Transforming Food Systems and Reducing Deforestation in the Protected Areas and Biological Corridors landscapes from the Southern Caribbean Coast and San Juan River autonomous region

Part I: Project Information

Name of Parent Program
Food Systems, Land Use and Restoration (FOLUR) Impact Program

GEF ID
10599

Project Type
FSP

Type of Trust Fund
GET

CBIT/NGI
CBIT **No**
NGI **No**

Project Title
Transforming Food Systems and Reducing Deforestation in the Protected Areas and Biological Corridors landscapes from the Southern Caribbean Coast and San Juan River autonomous region

Countries
Nicaragua

Agency(ies)
FAO

Other Executing Partner(s)
Ministry of Environment

Executing Partner Type
Government

GEF Focal Area
Multi Focal Area

Taxonomy
Influencing models, Convene multi-stakeholder alliances, Demonstrate innovative approache, Stakeholders, Private Sector, Individuals/Entrepreneurs, Communications, Behavior change, Education, Civil Society, Academia, Non-Governmental Organization, Community Based Organization, Type of Engagement, Consultation, Participation, Local Communities, Indigenous Peoples, Beneficiaries, Gender Equality, Gender Mainstreaming, Gender results areas, Participation and leadership, Knowledge Generation and Exchange, Capacity Development, Integrated Programs, Food Systems, Land Use and Restoration, Comprehensive Land Use Planning, Landscape Restoration, Deforestation-free Sourcing, Food Value Chains, Capacity, Knowledge and Research, Knowledge Exchange, Learning, Knowledge Generation, Professional Development, Training

Sector
AFOLU

Rio Markers
Climate Change Mitigation
Climate Change Mitigation 1

Climate Change Adaptation
Climate Change Adaptation 0

Submission Date
12/1/2021

Expected Implementation Start
7/1/2022

Expected Completion Date
6/30/2026

Duration
48In Months

Agency Fee($)
481,913.00

A. FOCAL/NON-FOCAL AREA ELEMENTS

Objectives/Programs	Focal Area Outcomes	Trust Fund	GEF Amount($)	Co-Fin Amount($)
IP FOLU	Transformation of food systems through sustainable production, reduced deforestation from commodity supply chains, and increased landscape restoration	GET	5,354,587.00	44,690,934.00
		Total Project Cost($)	**5,354,587.00**	**44,690,934.00**

B. Project description summary

Project Objective

To promote sustainable and integrated landscapes and efficient food systems (cacao, beef and dairy cattle) in key value chains in landscapes surrounding protected areas (PAs) and biological corridors in the South Caribbean Autonomous Region (RACCS) and the province of R?o San Juan.

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
Development of integrated landscape management systems	Technical Assistance	1.1. Participatory, inclusive and gender-sensitive planning and mapping promoted to improve land management and sustainable food systems in the target landscapes <u>*Indicators*</u> *-Number of municipalities that apply improved planning and management practices to promote sustainable food systems, with a target of 7 municipalities* *-Percent members of the land use planning teams that are indigenous, afro-descendant, and mestizo women, with a target of 30%*	1.1.1 Capacity building program on integrated and participatory landscape planning developed and under implementation for national, regional and local government partners 1.1.2 Integrated participatory management plans developed in project target areas to restore landscapes, conserve forests, and support climate-resistant production systems	GET	900,088.00	7,512,395.00
		1.2 Strengthening of governance systems and capacity building for national/local institutions in	1.2.1 Dialogue			

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
2. Promotion of sustainable food production practices and responsible value chains for target products	Investment	2.1 Implementation of Best Practices for land use and restoration activities in the target production landscapes <u>*Indicator*</u> *Area in which producers apply improved agricultural practices, including indigenous and traditional knowledge, as measured by SDG 2.4.1, with a target of 35,893 ha (Core Indicator 4.3)*	2.1.1Capacity development program with an ethnic and gender focus developed and implemented to support the conversion to (i) a low-emission, technologically intensive, silvopastoral livestock system; and (ii) intensive and diversified cacao agroforestry systems, which will contribute to the restoration of landscapes and biological corridors 2.1.2 Detailed investment plans developed by project stakeholders to ensure sustainable management of the target production landscapes 2.1.3 35,893 hectares of productive landscapes (prioritized in product 2.1.2) subjected to sustainable land	GET	1,707,268.00	14,249,353.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
3. Sustainable Land Management and Restoration of natural habitats	Investment	3.1. Sustainable land management practices and restoration activities implemented in target landscapes are upscaled to similar ecosystems in the target biological corridor <u>Indicators</u> *-Area of degraded agricultural lands rehabilitated for conservation and ecosystem services in the prioritized Biological Corridor, with a target of 13,027 ha (Core Indicator 3) distributed as follows: 5,569 ha of agricultural land (Core. Ind 3.1); 2,057 ha of forest land (Core Ind. 3.2); 5,401 ha of grasslands (Core Ind. 3.3)* *-Sustainable land use practices area and expanded*	3.1.1 Detailed investment plans (based on products 1.1.1 and 1.1.2) developed by project stakeholders to restore natural habitats and productive landscapes in the biological corridors of the RACCS and the department of R?o San Juan Output 3.1.2 At least 13,027 hectares of agricultural land, forest land and grasslands restored under priority systems in output 3.1.1) 3.1.3 At least 167,236 ha of landscapes (prioritized landscape area in the Biological Corridor of the RACCS and department of R?o San Juan) under improved management to avoid deforestation and reduce	GET	1,771,336.00	14,784,083.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
4. M&E, Strategic Knowledge Management and Communication programmes effectively implemented	Technical Assistance	4.1 M&E system and stakeholder collaboration support project and FOLUR programme delivery <u>Indicator</u> *Number of national, regional and global commodity platforms strengthened through the adoption of sustainability standards, traceability mechanisms or greater representation of stakeholders, with a target of 2 (one national commodity platform and one M&E mechanism)*	4.1.1 M&E system implemented, monitoring and evaluating and reporting in the context of the global coordination program 4.1.2 Midterm and final evaluations carried out in a timely manner	GET	720,915.00	6,016,965.00
		4.2 Strategic knowledge management and communications effectively implemented <u>Indicator</u> *Number of attendees to events (virtual and face-to-*	4.2.1 Knowledge management and communication program in execution, including the systematization of experiences in the agricultural and forestry sector based			

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
				Sub Total ($)	**5,099,607.00**	**42,562,796.00**
Project Management Cost (PMC)						
				GET	254,980.00	2,128,138.00
				Sub Total($)	**254,980.00**	**2,128,138.00**
				Total Project Cost($)	**5,354,587.00**	**44,690,934.00**

Please provide justification

C. Sources of Co-financing for the Project by name and by type

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount($)
Recipient Country Government	Ministry of Environment and Natural Resources (MARENA)	Public Investment	Investment mobilized	2,000,000.00
Recipient Country Government	Ministry of Environment and Natural Resources (MARENA)	In-kind	Recurrent expenditures	546,000.00
Recipient Country Government	Ministry of Family, Community, Cooperative and Associative Economy (MEFCCA)	In-kind	Recurrent expenditures	70,000.00
Recipient Country Government	Nicaraguan Institute of Agricultural Technology (INTA)	In-kind	Recurrent expenditures	120,000.00
Recipient Country Government	Institute of Animal Protection and Health (IPSA)	In-kind	Recurrent expenditures	1,550,581.00
Recipient Country Government	National Forest Institute (INAFOR)	In-kind	Recurrent expenditures	304,353.00
Recipient Country Government	MARENA - BCIE/GCF	Loans	Investment mobilized	25,000,000.00
Recipient Country Government	MARENA - BCIE/GCF	Grant	Investment mobilized	15,000,000.00
GEF Agency	FAO	In-kind	Recurrent expenditures	100,000.00
			Total Co-Financing($)	**44,690,934.00**

Describe how any "Investment Mobilized" was identified

The investment mobilized by MARENA and MEFCCA reflects a combination of public investment expenditures related to projects which are to be implemented in the geographic area of interest. These projects are coordinated by MEFCCA with collaboration from other institutions in the National Production,

Consumption and Commerce System (NPCCS), including MARENA, the Nicaraguan Institute of Agricultural Technology, (INTA) and the Animal and Plant Health and Protection Institute (IPSA). The government of Nicaragua has offered to mobilize resources in support of resources in support of the FMAM donation through the Project titled: ?Comprehensive Climate Action to Reduce Deforestation and Strengthen Resilience in the Bosaw?s and R?o San Juan Biospheres? (BioCLIMA). This Project was approved by the board of the Green Climate Fund (GCF) in November 2020 through the Central American Bank for Economic Integration (CABEI) as an accredited body. The CABEI/GCF co-financing is donation / loan combination and includes multiple activities. The Project will support the planning and management of the restoration of landscapes, forest conservation and climate-resistant production. Landscape restoration will take place by means of silvopastoral systems; diversified cacao agroforestry systems; and financing for community forest management subprojects as well as community-based forest restoration in territories outside protected areas (PAs). The co-financing from the CABEI/GCF Project shown herein is an estimate based on the information currently available, and must be validated during the first year of Project implementation, since it represents a portion of a larger fund made available to Nicaragua.

D. Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)	Total($)
FAO	GET	Nicaragua	Biodiversity	BD STAR Allocation	1,784,862	160,637	1,945,499.00
FAO	GET	Nicaragua	Land Degradation	LD STAR Allocation	892,431	80,319	972,750.00
FAO	GET	Nicaragua	Climate Change	CC STAR Allocation	892,431	80,319	972,750.00
FAO	GET	Nicaragua	Multi Focal Area	IP FOLU Set-Aside	1,784,863	160,638	1,945,501.00
				Total Grant Resources($)	**5,354,587.00**	**481,913.00**	**5,836,500.00**

E. Non Grant Instrument

NON-GRANT INSTRUMENT at CEO Endorsement

Includes Non grant instruments? **No**

Includes reflow to GEF? **No**

F. Project Preparation Grant (PPG)

PPG Required **true**

PPG Amount ($)

150,000

PPG Agency Fee ($)

13,500

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)	Total($)
FAO	GET	Nicaragua	Biodiversity	BD STAR Allocation	50,000	4,500	**54,500.00**
FAO	GET	Nicaragua	Land Degradation	LD STAR Allocation	25,000	2,250	**27,250.00**
FAO	GET	Nicaragua	Climate Change	CC STAR Allocation	25,000	2,250	**27,250.00**
FAO	GET	Nicaragua	Multi Focal Area	IP FOLU Set-Aside	50,000	4,500	**54,500.00**
				Total Project Costs($)	**150,000.00**	**13,500.00**	**163,500.00**

Core Indicators

Indicator 3 Area of land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
0.00	13027.00	0.00	0.00

Indicator 3.1 Area of degraded agricultural land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
	5,569.00		

Indicator 3.2 Area of Forest and Forest Land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
	2,057.00		

Indicator 3.3 Area of natural grass and shrublands restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
	5,401.00		

Indicator 3.4 Area of wetlands (incl. estuaries, mangroves) restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 4 Area of landscapes under improved practices (hectares; excluding protected areas)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
0.00	203129.00	0.00	0.00

Indicator 4.1 Area of landscapes under improved management to benefit biodiversity (hectares, qualitative assessment, non-certified)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
	167,236.00		

Indicator 4.2 Area of landscapes that meets national or international third party certification that incorporates biodiversity considerations (hectares)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Type/Name of Third Party Certification

Indicator 4.3 Area of landscapes under sustainable land management in production systems

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
	35,893.00		

Indicator 4.4 Area of High Conservation Value Forest (HCVF) loss avoided

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Documents (Please upload document(s) that justifies the HCVF)

Title	Submitted

Indicator 6 Greenhouse Gas Emissions Mitigated

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO?e (direct)	0	4890000	0	0
Expected metric tons of CO?e (indirect)	0	0	0	0

Indicator 6.1 Carbon Sequestered or Emissions Avoided in the AFOLU (Agriculture, Forestry and Other Land Use) sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO?e (direct)		4,890,000		

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO?e (indirect)				
Anticipated start year of accounting		2022		
Duration of accounting		20		

Indicator 6.2 Emissions Avoided Outside AFOLU (Agriculture, Forestry and Other Land Use) Sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO?e (direct)				
Expected metric tons of CO?e (indirect)				
Anticipated start year of accounting				
Duration of accounting				

Indicator 6.3 Energy Saved (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Total Target Benefit	Energy (MJ) (At PIF)	Energy (MJ) (At CEO Endorsement)	Energy (MJ) (Achieved at MTR)	Energy (MJ) (Achieved at TE)
Target Energy Saved (MJ)				

Indicator 6.4 Increase in Installed Renewable Energy Capacity per Technology (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Technology	Capacity (MW) (Expected at PIF)	Capacity (MW) (Expected at CEO Endorsement)	Capacity (MW) (Achieved at MTR)	Capacity (MW) (Achieved at TE)

Indicator 11 Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female		4,226		
Male		6,339		
Total	0	10565	0	0

Provide additional explanation on targets, other methodologies used, and other focal area specifics (i.e., Aichi targets in BD) including justification where core indicator targets are not provided

The hectares were estimated following discussions with national and local authorities and project beneficiaries during the consultation meetings. These include: - Restoration of 13,027 ha of agricultural lands selected in accordance with the restoration plans for biological corridors by promoting good restoration practices such as soil management in sowing and harvesting times, diminished use of agrochemicals and crop diversification - Sustainable Land Management in degraded production landscapes on 35,893 ha. The proposal is to implement low emission silvopastoral systems (in the cattle value chain) and agroforestry systems (in the cacao value chain). These systems will help to increase productivity, curb land degradation and will foster the conservation of biodiversity in biological corridors and the surrounding areas of protected areas, e.g. the Indio-Ma?z Biological Reserve (IMBR) - In addition, the Project will to improve the management of 167,236 ha to avoid the deforestation of high conservation value forests. To this aim, agreements will be sought with stakeholders on the most adequate systems to increase the productivity of production systems and thwart the advance of the agricultural frontier - Regarding GHG emissions, FAO calculated using EX-ACT that the project will sequester and avoid 4.89 MtCO2-eq -Finally, the 10,565 beneficiaries [Core Indicator 11] were calculated as follows: ? 65 government staff trained from the six target municipalities and NPCCS institutions (MARENA, MEFCCA, INTA, IPSA, INAFOR and the GRACCS-Creole Indigenous and Afrodescendant Territorial Government of Bluefields and Pearl Lagoon), identified under Output 1.1.1 ? 10,500 livestock and cocoa producers trained under Output 2.1.1. Please note that in output 2.1.2, the project will work with 5,250 of the 10,500 beneficiaries to prepare investment plans. Finally, under output 4.2.2, the project will invite 1,000 beneficiaries to participate in knowledge and exchange program events (virtual and face-to-face).

Part II. Project Justification

1a. Project Description

1.a Project Description

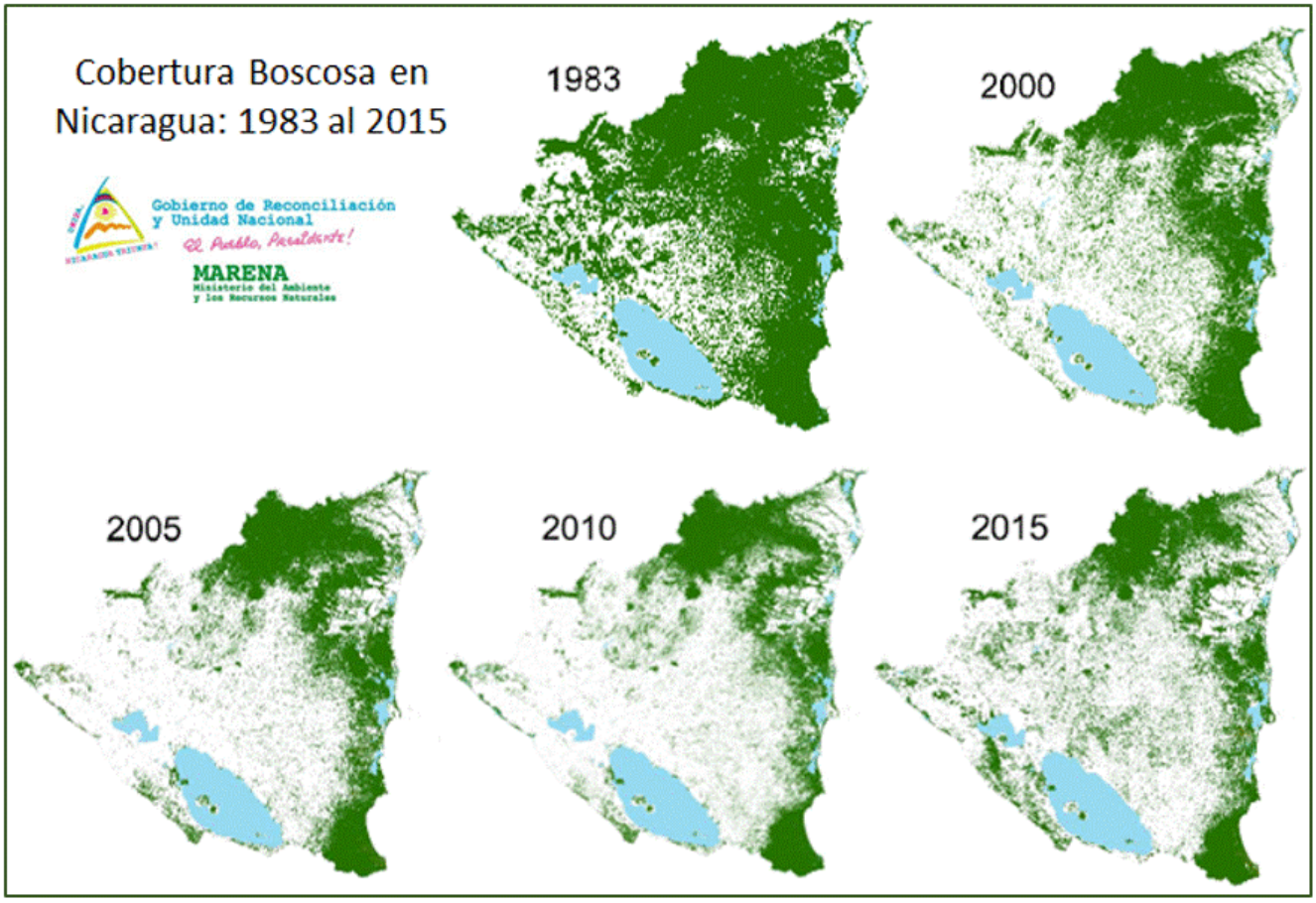
1) Global environmental problems, root causes and barriers that need to be addressed (systems description)

