indicators will be monitored on an annual basis, if possible, or as part of the mid-term and final evaluations.

The project output and outcome indicators have been designed to monitor biophysical and socio-economic impacts and progress in building and consolidating capacities for conservation and sustainable use of biodiversity, integrated management of natural resources and sustainable forest management, both at the political-legal level as well as at the productive level, among small farmer communities that conserve and use the natural resources for their food security, maintenance of ecosystems and cultures, and generation of economic benefits.

Capacity building processes and field impacts indicators will monitor:

- Outcome 1.1: Area of landscapes and seascapes that contribute to the socio-ecosystem connectivity effects of direct and indirect project interventions.
- Outcome 1.2: Percentage of the population that has improved its perception of biodiversity and socio-ecosystem connectivity. Percentage of stakeholders who have improved their knowledge, attitudes and practices for the management and conservation of biodiversity.
- Outcome 2.1: Areas of new and existing protected areas that contribute to improving the socio-ecosystem connectivity. Surface of protected areas used by indigenous and Afrodescendent under agreements for use and management of resources with a focus on socio-ecosystem connectivity. Surface of buffer zones with sustainable production plans that incorporate socio-ecosystem connectivities approach.
- Outcome 3.1: Surface mosaic conservation and sustainable use that contribute to improving the socio-ecosystem connectivity.

The main information sources to support the M&E plan include: i) monitoring systems of SIRAP, MADS, MADR, CARs, departmental governments and other project stakeholders, ii) participatory workshops to review progress with stakeholders and beneficiaries; iii) on-the-groung monitoring of the implementation of best practices for sustainable production; iv) progress reports prepared by the RCS with inputs from SIRAP, MADS, MADR, CARs, departmental governments, project specialists and other stakeholders; v) consultancy reports; vi) training reports; vii) midterm evaluation and final evaluation; viii) financial reports and budget revisions; ix) Project Implementation Reports prepared by the FAO Lead Technical Officer with the support of the FAO Representation in Colombia; x) FAO supervision mission reports.

4.5.3 Reporting schedule

Specific reports that will be prepared under the monitoring and evaluation program are: (i) Project inception report; (ii) Annual Work Plan and Budget (AWP/B); (iii) Project Progress Reports (PPRs); (iv) Annual Project Implementation Review (PIR); (v) Technical reports; (vi) Co-financing reports; and (vii) Terminal Report. In addition, assessment of the GEF BD, SFM and LD Tracking Tools (TTs) against the baseline (completed during project preparation) will be required at mid-term and final project evaluation.

Project Inception Report. After FAO approval of the project an inception workshop will be held. Immediately after the workshop, the RCS will prepare a project inception report in consultation with the FAO Representation in Colombia and other project partners. The report will include a narrative on the institutional roles and responsibilities and coordinating action of project partners, progress to date on project establishment and start-up activities and an update of any changed external conditions that may affect project implementation. It will also include a detailed first year AWP/B, a detailed project monitoring plan based on the monitoring and evaluation plan summary presented in section 4.5.4 below. The draft inception report will be circulated to FAO, the Project Steering Committee and the Project Management Committee for review and comments before its finalization, no later than three months after project start-up. The report will be cleared by the FAO BH, LTU and the FAO GEF Coordination Unit, which will upload it in FPMIS.

Annual Work Plan and Budget (AWP/B). The RCS, under the supervision of the NPD, will submit to the Project Management Committee a draft AWP/B no later than 10

January of each year. The AWP/B should include detailed activities to be implemented by project outputs and divided into monthly timeframes and targets and milestone dates for output indicators to be achieved during the year. A detailed project budget for the activities to be implemented during the year should also be included together with all monitoring and supervision activities required during the year. The FAO Representation in Colombia will circulate the draft AWP/B to the FAO interdisciplinary Project Task Force and will consolidate and submit FAO comments to the RCS, who will incorporate the comments of the Management Committee. The final AWP/B will be sent to the Project Steering Committee for approval and to FAO for final no-objection and upload in FPMIS.

Project Progress Reports (PPR). The RCS, under the supervision of the NPD will prepare six-monthly PPRs and submit them to the Project Management Committee and the FAO Representation in Colombia no later than July 31 (covering the period January through June) and 31 January (covering the period July through December). The first semester six months report should be accompanied by the updated AWP/B, if needed, for review and no-objection by FAO. The PPRs are used to identify constraints, problems or bottlenecks that impede timely implementation and take appropriate remedial action. PPRs will be prepared based on the systematic monitoring of output and outcome indicators identified in the project's Results Framework (Appendix 1). Each semester, the FAO PTM will review the PPR, collect and consolidate eventual comments by the FAO (BH, LTO, FAO-GEF Coordination Unit) and provide these comments to the PTC. When comments have been duly incorporated the BH and the LTO will give final approval and submit the final PPR to the FAO-GEF Coordination Unit for final clearance and upload in FPMIS.

Annual Project Implementation Review (PIR). The LTO supported by the FAO Office in Colombia and with inputs from the RCS, will prepare an annual Project Implementation Review covering the period July (the previous year) through June (current year) to be submitted to the BH and the FAO-GEF Coordination Unit for review and approval no later than 31 July. The FAO-GEF Coordination Unit will upload the final report on FPMIS and submit it to the GEF Secretariat and Evaluation Office as part of the Annual Monitoring Review report of the FAO-GEF portfolio. The FAO-GEF Coordination Unit will provide the updated format when the first PIR is due.

Technical Reports. Technical reports will be prepared as part of project outputs and to document and share project outcomes and lessons learned. The drafts of any technical reports must be submitted by the RCS to the Project Management Committee and the FAO Representation in Ecuador who will share it with the LTO for review and clearance and to the FAO-GEF Coordination Unit for information and eventual comments, prior to finalization and publication. Copies of the technical reports will be distributed to the Project Steering Committee and other project partners as appropriate. The final reports will be posted on the FAO FPMIS.

Co-financing Reports. The RCS will be responsible for collecting the required information and reporting on in-kind and cash co-financing provided by all the project cofinanciers and eventual other new partners not foreseen in the Project Document. Every year, the RCS will submit the report to the FAO Representation in Ecuador before 31 July covering the period July (the previous year) through June (current year).

GEF Tracking Tools. Following the GEF policies and procedures, the tracking tools for the BD focal area will be submitted to the GEF Secretariat at three moments: (i) with the

project document at CEO endorsement; (ii) at the project's mid-term evaluation; and (iii) with the project's terminal evaluation.

Final Report. Within two months before the end date of the project, the RCS will submit to the Project Management Committee and the FAO Representation in Colombia a draft Final Report. The main purpose of the final report is to give guidance to authorities (ministerial or senior government level) on the policy decisions required for the follow-up of the Project, and to provide the donor with information on how the funds were utilized. Therefore, the terminal report is a concise account of the main **products, results, conclusions and recommendations** of the Project, without unnecessary background, narrative or technical details. The target readership consists of persons who are not necessarily technical specialists but who need to understand the policy implications of technical findings and needs for ensuring sustainability of project results. Work is assessed, lessons learned are summarized, and recommendations are expressed in terms of their application to the integrated landscape management in the Caribbean Region in the context of the development priorities at national and departmental levels, as well as in practical execution terms. This report will specifically include the findings of the final evaluation as described in section 4.6 below. A final project review meeting should be held to discuss the draft terminal report with the Project Steering Committee before it is finalized by the RCS and approved by the BH, LTO and the FAO-GEF Coordination Unit.

4.5.4 Monitoring and evaluation plan summary

Table 4.4 below provides a summary of the main monitoring and evaluation reports, responsible parties and timeframe:

Table 4.4. Summary of the main monitoring and evaluation activities

Type of M&E Activity	Responsible Parties	Time-frame	Budget
Inception Workshop	CRS, FAO (supported by LTO, BH, and the FAO GEF Coordination Unit)	Within two months of project start up	USD14,250
Project Inception Report	CRS and FAOCO, cleared by LTO, BH, and the FAO GEF Coordination Unit	Immediately after the workshop	-
Field-based impact monitoring	CRS, project partners and local communities	Continually	USD10,800 (9% of project coordination time, technical workshops for identification of indicators, M&E workshops)
Supervision visits and rating of progress in PPRs and PIRs	CRS, FAO (FAOCO, LTO and FAO GEF Coordination Unit)	Annual or as required	FAO visits will be financed through GEF agency fee. Project coordination visits will be financed by the project travel budget

Type of M&E Activity	Responsible Parties	Time-frame	Budget
Project Progress Reports (PPR)	CRS, with contributions of project partners and other participating institutions	Six-monthly	USD 4,200 (3.5% of project coordination time)
Project Implementation Review report (PIR)	FAO (LTO and FAOCO) supported by the CRS. PIRs cleared and submitted by the FAO GEF Coordination Unit to the GEF Secretariat	Annual	Financed through GEF agency fee
Co-financing Reports	CRS with inputs from other co-financiers	Annual	USD 1,200 (1% of project coordination time)
Technical reports	CRS and FAO (LTO, FAOCO)	As appropriate	
Mid-term Evaluation	External Consultants, FAO Office for Evaluation in consultation with the project team including the FAO GEF Coordination Unit and other partners	At mid-point of project implementation	USD 40,000 for external, consultancy
Final evaluation	External Consultants, FAO Office for Evaluation in consultation with the project team including the FAO GEF Coordination Unit and other partners	At the end of project implementation	USD 40,000 for external, consultants and associated costs. In addition the agency fee will pay for expenditures of FAO staff time and travel
Terminal Report	CRS, FAO (FAOCO, LTO, the FAO GEF Coordination Unit and TSCR report Unit)	Two months before the end date of the Executing Agreement	
Total Budget			USD 110,450

4.6 PROVISION FOR EVALUATIONS

An independent Mid-Term Evaluation (MTE) will be undertaken at the end of the first 24 months of project implementation to review progress and effectiveness of implementation in terms of achieving project objective, outcomes and outputs. Findings and recommendations of this review will be instrumental for bringing improvement in the overall project design and execution strategy for the remaining period of the project's term if necessary. FAO (the Office of Evaluation) will arrange for the MTE in consultation with project management. The evaluation will, *inter alia:*

a) Review the effectiveness, efficiency and timeliness of project implementation;

b) Analyse effectiveness of partnership arrangements;

c) Identify issues requiring decisions and remedial actions;

d) Propose any mid-course corrections and/or adjustments to the implementation strategy as necessary; and

e) Describe the technical achievements and lessons learned derived from project design, implementation and management.

An independent Final Evaluation (FE) will be carried out three months prior to the terminal review meeting. The FE will aim to identify the project impacts, sustainability of project results and the degree of achievement of long-term results. The FE will also have the purpose of indicating future actions needed to expand on the existing Project in subsequent phases, mainstream and up-scale its products and practices, and disseminate information to management authorities and institutions with responsibilities in food security, conservation and sustainable use of natural resources, small farmer agricultural production and ecosystem conservation to assure continuity of the processes initiated by the Project. Critical elements that both the MTR and FE will pay special attention to are the outcome indicators.

4.7 COMMUNICATION AND VISIBILITY

In many of the project activities the high visibility of the project will be addressed, as well as mechanisms to ensure that communications in support of the project's messages are effective.

Activities of construction of the SEC Regional Strategy and capacity building in Component 1 will have high visibility among authorities and decision-makers of the departments (central government institutions in the region, departmental institutions such as planning councils and municipalities / rural district), as well as among many civil society stakeholders (community organizations, producer associations, NGOs) with which the project will interact in the process of action planning, implementation and monitoring throughout the life of the project. Developing strategies for participation and gender will contribute to improve communication within the project. Workshops under this component will support training and awareness raising of stakeholders, and dissemination of information and results of the activities undertaken. Information and training materials will support the communication of key messages in this component of the project, including environmental governance, integrated landscape management, inter-institutional coordination and collaboration, regional planning and participation among others.

Under component 2, the support to the creation of new protected areas will contribute to the visibility of the project and support the improvement of the management of existing areas as regards adequacy of infrastructure and provision of equipment and supplies. Participatory processes for the development of production plans in buffer zones will support the dissemination of information and knowledge about the need to conserve biodiversity and productive alternatives compatible with conservation.

In Component 3, participatory methodologies for the identification and creation of mosaic of conservation and sustainable use will contribute to the visibility of the project, and workshops and training materials will serve to transmit knowledge and raise awareness among beneficiaries with respect to the key project message for this component, the promotion of alternative productive activities while conserving biodiversity. The implementation of methodologies such as field schools and agricultural and forestry extension, including activities such as field days and visits of trainers will

serve to stream technical skills to beneficiaries for promoting the adoption of best practices.

Component 4 will contribute to communication and visibility through the systematization of experiences and lessons learned. The project will prepare publications containing these experiences and lessons. The project will also create on the website of the SIRAP Caribbean a page for the regular publication of the progress and results of the project for the dissemination of information and exchange of experiences.

In addition, the project will ensure mechanisms for the greatest possible dissemination to the documentation generated by the project, and in particular the Final Report, technical reports and midterm and final evaluations reports.

SECTION 5 – SUSTAINABILITY OF RESULTS

The project has been designed to remove the identified barriers and create an enabling environment for the conservation of biodiversity and ecosystem functions in the Caribbean Region of Colombia from the threats originated by anthropogenic and natural pressures causing biodiversity degradation on land and marine areas and fragmentation between protected areas and buffer zones.

From PY4, government institutions, communities and stakeholders are expected to be able to give continuity to the activities undertaken by the project.

Factors that foster sustainability in its social, environmental, economic, and capacity building dimensions are detailed below:

5.1 SOCIAL SUSTAINABILITY

The social sustainability of the project is based on promoting the appropriation thereof, through the incorporation of socio-ecosystem approach connectivities in policies and planning, and a wide dissemination of this approach to all stakeholders in the Caribbean Region.

Project implementation will include defining factors that ensure social sustainability[74]:

- **Capacity development** (see sub-section 5.4).
- **Gender equality and gender mainstreaming** at institutional and community levels. The project will focus on promoting participation of women, empowering them to foster their participation in planning and decision making and to improve their productivity, income and living conditions. Participation will be promoted through multi-sectorial workshops, consultation and validation processes to be applied to the development of the SEC Regional Strategy and updating departmental and municipal planning instruments (Component 1); the relationship on the field with the administrations of protected areas, the development and / or updating of management plans of protected areas and the development of community agreements for resources use and management (Component 2) and the development of sustainable production plans (Components 2 and 3). The project will also facilitate access of women to training and technical assistance and incentives for sustainable production (Components 2 and 3). At least 30% of beneficiaries of Component 3 will be female (women's networks, women heads of household). The data will be disaggregated by gender for monitoring differential impacts of the project, and women farmers will be particularly involved and represented in all project activities.
- **Food security,** which will be promoted through sustainable production plans. Under these plans, the project will promote the adoption of agroforestry, agrosilvopastoral, silvopastoral, fisheries and aquaculture systems that seek to increase sustainable food production.

[74] Based on FAO, *Environmental Impact Assessment - Guidelines for FAO Field Projects*, "Annex 3: Basic Policy Requirement for field projects": http://www.fao.org/docrep/016/i2802e/i2802e.pdf

- **Ownership** by local institutions, producer associations, and local communities of all project processes (see sub-section 5.4).

Multiculturalism existing in prioritized connectivity corridors has been identified as a strength of selected areas of intervention during the preparatory phase of the project. The different communities settled in the territory (indigenous, Afro-descendant and peasant) share congruent views on the need to conserve and protect the territory. In this sense, ethno-cultural characteristics of indigenous peoples and Afro-descendants communities living in prioritized connectivity corridors will be taken into account at all levels, promoting dialogue and exchange between technical expertise and traditional and ancestral knowledge, promoting full and effective participation of different communities in project validation, development, implementation, monitoring and evaluation, and respecting their expressions, values and socio-cultural traditions.

5.2 ENVIRONMENTAL SUSTAINABILITY

Project implementation is based on promoting SEC approach, which by definition is a promoter of comprehensive conservation, restoration and sustainable use practices at the landscape level and is appropriate for the local population that supports ecological viability of protected areas as well as the provision of goods and ecosystem services to surrounding communities.

In this context, the project has selected the most appropriate interventions for prioritized connectivity corridors, which are composed of a large diversity of marine and coastal ecosystems (mangroves, seagrass beds and coral reefs), forests, wetlands and swamp complexes where activities of conservation and socio-economic development are combined.

Project activities will directly or indirectly contribute to environmental sustainability by:

- **Institutional strengthening of government agencies related with socio-ecosystemic environment governance in the Caribbean Region:** development of a regional SEC strategy; SEC mainstreaming in instruments of regional, departmental and municipal planning (see description in Section 2)
- **Capacity development** of stakeholders in charge of the application of the SEC approach (see sub-section 5.4)
- **Improvement of the management and conservation status of ecosystems of national and global significance**: creation of new protected areas, including ecosystems currently underrepresented; enhancing management of existing protected areas; agreements use and management of resource with local communities in protected areas; and a program of biodiversity monitoring (see description in Section 2).
- **Disseminating sustainable natural resources management practices:** creation of mosaics of conservation and sustainable use of resources; promotion of sustainable production systems (agroforestry, agrosilvopastoral, silvopastoral, aquaculture, forest restoration); feasibility analysis of certification schemes applicable in the region such as the Ecological Food Label and Best Agricultural and Livestock Practices (see description in Section 2).

