Project Information Document/ Integrated Safeguards Data Sheet (PID/ISDS)

Concept Stage | Date Prepared/Updated: 23-Jul-2017 | Report No: PIDISDSC19194

BASIC INFORMATION

A. Basic Project Data

Country	Project ID	Parent Project ID (if any)	Project Name
Nicaragua	P160688		Resilient Landscapes Management Project (P160688)
Region	**Estimated Appraisal Date**	**Estimated Board Date**	**Practice Area (Lead)**
LATIN AMERICA AND CARIBBEAN	Oct 16, 2017	Dec 13, 2017	Environment & Natural Resources
Financing Instrument	**Borrower(s)**	**Implementing Agency**	**GEF Focal Area**
Investment Project Financing	Government of Nicaragua, Ministry of Finance and Public Credit (MHCP)	Ministry of Environment and Natural Resources (MARENA),National Forest Development Fund (FONADEFO)	Biodiversity

Proposed Development Objective(s)

The Project Development Objective (PDO) is to strengthen the National Protected Areas System and support sustainable land use and restoration practices in selected areas of the Dry Corridor of Nicaragua to foster biodiversity conservation, resilient landscapes, and local livelihoods.

Financing (in USD Million)

Financing Source	Amount
Global Environment Facility (GEF)	10.27
Total Project Cost	**10.27**

Environmental Assessment Category	Concept Review Decision
B-Partial Assessment	Track II-The review did authorize the preparation to continue

Other Decision (as needed)

N/A

B. Introduction and Context

Country Context

1. **Nicaragua remains one of the Latin America and the Caribbean (LAC) region's poorest countries, but recent strong economic growth has contributed to poverty reduction.** Since 2010, Nicaragua's dynamic economy has reduced poverty and strengthened shared prosperity. The Nicaraguan economy demonstrated favorable performance in 2015. GDP growth was 4.9 percent, 0.3 percentage points higher than the growth in 2014, and has maintained good momentum in the past five years, during which the average economic growth rate was 5.2 percent. This growth, together with an increase in expenditures in government priority areas, has resulted in a significant reduction in overall poverty (defined as people living under US$ 1.6 per day), dropping to 42.5 percent by 2009 and further to 26.9 percent by 2014, according to the 2014 Living Standards Measurement Study. Meanwhile, in the same period, extreme poverty dropped 6 percent, from 14.6 percent in 2009 to 8.3 percent in 2014.

2. **Despite of economy growth, poverty is still significant in the country and mainly in the rural area.** Nicaragua remains one of the least developed countries in Latin America, where access to basic services is still limited in different regions. Despite that poverty has declined steadily in recent years, about 1.7 million Nicaraguans (a third of the population) still lived below the overall official poverty line in 2014 and about 43 percent of the population live in rural areas and two out of three of said people (68 percent) are defined as living in poverty (World Bank 2015). Fifty-three percent (53%) of Nicaragua's municipalities are considered extremely poor, most of which are located in the Dry Corridor and the proposed project area.

3. **Rural Development is high on the government's agenda, particularly in the context of increasing resilience of the Dry Corridor region**. The Dry Corridor has become a priority region for the GoN because of its importance in the national economy but also because of its vulnerability to natural hazards and increasing land degradation. The Dry Corridor covers the Pacific Coast lowlands and most of the central pre-mountain region. Extreme weather events such as droughts (influenced by El Niño), floods, hurricanes, and tropical storms are recurrent in this corridor. Nicaragua ranks fourth within the ten countries which suffers to most from extreme weather events, according to the German Climate Change Watch.[1] In the last five years, droughts have caused severe social, economic, and environmental impacts affecting ecosystems, agricultural production, food security, local livelihoods, and extensive damage to the rural economy of Nicaragua and other Central American countries[2]. It is considered that climate change variability has also influenced the increased occurrence of this region's extreme weather events.

4. **Environmental costs and depletion of natural capital in the Dry Corridor may threaten the long-term sustainability of economic growth.** The Dry Corridor's agricultural production supports the entire country, since this area comprises more than 60% of the country's jobs and 55.8% of the total exports. This region produces 49% of the bean crop, 33% of corn, 100% of the nation's sorghum, and 80% of the beef production. Despite the abundant and rich volcanic soils found in this region, this severe degradation of

[1] German Watch. GLOBAL CLIMATE RISK INDEX 2016. https://germanwatch.org/fr/download/13503.pdf

[2] Van der Zee, A., J. Meyrat, C. Poveda, and L. Picado. 2012. *Estudio de caracterización del Corredor Seco Centroamericano. FAO.*

natural resources has led to about 30% reduction in national agricultural production. Even though Nicaragua still has important forest cover (about 3,398,000 hectares or about 26% of the national territory)[3], current land and forest practices in the Dry Corridor with the additional human pressure upon scarce water resources – as result of intense droughts – has increased deforestation and biodiversity loss. According to MARENA, about 70,000 hectares of forests are lost every year.

5. **Environmental land degradation in the Dry Corridor is also affecting biodiversity and ecosystems.** The dominant ecoregions in the Dry Corridor, according to WWF classification, are tropical dry forest, pine–oak forests, and humid forest (the target ecoregions of this project). Fragmentation and deforestation have affected connectivity, and droughts have decreased river flows, thereby affecting the ecoregion's wildlife and ecosystems, as well as the living conditions of local communities. However, despite of all these drivers of biological degradation, Nicaragua hosts rich biodiversity from the many different types of ecosystems found in the Pacific and Atlantic regions. Biodiverse dry, pine–oak and humid forest from Nicaragua are recognized globally as centers of high endemism and ecosystem value as well as flora and fauna biodiversity.