1. Nicaragua is considered a hotspot both in terms of biodiversity and deforestation.[1][1] Over the past fifty years, the country suffered rapid processes of deforestation and degradation which caused it to lose approximately 60% of its native forests. It is estimated that the average deforestation rate for the period from the year 2000 to 2015 has been of 140,000 ha per year, driven mainly by the expansion of the agricultural frontier and extensive cattle ranching. [2][2]

2. Native forests currently cover slightly over 30% of Nicaragua?s continental surface (3.9 million ha; INETER 2015), making it the fourth largest country in Central America in terms of forest cover. This means it has potential conditions to incentivize development based on its forest heritage. In terms of biological composition, four types of forest were identified: broad-leaf, coniferous, palm and mangroves. These are distributed in three physiographic parts of the country. According to the 2015 land use map, 88% of the forests are found in the Caribbean Coast region, with the remaining 12% found in the Pacific and Central-Northern parts of the country.

3. The loss of natural forest cover continues to be a challenge for Nicaragua. The most recent report on land use change at the national level presented by MARENA (2018) shows that, between 2005 and 2015, the net loss of forest was 543,668 ha.[3][3] This is equivalent to a reduction of total forest area of 5 percentage points, as the total national territory under forest decreased from 37% to 32%. At the same time agricultural lands (pastures and crops) increased by 259,279 hectares. Similar estimates by the IDB (2018)[4][4] report that in 1969 there was some type of forest in 76% of the national territory (8.6% was land for agriculture). However by the year 2000, 42% of the country was under forest cover, and 36% of the land was being used for agriculture and livestock raising. The changes in land use between 1969 and 2015 can be seen Figure 1 below, which also displays the advance of the agricultural frontier.

Figure 1. Forest Cover in Nicaragua between 1983 and 2015



4. The country has a National Protected Areas System (SINAP), made up of 72 areas (64 land and eight marine-coastal) distributed in nine management categories that represent 25.5% of the national territory. Around 40% of the deforestation occurs in protected areas and some 20% in Indigenous territories. In 1969, according to the 2018 IADB study, the places that are now PAs had 84% of the forest cover (22,049 km2), with only 1.6% being used for farming. By 2015 the forest cover had been reduced to 60% (15,738 km?), meaning there was a loss of 6,311 km?, equivalent to 29%. The updated NDC for Nicaragua, cut at December 2020, shows that the largest portion of forest conservation takes place in the Indigenous territories and PAs (Figure 2).

Figure 2. Forest cover 2015 in protected areas, Indigenous territories and targeted FOLUR biological corridors

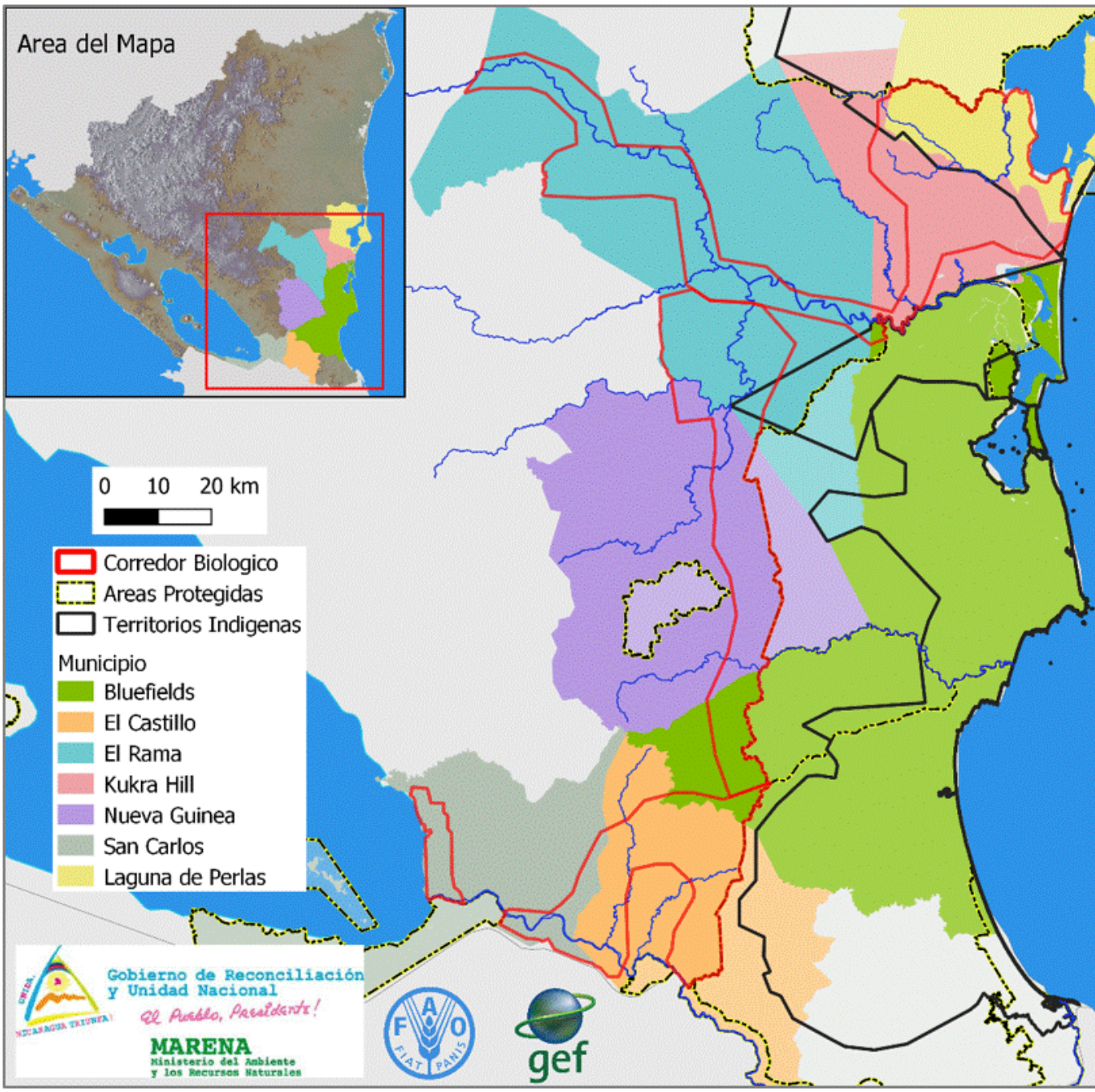
1.1 Project Target Areas

5. The proposed project will take place in the biological corridors located in the buffer zones of the Indio Maiz Biological Reserve, one of the last remaining native forests in Central America and part of the 5 Great Forests of Mesoamerica Inititative. The target regions, namely the South Caribbean Autonomous Region (RACCS, in Spanish) and the province of R?o San Juan, have the highest deforestation rates in the country--only in the RACCS, net forest loss between 2005 and 2015 was 276,616 ha.