- **Feasibility analysis and proposals for the financial sustainability of environment friendly initiatives**: feasibility of the application of monetary and non-monetary incentives and compensation schemes and / or payment for environmental services that currently exist and which may serve to finance conservation and sustainable productive activities (see description in section 2).
- **Communication and environmental education strategies:** will serve to raise awareness about the importance of biodiversity and socio-ecosystem connectivity.

5.3 FINANCIAL AND ECONOMIC SUSTAINABILITY

In financial terms, the project sustainability will be supported by the SIRAP Caribbean, which will promote the application of economic instruments such as Article 111 of the 99/1993 National Law, which declared of public interest areas of strategic importance for the conservation of water resources that provide water to district and municipal aqueducts, and stipulates that departments and municipalities will dedicate a percentage not lower than 1% of their income to the acquisition of such areas; as well as offset investment projects with positive impacts on biodiversity.

The financial sustainability of the project will be ensured through public investments in conservation, restoration and sustainable production in the context of institutional action plans, departmental development plans and land use plans with SEC approach. This will allow the institutional project partners (PNN, SIRAP, Governments and Municipalities) to have annual budgetary allocations for activities implemented under this approach, not only for those actions initiated by the project but also to expand the approach to other sectors and activities under these plans.

The financial and economic sustainability of the productive activities of the project will be achieved to the extent that these activities are financially and economically viable for farmers and their families, organized communities, producer organizations and institutional partners. The project will promote sustainable production systems seeking to simultaneously conserve and manage ecosystem services in the long term and improve the livelihoods of beneficiaries[75]. In order to support this action, the project will analyze the feasibility of the implementation of schemes of monetary and non-monetary incentives, certification, and compensation and/or payment for environmental services and will identify long-term funding sources to promote conservation action and sustainable production. On this basis, the project will develop a proposal for

[75] Studies show that the proposed sustainable production systems require an initial investment a little higher than the costs that producers normally bear, but decreasing costs over time ensures the sustainability of the action. In addition to this, integrated agroforestry and silvopastoral systems generate in the medium term, higher profits for producers compared to conventional systems. The Javeriana University for example, has conducted a comparative study between the proposed integrated production systems promoted by the Association of Indigenous and Peasant Producers (ASPROINCA) based on diversification and integration of the different components of the farm, seeking to improve soil conditions and management and enrichment of biodiversity, and extensive conventional livestock production systems. The study clearly demonstrates that the integrated systems have managed to make farm production more economically efficient. The key to the superiority of alternative systems is in livestock: a non-conventional producer obtains a surplus 6 times higher than conventional one per hectare used for this activity (Corrales Roa, Forero E. Alvarez, J., 2007, Reconstruction of Production Systems Workers. ASPROINCA the Case Riosucio and Supía).

implementation of such schemes under project Components 2 and 3 (sustainable production plans). Furthermore, it is planned to implement sustainable production plans under the model of Technology Transfer Units and Field Farmers Schools (see description in Section 2), which will cover a large geographical area at a reasonable cost, and in which participants will be trained to be promoters of sustainable production practices, ensuring their diffusion within the covered area and other areas. This model is considered a cost-effective strategy that will enable long term sustainability by institutional partners after project completion.

5.4 SUSTAINABILITY OF CAPACITIES DEVELOPED

The project will address the three dimensions of capacity development (CD) identified in *FAO's Approach to Sustainability*[76]: i) individuals (small-scale farmers, households, female-led households); ii) institutions (national government, departmental and municipal governments, CARs and organizations); and iii) the environmental policy (regional strategy for improving environmental socio-ecosystem governance, institutional capacities improved through training in sustainable management of natural resources and sustainable production). Interaction between community members and organizations of civil society and between civil society and government institutions will also be addressed.

Capacity building activities will focus on strengthening the management and technical skills of national and local institutions, producer associations, the educational community, civil society and local communities. At the institutional level, the project will strengthen PNN, SIRAP Caribbean, departmental and municipal governments, CAR, MADR and civil society organizations to facilitate inter-institutional and inter-sectorial collaboration. Capacity development will maximize the institutionalization of multiple public and private stakeholders in the design of policies and strategies for the implementation of the SEC approach in the Caribbean Region. Also, the capabilities of educational institutions of the region will be strengthened to implement an environmental education strategy promoting an environmental awareness among school-age young people and providing them with tools to engage in actions in favour of the environment. Thus, training and awareness raising of stakeholders will help to create an enabling environment for socio-ecosystem management in the region.

At the field level, the promotion of sustainable production systems is based on proven methodologies (Technology Transfer Units, Farmers Field Schools Sustainable Intensification of Production approach) and taking into account local knowledge. The training model through FFS will empower beneficiaries, who in turn will become promoters of the initiative, thus creating a multiplier effect that ensures the sustainability of the action. The training events (courses, workshops, field trips, and field days) will be timely scheduled to ensure participation of beneficiaries, especially women. In sum, local stakeholders' ownership of best practices and sustainable land management and MFS concepts will contribute to the sustainability of acquired skills. The systematization of lessons learned will also contribute to the sustainability of capacity to be installed.

[76]http://www.fao.org/capacitydevelopment/the-three-dimensions-of-the-fao-capacity-development-framework/en/20

Capacity development will be supported in a transversal manner throughout the project by a communication strategy aimed at positioning and spread the vision and concept of socio-ecosystem connectivity among key stakeholders and the general population of the Caribbean Region.

5.5 APPROPRIATENESS OF TECHNOLOGY INTRODUCED

Technical feasibility is based on the presence in the Caribbean Region of institutions with experience and technical expertise in conservation, productive development, research, extension and technology transfer, thus providing a solid baseline of field initiatives on which the project will build to incorporate the SEC approach and develop actions that generate global environmental benefits.

The project will promote proven and cost-effective production practices in the context of the Caribbean Region. These practices include agroforestry, silvopastoral and agrosilvopastoral systems, aquaculture, ecological restoration and reforestation with native species and sustainable intensification of production. Training and technical assistance methodologies currently used by FAO in Colombia will be applied, methodologies which are known and accepted by both technicians and producers. In addition, technical assistance and training will take into account aspects related to the dissemination of local knowledge of farmers, indigenous and afro-descendants communities.

5.6 REPLICABILITY AND SCALING UP

The replication potential of the project is high, given its complementarity with national, regional and departmental policies, plans and programs. The participatory development of the SEC regional strategy will allow the application of the SEC approach in the Caribbean Region. Also, mainstreaming SEC approach in planning tools will generate experiences and lessons that will expand the process to the entire region and other regions.

A SINAP level, interventions aimed at protected areas in priority corridors will allow to generate experiences and lessons that will support the replication of project results in other areas under the SINAP.
Suitable best practices and appropriate technologies to be disseminated by the project will be replicable throughout the context of the Caribbean region. This project will develop a program to transfer the Sustainable Intensification of Production approach applicable to the entire region.

Systematization of experiences and lessons learned will serve to promote the replication of project results at regional level as well as in other regions of Colombia.

The FAO Representation in Colombia will share information on project lessons learned with the Regional Office for Latin America and the Caribbean (FAO RLC) to disseminate it to other countries with similar ecosystems and problems.

APPENDICES

APPENDIX 1: RESULTS MATRIX

Project outcomes and impacts: [77]

Objective/Impact	Baseline	Outcome indicators	Assumptions
Global Environmental Objective: To reduce the degradation and fragmentation of strategic ecosystems in the Caribbean Region of Colombia. Project Objective:[78] To implement a strategy of socio-ecosystem connectivities that includes inter-institutional articulation, territorial planning, social participation with an intercultural vision, effective management of existing protected areas (PAs), creation of new PAs and the promotion of sustainable production models.	Component 1: Outcome 1.1 • The SIRAP Steering Committee is a regional body for inter-institutional and inter-sectorial coordination composed of environmental and administrative authorities, but it does not include other actors such as authorities of indigenous and Afro-descendant territories, rural communities and producers, and requires support for its consolidation as a setting of consultation and articulation • There are no inter-institutional programs for monitoring species associated with socio-ecosystem corridors. Baseline to be defined in PY1. Outcome 1.2	Component 1: Outcome 1.1 • 1,023,519 ha of terrestrial ecosystems and 181,918 ha of marine ecosystems have contributed to increase the area of socio-ecosystem connectivity in the West RCC by direct effects of the project[79]. • Additional 1,694,563 ha of land / seascape have effectively contributed to the socio-ecosystem connectivity as indirect effect (replication) of the project.[80] • One (1) monitoring program of flagship species of biodiversity for each socio-ecosystem corridor, inter-institutional and with community participation, designed and implemented. • The SEC regulations are under implementation in the CRC. Outcome 1.2	Component 1: The political will to incorporate the Socio-Ecosystem Connectivity approach in strategic and policy instruments is maintained. The institutions allocate financial resources to implement the Socio-ecosystem Connectivity approach in the western area of the CRC

[77] Please insert/delete rows for components as needed
[78] In line with FAO SOs
[79] Surfaces of selected connectivity corridors (see details in Table 4)
[80] The intervention area comprises a polygon of 2,900,000 hectares, made up of a highly degraded array consisting of rainforests, dry forests, wetlands, marshes and coastal marine ecosystems. Within this area are located the selected connectivity corridors, with a total area of 1,205,437 ha. The remaining area comprises indirect project intervention area (1,694,563 ha).

	• to be defined at inception /Project Year 1	• 70% of the population has improved its perception of biodiversity and socio-ecosystem connectivities measured through KAP surveys[81] that include gender disaggregation. • 50% of key stakeholders (producers, community leaders) have improved their knowledge, attitudes and practices for the management and conservation of biodiversity, measured by surveys that include gender disaggregation.	
	<u>Component 2:</u> <u>Outcome 2.1</u> • 72,000 ha PAs • 3,000 ha under use and management agreements • 2,500 ha covered by plans for sustainable production	<u>Component 2:</u> <u>Outcome 2.1</u> • 725,418 ha of existing and new Protected Areas (PAs) have improved their management and conservation status improving connectivity in forest, marshy and coastal and marine ecosystems (at least 10,000 hectares of new APs and 715,418 ha of existing APs). • 3,000 hectares of AP used by indigenous and Afro-descendants under agreements of use and management of resources incorporating SEC approach • 2,500 ha in buffer zones covered by plans for sustainable production incorporating the SEC approach.	<u>Component 2:</u> Institutions have the political will and technical capacity to promote the improvement of conservation status and management of protected areas and allocate resources to do so. Local stakeholders (producers, indigenous peoples and Afro-descendants) support and participate in activities to improve the state of management and conservation of protected areas.

[81] The KAP survey measures changes in Knowledge, Attitude and Practice of a community. The first KAP survey will be conducted in PY 1, when key local stakeholders have been identified and will be repeated in PY 4 to measure change as result of project interventions.

	Component 3: Outcome 3.1 • There are two mosaics: Morrosquillo Gulf with 167,826 ha and The Peak with 1122.78 ha	Component 3: Outcome 3.1 • 4,858 ha of mosaics of conservation and sustainable use of natural resources have contributed effectively to the socio-ecosystem connectivities in the CRC	Component 3: Local stakeholders (local governments, farmers, local communities, indigenous peoples and Afro-descendants) are actively involved in the implementation of the mosaics and promote best practices for sustainable production.
		Component 4: Outcome 3.1 • Project outcomes achieved and demonstrating sustainability	Component 4: Project M&E system designed, including monitoring activities, mechanisms for verifying fulfilment of outcome and output indicators and M&E responsibilities, deadlines and budgets.

Project outputs and outcomes:[82]

Indicators	Baseline (2014)	Target	Milestones towards achieving output and outcome targets				Data Collection and Reporting	
			Year 1	Year 2	Year 3	Year 4	Means of verification	Responsible for Data Collection
Component 1: Strengthening institutional coordination and mainstreaming the socio-ecosystem approach in land-use planning, to reduce the degradation and fragmentation of strategic ecosystems in the Caribbean Region of Colombia.								

[82] Please insert/delete columns for project years and rows for outputs and outcomes as needed.

Indicators	Baseline (2014)	Target	Milestones towards achieving output and outcome targets				Data Collection and Reporting	
			Year 1	Year 2	Year 3	Year 4	Means of verification	Responsible for Data Collection
Outcome 1.1: The Socio-Ecosystem Connectivity approach (SEC) has been incorporated into public policy instruments (land use plans and regional planning) to improve the management and conservation of biodiversity in five departments (Bolivar, Sucre, Cordoba, Antioquia and Chocó) located in the western area of the CRC.	Indicator BD 2.1: Landscapes and seascapes certified by internationally or nationally recognized environmental standards that incorporate biodiversity considerations (e.g. FSC, MSC) measured in hectares and recorded by GEF tracking tool. The SIRAP Steering Committee is a regional body for inter-institutional and inter-sectorial coordination composed of environmental and administrative authorities, but it does not include other actors such as authorities of indigenous and Afro-descendant territories, rural communities and producers, and requires support for its consolidation as a setting of consultation and articulation	Indicator BD 2.1: Landscapes and seascapes certified by internationally or nationally recognized environmental standards that incorporate biodiversity considerations (e.g. FSC, MSC) measured in hectares and recorded by GEF tracking tool. 1,023,519 ha of terrestrial ecosystems and 181,918ha of marine ecosystems have contributed to increase the area of socio-ecosystem connectivity in the West RCC by direct effects of the project. Additional 1,694,563 ha of land/seascape have effectively contributed to the socio-ecosystem connectivity as indirect effect (replication) of the project				1,023,519 ha of terrestrial ecosystems and 181,918ha of marine ecosystems have contributed to increase the area of socio-ecosystem connectivity in the West RCC by direct effects of the project. Additional 1,694,563 ha of land/seascape have effectively contributed to the socio-ecosystem connectivity as indirect effect (replication) of the project	Ecosystem monitoring Reports Satellite images Midterm and final Evaluation reports	Coordinator of the SEC Regional Strategy Policy and Advocacy Regional Coordinator Ecology/Biology Regional Coordinator MADS PNN SIRAP

Indicators	Baseline (2014)	Target	Milestones towards achieving output and outcome targets				Data Collection and Reporting	
			Year 1	Year 2	Year 3	Year 4	Means of verification	Responsible for Data Collection
	Indicator BD-2: *Policy and Regulatory frameworks* • *Biodiversity considerations are mentioned in sector policy:* agriculture : 1; forestry: 1; fisheries: 1[83] • *Biodiversity considerations are mentioned in sector policy through specific legislation*: 0 • *Regulations are in place to implement the legislation: 0* • *The regulations are under implementation: 0*	Indicator BD-2: *Policy and Regulatory frameworks* • *Biodiversity considerations are mentioned in sector policy through specific legislation*: agriculture : 1; forestry: 1; fisheries: 1 • *Regulations are in place to implement the legislation:* agriculture : 1; forestry: 1; fisheries: 1 • *The regulations are under implementation:* agriculture : 1; forestry: 1; fisheries: 1		*Biodiversity considerations are mentioned in sector policy through specific legislation*: agriculture : 1; forestry: 1; fisheries: 1		*Regulations are in place to implement the legislation: agriculture* : 1; forestry: 1; fisheries: 1 *The regulations are under implementation*: agriculture : 1; forestry: 1; fisheries: 1		

[83] 1 = yes; 0 = no (see GEF BD Tracking Tool, Objective 2, *Part V. Policy and Regulatory frameworks*)

Indicators	Baseline (2014)	Target	Milestones towards achieving output and outcome targets				Data Collection and Reporting	
			Year 1	Year 2	Year 3	Year 4	Means of verification	Responsible for Data Collection
Output 1.1.1: A study of multi-criteria valuation of socio-ecosystem services and a proposal of application of incentive schemes for conservation and sustainable production.	Existing studies: i) Valuation of water resources in protected Areas; ii) Valuation of carbón al national and local level; iii) Municipal agreements for tax exemption for land owners and Civil Society Nature Reserves (CSNR) that dedicate part or all of the land to conservation; iv) Social Cartography; v) Identification of corridors and productive alternatives; vi) hydrogeological and environmental models; vii) Studies on conflicts of land use; viii) Study on Jaguar corridors.	One (1) study of multi-criteria valuation of socio-ecosystem services and one (1) proposal of application of incentive schemes for conservation and sustainable production.	One (1) study of multi-criteria valuation of socio-ecosystem services and one (1) proposal of application of incentive schemes for conservation and sustainable production.				Valuation study Feasibility study on implementation of incentive schemes Institutional reports (PNN, SIRAP, MADS, Departmental Governments) Project reports	Coordinator of the SEC Regional Strategy Policy and Advocacy Regional Coordinator Ecology/Biology Regional Coordinator Environmental economics Specialist PNN, SIRAP