6. **The government of Nicaragua has taken a proactive role in the fight of land degradation and forest conservation in the Dry Corridor.** Nicaragua has requested the support from different agencies and donors to implement diverse instruments and strategies to improve conservation of protected areas, restore forestlands, increase connectivity, and support livelihoods of local communities dependent on forest and family agriculture. Nicaragua also recognizes the threat of climate change to its development and has been very active in international climate change negotiations and public policy formulation. Despite the fact that Nicaragua did not sign the Paris Agreement in the COP 21, but the GoN is fully on board in the preparation of the ENDE–REDD+ strategy.

7. **The GoN has also requested the World Bank's support** to prepare an IDA operation – Dry Corridor Climate Resilient Agriculture Project (P162982) – and technical assistance for developing a Strategic Development Framework for the Nicaraguan Dry Corridor to support sustainable land management, and thereby increase resilience of agriculture, forest, and landscape; and promote sustainable local economies.

Sectoral and Institutional Context

8. **Growth and Natural Resources.** In order to sustain the economic growth the country has experienced in the last years, Nicaragua needs sound, environmental management of its natural capital and it needs to integrate it into its development agenda. Deforestation, land degradation, fires, erosion and water sources deterioration is affecting soil productivity, biodiversity and livelihoods of rural communities.

9. **Forest.** Between 1983 and 2000, approximately 1.2 million ha of forest cover was lost in Nicaragua. This ranges from 66,000 to 80,000 ha per annum[4]. In only five years between 2010 and 2015, 35,161 ha of forest

[3] Forestry coverage estimated for 2009. Source: Government of Nicaragua. 2011. *Propuesta de Preparación del Proceso REDD+ en el Marco de la Estrategia Nacional para la Reducción de la Deforestación y la Degradación Forestal. Versión Borrador 2.* RPP/ENDE.
[4] GRUN/MARENA. 2015. REDD Readiness Preparation Plan, R-PP, 2012.

were lost in Nicaragua; this represents 25% of the forest that existed in 2010.[5] According to the latest FAO Forest Resources Assessment, Nicaragua reported a forest cover of 26% in 2015. The key challenge is to reverse the process of conversion of forests to other land uses; the deforestation rate is estimated at 2.1 percent (74,700 ha) annually. Out of the total forest loss, 45 percent was lost due to expansion of livestock, 40 percent due to expansion of agriculture, and 15 percent due to expansion of agroforestry (coffee, cocoa, and basic grains).

10. As forest loss continues, biodiversity becomes more fragmented and threatened, since only 18 percent of Nicaragua's total land area has legal status for management and protection. In this project 15 protected areas located within the Dryland Corridor and including three ecoregions (dry, humid and pine-oak forests) will promote conservation of forestland and reduce carbon emissions while protecting biodiversity and local livelihoods of about 150,000 people.

11. **Conservation of Biodiversity.** Nicaragua contains a diverse geography of extensive lowlands in the Pacific and Atlantic versants, numerous wetlands and lakes, an impressive volcanic chain composed of 25 volcanoes (top sites are protected areas), and the most southerly extension of lowland pine forest in the hemisphere. Nicaragua is home to a rich biodiversity of species including 6,014 species of vascular plants, 765 species of fish, 754 species of birds, 300 species of reptiles and amphibians, 215 species of mammals, and 12,230 species of invertebrates (snails, arthropods, and corals).

12. **Ecoregions.** In the Nicaraguan forestland, there are 28 documented forest types in Nicaragua, grouped in 12 ecoregions, among these: tropical dry forests, tropical humid forests and pine–oak forest (the target ecoregions in this project) which are critical for conserving biodiversity and for delivering of multiple environmental benefits to local communities and the country. In addition, Nicaragua has declared 19 corridors that seek to connect forested areas and protected areas. This project targets 15 protected areas and five corridors located in 3 ecoregions (tropical dry forests, tropical humid forests and pine–oak forest).

13. **Government Efforts to Protect Forests and Biodiversity.** The GoN has enacted more than 20 policies, programs, plans, and extensive regulations to protect natural resources and biodiversity, reduce degradation and increase resilience to climate change (see Annex 3 for detail). Among the most important instruments is the Nicaragua National Biodiversity Strategy Action Plan (NBSAP) 2015–2020[6]. This plan contains eight strategic lines to which this project is aligned. Furthermore, the proposed project will significantly contribute to NBSAP (Annex 2), which is aligned with the CBD and global Aichi targets[7], the National Environmental Strategy for Climate Change 2010–2015, and the National Strategy for Avoided Deforestation 2016.

Baseline

[5] MARENA. 2015. *Corredor Biológico del Pino.* Estimation of carbon emission and sequestration for the proposed GEF project.
[6] MARENA. 2015. National Strategy for Biodiversity. http://www.cbd.int. See Annex 2 for further information on the project's alignment with the NBSAP.
[7] https://www.cbd.int/

14. **National Protected Area System.** The Ministry of Environment and Natural Resources (MARENA) administers the National System of Protected Areas (SINAP). There are 74 public and private protected areas (66 terrestrial and 8 coastal marine) whose total area amounts to 2,341,000 ha. This includes four biosphere reserves recognized by the United Nations Educational, Scientific and Cultural Organization (UNESCO): (a) the Bosawas Biosphere Reserve, (b) Island of Ometepe, (c) Rio San Juan, and (d) the Sea Flower Biosphere Reserve. Further, Nicaragua has nine RAMSAR site wetlands of international importance for migratory birds and waterfowls. Among these, the Estero Real Natural Reserve included in this project. There are also 93 private wildlife reserves (9,900 ha) and three municipal ecological parks (51,000 ha). In 2013, MARENA created seven Water Reserve Zones (7,000 ha) for the conservation of water resources for human consumption, biodiversity, cultural values.