6. In order to select the project intervention sites, the project preparation team carried out a participatory mapping process and prioritization exercise. To this end, two actions were taken: (1) a segmentation process with the aim of zoning the corridor, using basin borders to achieve more operational work units; (2) the delimitation of prioritised land, where the criteria used was that the sites must be at a distance inferior to 500 m from patches of remaining forests (using the 2015 National Soil Use Map). This was done taking into consideration that the main objective is to contribute to forest conservation and to maximize the success of good sustainable land management (SLM) and restoration practices implemented, as this increases the possibility that natural regeneration will occur and the connectivity between forested areas is restored, with the consequent increase in resilience and reduction of impacts caused by climate variations. These prioritized landscapes were agreed upon at meetings with the intersectoral table and later validated at the workshop with experts, where they were classified according to their capacity and suitability for different types of intervention.

7. Two workshops with focus groups consisting of area experts were held to validate the mapping and define which landscapes are most suitable for Project interventions and demonstrative activities, using the information obtained from river basin studies. The result can be seen on the map (Figure 3), together with the location of Indigenous territories located in PAs. To see the all the maps online, please follow this link: https://projectgeffao.users.earthengine.app/view/nicaragua-folur

Figure 3. Project Target Areas



1.2 Direct causes of deforestation and forest and land degradation in Nicaragua

8. The study of the causes of deforestation and forest degradation prepared by MARENA in 2019[5][5] and the document on National Forest Emissions Reference Levels (NFERL) for the 2005-2015 period [6][6] indicate that direct causes for the loss of forestland are linked to the expansion of the agricultural frontier and extensive cattle raising. Changes in land use associated to the advance of the agricultural frontier bears relation to several factors, among them internal migration toward the Caribbean Coast from the Pacific and Central-Northern regions of Nicaragua and within the Caribbean region itself, as a result of the demographic pressure exerted by an annual 1.4% population growth rate, the availability of relatively cheap land, and road connections to and within the area.

9. Cattle raising is an extensive, rapidly increasing activity that expands the agricultural frontier throughout the country (MARENA, 2017). Agricultural land has increased from 8% of the national territory (in 1969) to 42% in 2015. An important percentage of this change is due to shifting land uses for livestock raising. Recent estimates (MARENA, 2018) state that between 2005 and 2015 pastureland increased by 147,273 hectares throughout the country.

10. By the year 2015, MARENA data showed there were 4,298,861 ha of pastureland, equivalent to 36% of country?s territory[7][7]. Between 2005 and 2015 the South Caribbean Autonomous Region (RACCS), one of the Project?s target areas, net loss of forest was close to 27,000 ha per year, mainly due to the expansion of the agricultural frontier for livestock raising purposes.[8][8] Deforestation in this target landscape exceeds 50% of the total nationwide and is swiftly advancing toward the Indio-Ma?z Biological Reserve (IMBR), specifically its northern and western borders. Between the year 2000 and 2015, the IMBR lost 4,967 ha in its core area and 7,144 ha per year in its buffer zone.

11. In addition to soil use, ranging from high biodiversity systems to extensive agriculture (oil palm) and cattle raising, there are locally important impacts on local, national and global biodiversity and a decline in key ecosystemic services, which ultimately have an impact on the resilience of food production systems.

1.3 Degradation of land suitable for agriculture and cattle raising

12. While the establishment of cattle raising systems, oil palm plantations and other crops such as cocoa are of significant economic importance and contribute to Nicaraguan foreign trade, there are underway degradation processes that must be stopped. In addition to deforestation, deforested land management under agricultural and cattle raising systems employ unsustainable practices. From the

perspective of local farmers and technicians[9][9], degradation is a process that begins with deforestation, mainly to establish cattle ranches, followed by poor or non-existent management of the extensive pastures, including slash-and-burn activities that take place for economic and cultural reasons and rare use of good agricultural practices. Taken together, these lead to loss of soil fertility or productivity, which in turn increases the need for agrochemicals. The direct impact is soil loss, a decrease in biodiversity, the drying up of water sources and the sedimentation of rivers and lagoons.

13. To the deforestation generated by the establishment of livestock grazing systems must be added the degradation of the pastureland itself, much of which takes place on fragile land, such as slopes; poorly adapted pastures; overgrazing during the rainy season; uncontrolled and frequent burning of pastures and the exhaustion of nutrients (Spain and Gualdr?n, 1991). All this has an effect on the agriculture and cattle raising systems, in particular those belonging to smallholders, which tend to become less productive as yields drop, costs rise and opportunities to diversify livelihoods and ecosystemic services grow scarce.

1.4 Situation of the cocoa and livestock productive systems

14. Agriculture and cattle raising are the most important means of subsistence for 80% of the rural population, and together contribute 15.4% of Nicaragua?s GDP and 70% of total exports in the primary sector (if processed food such as beef and sugar are included).[10][10] The agricultural sector, including oil palm and cattle raising, is currently the main source of employment. The main commodities are coffee, beef, peanuts, bananas, lobster, sugar, dairy products, beans and sesame.[11][11] In terms of GDP, agriculture contributes 8.6%, livestock 6.8%, energy 2.3%, tourism 4.3% and forestry 0.9% (BCN 2015)[12][12].

15. According to the Emissions Reduction Strategy (ENDE-REDD+), favourable market conditions created by means of free trade agreements between the United States and Central American countries, as well as with Venezuela, stimulated growth in beef exports and hence cattle raising. Further, recent investments by foreign companies have stimulated the cocoa market, and growth is foreseen in light of new agreements entered into with partners such as Ritter Sport, which has planted 1,500 ha of cocoa since 2020, and Bean & Company[13][13], which intends to plant 3,000 ha on the Pacific side, in the vicinity of Lake Managua. Nicaragua is one of the 18 countries where the Company intends to plant a total of 40,000 ha of cocoa.

16. The international cocoa and beef markets are important components in the current commercial context, but are also drivers of land degradation and the fragmentation of ecosystems.

17. While cattle raising is the main cause of deforestation and forest degradation, cocoa plantations have led to deforestation too. In 2015, a total of 732,247 ha were used for agricultural purposes in Nicaragua (MARENA, 2018). Between 2005 and 2015, in average, 11,200 ha each year (a total of 112,006 ha) were converted to crop land. During the same period, the area under cocoa production increased four-fold.[14][14] Most of this land use conversion took place in the northern and central parts of the country. Currently, approximately 200,000 ha of land in the Caribbean Region are put to agricultural uses (732,246 ha at the national level).

18. The Project will focus on strengthening both productivity and sustainability of the **cocoa, beef and dairy product value** chains, in keeping with national priorities and the objectives of the FOLUR Project. The situation of cattle raising and cocoa in Nicaragua can be described as follows:

Cocoa value chain

19. Nicaragua is the world?s third producer of fine cocoa[15][15]and has some 14,000 ha planted with this tree, of which 54% are grown by 9,500 smallholders. Total production is of 4,680 tonnes/year, of which 72% is exported to Central American countries, 27% to Germany and Holland and 3% to the United States, generating USD 5.77 million annually and 30,000 jobs.[16][16] In 2020 Nicaragua exported 6,002 tonnes of cocoa, worth USD 9.4 million, a 29.5% increase in the volume exported as compared to 2019. As for derivatives, the volume exported was 27.3 tonnes, worth USD 99,936 at a price of USD 3,3660 per tonne. Here the increase in relation to 2019 was 86% in volume but 40% in hard currency, given that the average sales price dropped by 24%. Nicaragua?s main cocoa markets in the region are Guatemala and El Salvador, and Germany in Europe (via Antwerp, Belgium). A significant part of the latter is exported by Ritter Sport Nicaragua S.A. The National Cocoa Development Strategy promoted by the government in 2017 states that by 2022 Nicaragua may be in a position to offer the external and internal markets 41,878 MT of cocoa. Sixty percent (60%) is expected to come from private companies.