Indicators	Baseline (2014)	Target	Milestones towards achieving output and outcome targets				Data Collection and Reporting	
			Year 1	Year 2	Year 3	Year 4	Means of verification	Responsible for Data Collection
Output 1.1.2: Regional Strategy for Socio-Ecosystem Connectivity for reintegrating fragmented ecosystems in CRC, designed with participatory and gender approaches, implemented and monitored.	Indicator BD 2.2: Polices and regulations governing sectoral activities that integrate biodiversity conservation as recorded by the GEF tracking tool as a score. There are several levels of planning with local scope (local development agendas, regional planning councils, municipal development councils, dialogue tables). No initiatives related with regional corridors or ecological structuring in the region have been developed. Inter-institutional programs for monitoring species associated with socio-ecosystem corridors are non-existent.	Indicator BD 2.2: Polices and regulations governing sectoral activities that integrate biodiversity conservation as recorded by the GEF tracking tool as a score. 1 Regional Strategy for Socio-Ecosystem Connectivity for reintegrating fragmented ecosystems in CRC, designed with participatory and gender approaches, implemented and monitored. 1 monitoring program for flagship species of biodiversity, inter-institutional and with community participation, designed and implemented.	Regional Strategy for Socio-Ecosystem Connectivity for reintegrating fragmented ecosystems in CRC, designed with participatory and gender approaches 1 monitoring program for flagship species for each socio-ecosystem corridor designed	1 Regional Strategy for Socio-Ecosystem Connectivity for reintegrating fragmented ecosystems in CRC implemented and monitored. 1 monitoring program for flagship species for each socio-ecosystem corridor implemented	1 Regional Strategy for Socio-Ecosystem Connectivity for reintegrating fragmented ecosystems in CRC implemented and monitored. 1 monitoring program for flagship species for each socio-ecosystem corridor implemented	1 Regional Strategy for Socio-Ecosystem Connectivity for reintegrating fragmented ecosystems in CRC implemented and monitored. 1 monitoring program for flagship species for each socio-ecosystem corridor implemented	Strategy document Official acknowledgment from Departmental governments, CAR, PNN, SIRAP, Municipalities Monitoring program for flagship species Institutional reports (PNN, SIRAP, MADS, Departmental Governments) Project reports	Coordinator of the SEC Regional Strategy Policy and Advocacy Regional Coordinator Departmental facilitators Socio-cultural Communication Specialist Ecosystem monitoring specialist PNN, SIRAP, Departmental governments

Indicators	Baseline (2014)	Target	Milestones towards achieving output and outcome targets				Data Collection and Reporting	
			Year 1	Year 2	Year 3	Year 4	Means of verification	Responsible for Data Collection
Output 1.1.3: Planning instruments at regional, departmental and municipal levels incorporate the Socio-ecosystem Connectivity Strategy, implemented and monitored	Indicator BD 2.2: Polices and regulations governing sectoral activities that integrate biodiversity conservation as recorded by the GEF tracking tool as a score. There are departmental plans, municipal land use plan, watershed management and use plan and regional plans but in general they do not incorporate the ecological structure or corridor management. The Sinu corridor has a study of ecological structure. The Land use plans of the central area of Urabá area were updated in 2013 and include environmental determinants. Existing sectorial studies with regional analysis: mining, oil, oil palm, cotton, rice, livestock).	Indicator BD 2.2: Polices and regulations governing sectoral activities that integrate biodiversity conservation as recorded by the GEF tracking tool as a score. 17 Planning instruments at regional, departmental and municipal levels incorporate the Socio-ecosystem Connectivity Strategy, implemented and monitored (5 Departmental Development Plans 5 Municipal Land Use Plans 5 Action Plans of Environmental Authorities, the PNN Action Plan and the SIRAP Caribbean Action Plan)	Strategic Environmental Assessment of rural development Plans, Programs and projects in CRC carried out.	17 Planning instruments incorporate the Socio-ecosystem Connectivity Strategy.	17 Planning instruments implemented and monitored	17 Planning instruments implemented and monitored	Departmental Development Plans Municipal Land Use Plans Action Plans Institutional reports (PNN, SIRAP, MADS, Departmental Governments, Municipalities) Project reports	Coordinator of the SEC Regional Strategy Policy and Advocacy Regional Coordinator Departmental facilitators GIS specialist Socio-cultural Communication Specialist PNN, SIRAP, Departmental governments, Municipalities

Indicators	Baseline (2014)	Target	Milestones towards achieving output and outcome targets				Data Collection and Reporting	
			Year 1	Year 2	Year 3	Year 4	Means of verification	Responsible for Data Collection
Output 1.1.4: Platform for Information, Monitoring and Inter-sectorial Evaluation of the SEC Strategy, interoperable with the information systems of the participating entities and providing strategic guidance for decision-making, designed and functioning	Indicator BD 2.2: Polices and regulations governing sectoral activities that integrate biodiversity conservation as recorded by the GEF tracking tool as a score. PNN has a GIS platform. CARs have GIS. There are Departmental planning systems. The IDEAM Forestry Information System is being implemented, with adjustments al local level. Existing GIS and other systems are not integrated or interoperables. There is neither consolidated information on the species of flora and fauna in the Western Caribbean nor GIS information on VOC (Value Object of Conservation).	Indicator BD 2.2: Polices and regulations governing sectoral activities that integrate biodiversity conservation as recorded by the GEF tracking tool as a score. 1 Platform for Information, Monitoring and Inter-sectorial Evaluation of the SEC Strategy, interoperable with the information systems of the participating entities and providing strategic guidance for decision-making, designed and functioning	1 Platform for Information, Monitoring and Inter-sectorial Evaluation of the SEC Strategy designed	1 Platform for Information, Monitoring and Inter-sectorial Evaluation of the SEC Strategy functioning	1 Platform for Information, Monitoring and Inter-sectorial Evaluation of the SEC Strategy functioning	1 Platform for Information, Monitoring and Inter-sectorial Evaluation of the SEC Strategy functioning	Agreements between participant institutions Design of the platform Reports generated by the platform Project reports	Coordinator of the SEC Regional Strategy Policy and Advocacy Regional Coordinator Departmental facilitators GIS specialist Information System Specialist

Indicators	Baseline (2014)	Target	Milestones towards achieving output and outcome targets				Data Collection and Reporting	
			Year 1	Year 2	Year 3	Year 4	Means of verification	Responsible for Data Collection
Output 1.1.5: One training program for capacity building for the management and implementation of the SEC Regional Strategy and the AEPMAPPS tool designed, implemented and monitored	A training program for the implementation of socio-ecosystem corridors connectivity is not available.	160 officers (PNN, SIRAP, Departmental governments, CAR, Municipalities) trained for the management and implementation of SEC Regional Strategy and the AEPMAPPS tool.	Training program in local environmental governance (course) designed	60 officers directly trained through the course	100 additional officers trained through replicas.	160 officers (PNN, SIRAP, Departmental governments, CAR, Municipalities) trained for the management and implementation of SEC Regional Strategy and the AEPMAPPS tool.	Document containing the training program Lists of participants in training events Training materials Training assessment sheets (disaggregated by gender)	Coordinator of the SEC Regional Strategy Policy and Advocacy Regional Coordinator Socio-cultural Communication Specialist

Indicators	Baseline (2014)	Target	Milestones towards achieving output and outcome targets				Data Collection and Reporting	
			Year 1	Year 2	Year 3	Year 4	Means of verification	Responsible for Data Collection
Outcome 1.2: The population and the different stakeholders of connectivity corridors have increased awareness of the importance of biodiversity and socio-ecosystem connectivity.	To be defined at inception /Project Year 1	70% of the population has improved its perception of biodiversity and socio-ecosystem connectivities measured through surveys that include gender disaggregation. 50% of key stakeholders (producers, community leaders, entrepreneurs, political class, indigenous and Afro-descendant leaders, among others) have improved their knowledge, attitudes and practices for the management and conservation of biodiversity, measured by KAP surveys that include gender disaggregation.	Baseline information produced (perception surveys and KAP surveys - knowledge, attitudes and practices)			70% of the population has improved its perception of biodiversity and socio-ecosystem connectivities. 50% of key stakeholders (producers, community leaders) have improved their knowledge, attitudes and practices for the management and conservation of biodiversity.	Sampling design and survey Reports of survey results Midterm and final evaluation reports	Coordinator of the SEC Regional Strategy Policy and Advocacy Regional Coordinator Socio-cultural Communication Specialist Departmental facilitators SIRAP

Indicators	Baseline (2014)	Target	Milestones towards achieving output and outcome targets				Data Collection and Reporting	
			Year 1	Year 2	Year 3	Year 4	Means of verification	Responsible for Data Collection
Output 1.2.1: Communication strategy for positioning and dissemination SEC Strategy among different actors, designed in a participatory manner, implemented and monitored.	Actions of environmental awareness raising exist in the contents of CIDEAs. PNN , SIARP and CARs implement communication strategies and specific actions (ex: radio and TV programs, printed material)	1 Communication strategy for positioning and dissemination SEC Strategy among different actors, designed, implemented and monitored	1 Communication strategy for positioning and dissemination SEC Strategy among different actors designed	1 Communication strategy for positioning and dissemination SEC Strategy among different actors implemented and monitored	1 Communication strategy for positioning and dissemination SEC Strategy among different actors implemented and monitored	1 Communication strategy for positioning and dissemination SEC Strategy among different actors implemented and monitored	Strategy document Institutional reports (PNN, SIRAP, others) Project reports Information and communication materials and contents	Coordinator of the SEC Regional Strategy Policy and Advocacy Regional Coordinator Socio-cultural Communication Specialist Departmental facilitators SIRAP

Indicators	Baseline (2014)	Target	Milestones towards achieving output and outcome targets				Data Collection and Reporting	
			Year 1	Year 2	Year 3	Year 4	Means of verification	Responsible for Data Collection
Producto 1.2.2: SIRAP Caribbean Environmental Education Strategy adapted to different levels implemented in educational institutions and monitored.	PNN has environmental education programs (ie. SINY- Paramillo Park, Los Katios Park). ESPs implemented in several schools. Environmental trainings at local and organization level (ie. Zenú Major Council trains environmental graduates; trainings for environmental lleaders in the Urabá region). Several studies and research by academic institutions can serve as a basis to develop environmental education programs.	1 SIRAP Caribbean Environmental Education Strategy adapted to different levels implemented in educational institutions and monitored.	1 SIRAP Caribbean Environmental Education Strategy adapted to different levels	1 SIRAP Caribbean Environmental Education Strategy implemented in educational institutions and monitored.	1 SIRAP Caribbean Environmental Education Strategy implemented in educational institutions and monitored.	1 SIRAP Caribbean Environmental Education Strategy implemented in educational institutions and monitored.	Environmental education strategy document Institutional reports (SIRAP) Project reports Environmental education materials and contents	Coordinator of the SEC Regional Strategy Policy and Advocacy Regional Coordinator Socio-cultural Communication Specialist Departmental facilitators SIRAP

Indicators	Baseline (2014)	Target	Milestones towards achieving output and outcome targets				Data collection and Reporting	
			Year 1	Year 2	Year 3	Year 4	Means of verification	Responsible for data collection
Component 2: Creating new protected areas (PAs) and improving the effectiveness of existing PAs in the CRC.								

Indicators	Baseline (2014)	Target	Milestones towards achieving output and outcome targets				Data collection and Reporting	
			Year 1	Year 2	Year 3	Year 4	Means of verification	Responsible for data collection
Outcome 2.1: Marine and coastal ecosystems (mangroves, seagrass beds and coral reefs), forests, wetlands and swamp complexes have improved their management and conservation status.	72.000 ha PA 3.000 ha under use and management agreements 2.500 ha covered by sustainable production plans	725,418 ha of existing and new Protected Areas (PAs) have improved their management and conservation status improving connectivity in forest, marshy and coastal and marine ecosystems (at least 10,000 hectares of new APs and 715,417 ha of existing APs) 3,000 hectares of AP used by indigenous and Afro-descendants under agreements of use and management of resources incorporating SEC approach 2,500 ha in buffer zones covered by plans for sustainable production incorporating the SEC approach.				725,418 ha of existing and new Protected Areas (PAs) have improved their management and conservation status improving connectivity in forest, marshy and coastal and marine ecosystems (at least 10,000 hectares of new APs and 715,417 ha of existing APs) 3,000 hectares of AP used by indigenous and Afro-descendants under agreements of use and management of resources incorporating SEC approach 2,500 ha in buffer zones covered by plans for sustainable production incorporating the SEC approach.	Institutional reports (PNN, SIRAP, MADS, NGO) Midterm and final evaluation reports	Coordinator of the SEC Regional Strategy Biology/Ecology Regional Coordinator Sustainable Production Regional Coordinator PNN, SIRAP, SILAP

Indicators	Baseline (2014)	Target	Milestones towards achieving output and outcome targets				Data collection and Reporting	
			Year 1	Year 2	Year 3	Year 4	Means of verification	Responsible for data collection
Output 2.1.1: Six (6) new PAs created and their management plans prepared (3Pas and 3 Civil Society Nature Reserves - CSNR)	Existing information on information representativeness and conservation priorities at national, regional and local levels. One study of biological corridor model in ecological structure. PNN has a methodology that allows modeling corridors and conservation areas in the Caribbean Region (SIG DTCA).	Six (6) new PAs created and their management plans prepared (3Pas and 3 Civil Society Nature Reserves – CSNR covering at list 10.000 ha)	Technical studies for selection and declaration of new PAs			Six (6) new PAs created and their management plans prepared (3Pas and 3 Civil Society Nature Reserves - CSNR)	Documents declaring PAs Management plans Institutional reports (PNN, SIRAP) Project reports	Coordinator of the SEC Regional Strategy Biology/Ecology Regional coordinator PNN, SIRAP, SILAP

Indicators	Baseline (2014)	Target	Milestones towards achieving output and outcome targets				Data collection and Reporting	
			Year 1	Year 2	Year 3	Year 4	Means of verification	Responsible for data collection
Output 2.1.2: Improved management effectiveness of 7 existing protected areas (5 national PAs and 2 regional PAs)	Indicator 1.1: Protected area management effectiveness score as recorded by Management Effectiveness Tracking Tool. Scores obtained in the implementation of the GEF tracking tool for management effectiveness in 7 existing AP: • NNP Katíos: 62 • NNP Paramillo: 58 • SFF Corchal "El Mono Hernández": 46 • SFF Los Colorados: 57 • NNP Los Corales del Rosario y de San Bernardo: 68 • IMD Ensenada de Río Negro: 44 • IMD Cispatá: 69	Indicator 1.1: Protected area management effectiveness score as recorded by Management Effectiveness Tracking Tool. Improvement in scores obtained in the implementation of the GEF tracking tool for management effectiveness in 7 existing AP: • NNP Katíos: 80 • NNP Paramillo: 75 • SFF Corchal "El Mono Hernández": 85 • SFF Los Colorados: 90 • NNP Los Corales del Rosario y de San Bernardo: 80 • IMD Ensenada de Río Negro: 80 • IMD Cispatá: 78		• NNP Katíos: 72 • NNP Paramillo: 65 • SFF Corchal "El Mono Hernández": 65 • SFF Los Colorados: 75 • NNP Los Corales del Rosario y de San Bernardo: 75 • IMD Ensenada de Río Negro: 62 • IMD Cispatá: 74		• NNP Katíos: 80 • NNP Paramillo: 75 • SFF Corchal "El Mono Hernández": 85 • SFF Los Colorados: 90 • NNP Los Corales del Rosario y de San Bernardo: 80 • IMD Ensenada de Río Negro: 80 • IMD Cispatá: 78	GEF tracking tool aplied at mid-term and end of project Project reprts	Coordinator of the SEC Regional Strategy Biology/Ecology Regional coordinator PNN, SIRAP

Indicators	Baseline (2014)	Target	Milestones towards achieving output and outcome targets				Data collection and Reporting	
			Year 1	Year 2	Year 3	Year 4	Means of verification	Responsible for data collection
Output 2.1.3: Sustainable production plans incorporated into the management plans of at least 2 Regional PAs, with socio-ecosystem approach, implemented and monitored.	Pas promote ecotourism. Existing initiatives for sustainable production: commercialization of *juagua* in indigenous reserves, heterotrophic projects shrimp and shad; sustainable mangrove management. Management plans cover 2.500 ha.	3 sustainable production plans (agrosilvopastoral, responsible fisheries and organic beekeeping) incorporated in management plans of at least 2 Regional PAs, with SEC approach, implemented and monitored	3 sustainable production plans (agrosilvopastoral, responsible fisheries and organic beekeeping) designed and incorporated in management plans	3 sustainable production plans (agrosilvopastoral, responsible fisheries and organic beekeeping) implemented and monitored	3 sustainable production plans (agrosilvopastoral, responsible fisheries and organic beekeeping) implemented and monitored	3 sustainable production plans (agrosilvopastoral, responsible fisheries and organic beekeeping) implemented and monitored	Management plans of Regional PAs Sustainable production plans Project reports	Coordinator of the SEC Regional Strategy Biology/Ecology Regional coordinator Sustainable Production Regional Coordinator SIRAP

Indicadors	Baseline (2014)	Target	Milestones toward achieving output and outcome targets				Data collection and reporting	
			Year 1	Year 2	Year 3	Year 4	Means of verification	Responsible for data collection
Component 3: Alternative models of sustainable production and strategies to ensure the supply of local and global ecosystem services.								