15. **Management of Protected Areas and Biodiversity – The Challenge**

a. MARENA is the national agency responsible of the protected areas and the SINAP. However, private owners or local communities own and manage 80 percent of Nicaragua's protected areas. MARENA, SINAP, and municipalities lack the necessary staff, budget, and tools for protecting, monitoring, planning, and development of initiatives that address the causes of biodiversity loss, forest cover, and soil degradation because of unsustainable current agriculture, forests, and landscapes.
b. There is a need for economic alternatives and incentives or mechanisms that can promote sustainable land-use practice, but also lead to successful livelihoods models or projects among producers living in protected areas and along the biological corridors. This project will test different initiatives such as agroforestry and agrosilvopastoral projects or biodiversity-friendly dry forest, pine, and oak forest production models to foster certification standards, ecotourism initiatives around protected areas, and payments for results (carbon sequestration and watershed protection), among others.
c. The Dry Corridor (where the targeted protected areas and corridors are found) is an active agricultural region that is the economic motor of the country. Different institutions, development plans, and productive activities interact in this region. The project will support the mainstreaming of biodiversity into other institutions' sectoral plans, and provide biodiversity information and capacity building to public officials regarding the importance of this natural capital to the country's economic growth.

16. **Resilient landscape and connectivity.** The proposed project will also contribute to reducing the degradation of critical habitats and loss of the dry, pine–oak, and humid forests in Nicaragua by strengthening management of protected areas; consolidating biological corridors that promote ecological connectivity between existing protected areas and forest remnants of dry, semi-humid, and humid forests; implementing a pilot ENDE–REDD+ project; and promoting sustainable land and forest management of Nicaragua. The project will work on protected areas, forested land, and agriculture land to achieve a triple win of environmental, social and economic benefits using a landscape approach. Resilient forest and landscapes within protected areas and corridors are needed to improve management of protected areas, implement initiatives that support conservation of biodiversity, but also local development of communities within and around protected areas and to allow different stakeholders involvement in the country land management.

Theory of change and Project Alternative

17. Deforestation, loss of biodiversity and loss of ecosystem services have significantly impacted the Dry Corridor of Nicaragua, especially the central region where the pine and oak forest ecoregion is found. This region contains important protected areas that are protecting a rich flora and fauna biodiversity, but the oak-pine forests are currently weakly represented in the System of Nationally Protected Areas (SINAP). In order to increase conservation of the pine and oak forest, protected areas management need to be strengthened and conservation measures are required on lands inside and outside of the protected and buffer areas. The best alternative to protect these protected areas and increase connectivity of these with forest patches in the rural landscape is through and landscape management framework which strengthens protected area management and which engages with landowners by improving their incomes and livelihoods in return for strengthening conservation and natural resource management activities on their land. Various forms of stewardship programs can be used to achieve this as is commonly practiced in many parts of the World.

18. **Drivers of losses.** The underlying causes of the losses include the low value of subsistence agriculture and an associated growing population, insufficient incentives to landowners and productive sectors of the economy to protect the natural assets, weak institutions to manage protected areas and support changes in landowner's behavior and climate change and natural disasters[1]. Higher temperatures more extreme weather events (hurricanes, temperature highs, heavy rainfall and drought)[2] are predicted (World Bank 2016).

19. **Causes of losses.** The drivers of the natural resource and ecosystem losses are agricultural and livestock expansion, illegal logging, fires and burning to increase area under agriculture, and the demand/ unsustainable use of natural resources including timber, fuel wood, food, etc.

20. **Proposed Intervention.** In order to change this cycle, four broad areas of intervention are proposed:

i. ***Strengthen protected area management and conservation of biodiversity****:* The first key intervention is to strengthen protected area management to lead them onto a sustainable footing – ecologically, financially and institutionally and ensuring that communities understand their relevance and benefit from them. Also to develop baseline studies to measure the current status of critical habitats and of forest conservation.

ii. ***Landscape Restoration for Biodiversity, Resilience, and Local Livelihoods.*** The second intervention seeks strengthening and linking biological corridors with protected areas. Supporting sustainable production practices within the pine and oak forest through i) landscape restoration and ii) Sustainable land use, will increase livelihoods resilience (food production, income, information) and biodiversity conservation. Conserving and rebuilding ecosystems and forest outside of the protected areas and in buffers and corridors requires the strengthening of landowner incomes in return for reforesting their lands

[1] Hurricane Mitch caused $1 billion in damage in 1998, killed 3,800 people in floods and landslides with over 70,000 landmines dispersed to new areas.
[2] http://www.worldbank.org/en/news/feature/2016/07/18/america-latina-llego-hora-adaptarse-calentamiento-global

and rehabilitating ecosystem services (e.g., supporting innovative mechanisms for conservation and sustainable land use agreements with landowners and productive sectors of the region). The intervention will include the implementation of an ENDE-REDD+ pilot.

iii. ***Mainstreaming biodiversity and restoration for resilient landscapes at the institutional and development sectors***. To influence a wider landscape management approach for the pine–oak protected areas and corridors, is necessary to mainstream biodiversity and landscape restoration in key government and private sectors strategies, practices and planning. Resilient landscape management planning will increase biodiversity conservation; consolidate and strengthen institutional capacity and disseminate quality biodiversity information within government sectors for better decision making.

iv. ***Project management.*** Project management reporting and evaluation is needed to keep the process on track.