20. The growing of cocoa in Nicaragua is largely a task undertaken by smallholders, Indigenous peoples and poor campesinos who live in outlying areas, with a deficient secondary and tertiary road system and close to protected areas. Cocoa bean production at farm level takes place on small farms, under agroforestry systems in association with musaceans, fruit and timber trees, which are used to provide shade for the cocoa. Nutrients are recycled and other products are grown to feed the family. Currently there are 56 cooperative and/or associative organisations working actively with cocoa that bring together 6,301 small farmers. Of these, 1,189 are women (18.87%).[17][17]

21. Of Nicaragua?s total production, 65% is washed cocoa, sold unfermented on the Central American market, while the remaining 35% is fermented cocoa for export to Germany through companies such as Ritter Sport, Bean & Company, and Cocoa Oro, who have contributed to positioning Nicaragua as an origin of both quality and volume. Ritter has been the dominant private sector actor over the past two decades, and heads the list of cocoa exporters. Over the years it has supported numerous cooperatives in the building of infrastructure and cocoa fermentation protocols. It has also played a fundamental role through its support to farmers in the production of certified cocoa under the organic seals of UTZ and FLO. Other companies, such as Ingemann, (Danish), ECOM and cooperatives such as *Cocoanica* and *La Campesina* have also begun to export cocoa during the past decade.[18][18]

22. The cocoa sector in Nicaragua is on the increase as a result of the growing demand for chocolate on the international market. This has driven the worldwide growth of production, and from 2009 to 2018 the increase was of 24.7%.[19][19] The Nicaraguan National Cocoa Development Strategy, launched by the government in 2017 estimates that by 2022, Nicaragua may be in a position to offer the external and internal markets 41,878 MT of cocoa. Sixty percent (60%) is expected to come from private companies, which would drastically alter the current productive matrix.[20][20].

Livestock value chain

23. The cattle raising sector renders Nicaragua significant economic benefits. The country is first in Central America in terms of heads of cattle with 5.15 million, followed by Guatemala (3.89 million) and Honduras (2.87 million).[21][21] During the period from 2017 to 2020 the cattle raising subsector made on average a 5.8% contribution to the national GDP and of 40.2% to agricultural GDP (NCB, 2020). Of the GDP produced by livestock, 75% comes from raising cattle. This activity generates some 530,000 direct and indirect jobs, of which 130,000 are exercised exclusively in cattle raising; another 400,000 are carried out in combination with agriculture, representing 53% of the total employment generated by agriculture/cattle-raising activities in the country (Cajina, 2016). Of jobs on cattle-ranches, 81.7% were in primary production, 12.8% in processing and 5.5% in commerce (MAG, 2013).

24. Cattle in Nicaragua is owned by 164,000 families, of which 80% own small or medium-size farms (GON, 2019e). In 2020 beef production was of 151,328 MT, and growth has been sustained at 2.6% annually for the past ten years (GON, 2019e). Beef exports in 2020 increased by 3.6% in value, generating USD 564 million in exports. Nicaragua?s main commercial partner in this field is the United States, followed by Central America. For its part, milk production in 2020 was of 1.444 billion litres and growth has been sustained at 8.5% annually for the past ten years. That same year, milk and milk derivative exports were worth USD 190 million. Of these, 78% were in the form of fresh cheese, mainly to neighbouring El Salvador. These numbers demonstrate that the livestock sector, and cattle raising in particular, has been very dynamic, with high and sustained growth. In addition, during the

past decade there has been significant direct foreign investment, as the Mexican LALA group has invested in a state-of-the-art dairy product plant and bought two others that were already in-country. For its part, the leading company in the Mexican beef industry, SuKarne, in 2015 invested USD 115 million in a new slaughterhouse for the purpose of exporting beef to the United States, Europe and Asia.

25. The results of the latest Agriculture and Livestock Census in Nicaragua (IV CENAGRO 2011) register the existence of 136,687 farms with cattle-raising activities and 3,248,496 ha of pastureland, used for the double purpose of producing beef and milk. The farms closer to markets which have available good road infrastructure tend toward milk production, while those further inland specialize in raising beef cattle, although they also produce milk. On small farms, milk production has for its primary function to feed the family, and a commercial interest exists only if there is a surplus. To own a few heads of cattle is also a savings strategy that may allow for covering future needs or dealing with an emergency. Almost 67% of the farms produce mainly for self-consumption, with 24.72% selling milk or cattle on the internal market. Only 8.32% is produced for export (IV CENAGRO, 2011). Because of the way it functions, the double purpose system is not very productive; the larger the farm, the less efficient it is; profitability comes about more via volume than quality; and it requires considerable amounts of resources (land and water).[22][22]

26. Small cattle ranchers work with traditional technology. They have no working capital with which to innovate and implement improvements in the breeds or technological feeding systems and technified production is implemented only by medium and large ranchers who have enough financial resources with which to innovate and improve productivity and merchandising of their cattle. During the rainy season milk production almost doubles, generating an oversupply of milk and its derivatives. Because smallholders lack the capacity to process this excess production, their profits drop.[23][23]

1.5 Opportunities for forest restoration in biological corridors

27. Large swaths of Nicaraguan landscapes have been deforested and now consist of mosaics of fragmented forests and crops. The Project interventions will be prioritised in biological corridors covering 365.318,98 ha or 21% of surface of the target landscape.

28. Regarding the link between forest restoration and the Nicaraguan NDC, expected to assist in the adaption to and mitigation of climate change, as well as the preservation of natural areas and ecosystemic services to the nation, Nicaragua joined the 20x20 Initiative in 2015, with the goal of restoring approximately 2.8 million ha by means of watershed management, the improvement of

resilience to climate change in rural livelihoods, and biodiversity conservation. The 2.8 million ha are distributed by actions related to conservation, restoration, forest management and protection. By means of these measures actions are undertaken to recover areas degraded by changes in land use.

29. The restoration measures set forth in the country?s programmes and projects are geared towards the establishment of sustainable productive systems that articulate biological corridors, restore landscapes and ecosystems and increase biodiversity and other ecosystemic services. To achieve this objective, Nicaragua, through the National Production, Consumption and Commerce System (SNPCC) has created productive strategies for cattle-raising and cocoa[24][24], with an approach based on mitigation and adaptation to climate change, the promotion of best practices for the introduction and management of crops and the incorporation of production initiatives that are low in emissions and contribute to environmental restoration.

30. Due to the foregoing and a Project portfolio still being developed and that includes FOLUR Nicaragua, it is proposed in the forest sector NDC there be changes in land use and a 20% emissions reduction in relation to the baseline by the year 2030, to be achieved through forest restoration, management and conservation actions.

1.6 Challenges and barriers to reducing deforestation, degradation, strengthening the sustainability of agricultural value chains and promoting restoration in Nicaragua

31. To promote landscapes and sustainable food systems in Nicaragua and the biological corridors in the South Caribbean Autonomous Region (RACCS) and the province of R?o San Juan, the following key barriers that must be addressed by the FOLUR Project have been identified:

? Weak governance frameworks and intersectoral and participatory planning mechanisms that favour conservation, comprehensive management and the restoration of agricultural and forest landscapes.

- ? Limited capacity to implement sustainable practices in productive landscapes so as to improve value chains (cocoa and cattle raising) by increasing productivity under sustainable systems, free of deforestation and degradation.
- ? Lack of access to financing and incentives with which to implement sustainable management practices, increase productivity by means of technological innovation and achieve landscape restoration.
- ? Limited capacity to expand sustainable management practices and landscape restoration in biological corridors.

32. According to the socioeconomic and gender study undertaken by the University of the Nicaraguan Caribbean Coast Autonomous Regions (URACCAN) for the FOLUR Project in its areas of intervention, among the main constraints faced by smallholder families when they wish to actively participate in the value chain are: limited access to information, knowledge, training, financial services, inputs, technologies, leadership and decision-making capacity.

33. A summary of the constraints found regarding forest conservation and barriers to sustainable management and the FOLUR Project approaches to overcome these is found in Table 1, below.

Table 1. Barriers and constraints to be addressed by the FOLUR-Nicaragua Project

Barriers and constraints to reduce deforestation, implement resilient food systems and restore forests in Nicaragua	**Key FOLUR project areas of intervention**

Barrier 1: Governance Weak governance frameworks and intersectoral and participatory planning mechanisms leading to conservation, comprehensive management and the restoration of agricultural and forest landscapes.	**Unintegrated sectoral approaches** ? Weak interinstitutional coordination ? Policies often show a preference for agricultural development, even in areas that today are forested. ? There is a gap between government programmes, private financing and producers / farmers / homes with production systems that affect landscapes **Weak land use planning** ? Weak intersectoral planning and between sectors and the actors involved. ? Sectoral planning is not evidence-based. ? Private sowing plans are not aligned with land use planning. ? Production takes place in unsuitable locations (e.g. livestock grazing on slopes) **Weak local participation** ? There is a lack of effective participatory mechanisms for decision-making, in particular among smallholders. **Limited institutional presence** ? Limited institutional presence (high travel costs, few means of transport, long distances), all of which restrict actions in the territory.	Integrated approaches are catalysed and comprehensive landscape management systems are developed. Governance and comprehensive / participatory planning regarding soil use is strengthened to restore landscapes, conserve forests and support climate change-resistant production systems. Dialogue is strengthened, as are institutional capacities for landscape management and land use.