Indicadors	Baseline (2014)	Target	Milestones toward achieving output and outcome targets				Data collection and reporting	
			Year 1	Year 2	Year 3	Year 4	Means of verification	Responsible for data collection
Outcome 3.1: The development of four (4) mosaics for conservation and sustainable use of natural resources has contributed effectively to the socio-ecosystem connectivity in the CRC.	Indicator BD 2.1: Landscapes and seascapes certified by internationally or nationally recognized environmental standards that incorporate biodiversity considerations (e.g. FSC, MSC) measured in hectares and recorded by GEF tracking tool. Two existing mosaics: Morrosquillo Gulf with 167.826 ha and The Peak with 1.122,78 ha	Indicator BD 2.1: Landscapes and seascapes certified by internationally or nationally recognized environmental standards that incorporate biodiversity considerations (e.g. FSC, MSC) measured in hectares and recorded by GEF tracking tool. 2.429 ha of mosaics of conservation and sustainable use of natural resources have contributed effectively to the socio-ecosystem connectivities in the CRC				2.429 of mosaics of conservation and sustainable use of natural resources have contributed effectively to the socio-ecosystem connectivities in the CRC		Coordinator of the SEC Regional Strategy Biology/Ecology Regional coordinator Sustainable Production Regional Coordinator PNN

Indicadors	Baseline (2014)	Target	Milestones toward achieving output and outcome targets				Data collection and reporting	
			Year 1	Year 2	Year 3	Year 4	Means of verification	Responsible for data collection
Output 3.1.1: 4 agreements for the creation of mosaics of conservation and sustainable use involving key local actors (municipalities, environmental authorities, landowners and producer organizations)	Agreements related to the 2 existing mosaics (Morrosquillo Gulf and The Peak)	4 agreements for the creation of mosaics of conservation and sustainable use involving key local actors (municipalities, environmental authorities, landowners and producer organizations)	4 agreements for the creation of mosaics of conservation and sustainable use involving key local actors (municipalities, environmental authorities, landowners and producer organizations)			4 agreements for the creation of mosaics of conservation and sustainable use involving key local actors (municipalities, environmental authorities, landowners and producer organizations)	Agreements for the creation of mosaics Institutional reports (PNN, MADS, NGOs, others) Project reports	Coordinator of the SEC Regional Strategy Biology/Ecology Regional coordinator Sustainable Production Regional Coordinator
Producto 3.1.2: Riparian forests in buffer zones and protected streams and canals connected with the mosaics in the basins of the Sinu and Leon rivers restored.	Existing specific initiative for reforestation and forest restoration: 10 km gallery forest in Sinú; 400 ha reforestation and recovery of 16 ha of cativales (*Prioria copaifera*) in Urabá; purchase of 220 ha for watershed protection in Chigorodó; Recovery of 618 ha of retract areas in various locations.	100 linear km of riparian forests in buffer zones and protected streams and canals connected with the mosaics in the basins of the Sinu and Leon rivers restored.		50 linear km of riparian forests in buffer zones and protected streams and canals connected with the mosaics in the basins of the Sinu and Leon rivers restored.		100 linear km of riparian forests in buffer zones and protected streams and canals connected with the mosaics in the basins of the Sinu and Leon rivers restored.	Project reports	Coordinator of the SEC Regional Strategy Biology/Ecology Regional coordinator Sustainable Production Regional Coordinator

Indicadors	Baseline (2014)	Target	Milestones toward achieving output and outcome targets				Data collection and reporting	
			Year 1	Year 2	Year 3	Year 4	Means of verification	Responsible for data collection
Output 3.1.3: Sustainable production plans (SPP) in private, communal or public land, designed, implemented and monitored.	Existing iniciatives promoting suatinable production implemented by producers associations; demonstrative farms; Sustainable development plans for farmers reserve areas; experiences of wildlife conservation with sustainable use models; organic cotton projects. The CSNR process in an artisanal way promissory products and non-timber forest products and are engaged in agro-ecotourism activities. Cocoa under agroforestry systems. There are 41 properties (3,977 ha) with GAP certification in the 5 departments; GLP eight farms with certification in Cordoba. 329 ha with ecological certification.	3.200 ha under sustainable production plans with existing or new certification schemes in private, community or public land, designed, implemented and monitored. (300 producers – 30% women and 30% members of ethnic groups)	Sustainable production plans designed	Sustainable production plans implemented and monitored.	Sustainable production plans implemented and monitored.	3.200 ha under sustainable production plans (300 producers – 30% women and 30% members of ethnic groups)	Sustainable production plans Institutional reports (MADR, PNN)	Coordinator of the SEC Regional Strategy Sustainable Production Regional Coordinator Local facilitators
Output 3.1.4: Program for the extension and transfer of the sustainable intensification approach in priority corridors designed, implemented and monitored	Strategic alliances of the Ministry of Agriculture. INCODER sustainable production project.	1 Program for the extension and transfer of the sustainable intensification approach in priority corridors designed, implemented and monitored	1 Program for the extension and transfer of the sustainable intensification approach in priority corridors designed	1 Program for the extension and transfer of the sustainable intensification approach in priority corridors implemented and monitored	1 Program for the extension and transfer of the sustainable intensification approach in priority corridors implemented and monitored	1 Program for the extension and transfer of the sustainable intensification approach in priority corridors implemented and monitored	Document containing Program for the extension and transfer Institutional reports (MADR) Project reports	Coordinator of the SEC Regional Strategy Sustainable Production Regional Coordinator

Indicadors	Baseline (2014)	Target	Milestones toward achieving output and outcome targets				Data collection and reporting	
			Year 1	Year 2	Year 3	Year 4	Means of verification	Responsible for data collection
Component 4: Monitoring, evaluation and dissemination of project information								
Outcome 4.1: Project implementation based on RBM and lessons learned/good practices documented and disseminated		Project implementation based on RBM and demonstrating sustainability	36% progress in achievement of outcomes	70% progress in achievement of outcomes	88% progress in achievement of outcomes	Project outcomes achieved and demonstrating sustainability	PIR PPRs Mid-term and final evaluations	Coordinator of the SEC Regional Strategy FAO MADS, PNN, SIRAP
Output 4.1.1 Monitoring system project operating and providing systematic information on progress in reaching expected outcomes and targets		Project results matrix with outcomes and outputs indicators, baseline and targets	2 six-monthly reports (1 PPR y 1 PIR)	2 six-monthly reports (1 PPR y 1 PIR)	2 six-monthly reports (1 PPR y 1 PIR)	2 six-monthly reports (1 PPR y 1 PIR)	PPR PIR	Coordinator of the SEC Regional Strategy FAO MADS, PNN, SIRAP
Producto 4.1.2 Midterm and final evaluations; implementation and sustainability strategy adjusted to recommendations.		1 mid-term evaluation and 1 final evaluation		Mid-term evaluation report		Final evaluation report	Mid-term and final evaluation reports	Coordinator of the SEC Regional Strategy FAO MADS, PNN, SIRAP

APPENDIX 2: WORK PLAN (RESULTS BASED)

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3				Year 4			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Component 1: Strengthening institutional coordination and mainstreaming the socio-ecosystem approach in land-use planning, to reduce the degradation and fragmentation of strategic ecosystems in the Caribbean Region of Colombia.																		
Output 1.1.1: A study of multi-criteria valuation of socio-ecosystem services and a proposal of application of incentive schemes for conservation and sustainable production.	Study of supply and demand of ecosystem services	Project coordinator, Policy and advocacy Regional coordinator Environmental economics specialist MADS, PNN, SIRAP, MADR																
	Feasibility analysis of the implementation of incentive and compensation schemes /PES	Project coordinator, Policy and Advocacy Regional coordinator Environmental economics specialist MADS, PNN, SIRAP, MADR																
	Local workshops for disseminating information on incentive and compensation schemes /PES	Project coordinator, Policy and Advocacy Regional coordinator Environmental economics specialist MADS, PNN, SIRAP, MADR, Departmental governments																
<u>Output 1.1.2</u> Regional Strategy for Socio-Ecosystem Connectivity for reintegrating fragmented ecosystems in CRC, designed with participatory and gender approaches, implemented and monitored.	Development of concept paper	Project coordinator, Policy and Advocacy Regional coordinator MADS, PNN, SIRAP																
	Development of a GIS cartographic analysis	Project coordinator, Policy and Advocacy Regional coordinator MADS, PNN, SIRAP																
	Consultation workshops – regional level	Project coordinator, Policy and Advocacy Regional																

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3				Year 4			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
		coordinator MADS, PNN, SIRAP																
	Consultation workshops – local level	Project coordinator, Policy and Advocacy Regional coordinator MADS, PNN, SIRAP, Departmental governments, CARs																
	Implementation and monitoring of the SEC Regional Strategy	MADS, PNN, SIRAP, Departmental governments, CARs																
	Development monitoring program for Biodiversity	Project coordinator, Policy and Advocacy Regional coordinator Ecosystem monitoring specialist PNN																
	Implementation of monitoring program for Biodiversity	Project coordinator, Policy and Advocacy Regional coordinator Ecosystem monitoring specialist PNN																
<u>Output 1.1.3</u> Planning instruments at regional, departmental and municipal levels incorporate the Socio-ecosystem Connectivity Strategy, implemented and monitored	Strategic Environmental Assessment	Project coordinator, Policy and Advocacy Regional coordinator Departmental facilitators PNN, SIRAP, Departmental governments, CARs																
	Incorporation of SEC approach in planning instruments	Project coordinator, Policy and Advocacy Regional coordinator Departmental facilitators PNN, SIRAP, Departmental governments, CARs, MADR																
	Implementation and monitoring of plans with SEC approach	Project coordinator, Policy and Advocacy Regional coordinator																

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3				Year 4			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
		Departmental facilitators PNN, SIRAP, Departmental governments, CARs																
Output 1.1.4 Platform for Information, Monitoring and Inter-sectorial Evaluation of the SEC Strategy, interoperable with the information systems of the participating entities and providing strategic guidance for decision-making, designed and functioning	Analysis of requirements	Project coordinator, Policy and Advocacy Regional coordinator GIS Regional Coordinator MADS, PNN, SIRAP, Departmental governments, CAR, others																
	Data entry	Project coordinator, Policy and Advocacy Regional coordinator GIS Regional Coordinator MADS, PNN, SIRAP, Departmental governments, CAR, others																
	Design of geodatabases, information sharing protocols, system architecture and applications	Project coordinator, Policy and Advocacy Regional coordinator GIS Regional Coordinator MADS, PNN, SIRAP, Departmental governments, CAR, others																
	Processing and production of data	Project coordinator, Policy and Advocacy Regional coordinator GIS Regional Coordinator MADS, PNN, SIRAP, Departmental governments, CAR, others																
	Development of the logic model of information storage	Project coordinator, Policy and Advocacy Regional coordinator GIS Regional Coordinator MADS, PNN, SIRAP, Departmental governments, CAR, others																

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3				Year 4			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	Implementation of a pilot online	Project coordinator, Policy and Advocacy Regional coordinator GIS Regional Coordinator MADS, PNN, SIRAP, Departmental governments, CAR, others																
	Dissemination and training	Project coordinator, Policy and Advocacy Regional coordinator GIS Regional Coordinator MADS, PNN, SIRAP, Departmental governments, CAR, others																
	Implementation of the platform	Project coordinator, Policy and Advocacy Regional coordinator GIS Regional Coordinator MADS, PNN, SIRAP, Departmental governments, CAR, others																
Output 1.1.5: One training program for capacity building for the management and implementation of the SEC Regional Strategy and the AEPMAPPS tool designed, implemented and monitored.	Design of the training program (diplomado)	Project coordinator, Policy and Advocacy Regional coordinator Universities																
	Implementation of the training program, evaluation and feedback	Project coordinator, Policy and Advocacy Regional coordinator Universities																
	Replicas at departmental and local levels	Project coordinator, Policy and Advocacy Regional coordinator PNN, SIRAP, CAR, Departmental governments																
Output 1.2.1 Communication strategy for positioning and dissemination SEC Strategy among different actors,	Design of the communication strategy	Project coordinator, Policy and Advocacy Regional coordinator Communications specialist																

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3				Year 4			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
designed in a participatory manner, implemented and monitored.		SIRAP																
	Production of elements and materials of the strategy (web page, newsletters, ads in the radio, mini-documentaries, posters, etc.	Project coordinator, Policy and Advocacy Regional coordinator Communications specialist SIRAP																
	Implementation and monitoring of the communications strategy	Project coordinator, Policy and Advocacy Regional coordinator Communications specialist SIRAP, PNN, MADS, Departmental governments, CARs, others																
Output 1.2.2 SIRAP Caribbean Environmental Education Strategy adapted to different levels, implemented in educational institutions and monitored	Adaptation of the SIRAP Environmental Education Strategy	Project coordinator, Policy and Advocacy Regional coordinator Communications specialist SIRAP																
	Selection of educational institution and training to CIDEAs	Project coordinator, Policy and Advocacy Regional coordinator Communications specialist SIRAP, CIDEAs																
	Design of box of training tools	Project coordinator, Policy and Advocacy Regional coordinator Communications specialist SIRAP, CIDEAs																
	Training of teachers	Project coordinator, Policy and Advocacy Regional coordinator Communications specialist, NGO to be hired, SIRAP, CIDEAs																
	Training teachers – students and replicas	Project coordinator, Policy and Advocacy Regional coordinator Communications specialist																

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3				Year 4			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
		SIRAP, CIDEAs																
	PRAEs updating – formal and informal activities	Project coordinator, Policy and Advocacy Regional coordinator Communications specialist, NGO to be hired, SIRAP, CIDEAs																
Component 2: Creating new protected areas (PAs) and improving the effectiveness of existing PAs in the CRC.																		
Producto 2.1.1 Six (6) new PAs created and their management plans prepared (3Pas and 3 Civil Society Nature Reserves - CSNR)	Technical studies for the creation of CSNR and Regional PAs	Project coordinator, Biology Regional Coordinator Ecosystem Monitoring Specialist PNN, SIRAP, CARs, communities																
	Consultation workshops with stakeholders for validation of the studies and agreement	Project coordinator, Biology Regional Coordinator Ecosystem Monitoring Specialist PNN, SIRAP, CARs,																
	Pas declaration	Project coordinator, Biology Regional Coordinator PNN, SIRAP, CARs, communities																
	Development of management plans	Project coordinator, Biology Regional Coordinator PNN, SIRAP, CARs, communities																
Output 2.1.2 Improved management effectiveness of 7 existing protected areas (5 national PAs and 2 regional PAs)	Design and implementation of training on PAs management	Project coordinator, Biology Regional Coordinator PNN, SIRAP, CARs																
	Sharing of management plans, adoption of adjusted plans	Project coordinator, Biology Regional Coordinator PNN, SIRAP, CARs																
	Investments (equipment, infrastructure)	Project coordinator, Biology Regional Coordinator PNN, SIRAP, CARs																

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3				Year 4			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	Agreements for use and management of resources with communities	Project coordinator, Biology Regional Coordinator PNN, SIRAP, CARs																
	Implementation of agreements with communities	Project coordinator, Biology Regional Coordinator PNN, SIRAP, CARs																
	Strengthening AEMAPPS tool	Project coordinator, Biology Regional Coordinator PNN, SIRAP, CARs																
	Annual exercises of implementation of AEMAPPS tool	Project coordinator, Biology Regional Coordinator PNN, SIRAP, CARs																
Output 2.1.3 Sustainable production plans incorporated into the management plans of at least 2 Regional PAs, with socio-ecosystem approach, implemented and monitored.	Selection of Regional PAs	Project coordinator, Biology Regional Coordinator PNN, SIRAP, CARs																
	Workshops for sharing PAs management plans and sustainable production principles	Project coordinator, Biology Regional Coordinator PNN, SIRAP, CARs																
	Feasibility study of value chains	Coordinador Proyecto Coord. Regional Biología Coord. Regional Producción Sostenible PNN, SIRAP, CARs																
	Design of sustainable production plans (including training programs)	Project coordinator, Biology Regional Coordinator Sustainable production Regional Coordinator PNN, SIRAP, CARs																
	Implememntation of sustainable production plans (including provision of seeds, seedlings, tools and agricultural inputs)	Project coordinator, Biology Regional Coordinator Sustainable production Regional Coordinator PNN, SIRAP, CARs																
Componente 3: Alternative models of sustainable production and strategies to ensure the supply of local and global ecosystem services.																		
Output 3.1.1 4 agreements for the creation of mosaics of conservation and	Creation of mosaics and signature of agreements	Project coordinator, Sustainable production Regional Coordinator																

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3				Year 4			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
sustainable use involving key local actors (municipalities, environmental authorities, landowners and producer organizations)		Ecosystem Monitoring Specialist PNN, SIRAP, CARs, Departmental governments																
	Precesses of collective construction of mosaics	Project coordinator, Sustainable production Regional Coordinator Ecosystem Monitoring Specialist PNN, SIRAP, CARs, Departmental governments																
	Implementation of agreements	Project coordinator, Sustainable Production Regional Coordinator Ecosystem Monitoring Specialist PNN, SIRAP, CARs, Departmental governments																
Output 3.1.2 Riparian forests in buffer zones and protected streams and canals connected with the mosaics in the basins of the Sinu and Leon rivers restored.	Design of a for riparian forest reforestation plan	Project coordinator, Sustainable Production Regional Coordinator Biology Regional Coordinator Field facilitators – Local Promoters Government of Antioquia, Government of Cordoba																
	Training and awareness raising workshops with communities and land owners	Project coordinator, Sustainable Production Regional Coordinator Biology Regional Coordinator Field facilitators – Local Promoters Government of Antioquia, Government of Cordoba																
	Implementation of the riparian forest reforestation plan (farm selection, provision of seedlings, crop care)	Project coordinator, Sustainable Production Regional Coordinator Biology Regional Coordinator																