Relationship to CPF

21. **Country Partnership Framework.** The proposed project is consistent with the World Bank Country Partnership Strategy (CPS) for Nicaragua for the period of fiscal years (FY) 2013–2017 (Report No. 69231–NI). One of the two strategic objectives of Nicaragua's CPS is to raise incomes by sustainably improving productivity, competitiveness, and diversification. By seeking to improve management effectiveness in the project area through the implementation of activities that aim to improve practices to reduce pressures on deforestation and biodiversity, while helping create economic opportunities for vulnerable local communities, including small farmers and indigenous peoples, the project is responsive to all three themes.

C. Proposed Development Objective(s)

The Project Development Objective (PDO) is to strengthen the National Protected Areas System and support sustainable land use and restoration practices in selected areas of the Dry Corridor of Nicaragua to foster biodiversity conservation, resilient landscapes, and local livelihoods.

Key Results (From PCN)

22. Following are the key results expected from the project in **Global Environmental Benefits**:

    i. Improved habitats for biodiversity through 262,601 hectares conserved or restored (natural regeneration, re/afforestation and agroforestry and silvopastoral systems) to increase resilience, protection and connectivity between 15 protected areas and remnants of dry, pine-oak and humid forests, targeting an approximate area of an additional 229,015 hectares (buffer areas), bringing the total area targeted to 491,617 hectares (Components 1, 2, 3)[8].

[8] Note that under GEF-6, the targeted area is 73,563 hectares conserved or restored, and increase resilience, protection and connectivity between 7 protected areas targeting an approximate area of 129,317 hectares.

ii. Improved management effectiveness of 15 protected areas (core areas) in a total 262,601 hectares (Component 1).[9]

iii. Contribution to at least 5 Strategic Lines of the 2020 National Biodiversity Strategy and tracked by the biodiversity monitoring system to be developed under the project (Components 1, 2, 3).

iv. 53,000 hectares (TBD) additional from local farmers benefiting from a results payment program for applying sustainable forest use practices that contribute to reduce deforestation, increase corridor connectivity and support local livelihoods (Component 2)[10].

v. 544,300 metric tons (600,000 tons) of Green House Gases (GHG) emissions reduced or avoided (or carbon sequestered) (Component 2).

Results of the Project are proposed to be measured through the following PDO indicators:

23. Proposed indicators:

(i) Area restored or re/afforested (FAP indicator);
(ii) Land area under sustainable landscape management practices (WB core sector and FAP I ndicator);
(iii) Score target to increase protected area management effectiveness according to MARENA methodology;
(iv) Progress toward reaching at least 25% of targets of five strategic lines of the 2015–2020 National Biodiversity Strategy;
(v) Net greenhouse gas emissions (WB core sector and FAP indicator); and
(vi) Beneficiaries of job-focused interventions.

D. Concept Description

24. The project will contribute to improve management of protected areas, and reduce land degradation and biodiversity loss of Nicaragua's critical habitats through the (a) Consolidate biological corridors that promote ecological connectivity between existing protected areas and forest/agricultural landscapes. (b) Support land uses across farms in dry and humid forest landscapes to allow farmers to improve on-farm resilience and sustainability (including the implementation of agroforestry and silvopastoral systems). (c) Implement an ENDE–REDD+ pilot project. (d) Mainstream biodiversity and sustainable use of biodiversity into production landscapes. These and other actions will address barriers related to the lack of institutional capacity, technical knowledge and tools that have limited the effective conservation of biodiversity in protected areas and the sustainable use of forests and the land within their surrounding landscapes. The project will deliver multiple global environmental benefits including biodiversity conservation of endangered, threatened, and migratory species; reduction of land degradation; increase in

[9] This combines the core areas of the 15 protected areas under GEF 6 and GEF 5 funding.
[10] This is 20,000 hectares for GEF-6 only.

carbon stocks and reduction of GHG emissions; and increase in forest cover and sustainable flows of ecosystem services.

25. The project area includes 15 protected areas, five corridors and three main ecoregions: dry forest, pine–oak forest, and humid forest, extending in **491,617** hectares (Table 1). The project will benefit about 185,000 people from 11 Departments and 32 Municipalities located within these ecoregions.

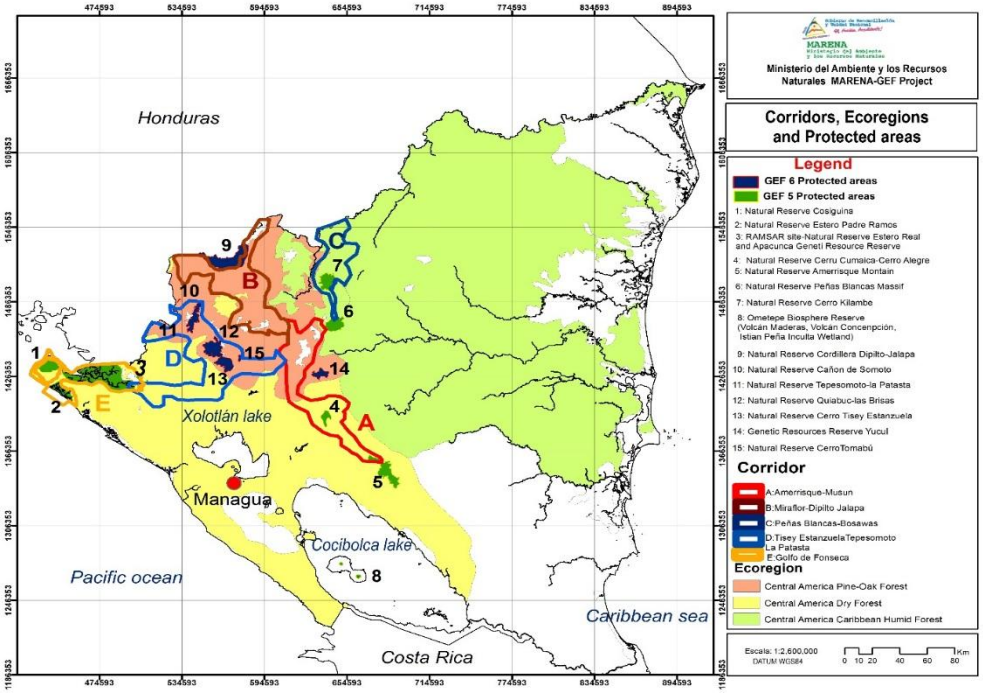
Table 1. Protected Areas (15) and Biological Corridors (5) of Nicaragua, targeted by this Project with Funding from GEF 5 and GEF 6.