Barrier 2: Producer Capacities Limited capacity to implement sustainable practices in productive landscapes so as to improve cocoa and cattle raising value chains by increasing productivity under sustainable systems, free of deforestation and degradation.	**Limited technological level and restricted capacities in the value chains** ? Limited capacities for innovation and improvement in the various links of the value chain (cocoa and cattle raising) (e.g. increase in cocoa genetic varieties) ? Constraints to increase productivity of farming practices and value chains (high costs ? low returns; decline in cattle prices ? increase in competition from other exporting countries) ? Lack of technological innovation ? Limited access to certified cocoa propagating material ? Limited application of intelligent agriculture ? Limited facilities for processing and adding value to primary products ? Limited administrative (e.g. control and registration systems), entrepreneurial and marketing capacities for improved access to markets, especially in the case of small and medium producers ? Little or no knowledge of agroforestry system management and use of non-timber forest products on cocoa plantations **Cultural barriers** ? Some cultural barriers promote deforestation (land clearing) and impede the fire prevention and control.	Promotion of sustainable landscape restoration, food production systems and responsible staple food value chains. Support to technological reconversion of intensive value chains, free of deforestation and with low emissions, for the purpose of increasing resilience.

Barrier 3: Financing and incentives Lack of access to financing and incentives with which to implement sustainable management practices, increase productivity by means of technological innovation and restore landscapes.	**Absence of incentives and public and private investments** ? There is a gap between resources available and resources needed to implement sustainable practices. ? There are no investment plans and financial resources for conservation, sustainable land use, product and markets diversification, and restoration activities. ? Lack of incentives for private conservation, sustainable management and restoration activities. ? Weak market contribution to the establishment of feedlots, causing degradation to expand. **Lack of access to credit** ? Limited access to microcredit by small and medium producers, due to high interest rates, risks, collateral securities, etc. ? Absence of credit programmes aimed at sustainable land management and forest restoration.	Investments are sought and leveraged through links to public and private partners and the formulation of financing models. Capacities are strengthened to formulate investment plans.

Barrier 4: **Restoration in biological corridors** Limited capacity to expand sustainable management practices and landscape restoration in biological corridors.	**Low value of forestland and ecosystemic services ? cost of opportunity** ? The value of standing forests is low, so deforestation is the norm. ? Cost of opportunity of degrading activities (e.g. cattle raising) is higher than that of forest conservation. ? There is a gap between the high value that society and consumers assign to certain basic products and the low value of ecosystemic services provided by sustainable landscapes. **Limited capacities and opportunities for the implementation of sustainable land management practices at landscape level** ? There is a gap between knowledge / understanding of global processes and impacts and the need for practical knowledge to improve sustainability at local level. ? Weak implementation of sustainable practices that prevent and mitigate degradation and are climate-smart (e.g. silvopastoral systems). ? There is a gap between deforestation-free commitments and the scale of action necessary in production processes and the need for broad-based adoption of MST practices at landscape level. **Restoration requires investment and merchandising strategies** ? Lacking are assessments and a diversification of merchandising and markets for non-timber forest products (e.g. those found in cocoa agroforestry systems) ? Conservation-based alternatives (e.g. ecotourism) require investments	Sustainable land management to avoid deforestation and reduce the degradation of forests with high conservation value. Restoration of natural habitats and productive landscapes in biological corridors. Advisory services are strengthened, as are knowledge management, dissemination and South-South exchanges.

Analysis of several sources:

- MARENA (2019)
- Evaluation of main obstacles faced by REDD+, ERPD document of 31-07-19: http://www.marena.gob.ni/Enderedd/wp-content/uploads/2019/08/ERDP_ESPA%C3%91OL_310719_VF.pdf
- Sector analysis study of cattle and cocoa value chains, carried out as part of the PPP for this FOLUR Project by FAO and MARENA, November 2020.
- Rapid evaluation of land degradation undertaken as part of PPP in five municipalities in RACCS and the province of R?o San Juan, January 2021.

- GEF - Food Systems, Land Use and Restoration (FOLUR) Impact Programme Framework Document

<u>Barrier 1.</u> Weak governance frameworks and intersectoral and participatory planning mechanisms leading to conservation, comprehensive management and the restoration of agricultural and forest landscapes.

34. To reduce deforestation, degradation, the advance of the agricultural frontier, and promote the comprehensive management of agricultural and forest landscapes, robust governance structures are required, with policies, regulations, planning mechanisms, efficient institutional processes, integrated approaches, investment and incentives strategies, collaboration between sectors and the various levels, participation and inclusion, especially of local producers and groups.

35. **The lack of more robust governance** in Nicaragua is one of the reasons there is a lack of comprehensive approaches by which to address landscapes in an integrated manner by including the forestry sector, conservation, production, climate change and water resource management to promote resilient agroecological systems.

36. **The low profile** of forest conservation, sustainable land management and the restoration of ecosystems in sectoral plans and government budgets evidences the need for better communication and integration of landscape management approaches in the various decision-making processes at national and territorial level.

37. In Nicaragua there have been multiple efforts to strengthen interinstitutional coordination. However, there persists a **lack of coordination between actors and permanent dialogue mechanisms** and there is insufficient coordination among public-private / interinstitutional / multiple actors, in particular regarding vertical relations between the various levels (farms, landscapes, decentralized administrations, central and national entities). As stated in the BioCLIMA Project proposal, the dialogue platforms that once existed in each municipality of the ?mining triangle? region are currently inactive and without a visible coordinating body that might inject dynamism.[25][25] Likewise, according to the coffee and cocoa market analysis carried out by CIAT (2020), several efforts have been made to create a national coordination entity for the sector. A national cocoa table existed until about 2012, but had no farmer representation.

38. In Nicaragua there are several territorial intervention strategies, both governmental and on the part of international cattle and cocoa merchandising companies with clear investment plans. Their articulation with planning processes and **land use zoning** must be ensured for the purpose of avoiding the implementation of activities for which the soil is not suitable (e.g. livestock grazing on slopes, near water sources), reducing conflicts, offering more security to investments, establish indicators and strengthen the monitoring of activities nationwide. Further, there is only limited knowledge of and use made of mapping systems at different scales that allow for generating biophysical and socioeconomic evidence leading to better territorial planning and targeting of strategies, actions and incentives.

39. **Participation**, in particular that of smallholders, also tends to be weak in terms of general decision-making about land use and production systems, value chains and merchandising. Generally, commercial and processing companies, usually international cocoa companies or their providers, establish technical norms, prices and profits distribution mechanisms, with little participation by local farmers. This situation causes a significant power imbalance and limits the inclusion of these actors in decision-making processes that affect them.

40. During a rapid evaluation of land degradation,[26][26] local actors identified the **scarce institutional presence in the territory** as one of the main barriers to the implementation of conservation, sustainable management and restoration practices (for instance, the implementation of silvopastoral systems). Intersectoral territorial institutionality needs to be strengthened in Project intervention zones, as does **coordination between the different decision-making levels.**

<u>Barrier 2</u>. Limited capacity to implement sustainable practices in productive landscapes so as to improve cocoa and cattle raising value chains by increasing productivity under sustainable systems, free of deforestation and degradation.

41. There are constraints among small and medium producers as concerns capacities to implement more sustainable production systems that are deforestation-free and climate-smart.

42. While in Nicaragua the government and the private sector have both supported the development and markets of the different links in the value chains (by providing genetic material, training, certification schemes, facilitating markets, etc.) these continue to show relatively low productive yields and poor technical level in a number of fields, such as sustainable crop management (with strategies to reduce degradation and adapt to climate change), the quality and adding of value to the production and processing links, access to markets, etc. There are also significant deficiencies in administrative and entrepreneurial capacities. These factors affect chain performance in matters concerning efficacy, efficiency, inclusion, equity and sustainability.