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3				Year 4			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
		Field facilitators – Local Promoters Government of Antioquia, Government of Cordoba																
Output 3.1.3 Sustainable production plans (SPP) in private, communal or public land, designed, implemented and monitored.	Design of SPP	Project coordinator, Sustainable Production Regional Coordinator Field facilitators – Local Promoters PNN, MADR																
	Setting of TTU and FFS- SEC	Project coordinator, Sustainable Production Regional Coordinator Field facilitators – Local Promoters PNN, MADR																
	Implementation of SPP, monitoring	Project coordinator, Sustainable Production Regional Coordinator Field facilitators – Local Promoters PNN, MADR																
	Feasibility analysis of the implementation of certification schemes	Project coordinator, Sustainable Production Regional Coordinator MADR, ICA																
Output 3.1.4 Program for the extension and transfer of the sustainable intensification approach in priority corridors designed, implemented and monitored	Design of the program	Project coordinator, Sustainable Production Regional Coordinator MADR																
	Implementation of the program, monitored	Project coordinator, Sustainable Production Regional Coordinator MADR																
Component 4: Monitoring, evaluation and dissemination of project information																		
Output 4.1.1 Monitoring system project	Inception workshop	Project coordinator, M&E Assistant																

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3				Year 4			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
operating and providing systematic information on progress in reaching expected outcomes and targets	Preparation and validation of AWP/B	Project coordinator, Policy and Advocacy Regional coordinator Biology Regional Coordinator Sustainable Production Regional Coordinator																
	Preparation and validation of M&E plan	Project coordinator, Policy and Advocacy Regional coordinator Biology Regional Coordinator Sustainable Production Regional Coordinator M&E assistant																
	Periodic monitoring and preparation of progress reports (PPR)	Project coordinator, Policy and Advocacy Regional coordinator Biology Regional Coordinator Sustainable Production Regional Coordinator M&E assistant																
	Preparation of annual reports (PIR)	Project coordinator LTU																
<u>Output 4.1.2</u> Mid-term and final evaluations; implementation and sustainability strategies adapted to recommendations	Midterm evaluation	External Consultant FAO National Project Director Project Coordinator																
	Final evaluation	External Consultant FAO National Project Director Project Coordinator																
Project management	Contracting of project management staff	FAO CO																

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3				Year 4			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	Six-monthly Project Steering Committee (PSC) meetings	PSC Presidency Project coordinator																

APPENDIX 3: RESULTS BUDGET

Budget final EN.xlsx

					BUDGET in USD				Total	Expenditures by year			
Oracle code and description	Unit	No. of units	Unit cost	Component 1 Total	Component 2: Total	Component 3: Total	Component 4: Total	PM	GEF	Year 1	Year 2	Year 3	Year4
5300 Salaries professionals									**TOTALS**				
Financial and Operations Officer	month	48	7.136,92	**0**	**0**	**0**	**0**	342.572	342.572	85.643	85.643	85.643	85.643
5300 Sub-total salaries professionals				**0**	**0**	**0**	**0**	342.572	**342.572**	85.643	85.643	85.643	85.643
			10,68%										
5013 *incl. ICRU + MCS	**National**		**consultants**						0				
Coordinator of the Regional Strategy of Socio-Ecosystem Connectivities	month	48	4.205,84	**88.827**	**46.432**	**46.432**	**20.188**		**201.880**	50.470	50.470	50.470	50.470
M&E assistant	month	47	1.770,88	**36.622**	**19.143**	**19.143**	**8.323**		**83.231**	19.480	21.251	21.251	21.251
Administrative, financial and operation support (+ Assistant)	month*	48	3.320,40	**51.910**	**55.289**	**48.961**	**3.219**		**159.379**	39.845	39.845	39.845	39.845
Project's vehicols drivers (2)	month*	36	1.494,18	**17.520**	**18.660**	**16.524**	**1.087**		**53.790**	11.953	14.942	14.942	11.953
Ecology/Biology Regional Coordinator	month	43	2.988,36	**32.872**	**80.686**	**14.942**	**0**		**128.499**	35.860	35.860	29.884	26.895
Sustainable Production Regional Coordinator	month	43	2.988,36	**26.895**	**56.779**	**44.825**	**0**		**128.499**	29.884	35.860	35.860	26.895
Policy and Advocacy Regional Coordinator	month	40	2.988,36	**71.721**	**20.919**	**26.895**	**0**		**119.534**	35.860	35.860	29.884	17.930
Socio-cultural Communication Specialist	month	44	2.767,00	**88.544**	**19.369**	**13.835**	**0**		**121.748**	30.437	30.437	30.437	30.437
Environmental Economics Specialist	month	12	2.767,00	**22.136**	**2.767**	**8.301**	**0**		**33.204**	24.903	8.301	0	0
SEC departmental facilitator Bolivar	month	36	2.600,98	**54.621**	**26.010**	**13.005**	**0**		**93.635**	23.409	31.212	28.611	10.404
SEC departmental facilitator Sucre	month	36	2.600,98	**54.621**	**26.010**	**13.005**	**0**		**93.635**	23.409	31.212	28.611	10.404

					BUDGET in USD				Total	Expenditures by year			
Oracle code and description	**Unit**	**No. of**	**Unit cost**	**Component 1**	**Component 2:**	**Component 3:**	**Component 4:**	**PM**	**GEF**	**Year 1**	**Year 2**	**Year 3**	**Year4**
SEC departmental facilitator Cordoba	month	36	2.600,98	**54.621**	**26.010**	**13.005**	**0**		**93.635**	23.409	31.212	28.611	10.404
SEC departmental facilitator Antioquia and Chocó (Urabá)	month	36	2.600,98	**54.621**	**26.010**	**13.005**	**0**		**93.635**	23.409	31.212	28.611	10.404
Local Indigenous interpreter *(Palabrero)*	month	20	1.106,80	**11.068**	**4.427**	**6.641**	**0**		**22.136**	5.534	5.534	5.534	5.534
Forestry specialist	month	11	2588,23	**0**	**0**	**28.471**	**0**		**28.471**	10.353	10.353	7.765	0
Fisheries and aquaculture specialist	month	6	2588,23	**0**	**7.765**	**7.765**	**0**		**15.529**	7.765	7.765	0	0
Ecosystem Monitoring Specialist - SEC - SIAC IDEAM MADS Liaison	month	34	3320,40	**112.894**	**0**	**0**	**0**		**112.894**	26.563	33.204	26.563	26.563
Agriculture and Livestock Sector Liaison Consultant UPRA-MADR-INCODER-CORPOICA	month	24	3320,40	**79.690**	**0**	**0**			**79.690**	19.922	19.922	19.922	19.922
GIS -Land Use Planning - Remote Sensing Specialist	month	39	2.767,00	**44.272**	**49.806**	**13.835**	**0**		**107.913**	27.670	33.204	22.136	24.903
Local facilitators (10)	month	380	1328,16	**0**	**151.410**	**353.291**	**0**		**504.701**	132.816	159.379	132.816	79.690
Information Systems - Information and Communication Technologies Consultant	month	24	2988,36	**71.721**	**0**	**0**	**0**		**71.721**	29.884	23.907	17.930	0
Local promoters Sec monitoring - field GIS verification (contracts)	month	288	442,72	**0**	**85.002**	**42.501**	**0**		**127.503**	42.501	42.501	42.501	0
Sub-total consultants				**975.173**	**722.493**	**744.382**	**32.817**	0	**2.474.865**	675.335	733.442	642.182	423.904
5014 Contracts													
Design/execution IT platforms	Lumpsum	1	84.802	**84.802**	**0**	**0**	**0**		84.802	44.802	40.000		
Market studies (value chains, ES offer and supply)	Lumpsum	1	57.000	**41.000**	**16.000**	**0**	**0**		57.000	42.000	15.000		
Execution of sustainable production training module	Lumpsum	1	68.000	**0**	**38.000**	**30.000**	**0**		68.000	38.000	20.000	10.000	
Execution of Environmental education module	Lumpsum	1	48.953	**48.953**	**0**	**0**	**0**		48.953	28.953	20.000		
Agreement with University for the creation of a training program		1	50.000	**50.000**		**0**	**0**		50.000	50.000			
Implementation of use and management agreements with ethnic communities (Indigenous Reserves and Community Councils).	Lumpsum	8	10.000	**0**	**80.000**	**0**	**0**		80.000		80.000		

					BUDGET in USD				Total	Expenditures by year			
Oracle code and description	**Unit**	**No. of**	**Unit cost**	**Componen t 1**	**Compone nt 2:**	**Compone nt 3:**	**Compone nt 4:**	**PM**	**GEF**	**Yea r 1**	**Year 2**	**Year 3**	**Year4**
Design/implementation of the start-up phase of Mosaics of Conservation, Development and Sustainable Use	Lumpsum	1	96.000	**0**	**0**	**96.000**	**0**		96.000	48.0 00	48.000		
GIS Analysis, Monitoring and field coverage verification - Mosaics and viability analysis of flagship species population	Lumpsum	1	10.000	**0**	**10.000**	**0**			10.000	5.00 0		5.000	
Technical studies and social consultation for the creation of Civil Society Nature Reserve	Lumpsum	3	32.000	**0**	**96.000**	**0**	**0**		96.000	47.0 00	49.000		
Technical studies and social consultation for the creation of Regional Pas	Lumpsum	3	75.000	**0**	**225.000**	**0**			225.000	125. 000	100.00 0		
Delimitation of national PAs	Lumpsum	1	30.000	**0**	**30.000**	**0**	**0**		30.000	10.0 00	20.000		
PNN - CARs Agreement - agreed proposal of PAs Buffer Zones included in LUPs	Lumpsum	1	38.000	**0**	**38.000**	**0**			38.000	19.0 00	19.000		
Management plans Regional PAs	Lumpsum	2	25.000	**0**	**50.000**	**0**	**0**		50.000	25.0 00	25.000		
Production and transmission of spots and audiovisuals	Lumpsum	1	80.000	**80.000**	**0**	**0**	**0**		80.000	24.0 00	24.000	24.000	8.000
Design and printout of communication matrial	Lumpsum	1	48.000	**48.000**	**0**	**0**	**0**		48.000	18.0 00	20.000	5.000	5.000
Mid-term evaluation	Lumpsum	1	40.000	**0**	**0**	**0**	**40.000**		40.000		40.000		
Final evaluation	Lumpsum	1	40.000	**0**	**0**	**0**	**40.000**		40.000				40.000
5650 Sub-total Contracts				**352.755**	**583.000**	**126.000**	**80.000**	0	**1.141.755**	524. 755	520.00 0	44.000	53.000
5021 Travel													
Local travels	days	97 0	45	**16.425**	**7.110**	**20.115**	**0**		43.650	11.2 50	16.000	9.900	6.500
International travels		4	4.750	**19.000**	**0**	**0**	**0**		19.000	4.00 0	15.000		
National travels	Tickets	44 4	130	**27.170**	**11.700**	**18.850**	**0**		57.720	17.0 00	21.000	11.000	8.720
National travels (allowances)	days	96 4	100	**34.700**	**35.500**	**26.200**	**0**		96.400	24.0 00	34.900	29.500	8.000
5900 Sub-total travel				**97.295**	**54.310**	**65.165**	**0**	0	**216.770**	56.2 50	86.900	50.400	23.220
5023 Training and workshops							**0**		0				

					BUDGET in USD				Total	Expenditures by year			
Oracle code and description	**Unit**	**No. of**	**Unit cost**	**Component 1**	**Component 2:**	**Component 3:**	**Component 4:**	**PM**	**GEF**	**Year 1**	**Year 2**	**Year 3**	**Year4**
Public officers SEC training workshops (diplomado)	workshop days	10	800	**8.000**	**0**	**0**	**0**		8.000	8.000			
ICEEs training workshops	workshop days	17	500	**8.500**	**0**	**0**	**0**		8.500	8.500			
SEC FFS Workshops	workshop days	400	80	**0**	**0**	**32.000**	**0**		32.000	8.000	14.000	6.000	4.000
Inovation Extencion activities-technicians Component 3	workshop days	180	80	**0**	**0**	**14.400**	**0**		14.400	3.600	5.000	3.800	2.000
Workshops for socialization of agreements for conservation mosaics creation	workshop days	16	500	**0**	**0**	**8.000**	**0**		8.000	4.000	4.000		
Workshops for socialization of management plans and sustainable production	workshop days	16	500	**0**	**8.000**	**0**	**0**		8.000	4.000	4.000		
Sustainable crop models workshops	workshop days	11	750	**0**	**8.250**	**0**	**0**		8.250	4.125	4.125		
Workshops on sustainable fhisheries, closed season, minimum size	workshop days	20	750	**0**	**15.000**	**0**	**0**		15.000	5.000	6.000	4.000	
Coordination meetings for the declaration of new Pas	workshop days	20	750	**0**	**15.000**	**0**	**0**		15.000	5.000	10.000		
Training in IT platform use and management	workshop days	20	500	**6.000**	**4.000**	**0**	**0**		10.000	4.000	4.000	2.000	
Meetings for coordination and work with communities	workshop days	100	500	**20.500**	**17.000**	**12.500**	**0**		50.000	32.500	17.500	0	0
GEF SEC inception workshops	workshop days	20	500	**7.000**	**1.500**	**1.500**			10.000	10.000			
Workshops for mainstreaming the SEC strategy in policy documents	workshop days	20	500	**10.000**	**0**	**0**	**0**		10.000	2.500	5.000	2.500	
Workshops for SEA and construction of the SEC Strategy	workshop days	36	500	**18.000**	**0**	**0**	**0**		18.000	13.000	5.000	0	0
5920 Sub-total training				78.000	**68.750**	68.400	0	0	**215.150**	**112.225**	**78.625**	**18.300**	**6.000**
5024 Expendable procurement							**0**		0				
Office supplies	global	77	150	**4.950**	**2.250**	**4.350**	**0**		11.550	3.465	2.888	2.888	2.310
Seeds, seedlings	Total for FFS	24	15.000	**0**	**60.000**	**300.000**	**0**		360.000	108.000	180.000	72.000	
Tools	Total for FFS	24	8.000	**0**	**24.000**	**168.000**	**0**		192.000	57.600	96.000	38.400	
Dissemination material, brochures, booklets, CDs	global	42	250	**5.500**	**2.500**	**2.500**	**0**		10.500	3.150	5.250	2.100	

					BUDGET in USD				Total	Expenditures by year			
Oracle code and description	**Unit**	**No. of**	**Unit cost**	**Component 1**	**Component 2:**	**Component 3:**	**Component 4:**	**PM**	**GEF**	**Year 1**	**Year 2**	**Year 3**	**Year4**
Agricultural supplies	global	24	3.500	**0**	**14.000**	**70.000**	**0**		84.000	25.200	42.000	16.800	
General provisions (Plastics, sprinkers, wire, etc)	global	24	2.500	**0**	**10.000**	**50.000**	**0**		60.000	18.000	30.000	12.000	
6000 Sub-total Expendable procurement				**10.450**	**112.750**	**594.850**	**0**	0	**718.050**	215.415	356.138	144.188	2.310
5025 Non-expendable procurement													
Computers, servers	global	1	74.000	**44.000**	**18.000**	**12.000**	**0**		74.000	74.000			
Specialized softwares (Arc Gis ArcGis Spatial Analisys -Remote sensing, statistical analysis for monitoring)	global	1	27.000	**20.000**	**7.000**	**0**			27.000	16.000	8.000	3.000	
GPS	N°	80	700	**0**	**28.000**	**28.000**	**0**		56.000	28.000	28.000	0	
Markers, signposts	N°	35	1.000	**20.000**	**15.000**	**0**	**0**		35.000	10.500	20.000	4.500	
Printer/plotter	N°	7	1.000	**3.000**	**2.000**	**2.000**	**0**		7.000	4.000	1.500	1.500	
Monitoring and laboratory equipment (camera traps and other equipment for monitoring of flagship species such as tables, stereo microscopes, analytical balances, digital recorders, etc)	N°	6	5.000	**0**	**30.000**	**0**	**0**		30.000	20.000	10.000		
Outboard engines	N°	4	8.000	**0**	**32.000**	**0**	**0**		32.000	32.000	0	0	
Wooden boats for river	N°	2	15.000	**0**	**30.000**	**0**	**0**		30.000	30.000			
Fiberglass boats for marine areas	N°	2	15.000		**30.000**				30.000	30.000			
Telecommunications equipments	N°	4	3.000	**0**	**12.000**	**0**	**0**		12.000	6.000	6.000		
Motorbikes	N°	10	3.500	**0**	**7.000**	**28.000**	**0**		35.000	35.000			
Pick up trukcs	N°	3	40.000	**80.000**	**40.000**	**0**	**0**		120.000	120.000			
Solar panels	N°	4	2.500	**0**	**10.000**	**0**	**0**		10.000	3.000	7.000		
Power Generators		8	2.000		**8.000**	**8.000**	**0**		16.000	8.000	8.000		
Tent for fairs		17	1.000		**8.000**	**9.000**	**0**		17.000	8.000	9.000		