#	Protected Area	Extent of area in ha (combined core area and buffer zone)	Biological Corridor	Number of inhabitants	Department	Municipalities
	GEF 5					
1	Natural Reserve Volcán Cosigüina	31,748	1.Dry Forest Corridor of Chinandega–Rivas	86,317	Chinandega	El Viejo
2	Natural Reserve Estero Padre Ramos	28,316			Chinandega	El Viejo
3	RAMSAR Site – Natural Reserve Estero Real and Apacunca Genetic Resources Reserve	150,903		134,069	Chinandega	Municipio de El Viejo, Puerto Morazan, Villanueva, Somotillo
4	Natural Reserve Cerro Cumaica–Cerro Alegre	22,465	2.Corridor of Cerro Cumaica Cerro Alegre–Cerro Mombachito–La Vieja–Sierra Amerrisque	34,804	Boaco	Santa Lucía, San José de los Remates, Esquípulas
5	Natural Reserve Amerrisque Mountains	29,068		3,693	Chontales	Juigalpa, San Francisco de Cuapa, San Pedro de Lobago
6	Natural Reserve Peñas Blancas Massif (Forms part of the Biosphere Reserve Bosawas)	14,867	3.Corridor of Peñas Blancas–Kilambé	116,396	Matagalpa	El Cua, Rancho Grande, Tuma La Dalia
7	Natural Reserve Cerro Kilambé (Forms part of the Biosphere Reserve Bosawas)	66,518		111,159	Matagalpa	El Cuá, San Jose de Bocay
8	Biosphere Reserve Isla Ometepe–Natural Reserve Concepcion and Maderas Volcanos–Peña Inculta Wetland	18,415	4.Corridor of Lake Nicaragua Islands	31,817	Ometepe	Alta Gracias, Moyogalpa

	Wildlife Refuge					
	TOTAL GEF 5	**362,300**	**4**	**518,255**	**6**	**19**
	GEF 6					
9	Natural Reserve Cordillera Dipilto y Jalapa	52,449	5.Pine and Oak Forest Corridor	60,652	Nueva Segovia	Dipilto, Jalapa, San Fernando, Mozonte
10	Natural Reserve Cañón de Somoto	644		15241	Madriz	San Lucas
11	Natural Reserve Tepesomoto–Patasta	21,674		7,879	Madriz	Somoto, San Lucas, Las Sabanas y San José de Cusmapa
12	Natural Reserve Cerro Quiabuc–Las Brisas	25,031		4,636	Esteli	La Trinidad y Esteli
13	Natural Reserve Cerro Tisey Estanzuela	21,680		6,754	Esteli y Leon	Esteli, San Nicolas, El Sauce
14	Genetic Resources Reserve Yucul	5,714		3,897	Matagalpa	San Ramon
15	Natural Reserve Cerro Tomabú	2,125		1,498	Esteli	Esteli
	GEF 6	**129,317**	**1**	**100,557**	**5**	**13**
TOTAL (GEF 6 and GF5):		**491,617**	**5**	**618,812**	**11**	**32**

Source: MARENA.

Map 1. Project area: 15 protected Areas and five Corridors in the Dry, Humid and Pine-Oak Forest Ecoregions.



Project components

26. This operation (US$ 10,274,776) is proposed around the following four components:

27. ***Component 1. Strengthening the Protected Area Management System and conservation of biodiversity (estimated GEF funding US$ 4,295,000 million, 41.8 percent).*** The component will finance both TA and investments to strengthen management of the 15 targeted protected areas. More specifically, it will:

    (i) Strengthen the conservation and protection of protected areas from illegal logging, fires, and invasive species (pine bark beetle[11]) by increasing presence in the protected areas, and providing field equipment and logistic support to park rangers, regional offices (Delegaciones Departamentales of MARENA) and local management committees.

    (ii) Update and implement environmental plans for improving forest, land, biodiversity and water management, as needed and in coordination with families and local communities living within the park and the corridors.

    (iii) Restore important habitats for selected species within the corridors that have been affected by the current land-use practices within the protected areas.

    (iv) Identify and proposed potential financial and economic mechanisms to improve income for the local communities within the protected areas and for the conservation of the dry, humid and pine-oak forests (campaigns, fees, PP partnerships, tourism, and so forth).

    (v) Support baseline studies on critical habitats and species to develop a biodiversity monitoring system.

    (vi) Monitor protected areas management effectiveness by putting in place the national Integral System to Monitor and Evaluate Management Effectiveness of the Protected Areas, in accordance with MARENA's Ministerial Resolution No. 38–2008.

    (vii) Support capacity building of MARENA staff at headwaters and regional offices, national and international training, and exchange programs with international centers or with other parks other countries, and so forth.

    (viii) Prepare educational and communication material to lead environmental awareness activities to support the Government agenda of "protecting mother nature" and to position nationally and internationally the protected areas of Nicaragua.