43. Low cocoa yields are caused by factors such as the lack of certified clonal gardens, the use of seeds that are not validated, uncertified propagative material, old plantations with little productive capacity, inadequate pest management, deficient tissue management and insufficient use of agricultural inputs. But it is also the case that technical assistance is limited, and the technical teams of producer organizations offering such assistance still need to be strengthened.[27][27]

44. Some 84% of national milk production is in in the hands of small and medium ranchers who face serious structural limitations (precarious road infrastructure, little access to basic services and financing, etc.). Other constraints have to do with access to knowledge, **taking ownership of industrial processing technology** and the reduced, dispersed and incomplete installed capacity of the

dairy industry, which means that processing capacity is deficient and does not allow for competitive production.

45. Little assistance is available for training in more **sustainable and climate-smart production methods,** as well as greenhouse gas emissions reduction mechanisms along the value chains. In the case of cattle raising, there are weaknesses in the production systems, from the establishment of silvopastoral systems and the adding of value to dairy products such as cheese. Nor is there much experience regarding the export of dairy products. The reasons for this can be found in weak knowledge of value-adding systems, market opportunities and its conditions, tendencies, preferences, prices, procedures and regulations.

Barrier 3. Lack of access to financing and incentives with which to implement sustainable management practices, increase productivity by means of technological innovation and restore landscapes.

46. There is broad-based consensus both at government institutions and among local actors that there are only scarce financing opportunities and incentives (economic and non-economic) for the implementation of conservation, sustainable management and restoration practices, both at productive systems improvement and value chain innovations levels. The lack of financing and incentives leads to degradation and poverty.

47. The lack of financing and incentives for the implementation of practices that reduce degradation is a serious handicap. Opportunity costs for cattle raising as compared to forests is high, and financial assistance is required to achieve a shift toward deforestation-free systems.

48. Loans to the sector entail high interest rates and favour the continuation of traditional cattle raising. Financial services for cocoa farmers are limited, and most have no access to credit. A few microfinance institutions (FDL, FUNDESER) have small cocoa credit portfolios, based on their experience in the coffee sector. Cooperatives such as SOPPEXCCA have financial products for cocoa. Commercial banks are interested in developing financial products for the sector, but lack the information needed to do so. Socially-oriented financial institutions are beginning to support cocoa cooperatives with commercial credits. The funds for these come from Banco Produzcamos and IADB. Climate funds offer a preferential window for cocoa.[28][28] IADB and CABEI are working on instruments by which to use these funds for financial services aimed at cocoa farmers. In the current context, cooperatives are better positioned to reach their members with financial services than commercial banks or microfinance institutions.[29][29]

<u>Barrier 4</u>. Limited capacity to expand sustainable management practices and landscape restoration in biological corridors.

49. There is only limited capacity to implement and expand conservation, sustainable management and landscape restoration practices in biological corridors, in part because these are in reality agriculture-forestland mosaics in which extensive production systems are prioritized.

50. The restoration of land and forests in productive areas apt for the creation of biological corridors carries implicit planting of tree and brush species that are key to the dispersion of seeds and pollination, provide food year-round and catalyse natural regeneration in the biological corridors. There is little knowledge about these key aspects of restoration.

51. Likewise, knowledge is weak regarding the use of and market potential of **non-timber forest products found in cocoa agroforestry systems**. These contribute to the conservation of forest cover and increase the value of agroforestry systems. According to the CIAT and FAO study (MOCCA Project), the evidence is increasing that without the income generated by associated agroforestry systems and other agricultural income, cocoa ceases to be profitable. Therefore, much emphasis has been placed on the incorporation of cropping systems associated with cocoa, to which end it is necessary to strengthen capacities and technical assistance. As concerns beef, there persist low productive rates. The market for inputs used in feedlots is deficient and given to scarcity of ingredients. This in turn leads to the low nutritional quality of supplements to this agribusiness and thus the persistent degradation of pastures and the deterioration of hydrographic basins.

2) Baseline scenario and any associated baseline projects

2.1. Policy and Institutional framework

<u>Relevant policies and strategies</u>

52. The proposed Project is aligned with the National Human Development Programme (NHDP) 2018-2021,[30][30] which has as objectives to ensure adequate land-use planning, to improve the social wellbeing of Indigenous and Afrodescendant communities, to strengthen the agriculture sector, and to protect the environment. Regarding agriculture and cattle raising, the NHDP 2018-2021 aims to consolidate a model based on dialogue, alliances and consensus with productive sectors in order to promote production, commerce and supply of goods through the National Production, Consumption and Commerce System (SNPCC, in Spanish).[31][31] Likewise, the NHDP seeks to increase production, productivity, quality and added-value of the productive chains while ensuring sustainability and the promotion of associativity and cooperativism, with particular attention to small and medium producers.

53. The key national strategies and policies that are implemented within the context of the SNPCC:

? The **National Family Agriculture for Food Security Promotion Strategy (2019-2021),**[32][32] in which agriculture is an important component in food and nutrition security because of its significant contribution to self-consumption and income generation. The main lines of action are keyed toward strengthening family agriculture by diversifying the production of nutritious foods and promoting the consumption of healthy food. These actions are part of the National Human Development Plan.

? The **National Forest and Climate Change Strategy to Counter Poverty,**[33][33] represents an opportunity to strengthen the implementation of the National Environmental and Climate Change Strategy and the Nicaragua Biodiversity Strategy, while simultaneously consolidating its own investments and attracting foreign ones, in order to reduce the risk of natural disasters, protect and/or recover water resources and degraded ecosystems, restore landscapes, protect biodiversity, sequester carbon and generate an economic alternative for supplementary income for families, related to the protection of the Nicaraguan state?s natural forest heritage.

? The **National Emissions Reduction from Deforestation and Forest Degradation Strategy (ENDE-REDD+)**5 has six strategic lines and 37 lines of action, projected over a 22-year horizon (2018 to 2040), which are interrelated with public policy instruments and national and regional plans and programmes that seek to reduce the rate of deforestation and forest degradation, among them reforestation campaigns, declarations of Private Forest Reserves, stewardship, oversight and updating of the Protected Areas Management Plans. To

implement the national ENDE-REDD+ strategy, it is foreseen to take actions step-by-step, considering economic resources, the direct and indirect drivers of deforestation and forest degradation, and the current stock of natural forests. This is why the Caribbean region has been selected as the priority zone.

? The **National Cocoa Development Strategy (2017)** has lines of action geared towards strengthening cocoa fermentation and drying processes by making available to farmers technical tools suitable to the agro-climatic conditions prevailing in each of the cocoa-producing regions; the technification of harvest and post-harvest processes through technical guides that ensure the quality of fine and aromatic cocoa; assisted pollination, the use of high quality clones, polyclonal arrangements, plant fertilization and nutrition, pruning and sanitation techniques that increase productivity; and sustainable pest and disease management, all intended to follow market tendencies and mitigate the effects of climate change through bio-factories and the production and use of bio-inputs.

? **The Nicaraguan Fine Cocoa Development Strategy 2020-2023** has for its main objective to conserve the quality of the cocoa, increase productivity, profits and income through access to more competitive markets. The strategy has five action pillars, as follows: a) improve the quality of cocoa value-adding and transformation processes; b) promote the merchandising of fine and aromatic cocoa; c) increase the productivity of Nicaraguan fine cocoa; d) promote the generation of small cocoa enterprises; and e) foster the traceability and safety of cocoa production in Nicaragua. INTA is charged with research and development concerning fine cocoa.

? The **Cattle Raising Development Strategy 2020-2023** contains the following lines of action: a) promote genetic improvement to increase productivity on cattle ranches; b) strengthen the health and traceability of cattle, thus strengthening the value chain; c) promote pastures, forages and technological alternatives for cattle nutrition; d) strengthen capacities among producer families to improve bovine cattle management; e) promote access to new markets in order to improve family incomes; f) intensify beef and milk production on cattle ranches; and g) promote adding value and quality agribusinesses in cattle production, for the purpose of improving competitiveness.

? The **National Strategy for the Development of Dairy Production and Processing (2020-2023)** contains the following lines of action: a) improve competitiveness in the dairy sector by adding value to milk production; b) exchange knowledge and technological advances[34] in the small and medium dairy industry with national and international experience; c) disseminate results of research and innovation in small and medium-scale milk industrialization; d) ensure the safety of milk production and processing; e) strengthen the capacity of producers and technicians to achieve a reduction in milk contamination; f) promote the increase of milk cow yields; g) train cattle ranchers in technological applications

that increase milk production; and h) merchandising and access to new, high-value national and international markets.