					BUDGET in USD				Total	Expenditures by year			
Oracle code and description	**Unit**	**No. of**	**Unit cost**	**Componen t 1**	**Compone nt 2:**	**Compone nt 3:**	**Compone nt 4:**	**PM**	**GEF**	**Yea r 1**	**Year 2**	**Year 3**	**Year4**
Adequacy PA offices and control and monitoring cabins	N°	1	50.000	**0**	**50.000**	**0**	**0**		50.000	25.0 00	25.000		
6100 Sub-total non-expendable procurement				**167.000**	**327.000**	**87.000**	**0**	0	**581.000**	449. 500	122.50 0	9.000	0
5028 GOE							**0**		0				
Operations/maintenance	X month*	48	7.541	**117.777**	**125.447**	**111.091**	**7.637**	0	361.952	90.4 88	90.488	90.488	90.488
6300 Sub-total GOE				**117.777**	**125.447**	**111.091**	**7.637**	0	**361.952**	90.4 88	90.488	90.488	90.488
TOTAL				**1.798.450**	**1.993.750**	**1.796.888**	**120.454**	**342.572**	**6.052.114**	2.20 9.64 9	2.073.7 66	1.084.1 78	684.521

* Calculated for % of weight in investment/output

SUBTOTAL Comp 1	**1.798.449,88**	30 %
SUBTOTAL Comp 2	**1.993.749,89**	33 %
SUBTOTAL Comp 3	**1.796.887,71**	30 %
SUBTOTAL Comp 4	**120.454,27**	2%
SUBTOTAL Project Management (PM) 6%	**342.572,00**	6%
TOTAL GEF	**6.052.114**	10 0%

APPENDIX 4: RISK MATRIX

Risk statement	Impact	Likelihood[84]	Mitigation measures
Political Risk: • Suspension of local authorities (eg, the mayor). • Change of directors and restructuring of the CARs. • Local authorities show little interest in the project and refuse or delay the adoption of the provisions of the environmental authority in the updating of local and land use plans. • Disturbance of the peace. • Decision makers show a lack of interest in the project.	Regional policies and strategies will continue without incorporating the SEC approach with interventions that will continue degrading the environment. Reduced involvement of authorities in the project and ownership of results.	M	Institutional strengthening and the definition of clear roles for each institution participating in the project, along with technical support and coordination arrangements will constitute support tools for project management at the regional and local levels. Government agencies have formally committed to participate in the project through co-financing letters. Additionally specific agreements for the implementation of activities will be signed. Participatory spaces for discussion with the involved local authorities will be agreed. The Project Steering Committee is one of these spaces and is composed of key government institutions in the region (MADS, PNN, SIRAP, MADR, Departmental Governments and CARs), and is responsible for providing political support to the project.
Institutional risk: Loss of interest of the participants in the training. The primarily online training modality can lead to a limited participation. The high turnover of officials of CARs, Departmental Governments and Municipalities does not allow the positioning of the SEC strategy over time	Regional policies and strategies will continue without incorporating the SEC approach with interventions that will continue degrading the environment. Limited ownership of results.	MH	The training program to be implemented by the project (Output 1.1.5) shall include participatory methodologies, discussion forums, clear learning goals at defined times and regular checks of the learning process. Also, the training program will include selection criteria for participation, one important criterion will be being permanent staff of the institution. Trained officials will carry out replicas of the trainings to encourage the use of the knowledge acquired and increase the number of beneficiaries. Extending the training to a larger number of participants over the life of the project will help to have a larger critical mass of trained staff which in turn will reduce the risk. Trained staff will also participate in the process of construction and

[84] Estimate of likelihood: High, Moderately High, Moderately Low, or Low, as per the FAO Project Cycle Guidelines. .

Risk statement	Impact	Likelihood[84]	Mitigation measures
within institutions (eg.: trained staff change jobs soon after the end of training)			implementation of the Socio-ecosystem connectivities Regional Strategy which will help to encourage the use of knowledge and probably the interest in continue participating in the project.
Social risk: Lack of interest of local communities to participate in the project.	Persistent pressures on protected areas. Local communities do not improve their livelihoods through sustainable production	M	The project will implement participatory mechanisms and processes to promote the participation and ownership of local communities in the planning, implementation and monitoring phases of the project. The main aspects of participation included into project design are: • Construction and dissemination of SEC Regional Strategy (Component 1) • Involvement of local communities in the development of the monitoring system of flagship species of biodiversity, sensitizing them and thus making them aware of the actions in favor of biodiversity conservation (Component 2). • Development of management plans for new protected areas, development / updating of management plans for existing protected areas and development of agreements for use and management of resources (Component 2). • Participation of women, promotion of their empowerment through the involvement of women networking and partnerships in all phases of the project (for example in the development of the SEC Regional Strategy and facilitating access to training and technical assistance and incentives for sustainable production). • As regards the indigenous peoples and Afro-descendant communities, the project will strengthen the linkages between culture and the environment through different regional identities and will promote dialogue and exchange between technical knowledge and traditional and ancestral knowledge. The project will promote full and effective participation of different communities in validation, development, implementation, monitoring and evaluation. Their expressions, values and socio-cultural traditions will be duly valued within the project. In this context, the participation will occur particularly under Component 1 in all matters relating to the construction and participatory validation of the SEC Regional Strategy, in Component 2 in terms of social participation in the management of protected areas and in

Risk statement	Impact	Likelihood[84]	Mitigation measures
			Component 3 in the implementation of sustainable production patterns.
Social risk: Areas selected for project implementation have the highest rates of dispossessed or abandoned properties. This can hinder the implementation of Component 3 activities.		MH	Since 2012, under Act 1448 of 2011, the Land Restitution Unit of the Ministry of Agriculture and Rural Development has begun the process of restitution of dispossessed or abandoned land in some of the municipalities involved. The project will coordinate the implementation of Component 3, especially everything related the work with landowners and communities, with the Ministry of Agriculture and Rural Development and attached bodies (the Rural Agricultural Planning Unit (UPRA) and the Colombian Institute for Rural Development - INCODER). The Ministry is part of both the Management Steering Committee and the Project Management Committee, which will provide policy and technical coordination in the subject.
Socioeconomic risk: Lack of interest or commitment of producers (small, medium or large-scale) in the adoption of sustainable production plans	Persistence of problems of deforestation, changes in land use, habitat fragmentation, unsustainable production practices. Loss of ecosystem services. Producers do not improve their livelihoods through sustainable production.	L	As mentioned previously, the project will implement participatory mechanisms and processes for promoting participation and ownership of these actors in the different phases of the project. The main aspects of participation included in the design are: • The participation of organizations and associations in the construction of the SEC Regional Strategy, which will provide the reference framework for the project actions. • The promotion of good practices for sustainable production through proven methodologies (FFS) that promote learning by beneficiaries through their own observation, discussion and participation in practical exercises (Component 3). • Participation of producers will be encouraged by facilitating access to training, technical assistance and incentives for sustainable production. At least 30% of the beneficiaries of Component 3 must be women (women's networks, women heads of household). • Methodologies proven in the region will be taken into account the. For example CVS has methodologies and tools for community outreach and participatory design of initiatives. • Involvement of organizations / guilds in the feasibility analysis of the application of incentives and compensation schemes / payment for environmental services / certifications that can offset the transitional costs of changes in production systems.

Risk statement	Impact	Likelihood[84]	Mitigation measures
Economic/financial risk: Participating entities fail to meet commitments	The project does not achieve the expected impact due to lack of availability of co-financing to complement GEF intervention.	L	Participating institutions have signed co-financing letters for the project for a value higher than that originally envisaged in the PIF. These institutions are also members of the Project Steering Committee; this will help to ensure to a greater extent their commitment to the project. Under the PSC issues related to co-financing contributions will be coordinated to ensure these commitments in the annual budgetary allocations of institutions and contributions, either in cash or in-kind, will be monitored.
Environmental risk: Sequence of climate change related events affect the target population	Loss of goods and agricultural production due to extreme events.	H	Project activities related to biodiversity conservation, including the productive transformation, improve coverage and restoration of native vegetation, and are expected to increase resilience to potential impacts of climate change and variability.
Security: Armed conflict - presence of illegal armed groups, illicit crops, mined areas (Upper Sinu). Unsafe conditions in many of the areas of intervention of the project may affect the implementation of sustainable production activities.	Displacement of beneficiaries. Delay or impediment in the implementation of activities.	MH	In the definition of mosaics and corridors, security criteria were taken into account, and areas in which major efforts of the peace process are concentrated were selected. The safety aspect will be also taken into account in the selection of areas for the implementation of pilot activities. The Ombudsman provides communities and institutions with an Early Warning System, which monitors risk situations due to armed conflict. Also, security measures required by the United Nations system will be implemented for such cases.

APPENDIX 5: PROCUREMENT PLAN

Please use format from the "FAO Guide to the Project Cycle"

APPENDIX 6: TERMS OF REFERENCE (TORS)

N.1: TERMS OF REFERENCE:

Project Coordinator / Coordinator of the Regional Strategy of Socio-Ecosystem Connectivities

Under the overall supervision of the FAO Representative in Colombia and the Lead Technical Officer (LTO) and the direct supervision of the Project Steering Committee, the Coordinator of the Regional Strategy of Socio-Ecosystem Connectivities will act as the leader of the Project Implementation Unit and as Secretary of the Project Steering Committee and will be responsible overall planning, daily management, technical supervision and coordination of all project activities, carrying out the following tasks:

- Lead the execution of technical and administrative activities of the project in coordination with the coordinators of the components 1, 2 and 3, with the technical supervision of the LTO in the Regional Office and FAO Headquarters in Rome.
- Coordinate and participate in the inception workshop, annual project progress review and planning workshops with local stakeholders and Project Executing Partners to prepare the Annual Work Plan and Budget (AWP/B).
- Provide technical supervision and guidance to the Project Executing Partners in implementing project activities.
- Conduct regular field supervision visits and provide on-site guidance to technical staff from Project Executing Partners;
- Permanent coordination and communication with the Project Executing Partners staff.
- Monitor project risks according to the risk matrix (see Appendix 4) and ensure that mitigation measures are being applied or alternative mitigation measures are in place.
- Ensure that the Socio-Ecosystem Connectivity approach is followed during project implementation;
- Prepare the Project Progress Reports (PPR) and the Final Report (FR) in coordination with the project team and submit them to the LTO and Project Steering Committee for consideration and review.
- Support the LTO in preparation of the annual Project Implementation Review (PIR);
- Advice Project Executing Partners in reporting in-kind and cash co-financing provided by co-financers and eventual other partners not foreseen in the Project Document;
- In consultation with the PSC, the FAO Evaluation Office, the LTU and the FAO-GEF Coordination Unit, support the organization of the mid-term and final evaluations;
- Coordinate the review and approval of the Terms of Reference and technical specifications for the corresponding contracts;
- Coordinate the work plans of the other consultants hired for project implementation;
- Plan, organize and participate in meetings of the Project Steering Committee and the Project Management Committee.
- Make the necessary arrangements to facilitate, through agreements and inter-sectorial partnerships with local and national government sector, including the private sector, the development of the project and the achievement of goals.
- Conduct, in coordination with the coordinators of components, interventions to contracts for the implementation of project activities.
- Ensure technical compliance with the targets of the project, based on the monitoring component, monitoring and evaluation.
- Coordinate the implementation of the communication strategy of the project and institutional strengthening activities.

Minimal Requirements:

- University degree in Natural Science or related fields; postgraduate studies preferable.
- At least 10 years of professional experience in integrated management of natural resources and/or management of international cooperation projects. Work experience in the Caribbean Region of Colombia preferable.
- Knowledge and experience in results based management, budget design, and execution, preparation of technical and financial reports, and M&E;
- Proven capacity to work with technical and managerial staff of governmental and non-governmental institutions;
- Ability to prepare concise reports according to United Nations standards;
- Proven capacity as team leader and team builder in developing countries;
- Excellent oral and written communication skills;
- Experience with GEF Projects desirable;
- Experience in execution and evaluation of FAO project desirable.

Duration: 48 months
Location: Bogotá and/or Montería (according to PSC decision), with regular field visits to project intervention areas in the Caribbean Region of Colombia.
Languages: Spanish (C level), English (B level).

N.2: TERMS OF REFERENCE:
Administrative and Operations Assistant

Under the general supervision of the FAO Representative in Colombia and the direct supervision of the Coordinator of the Regional Strategy of Socio-Ecosystem Connectivities (CRS) and the Administrative and Operations Officer, will be responsible for providing administrative, financial and logistical support for the implementation of the project, conducting the following activities:

- Support CRS and the Coordinators of Components 1, 2 and 3 in the operational and administrative management of the project.
- Plan, organize meetings of theProject Steering Committee and Technical Committee and participate, if required.
- Review and control budgetary records of the project in accordance with the available applications, such as: Data Ware House - Oracle; FPMIS and GRMS.
- Plan, implement and adjust the project budget.
- Monitor the correct implementation of the budget.
- Prepare the project budget revisions in accordance with the requirements of the GEF for approval by the FAO Representation in Colombia.
- Prepare monthly projections of project costs, at the request of the Representation.
- Track and monitor expenditures, commitments and availability of project resources.
- Provide advice and guidance to the administration team in different activities and administrative and financial requirements of the project.
- Prepare investment reports for each component and other required by the Project Steering Committee.
- Prepare investment reports for each component and other required by the GEF.
- Implement administrative and operational procedures according to FAO standards and rules and regulations of the United Nations System.

Minimal requirements:

- University Degree in Economics, Business Administration, or related fields.
- At least five years experience in United Nations project operation and management, preferably FAO.
- Proven capacity to work and establish working relationships with government and non-government representatives.
- Knowledge of FAO's project management systems.

Location: Montería, with regular field visits to project intervention areas in the Caribbean Region of Colombia.
Duration: 48 months
Language: Spanish

N.3: TERMS OF REFERENCE:
Budget and Operations Officer

Under the general supervision of the FAO Representative in Colombia (Budget Holder) and the Coordinator of the Regional Strategy of Socio-Ecosystem Connectivities, and in close collaboration with the project executing partners, the Budget and Operations Officer will take the operational responsibility for timely delivery of the project outcomes and outputs. In particular, he/she will perform the following main tasks:

- Ensure smooth and timely implementation of project activities in support of the results-based workplan, through operational and administrative procedures according to FAO rules and standards;
- Coordinate the project operational arrangements through contractual agreements with key project partners;
- Arrange the operations needed for signing and executing Letters of Agreement (LoA) and Government Cooperation Programme (GCP) agreement with relevant project partners;
- Maintain inter-departmental linkages with FAO units for donor liaison, Finance, Human Resources, and other units as required;
- Day-to-day manage the project budget, including the monitoring of cash availability, budget preparation and budget revisions to be reviewed by the Project Coordinator;
- Ensure the accurate recording of all data relevant for operational, financial and results-based monitoring;
- Ensure that relevant reports on expenditures, forecasts, progress against workplans, project closure, are prepared and submitted in accordance with FAO and GEF defined procedures and reporting formats, schedules and communications channels, as required;
- Execute accurate and timely actions on all operational requirements for personnel-related matters, equipment and material procurement, and field disbursements;
- Participate and represent the project in collaborative meetings with project partners and the Project Steering Committee, as required;
- Undertake missions to monitor the outputs-based budget, and to resolve outstanding operational problems, as appropriate;
- Be responsible for results achieved within her/his area of work and ensure issues affecting project delivery and success are brought to the attention of higher level authorities through the BH in a timely manner,
- In consultation with the FAO Evaluation Office, the LTU, and the FAO-GEF Coordination Unit, support the organization of the mid-term and final evaluations, and provide inputs regarding project budgetary matters;
- Undertake any other duties as required.

Minimal requirements:

- University Degree in Economics, Business Administration, or related fields.
- At least five years experience in project operation and management related to natural resources management, including field experience in developing countries.
- Proven capacity to work and establish working relationships with government and non-government representatives.
- Knowledge of FAO's project management systems.

Location: Bogotá
Duration:
Language: Spanish

N.4: TERMS OF REFERENCE:
Monitoring and Evaluation (M&E) Assistant

Under the general supervision of the FAO Representative in Colombia and the Lead Technical Officer (LTO) and the direct supervision of the Coordinator of the Regional Strategy of Socio-Ecosystem Connectivities (CRS), the M&E Assistant will be responsible for the design and implementation of the M&E System of the project. The M&E System will be used by the M&E Assistant to coordinate and conduct M&E related activities including: i) conducting regularly field M&E visits to project sites; ii) monthly monitoring progress in achieving all project outputs and outcome indicators; iii) providing technical and operational guidance to the staff of participating institutions; and iv) proposing eventual shifts in project implementation strategies if the project is not performing as planned. In particular, the M&E Assistant will perform the following activities:

- Design the M&E System in consultation with executing partners and key stakeholders.
- Lead the definition of outcome and impact indicators, maintaining coherence and feasibility with the logical framework, the PTPA and project targets.
- Lead the definition of indicators for each project component, maintaining integrity among them. Indicators should cover economic, social and environmental factors as part of a food security plan.
- Ensure monitoring of project impacts in terms of gender, including gender-differentiated indicators.
- Define the methodology for the survey, delivery and processing of information necessary to feed the indicators, considering the use of Information and Communication Technologies.
- Define tools for systematization and processing of information obtained from project execution.
- Support the process of baseline feeding in each of the project components.