28. ***Component 2: Landscape Restoration for Biodiversity, Resilience, and Local Livelihoods (estimated GEF funding US$ 4,054,489 million, 39.4 percent).*** The component will finance both TA and investments in the pine and oak forest corridor to increase connectivity between the 15 targeted protected areas and the landscapes and increasing resilience of globally significant biodiversity.

[11] The pine-oak ecoregion has experienced outbreaks of the Pine bark beetles of the genus *Dendroctonus* (Coleoptera: Scolytidae) which is a very destructive forest pest currently affecting the native pine forests of Central America.

29. The component activities will support community demand subprojects in selected communities in return for signing conservation agreements on their land to reduce impacts and align their productive activities with the protected areas' and biological corridor's management plans. Subproject design will include lessons learned from similar approaches implemented in Nicaragua with small-scale farms and community demand investments, such as: Environmental Rehabilitation Systems Program (ERSP),[12] the PACCAS[13] Project (P127088) supported by the Special Climate Fund Project, Caribbean Coast Food Security Project (P148809) financed by the Global Agriculture and Food Security Program, the Corazon Transboundary Biosphere Reserve Project in the Bosawas Biosphere Reserve (P085488), supported by GEF.

30. The proposed project will also ensure the application of local knowledge in subprojects design. The component will require counterpart contribution from each participating group of farmers/farmer in form and quantity that will be assessed during project preparation and implementation. The following aspects, among others, will be further assessed during project preparation to define this component's scope: (i) criteria to select the communities and beneficiaries; (ii) MARENA's experience with different models of livelihood improvement in protected areas, productive landscapes, and watersheds; (iii) socioeconomic analysis of existing and potential productive activities and livelihoods in the project area; and (iv) available resources for direct investments with GEF–6 and co-financiers.

31. The farm-level rehabilitation agreements and plans (subprojects) to be financed by this component will implement sustainable production practices within the pine and oak forest corridor that contributes to increase resilience, forest restoration, biodiversity and support local livelihoods, such as: i) Landscape restoration (reforestation with native species, tree fences, natural regeneration, nurseries); ii) Sustainable land use (agro-ecotourism, shade crops such as coffee and cacao; reforestation for firewood; honey production).

32. This component will also finance a pilot initiative of REDD+ incentives and the funding needed to provide for the related tools and mechanisms like the baseline and monitoring system. This pilot will be implemented in close coordination with the REDD+ Readiness grant that is being implemented by MARENA under the country's National Strategy of Avoided Deforestation (ENDE REDD+). The pilot would work with beneficiary families to promote conservation of 53,000 ha of forest in the tropical humid forests in the Corridor Peñas Blancas–Kilambe and the Pine Forest Corridor in north–central Nicaragua and would include land under high risk of deforestation due to unplanned land-use change. The pilot will apply the methodology agreed for the Nicaraguan ENDE- REDD+ strategy and will contribute to verified and monitored carbon emission reductions (see Annex 5).

[12] MARENA developed the ERSP as part of the Socio-Environmental Forest Development Program (POSAF I and POSAF II), implemented between 2002 and 2012 with funding from the EuropeAid Cooperation Office (EuropeAID), the Nordic Development Fund (NDF), and Inter-American Development Bank (IDB) and participation by the Tropical Agricultural Research and Higher Education Center (CATIE). The ERSP covers five categories of systems: eco-forestry coffee, agroforestry systems, silvopastoral systems, management of natural regeneration, and forest management, including 21 different sets of best management practices (BMPs) that contribute to ecosystem conservation.

[13] Adaptation of Nicaragua's Water Supplies to Climate Change financed by the Special Fund of Climate Change supported the implementation of a Program of payment of environmental services for the conservation of water sources by farmers of selected municipalities in the Dry Corridor.

33. ***Component 3. Mainstreaming biodiversity and restoration for resilient landscapes at the institutional and development sectors (estimated GEF funding US $ 1,355,000 million, 13.1 percent*).** The component will promote mainstreaming of biodiversity and landscape restoration in key government and private sectors strategies, practices and planning to increase biodiversity conservation; consolidate and strengthen institutional capacity to learn, produce and disseminate biodiversity information within government sectors, in the pine–oak corridor and in general in the country.

34. Landscape planning and dissemination of biodiversity information will contribute to strengthen plans and development programs in the conservation of globally significant biodiversity, address land degradation, climate change impacts, and the loss of forest cover in the project area. To create the technical knowledge needed to support mainstreaming activities in sectors such as agriculture, family, territorial planning, tourism, and water, a special focus will be placed on creating capacity within institutions that did not previously work with biodiversity. The project plans to implement this component through several activities:

(i) Strengthen technical capacity of MARENA and the project municipalities to include the corridor into local development plans and to monitor its implementation[14]; provide equipment, materials, and support.

(ii) Coordinate and develop strategies and mechanisms for incorporating the objective of biodiversity conservation, increasing connectivity and landscape restoration into policies, programs, projects, and development plans throughout different government sectors and levels intervening in the corridor. In addition, seek opportunities to generate income from the protected area (for example, ecotourism).

(iii) Support interinstitutional coordination and collaboration to strengthen biodiversity knowledge, sustainable forest and land management, and productive systems in the corridor across MARENA; INAFOR; INETER; Ministry of Family, Communal, Cooperative and Associative Economy (MEFCCA); Nicaraguan Institute of Tourism (INTUR); and, INTA.

(iv) Promote investments in forest regeneration, agro-forestry and silvopastoral systems with the private sector and government institutions working with the agrosector.

(v) Establish an environmental awareness and biodiversity dissemination plan. Raising of awareness will also address the value of biodiversity, ecosystem services, and key species to communities, among other topics.

35. ***Component 4. Project Management (estimated GEF funding US$ 570,287, 5.5 percent).*** This component will finance the Project Implementation Unit (PIU) in the Ministry of Environment and Natural Resources (MARENA), the proposed project-implementing agency. MARENA is in charge of promoting environmental management and represents Nicaragua in the United Nations Framework Convention for

[14] This will include establishing an early warning system of deforestation at municipal level through at least one community-based observation post per participating Municipality. It will be supplemented by MARENA using quarterly monitoring through satellite images and field verifications. Activities will be coordinated with the Nicaraguan Institute for Territorial Studies (INETER) and INAFOR, and the Ministry of Agriculture (MAG) and Nicaraguan Institute of Agricultural Technology (INTA).

Climate Change (UNFCCC). The PIU will comprise consultants and technical staff assigned by MARENA; they will be in charge of socioenvironmental and fiduciary management. This team, in coordination with MARENA's authorities, will coordinate with other sector and local institutions related to sustainable management of protected areas and biological corridors to promote the forest restoration and application of the landscape approach.

36. The project will collaborate with the National Forestry Institute (INAFOR), Nicaraguan Institute of Tourism (INTUR), and Ministry of Family, Communal, Cooperative, and Associative Economy (MEFCCA).

SAFEGUARDS

A. Project location and salient physical characteristics relevant to the safeguard analysis (if known)

The proposed project targeted area is approximately 491,617 hectares, comprising 15 protected areas (15.4 percent of the area under SINAP) and five biological corridors to increased connectivity of protected areas with forest landscapes (Table 1). This area extends to 11 departments and 32 municipalities. Two ethnic groups (Mayagna and Mozonte) have been preliminarily identified that could reside in the Project area, but this is not confirmed.

The protected areas included in the project are:
(i) Natural Reserve Volcán Cosigüina,
(ii) Natural Reserve Estero Padre Ramos,
(iii) RAMSAR Site – Natural Reserve Estero Real and Apacunca Genetic Resources Reserve,
(iv) Natural Reserve Cerro Cumaica–Cerro Alegre,
(v) Natural Reserve Amerrisque Mountains,
(vi) Natural Reserve Peñas Blancas Massif,
(vii) Natural Reserve Cerro Kilambé,
(viii) Natural Reserve Concepcion and Maderas Volcanos – Peña Inculta Wetland Wildlife Refuge,
(ix) the Natural Reserves Cordillera Dipilto and Jalapa,
(x) National Monument Cañon de Somoto,
(xi) Natural Reserve Tepesomoto–Patasta,
(xii) Natural Reserve Cerro Quiabuc–Las Brisas,
(xiii) Cerro Tisey Estanzuela,
(xiv) Yucul Genetic Resources Reserve, and
(xv) Cerro Tomabú.

MARENA is responsible for safeguarding these protected areas, even though most of the 80% of the land belongs to private owners, cooperatives, or indigenous communities.

B. Borrower's Institutional Capacity for Safeguard Policies

MARENA is the country's leading agency for applying the country's main environmental legislation. This includes regulations on: environmental impact assessment, biodiversity, climate change, forest, wetlands, RAMSAR sites

protection, among others. The main MARENA departments that will be working in the project are: protected areas, biodiversity, and climate change. The Department of Environmental Control that issues environmental licenses will also be consulted in project preparation to ensure proper participation in the project. During preparation, the capacity of MARENA and participating departments to apply and manage environmental and social safeguards will be assess as well in other participating agencies that will participate in the project implementation.

The project plans to install a project Implementation Unit (PIU) in MARENA to lead project implementation. The capacity of MARENA and other project participating agencies on managing Bank and other project-related institutional capacities will be assessed during project preparation. Training and capacity building activities will be provided during project preparation and implementation. Social and environmental professionals will be hired to work in the project PIU in MARENA and will have responsibility to work and trained MARENA departmental offices that will benefit from the project. If Indigenous Peoples are confirmed in the project area, the social specialist hired for the PIU will have relevant experience in IP.

C. Environmental and Social Safeguards Specialists on the Team

Ruth Tiffer-Sotomayor, Environmental Safeguards Specialist
Mariela Mena, Social Safeguards Specialist
Karina Elizabeth Rodriguez Saenz, Social Safeguards Specialist

D. Policies that might apply

Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/BP 4.01	Yes	The project is proposed as a category B. The project is expected to generate mostly positive environmental and social impacts related to better management of protected areas and consolidation of five biological corridors through a landscape approach. A baseline study on current forest cover and level of conservation practices on protected areas will be performed for project technical design; it will also identify potential impacts on the local livelihood of communities that could result from project activities. The Bank safeguards policies apply, including the Bank's Interim Guidelines on the Application of Safeguard Policies to Technical Assistance (TA), to all project components, including the activities of Component 3. The project is expected to generate positive social impacts (water conservation, PES, land restoration), since the project will have a strong focus on safeguarding the natural resources upon which local communities in the project area depend for their livelihoods.