Minimal requirements:

- University Degree Natural science, with knowledge in Statistics, specialization in M&E desirable.
- At least 5 years experience in M & E of programs / projects in natural resource management and sustainable agricultural production.
- Proven capacity to work and establish working relationships with government and non-government representatives.
- Capacity to take initiative and work with minimal supervision
- Experience in monitoring gender impacts
- Experience working on projects funded by international donors, preferably UN

Location: Montería, with regular field visits to project intervention areas in the Caribbean Region of Colombia.
Duration: 47 months
Language: Spanish

N.5: TERMS OF REFERENCE:
Policy and Advocacy Regional Coordinator

Under the general supervision of the FAO Representative in Colombia and the Lead Technical Officer (LTO) and the direct supervision of the Coordinator of the Regional Strategy of Socio-Ecosystem Connectivities (CRS), the Regional Policy and Advocacy Coordinator will be responsible for leading the implementation of Component 1 of the Project providing technical assistance, support in monitoring and evaluation for the implementation of the other components, performing the following activities:

- Prepare the annual work plan and budget for the activities that fall under his/her responsibility and contribute to preparation of the project´s Annual Work Plan and Budget (AWP/B);
- Prepare periodic reports of the activities developed and contribute to the preparation of the Project Progress Report (PPR);
- Support periodic Monitoring and Evaluation of the project, collecting information related to progress in achieving outcome and output indicators, means of verification and identifying lessons learned;
- Design of the conceptual model of the Regional Strategy for Socio-Ecosystem Connectivity.
- Monitor the participatory design of the Regional Strategy of Socio-Ecosystem Connectivity through dissemination, construction and validation workshops.
- Provide technical assistance during the implementation of the strategy, supporting monitoring and evaluation to obtain feedback from stakeholders and lessons learned to help improve the design.
- Draft terms of reference for the design and implementation of the training program to foster and strengthen local environmental governance for representatives of regional, departmental and municipal institutions, and monitor implementation.
- Draft terms of reference for the design and implementation of training program for Rural SEC Facilitators and monitor implementation.
- Supervise the implementation of training programs, promoting feedback and identification of lessons learned to help improve it.
- Facilitate the creation and maintenance of networks, alliances and partnerships among multiple stakeholders to sustainably strengthen program implementation.
- Facilitate knowledge sharing sessions and processes between project staff and national counterparts and document best practices in learning.
- Support others Coordinators (Project Components 2 and 3) with advice on cross-cutting issues related to his/her specialty and functions.

<u>Minimal requirements</u>:

- University Degree in Law, Political Science, or other related fields, postgraduate studies preferable.
- At least 8 years experience in institutional strengthening and capacity building.
- Knowledge and experience in comprehensive institutional strengthening and development of strategies to promote capacity building in large institutional settings across the country.
- Proven capacity to perform field work, teamwork and establish working relationships with institutions of central government, local government and civil society.
- Experience in training to government institutions.
- Work experience in the Caribbean Region of Colombia preferable.

- Experience in international cooperation and UN projects preferable.
- Excellent written and oral skills.

Optional selection criteria

- Extent of experience to facilitate the strengthening of national capacities to formulate and implement policies and leading political and legislative reforms.
- Extent of familiarity with the renewed focus and strategy of FAO capacity development for more sustainable results (this can be evaluated since the documents are publicly available http://www.fao.org/capacitydevelopment/en/)
- Extent of familiarity with the FAO approach and strategy on knowledge sharing and capitalization of knowledge (that can be evaluated as documents are publicly available http://www.fao.org/knowledge/km-gender/en/)

Location: Montería, with regular field visits to project intervention areas in the Caribbean Region of Colombia.
Duration: 40 months
Language: Spanish

N.6: TERMS OF REFERENCE:
Ecology/Biology Regional Coordinator

Under the general supervision of the FAO Representative in Colombia and the Lead Technical Officer (LTO) and the direct supervision of the Coordinator of the Regional Strategy of Socio-Ecosystem Connectivities (CRS), the Regional Ecology/Biology Coordinator will be responsible for leading the implementation of Project Component 2 providing technical assistance, support in monitoring and evaluation for the proper implementation of Socio-Ecosystem Connectivities Approach, performing the following activities:

- Prepare the annual work plan and budget for the activities that fall under his/her responsibility and contribute to preparation of the project´s Annual Work Plan and Budget (AWP/B);
- Prepare periodic reports of the activities developed and contribute to the preparation of the Project Progress Report (PPR);
- Support periodic Monitoring and Evaluation of the project, collecting information related to progress in achieving outcome and output indicators, means of verification and identifying lessons learned;
- Draft terms of reference for technical studies for the creation of new regional protected areas and reserves of civil society, and supervise the execution of these studies;
- Draft terms of reference for studies and activities to improve the management effectiveness of protected areas (delimitation of protected areas, management plans, sustainable use in buffer zones, use and management agreements with ethnic communities) and monitor the execution of these studies.
- Support the organization and implementation of participatory processes related to the creation of new protected areas /civil society reserves (arrangements for new areas, development of management plans, etc.) and actions to improve the effectiveness of management of existing protected areas (update management plans, agreements with ethnic communities, etc.).
- Provide technical support to PNN, CARs and departmental governments in the implementation and monitoring of management plans.
- Execute with the Coordinator of the Regional Strategy of Socio-Ecosystem Connectivities activities to promote the Principles and Criteria of Socio-Ecosystem Connectivity.
- Support the process of negotiation and signing of conservation agreements with producers and communities within the framework of the activities of Project Components 2 and 3.
- Support others Coordinators (Project Components 1 and 3) with advice on cross-cutting issues related to his/her specialty and functions.

Minimal requirements:

- University Degree in Ecology, Biology, or other field related with biodiversity conservation. Postgraduate studies preferable.
- At least eight years of experience in work related to biodiversity conservation and management of protected areas, including the development of management plans.
- Experience in management, restoration and rehabilitation of native forest
- Proven capacity to perform field work, teamwork and establish working relationships with institutions of central government, local government and civil society.
- Experience in training to local stakeholders.
- Work experience in the Caribbean Region of Colombia preferable.
- Experience in international cooperation projects and UN preferable.
- Excellent written and oral skills.

Location: Montería, with regular field visits to project intervention areas in the Caribbean Region of Colombia.
Duration: 43 months
Language: Spanish

N.7: TERMS OF REFERENCE:
Sustainable Production Regional Coordinator

Under the general supervision of the FAO Representative in Colombia and the Lead Technical Officer (LTO) and the direct supervision of the Coordinator of the Regional Strategy of Socio-Ecosystem Connectivities (CRS), the Regional Sustainable Production Coordinator will be responsible for leading the implementation of Project Component 3 providing technical assistance, support in monitoring and evaluation for the proper implementation of sustainable production systems and incentives, performing the following activities:

- Prepare the annual work plan and budget for the activities that fall under his/her responsibility and contribute to preparation of the project´s Annual Work Plan and Budget (AWP/B);
- Prepare periodic reports of the activities developed and contribute to the preparation of the Project Progress Report (PPR);
- Support periodic Monitoring and Evaluation of the project, collecting information related to progress in achieving outcome and output indicators, means of verification and identifying lessons learned;
- Support the design and implementation of Field Farmers School with Socio-Ecosystem Connectivity approach (SEC-FFS).
- Provide technical support to SIRAP and MADR to improve agricultural technology packages by incorporating environmentally friendly best practices.
- Provide technical support for the preparation of sustainable production plans.
- Provide technical support to implement a participatory farm planning process with the producers participating in the project.
- Provide technical support for the identification and provision to producers of materials and supplies for the implementation of best agricultural practices.
- Support the development of the training and technical assistance plan within the framework of Best Agricultural Practices, to be developed in production systems.
- Provide technical support for the preparation of training materials and contents on farm planning and best practices selected for each production system.
- Provide technical support to analyze the feasibility of implementing certification schemes for environmentally friendly production systems in the corridors of the project intervention.
- Together with the Ecology/Biology Regional Coordinator, provide technical assistance for the development of a geographical analysis of the incentive mechanisms intervention sites in the departments. Depending on the spatial analysis and incorporating social and economic variables, propose guidelines for the coordination between SIRAP, MADS, MADR, Municipalities and Rural districts/communities, to channel incentive mechanisms in the field taking into account the project activities under Components 2 and 3. Support the organization and implementation of workshops for socialization of incentive mechanisms to promote access by the beneficiaries of Project Components 2 and 3.
- Provide technical support to the design of a program for extension and transfer of the sustainable production intensification approach (SCPI) incorporating the SEC vision and including interventions related to the promotion and dissemination of an integrated incentives scheme for sustainable production.
- Support the process of negotiation and signing of conservation agreements with producers and communities within the framework of the activities of Project Components 2 and 3.
- Support others Coordinators (Project Components 1 and 2) with advice on cross-cutting issues related to his/her specialty and functions.

Minimal requirements:

- University Degree in Agronomy, or other related fields. Postgraduate studies preferable.
- At least 8 years of experience in rural development and implementation of technology packages of Best Agricultural Practices.
- Experience in artisanal fisheries and aquaculture
- Proven capacity to perform field work, teamwork and establish working relationships with institutions of central government, local government and civil society.
- Work experience in the Caribbean Region of Colombia preferable.
- Experience in international cooperation projects and UN preferable.
- Excellent written and oral skills.

Location: Montería, with regular field visits to project intervention areas in the Caribbean Region of Colombia.
Duration: 43 months
Language: Spanish

N.8: TERMS OF REFERENCE
Socio-cultural Communication Specialist

Under the general supervision of the FAO Representative in Colombia and the Lead Technical Officer (LTO) and the direct supervision of the Coordinator of the Regional Strategy of Socio-Ecosystem Connectivities (CRS), in close coordination with the Regional Policy and Advocacy Coordinator, the Socio-cultural Communication Specialist will provide technical assistance, support in monitoring and evaluation for the achievement of Outcome 2.1 (communications and environmental education), as well as cross-cutting support to all project components. In particular, he/she will carry out the following activities:

- Prepare the annual work plan and budget for the activities that fall under his/her responsibility and contribute to preparation of the project´s Annual Work Plan and Budget (AWP/B);
- Prepare periodic reports of the activities developed and contribute to the preparation of the Project Progress Report (PPR);
- Support periodic Monitoring and Evaluation of the project, collecting information related to progress in achieving outcome and output indicators, means of verification and identifying lessons learned;
- In coordination with SIRAP Caribbean, design the communications strategy for the visibility and positioning of the project.
- In collaboration with SIRAP Caribbean, lead the environmental education program: design didactic tool box, coordinate trainings for Inter-institutional Committees of Environmental Education (CIDEA), and coordinate the implementation of the tools in pilot schools. Ensure implementation of gender and multiculturalism approach, participation and economic profitability of production systems proposed by the project.
- Draft terms of reference for the design and development of information and communication materials for the project (mini-documentaries, radio ads, various printed materials, manuals and guides), and supervise the execution of the work.
- Design and supervise studies and surveys to determine the impact of communication strategies and environmental education. Prepare reports for analysis of impacts and stakeholders' perception of change, taking into account gender issues, multiculturalism, ethnic groups.

Minimal requirements:

- University Degree in Communications, or other related fields.
- At least five years of experience in socio-economic and environmental analysis and development projects.
- Proven capacity to perform field work, teamwork and establish working relationships with institutions of central government, local government and civil society.
- Work experience in the Caribbean Region of Colombia preferable.
- Excellent written and oral skills.

Location: Bogotá and/or Montería (according to PSC decision), with regular field visits to project intervention areas in the Caribbean Region of Colombia.
Duration: 44 months
Language: Spanish. English desirable.

N.9: TERMS OF REFERENCE
Environmental Economics Specialist

Under the general supervision of the FAO Representative in Colombia and the Lead Technical Officer (LTO) and the direct supervision of the Coordinator of the Regional Strategy of Socio-Ecosystem Connectivities (CRS), in close coordination with the Regional Policy and Advocacy Coordinator, the Environmental Economy Specialist will provide technical assistance, support in monitoring and evaluation for the achievement of Output 1.1.1 (study on valuation of socio-ecosystem services and incentives) and support the startup and implementation of incentives for sustainable production under project components 2 and 3. In particular, he/she will carry out the following activities:

- Prepare the annual work plan and budget for the activities that fall under his/her responsibility and contribute to preparation of the project´s Annual Work Plan and Budget (AWP/B);
- Prepare periodic reports of the activities developed and contribute to the preparation of the Project Progress Report (PPR);
- Support periodic Monitoring and Evaluation of the project, collecting information related to progress in achieving outcome and output indicators, means of verification and identifying lessons learned;
- Daft Terms of Reference for the study of supply and demand of ecosystem services in Socio-Ecosystem Connectivity corridors and feasibility of implementation of incentive mechanisms in project intervention areas. Supervise the execution of the study.
- Assisting SIRAP in the formulation of a proposal for access financial resources of the Diamond Caribbean Program, financial products, incentives and / or compensation schemes / payment for environmental services that can be applied in the departments.

Minimal requirements:

- University Degree in Environmental Economics, Environment Sciences or other related fields.
- At least five years of experience in socio-economic and environmental analysis of development projects.
- Proven capacity to perform field work, teamwork and establish working relationships with institutions of central government, local government and civil society.
- Work experience in the Caribbean Region of Colombia preferable.
- Excellent written and oral skills.

Location: Montería with regular field visits to project intervention areas in the Caribbean Region of Colombia.
Duration: 12 months
Language: Spanish

N.10: TERMS OF REFERENCE
Departmental facilitators: Bolivar, Sucre, Antioquia/Chocó, Cordoba

Under the general supervision of the FAO Representative in Colombia and the Lead Technical Officer (LTO) and the direct supervision of the Coordinator of the Regional Strategy of Socio-Ecosystem Connectivities (CRS), the Departmental facilitators will be responsible for achieving Output 1.1.3 (updating planning tools - departmental development plans, land use plans, etc.), in addition to supporting the implementation in the field of activities under project Components 1, 2 and 3. In particular, they will undertake the following activities:

- Prepare the annual work plan and budget for the activities that fall under his/her responsibility and contribute to preparation of the project´s Annual Work Plan and Budget (AWP/B);
- Prepare periodic reports of the activities developed and contribute to the preparation of the Project Progress Report (PPR);
- Support periodic Monitoring and Evaluation of the project, collecting information related to progress in achieving outcome and output indicators, means of verification and identifying lessons learned;
- Support the Monitoring & Evaluation Project periodic, collecting information related to the fulfilment of the Results Framework indicators and means of verification, and identification of lessons learned.
- Support departmental and municipal governments and regional institutions in the realization of the Strategic Environmental Assessment (SEA) of plans, programs and projects, focused on the socio-ecosystem connectivity approach, to identify actions or projects that departments and municipalities should undertake to overcome difficulties in land use.
- Provide technical backstopping to departmental and municipal governments and regional institutions to mainstream the Socio-Ecosystem Connectivity approach in the framework of the updating process of their planning instruments (5 Departmental Development Plans, 5 Municipal Land Use Plans, 5 Environmental Authorities Action Plans, 1 SIRAP Caribbean Action Plan, 1 PNN Institutional Action Plan).

Minimal requirements:
- University Degree in Law, Political science or other related fields.
- At least five years of experience in socio-economic and environmental analysis and development projects.
- Proven capacity to perform field work, teamwork and establish working relationships with institutions of central government, local government and civil society.
- Work experience in the Caribbean Region of Colombia preferable.
- Excellent written and oral skills.

Location: Cartagena (Bolivar); Sincelejo (Sucre); Montería (Cordoba), Apartado-Turbo (Antioquia, Chocó)
Duration: 36 months
Language: Spanish

N.11: TERMS OF REFERENCE
Ecosystem Monitoring Specialist
SEC-SIAC[1]-IDEAM[2]MADS[3] Liaison

Under the general supervision of the FAO Representative in Colombia and the Lead Technical Officer (LTO) and the direct supervision of the Coordinator of the Regional Strategy of Socio-Ecosystem Connectivities (CRS), the Ecosystem Monitoring Specialist SEC-SIAC –IDEAM - MADS Liaison will be responsible for providing technical backstopping, supervision and monitoring and evaluation to achieve Output 3.1.1 (mosaics of conservation and sustainable use) as well as for the design and implementation of the monitoring methodology of Biodiversity of the Project (Component 1) . In particular he/she shall perform the following activities:

- Prepare the annual work plan and budget for the activities that fall under his/her responsibility and contribute to preparation of the project´s Annual Work Plan and Budget (AWP/B);
- Prepare periodic reports of the activities developed and contribute to the preparation of the Project Progress Report (PPR);
- Support periodic Monitoring and Evaluation of the project, collecting information related to progress in achieving outcome and output indicators, means of verification and identifying lessons learned;
- Daft Terms of Reference for the design and implementation of the Mosaics for conservation, development and sustainable use. Supervise the execution of the contract in design and implementation.
- Provide PNN with technical backstopping for the selection of flagship species for biodiversity monitoring and the development of species baseline.
- Develop Terms of Reference for the study of GIS analysis and field verification and monitoring of mosaics coverage and analysis of viability of flagship species population, and monitor contract execution.
- Provide technical backstopping to PNN for designing the monitoring methodology to be employed by the project to monitor selected flagship species.
- Support the implementation of the monitoring methodology of biodiversity, identifying those aspects that can contribute to the adjustment and improvement of the methodology.
- Harmonize information, prepare data sets, develop exchange protocols, catalyze geographic, socioeconomic and documentary information of the Environmental Sector of Colombia and related entities of the National Environmental System (SINA) on socio-ecosystem connectivity in the Caribbean Region, support information processing and development of a scheme of integrated incentives for SEC. Generate knowledge about ecological integrity and ecosystem functionality in order to determine the connectivities (Objective 1 regional level - Caribbean).