		Some potential negative impact from subprojects might be related to small works such as trails, park rangers offices and signaling to improve presence of MARENA in the protected area and reduce deforestation and degradation. The project will prepare an Environmental and Social Management Framework (ESMF) that complies with country environmental legislation and the OP 4.01 and it will describe the responsibilities of MARENA and other potential participating institutions in the review, approve and manage of project investments to prevent, mitigate or compensate negative impacts that might be caused by the project. The ESMF will include health and safety measures and procedures to prevent any social issue and exclude any child labor. Grievance mechanisms already in place in other Bank projects in Nicaragua, will be reviewed and the ESMF will include the mechanisms that are more effective (such as periodic meetings of local leaders with the PIU staff). The ESMF will be consulted and disclosed before project appraisal.
Natural Habitats OP/BP 4.04	Yes	This policy is triggered because the project area includes protected areas and critical habitats that are the habitat of endangered, migratory, and threatened species. The landscape approach that will be use in the project will promote positive impacts on habitat restoration within protected areas and corridors, thus increasing connectivity and habitat restoration for biodiversity. The project will also finance a biodiversity monitory system to improve biodiversity information and mainstreaming biodiversity into other sectorial institutions and local planning. The ESMF will include procedures and checklists to ensure that financed activities will support the conservation of natural and critical habitats and applied national legislation and international agreements (RAMSAR, CITES).
Forests OP/BP 4.36	Yes	This policy is triggered since the project will promote better forest management and protection. The ESMF will include the procedures to develop and implement sustainable forest management plans according to the Policy and the national forestry-related legislation to ensure sustainable forest management in the project

		area. During project preparation will be analyzed whether the project could support better forest management (timber) in public or private lands where timber harvesting is legal. The project will finance capacity building in sustainable forest management, monitoring tools, and reforestation campaigns, among other activities, which will have positive effects on the forest by reducing carbon emissions, and increasing forest stocks, biodiversity, and connectivity of protected areas.
Pest Management OP 4.09	Yes	The project will support agro-forestry and silvopastoral activities though subprojects to benefit local producers while promoting resilience and sustainable land-use practices. An Integrated Pest Management Framework (IPMF) will be prepared to serve as a framework to ensure preventive and mitigation measures will be use in project components. Procedures included in the IPMF will follow OP 4.09 and will establish procedures to applied best international practices on pest management. Because of the current bark beetle infestation affecting pine forests in Nicaragua, the project might need to support current efforts of the GoN in controlling the expansion of the infestation. If necessary, the IPMF will include procedures for managing specific pesticides to deal with the beetle, always excluding yellow and red label products.
Physical Cultural Resources OP/BP 4.11	Yes	This policy is triggered, since the project might support activities for conservation, research or ecotourism with potential cultural significance (such as sacred sites, petroglyphs, caves) for local communities. The ESMF will include checklists and procedures for the preparation of Physical Cultural Protection Plans if necessary. The ESMF will define the procedures for the project to comply with the country cultural and archeological legislation and the OP 4.11.
Indigenous Peoples OP/BP 4.10	Yes	Preliminary information indicates potential presence of Mozonte Indigenous People in the Natural Reserve of Cordillera Dipilto y Jalapa. During project preparation, the Bank will coordinate with MARENA, government Indigenous Peoples' representatives and relevant national specialists to conduct related

		screening to confirm if Indigenous Peoples live in the project area, or if Indigenous Peoples have collective attachment to any of the targeted land. Based on the screening results and a social assessment, MARENA shall prepare an Indigenous Peoples Planning Framework (IPPF), supported and to be approved by the World Bank before project appraisal. IP organizations and communities should be included in consultations on relevant component 3 activities.
Involuntary Resettlement OP/BP 4.12	Yes	No land adquisition is expected from the project. MARENA will prepare a Process Framework (PF) for potential involuntary restrictions to local communities and IP if present in the project area (TBD) on access to the use of natural resources, according to OP 4.12. The PF's preparation will be supported by, and undergo an approval process by, the World Bank before project appraisal. The PF will establish the procedures and applicable mitigation measures that MARENA and the other participating GoN agencies will follow during project implementation in order to identify, evaluate, and manage the associated potential negative social impacts that the project might cause to local communities, specially to IP if these are found in the project area.
Safety of Dams OP/BP 4.37	No	The Project will not finance any dam and is not expected to finance subprojects that would depend on an existing dam.
Projects on International Waterways OP/BP 7.50	TBD	There are international waterways in the project area (a protected area along the shore of the Fonseca Gulf), further assessment is required to confirm if it is needed to trigger the OP/BP 7.50.
Projects in Disputed Areas OP/BP 7.60	No	Project activities will not be conducted in disputed areas.

E. Safeguard Preparation Plan

Tentative target date for preparing the Appraisal Stage PID/ISDS

Nov 30, 2017

Time frame for launching and completing the safeguard-related studies that may be needed. The specific studies and their timing should be specified in the Appraisal Stage PID/ISDS

The World Bank team will coordinate with MARENA and other participating agencies the preparation of the safeguards documents. The WB will provide guidance to MARENA for the preparation, consultation, and disclosure of the safeguards documents before project appraisal.

At this stage is identified that the project will need to prepare four safeguards instruments:

i) Environmental and Social Management Framework (ESMF)
ii) Integrated Pest Management Framework (IPMF)
iii) Indigenous Peoples Planning Framework (IPPF)
iv) Process Framework (PF) for potential involuntary restrictions on land

CONTACT POINT

World Bank

Ruth Tiffer-Sotomayor, Augusto Garcia
Senior Environmental Specialist

Borrower/Client/Recipient

Government of Nicaragua, Ministry of Finance and Public Credit (MHCP)
Ivan Acosta
Minister
ivan.acosta@mhcp.gob.ni

Implementing Agencies

Ministry of Environment and Natural Resources (MARENA)
Juana Argeñal Sandoval
Minister
juanaargenal@marena.gob.ni

National Forest Development Fund (FONADEFO)
Roberto Araquistain
Vice Minister
raraquistain@marena.gob.ni

FOR MORE INFORMATION CONTACT

The World Bank
1818 H Street, NW
Washington, D.C. 20433
Telephone: (202) 473-1000
Web: http://www.worldbank.org/projects

APPROVAL

Task Team Leader(s):	Ruth Tiffer-Sotomayor, Augusto Garcia

Approved By

Practice Manager/Manager:	Angela G. Armstrong	26-Jul-2017
Country Director:	Christian Albert Peter	31-Jul-2017