Minimal requirements:

- University Degree in Ecology, Biology, or other related fields. Postgraduate studies preferable.
- At least five years of experience in work related to biodiversity conservation and monitoring.
- Proven capacity to perform field work, teamwork and establish working relationships with institutions of central government, local government and civil society.
- Experience in training to local stakeholders.
- Work experience in the Caribbean Region of Colombia preferable.
- Excellent written and oral skills.

[1] System of Environmental Information of Colombia
2 Institute of Hydrology, Meteorology and Environmental Studies of Colombia
[3] Ministry of Environment and Sustainable Development

Location: Bogotá, with regular field visits to project intervention areas in the Caribbean Region of Colombia.
Duration: 34 months
Language: Spanish

N.12: TERMS OF REFERENCE

Agriculture and Livestock Sector Liaison Consultant UPRA-MADR-INCODER-CORPOICA

Under the general supervision of the FAO Representative in Colombia and the Lead Technical Officer (LTO) and the direct supervision of the Coordinator of the Regional Strategy of Socio-Ecosystem Connectivities (CRS), the Agriculture and Livestock Sector Liaison Consultant will act as a liaison with UPRA, MADR, INCODER and CORPOICA. In particular he/she shall perform the following activities:

- Prepare the annual work plan and budget for the activities that fall under his/her responsibility and contribute to preparation of the project´s Annual Work Plan and Budget (AWP/B);
- Prepare periodic reports of the activities developed and contribute to the preparation of the Project Progress Report (PPR);
- Support periodic Monitoring and Evaluation of the project, collecting information related to progress in achieving outcome and output indicators, means of verification and identifying lessons learned;
- Harmonize information, prepare data sets, develop exchange protocols, catalyze geographic, socioeconomic and documentary information of the Agriculture and Livestock Sector of Colombia at the national level (UPRA, MADR, INCODER, financial entities of the sector, ICA, CIAT, etc.)

Minimal requirements:

- University Degree in Agronomy or other related fields.
- At least five years of experience in work related to land use and agricultural planning.
- Proven capacity to perform field work, teamwork and establish working relationships with institutions of central government, local government and civil society.
- Work experience in the Caribbean Region of Colombia preferable.
- Excellent written and oral skills.

Location: Bogotá,
Duration: 24 months
Language: Spanish

N.13: TERMS OF REFERENCE
Geographic Information Systems -Land Use Planning - Remote Sensing Specialist

Under the general supervision of the FAO Representative in Colombia and the Lead Technical Officer (LTO) and the direct supervision of the Coordinator of the Regional Strategy of Socio-Ecosystem Connectivities (CRS), the Geographic Information Systems -Land Use Planning - Remote Sensing Specialist will be responsible for achieving Output 1.1.4 (intersectorial platform for socio-ecosystemic governance), in addition to technically supporting other Project Components. In particular he/she shall perform the following activities:

- Prepare the annual work plan and budget for the activities that fall under his/her responsibility and contribute to preparation of the project´s Annual Work Plan and Budget (AWP/B);
- Prepare periodic reports of the activities developed and contribute to the preparation of the Project Progress Report (PPR);
- Support periodic Monitoring and Evaluation of the project, collecting information related to progress in achieving outcome and output indicators, means of verification and identifying lessons learned;
- Draft Terms of Reference for the design, testing and implementation of a Platform for Information, Monitoring and Intersectorial Evaluation of the SEC Strategy that should be interoperable with the information systems of participating entities and give strategic guidance for decision making. Oversee, in coordination with the participating entities, the performance of contract design and implementation.
- Identify equipment needs (hardware and software) to implement the Platform for Information, Monitoring and Intersectorial Evaluation. Draft technical specifications for equipment procurement (hardware and software). Supervise proper delivery, installation and functioning of the equipment.
- Supervise the training of staff of involved entities for the management and maintenance of the technological platform.
- Support the Ecosystem Monitoring Specialist in drafting Terms of Reference for study of GIS analysis and field verification and monitoring of mosaics coverage and analysis of viability of flagship species population, and in monitoring contract execution.
- Provide technical support to the Departmental Facilitators in the Strategic Environmental Assessment process, updating instruments for regional, departmental and municipal planning and mainstreaming of SEC in the mentioned instruments, as it relates to the use of GIS / Remote Sensing in these processes.

Minimal requirements:

- University Degree in Geography or other fields related to information systems management for land use planning.
- At least five years of experience in use of GIS, design and operation of platforms and database.
- Knowledge and experience in GIS and database related to natural resources.
- Proven capacity to perform field work, teamwork and establish working relationships with institutions of central government, local government and civil society.
- Work experience in the Caribbean Region of Colombia preferable.
- Excellent written and oral skills.

Location: Montería, with regular field visits to project intervention areas in the Caribbean Region of Colombia.
Duration: 39 months
Language: Spanish

N.14: TERMS OF REFERENCE
Local Facilitators

Under the general supervision of the FAO Representative in Colombia and the Lead Technical Officer (LTO) and the direct supervision of the Coordinator of the Regional Strategy of Socio-Ecosystem Connectivities (CRS), the Regional coordinators and the departmental facilitators, Local Facilitators will be responsible for supporting the implementation of activities under Project Components 1, 2 and 3. Local facilitators will carry out the following activities:

- Support participatory processes for the construction of the Regional Strategy for Socio-ecosystem connectivity.
- Support the organization and implementation of training processes of local actors.
- Support participatory processes for mainstreaming Socio-ecosystem connectivities in planning tools.
- Support the implementation of Agricultural, Livestock and Aquaculture Farmer Field Schools with Socio-Ecosystem Connectivity approach (FFS-SEC).
- Conduct assessment of training needs of producer and develop agreed training plans. Supporting the design and preparation of training materials.
- Conduct comprehensive farm planning and prepare the details of conservation agreements with landowners and communities.
- Conduct FFS-SEC trainings according to the agreed schedule, providing teaching materials and explaining the selected topics as well as giving support to producers for the implementation of Best Farming practices.
- Support the implementation of agroforestry and forestry activities, restoration and reforestation in farms, corridors and riparian forests.
-

Minimal requirements:

- High school Degree with emphasis in Agromomy or Forestry with proven training in natural resource management and Best farming practices.
- At least three years of experience in management and conservation of natural resources and Best farming practices
- Residing or work experience in the Caribbean Region of Colombia
- Proven capacity to perform field work, teamwork and establish working relationships with institutions of central government, local government and civil society.
- Excellent written and oral skills.

Location: project intervention areas.
Duration: 38 months
Language: Spanish

N.15: TERMS OF REFERENCE
Information Systems - Information and Communication Technologies Consultant

Under the general supervision of the FAO Representative in Colombia and the Lead Technical Officer (LTO) and the direct supervision of the Coordinator of the Regional Strategy of Socio-Ecosystem Connectivities (CRS), the Information Systems - Information and Communication Technologies Consultant will support the Geographic Information Systems -Land Use Planning - Remote Sensing Specialist, providing technical advice for the implementation of product 1.1.4 (intersectorial platform for socio-ecosystemic governance):

- Prepare the annual work plan and budget for the activities that fall under his/her responsibility and contribute to preparation of the project´s Annual Work Plan and Budget (AWP/B);
- Prepare periodic reports of the activities developed and contribute to the preparation of the Project Progress Report (PPR);
- Support periodic Monitoring and Evaluation of the project, collecting information related to progress in achieving outcome and output indicators, means of verification and identifying lessons learned;
- Support the preparation of Terms of Reference for the design and architecture of GIS and socio-ecosystem governance platform (hardware and software functioning design); monitor the development of this work.
- Support the identification of equipment upgrade needs (hardware and software) to strengthen the GIS Unit, development of technical specifications for the procurement of equipment (hardware and software). Supervise proper delivery, installation and functioning of the equipment.
- Provide technical support for the implementation of the online pilot of the platform for intersectorial socio-ecosystem governance.
- Prepare training materials and train staff in GIS and ICT SIRAP.
- Provide SIRAP MADS and other relevant actors in the departments with support for training in the GIS and ICT, according to the training of trainers methodology.
- Provide SIRAP with technical backstopping for the design and creation of a spatial database on existing productive and conservation projects in the departments and a monitoring structure thereof as support for land use and environmental planning. Provide support to the uploading and updating of data, and generate reports.

Minimal requirements:

- University Degree in fields related to Information and Communication Technologies.
- At least five years of experience using and developing Information and Communication Technologies, including design and operation of platforms and database.
- Knowledge and experience in GIS and database related to natural resources.
- Proven capacity to perform field work, teamwork and establish working relationships with institutions of central government, local government and civil society.
- Work experience in the Caribbean Region of Colombia preferable.
- Excellent written and oral skills.

Location: Bogotá
Duration: 24 months
Language: Spanish

N.16: TERMS OF REFERENCE
Forestry Specialist

Under the general supervision of the FAO Representative in Colombia, the Lead Technical Officer (LTO) the Coordinator of the Regional Strategy of Socio-Ecosystem Connectivities (CRS), and the direct supervision of the Sustainable Production Regional Coordinator, the Forestry Specialist will provide technical backstopping for the implementation of the Product 3.1.2 (restoration of riparian forests), performing the following activities:

- Prepare the annual work plan and budget for the activities that fall under his/her responsibility and contribute to preparation of the project´s Annual Work Plan and Budget (AWP/B);
- Prepare periodic reports of the activities developed and contribute to the preparation of the Project Progress Report (PPR);
- Support periodic Monitoring and Evaluation of the project, collecting information related to progress in achieving outcome and output indicators, means of verification and identifying lessons learned;
- Support the Departmental Government of Antioquia and the Municipalities of Turbo, Chigorodó, Mutatá (axis of Rio León) and the Departmental Government of Cordoba and the Municipalities of Tierralta, Monteria and Cereté (middle Sinu River basin) in the development of a plan for the restoration of riparian forests in the mentioned basins.
- Propose mechanisms to promote the participation of local actors in the framework of the restoration plan.
- Prepare Terms of Reference for the design and implementation of training in analog forestry and productive restoration of riparian forests. Supervise the execution of the contract.

Minimal requirements:

- University Degree in Forestry Science or related fields.
- At least five years professional experience in sustainable forestry management, including forest restoration with participatory methodologies.
- Proven capacity to perform field work, teamwork and establish working relationships with institutions of central government, local government and civil society.
- Work experience in the Caribbean Region of Colombia preferable.
- Excellent written and oral skills.

Location: Montería, with regular field visits to project intervention areas in the Caribbean Region of Colombia.
Duration: 11 months
Language: Spanish

N.17: TERMS OF REFERENCE
Fisheries and Aquaculture Specialist

Under the general supervision of the FAO Representative in Colombia, the Lead Technical Officer (LTO) the Coordinator of the Regional Strategy of Socio-Ecosystem Connectivities (CRS), and the direct supervision of the Ecology/Biology Regional Coordinator, the Fisheries and Aquaculture Specialist will provide technical backstopping for the implementation of the Product 2.1.3 (sustainable production plans in Regional Protected Areas), performing the following activities:

- Prepare the annual work plan and budget for the activities that fall under his/her responsibility and contribute to preparation of the project´s Annual Work Plan and Budget (AWP/B);
- Prepare periodic reports of the activities developed and contribute to the preparation of the Project Progress Report (PPR);
- Support periodic Monitoring and Evaluation of the project, collecting information related to progress in achieving outcome and output indicators, means of verification and identifying lessons learned;
- Provide technical backstopping for the preparation of sustainable production plans in Regional Protected Areas
- Develop Terms of Reference for the design and implementation of training module on incentives for sustainable artisanal fishermen in marine and coastal protected areas. Monitor the performance of the contract in their design and implementation phases. (Component 2).

Minimal requirements:

- University Degree in Agronomy or related fields, with specialization in sustainable fisheries and aquaculture.
- At least five years professional experience in sustainable fisheries and aquaculture.
- Proven capacity to perform field work, teamwork and establish working relationships with institutions of central government, local government and civil society.
- Work experience in the Caribbean Region of Colombia preferable.
- Excellent written and oral skills.

Location: Montería, with regular field visits to project intervention areas in the Caribbean Region of Colombia.
Duration: 6 months
Language: Spanish

APPENDIX 7: PROJECT STEERING COMMITTEE TERMS OF REFERENCE (TORS)

Role of the Project Steering Committee (PSC)

The PSC will be the policy setting body for the project. As and when required, the PSC will be the ultimate decision-making body with regard to policy and other issues that may affect the achievement of project objectives. The PSC will be responsible for providing general oversight of project execution, and will ensure that all activities in the GEF project document are adequately prepared and carried out. In particular, the PSC will:

1. Take decisions in the course of the practical organization, coordination and implementation of the project, and provide overall guidance to the Project Implementation Unit (PIU);
2. Advise the PIU on other on-going and planned activities facilitating collaboration between the Project and other programmes, projects and initiatives in the Caribbean Region of Colombia;
3. Facilitate that co-financing support is provided in a timely and effective manner;
4. Review six-monthly Project Progress Reports (PPRs), and provide overall oversight of project progress and achievement of planned results as presented in the PPRs;
5. Review, amend if appropriate, and approve the draft Annul Work Plan and Budget (AWP/B) for submission to FAO;
6. Provide inputs to the mid-term and final evaluations, review findings, and provide comments for the Management Response;
7. Ensure the dissemination of project information, lessons learnt, and best practices.
8. Facilitate cooperation between the Ministry of Environment and Sustainable Development (MADS), National Natural Parks (PNN), Regional System of Protected Areas Caribbean (SIRAP Caribbean), Ministry of Agriculture and Rural Development (MADR), FAO, and project participating partners at the local level;

Meetings of the PSC

9. The PSC meetings will be normally be held bi-annually. Nevertheless, additional meetings can be called, if this is considered necessary. PSC meetings would not necessarily require a physical presence, and could be also undertaken electronically. No more than 7 months may elapse between PSC meetings;
10. Invitations to a regular PSC meeting shall be issued not less than 90 days in advance of the date fixed for the meeting. Invitations to special meetings shall be issued not less than 40 days in advance of the meeting date.
11. A provisional agenda will be drawn up by the Project Coordinator and sent to PSC members. The provisional agenda will be sent not less than 30 days before the meeting date;
12. A revised agenda including comments received from PSC members will be circulated 5 working days before the meeting date;
13. The agenda of each regular meeting shall include:
    1. A report of the Project Coordinator on project activities during the inter-sessional period;
    2. A report and recommendations from the Project Coordinator on the proposed AWP/B and the proposed budget for the ensuing period;
    3. Reports that need PSC intervention;
    4. Consideration of time and place of the next meeting;

5. Any other business.

14. The agenda of a special meeting shall consist only of items related to the purpose for which the meeting was called.

The PSC Secretariat

The PMCU will act as Secretariat to the PSC, and be responsible for providing PSC members with all required documents in advance of PSC meetings, including the draft AWP/B, and independent scientific reviews of significant technical proposals or analyses. The PMCU will prepare written report of all PSC meetings and be responsible for logistical arrangements regarding the holding of those meetings.

Participation

The PSC will include the Minister of Environment, the Minister of Agriculture, the Executive Director of PNN, the FAO Representative in Colombia, the Directors of Codechoco, Corpourabá, CVS, Carsucre and Cardique, the Governors of the Departments of Chocó, Antioquia, Cordoba, Sucre and Bolivar. The Project Coordinator will be the Secretary to the PSC. Other institutions active in the Caribbean Region of Colombia may also be requested to participate as observers. The PSC will meet within the SIRAP Caribbean Steering Committee, extended to members that do not normally participate in this committee (FAO, MADR, Governors).

Decision-making
All decisions of the PSC shall be taken by consensus.

Reports and recommendations

At each meeting, the PSC shall approve a report text that embodies its views and decisions, including, when requested, a statement of minority views. A draft report shall be circulated to the PSC Members after the meeting for comments. Comments shall be accepted over a period of 20 days. The final report will be distributed among PSC members and shall be uploaded to the Socio-Ecosystem Connectivities webpage.

Official language
The official language of the PSC will be Spanish.

APENDIX 8: MAP OF PROJECT INTERVENTION AREAS

(Separated file)

APPENDIX 9: SOCIAL AND ENVIRONMENTAL REVIEW FORM

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APPENDIX 10: GEF TRACKING TOOL

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