? Finally, there are two additional strategies related to cattle production that provide a framework for support for the proposed project. These are the Strategy to Strengthen Productive and Reproductive Growth of the Cattle Herd (2020 ? 2022), and the National Strategy to Promote the Merchandising of Agricultural / Livestock Products on the National and International Markets (2020 ? 2023).

2.2. Investments baseline: programmes and projects

54. For the purpose of complying with the National Human Development Programme 2018-2021 on matters related to environmental policies and the protection of natural resources, MARENA has developed a portfolio of twenty projects to be implemented between 2020 to 2028 with a number of multilateral and bilateral funds worth USD 482 million.[35][35] Within this context, the Government of Nicaragua will build on the baseline programmes and projects listed below. The Government of Nicaragua expects to mobilize approximately USD 48 million in co-financing to support the proposed GEF-funded FOLUR project, as follows:

Table 2. Baseline programmes and projects

Description	Relevant products for the proposed FOLUR Project
Integrated climate action to reduce deforestation and increase resilience in the BOSAWAS and R?o San Juan Biosphere Reserves. **(Bio-CLIMA Project)**	

Objective: To transform extensive cattle-raising, agriculture and forest exploitation in buffer zones of the BOSAWAS and R?o San Juan Biosphere Reserves into sustainable, more intensive and deforestation-free forms of production, integrating ecosystem conservation and services with the production of goods and services. Duration: 2021-2028 Source of financing: GCF / IADB as accredited entity with the GCF Executing agency: MARENA Amount of financing: USD 110 million	? Bio-CLIMA will offer farmers financial incentives, technical assistance and facilitate market access for sustainable intensification of cattle production, cultivation of coffee and cocoa, through Agroforestry Systems (AFS) and productive restoration of idle lands that are frequently degraded and covered by secondary vegetation, as well as sustainable management of natural forest **(Component 1: Conserving and producing for life).** ? Bio-CLIMA will provide additional technical staff, logistical means, vehicles, information technology, equipment and budgets for operative costs for relevant public institutions in charge of protecting the environment, enforcing the law, conserving forests and climate-adapted sustainable agricultural production **(Component 2: Good government).** ? Bio-CLIMA will build capacities to shift from a fractioned sectoral approach to soil use towards an approach of integrated and sustainable use and conservation of farms, landscapes and ecosystems. Technical staff of public dissemination services, farmers and protagonists, will receive training on: integrated land use planning and management (POF), implementation and maintenance of ?models?, innovation in administrative procedures, legislation and norms, strengthening of local organizations, quality management and market access, among other topics **(Component 3. Capacity development).**
Emissions Reduction Programme (ERPD) Emissions Reduction Programme to fight climate change and poverty in the Caribbean Coast region, BOSAWAS Biosphere Reserve and Indio Ma?z	

Objective: To reduce emissions due to deforestation and forest degradation by 50% by the year 2040; to conserve and increase carbon stocks; and to contribute to the protection of Mother Earth in the face of climate change. Duration: 2020-2026 (two years of preparation and five years of intervention) Source of Financing: Forest Carbon Partnership Facility FCPF/ Carbon Fund. Executing agency: MARENA in coordination with MHCP, MEFFCA, INETER, INAFOR, MAG, SDC regional and territorial governments Amount of financing: USD 55,000,000 (potential payment for carbon sequestration by the Carbon Fund)	? National Monitoring, Reporting and Verification System (SNMRV) ? The Carbon Module will measure, monitor, report and verify (MRV) the state and conditions of Nicaraguan forests, as well as deforestation and forest recovery. It will inform about avoided emissions, as well as those occurring due to changes of national carbon stocks. ? Monitoring system for bird biodiversity created to provide information about prioritized benefits not related to carbon in the framework of the ERPD design.
FDV SICA-CCAD Restoration of resilient landscapes and ecosystems in the face of climate change in the municipality of El Castillo, Rio San Juan Biosphere Reserve.	
Duration: 2021-2025 Source of financing: European Union Executing agency: MARENA Amount of financing: USD 1.5 million	This Project complements the implementation of component 1 and 3 of the FOLUR Nicaragua Project in the municipality of El Castillo.
BOVINOS Programme for the support of the cattle value chain in Nicaragua .	

Objective: To contribute to the development of a more productive cattle raising sector, with better and more ecological use of resources, in a competitive, sustainable and inclusive form. This will contribute to higher incomes, food and nutrition security, and the wellbeing of small and medium cattle-ranchers in 11 municipalities in the provinces of Chontales (Santo Domingo, La Libertad, Santo Tom?s, El Coral, Acoyapa and Villa Sandino), R?o San Juan (El Almendro) and RACCS (El Ayote, Muelle de los Bueyes, Nueva Guinea and El Rama). Duration: 2015-2021 Source of Financing: European Union Executing agency: AECID Delegated Cooperation coordinating with MEFCCA, INTA and IPSA Amount of financing: EUR 20 million	This Project supports the establishment of the baseline of components 2 and 3 of the FOLUR Nicaragua Project.
NICADAPTA Support for climate change adaptation of coffee and cocoa production of smallholders in adequate agro-climatic zones	

Objective: To sustainably improve the living conditions of rural coffee and cocoa-growing families by incorporating them into markets and reducing their vulnerability to climate change. Duration: 2014-2020 Source of financing: IFAD / IADB Executing agency: MEFCCA Amount of financing: USD 37,05 million	Province of R?o San Juan: five investment plans for collective or community-based coffee and cocoa-tree nurseries in prioritized areas Four cocoa-producing organizations established in the municipality of El Castillo: ASIHERCA and COOPROCAFUC in the community of Buena Vista; COOSEMUCRIM in Boca de S?balos; and COODEPROSA in El Castillo. The cocoa-growing families are diversifying their farms and establishing new cocoa plantations, motivated by different programmes and world market prices. The RACCS Delegation has four investment plans. Establishment of a diversified agricultural system with gender equity and climate change adaptation, to improve the production and living conditions of families in eight communities of the Rama and Kriol territory in the municipality of Bluefields and the RACCS. This Project supports the establishment of the baseline of components 2 and 3 of the FOLUR Nicaragua Project.
PAIPSAN Support Project to enhance productivity, food and nutrition security in the Nicaraguan Caribbean Coast Region (PAIPSAN CCN).	
Objective Duration: November 2015 - December 2019 Source of Financing: Global Agriculture and Food Security Programme-Canada Amount of Financing: USD 33,900,000.00 Involved institutions: MEFCCA, IPSA, MAG, INTA, INPESCA and the regional governments. Executing agency: MEFCCA	Plans for Innovative Development (PDI): investment plans to support agricultural production and improve food security, availability and consumption, through the capitalization with goods, materials and supplies to communities of the Caribbean Coast Region. In the framework of the PAIPSAN Project, IPSA implemented aspects related to phytosanitary surveillance, epidemiological surveillance, good agricultural practices, inspection of security procedures for fishing products needed for the implementation of PAIPSAN. The support in this area was through intervention in three subprojects or PDI implemented in Rama and Creole communities. For the implementation of the system of Good Agricultural Practices it was possible to register 102 productive units of protagonists in the territories of Bluefields, Rama and Creole, 62 of which are men and 40 women.

55. Finally, the FOLUR project will coordinate actions with the Five Great Forests of Mesoamerica Alliance Initiative: a Central American environmental initiative launched at COP25. This will be achieved through MARENA, which is the Institution of the Government of Nicaragua that is a member of the Central American Commission for Environment and Development (CCAD) and through

the synergies and complementarities that are identified with regional projects led by CCAD, for example, the Linking the Central American Landscape Program executed by IUCN with KFW resources in CCAD member countries.

56. Coordination with these regional initiatives through CCAD will be defined according to the work process that they develop from 2022 and MARENA will have the role of facilitating operational coordination when actions are developed in the area of the FOLUR project

2.3. Regulatory framework

57. In Nicaragua there is a framework of key national policies and strategies that supports the Integrated Management of Landscape Restoration (IMLR). These are as follows:

? National Human Development Programme (2018-2021)

? National Climate Change Management System and Establishment of Principles and Guidelines for the National Climate Change Policy. Presidential Decree N?15-2021[36][36]

? National Strategy for the Development of Nicaraguan Cocoa Growing (2018)

? Strategy to Strengthen Productive and Reproductive National Growth and Development of Cattle Raising (2019)

? Strategy to Strengthen Productive and Reproductive Growth of the National Cattle Herd (2020?2022)

? Strategy to Develop the Caribbean Coast and Upper Wangki and Bocay Region (EDCC and AWB) (2019-2029)

? National Strategy to Develop Fine Nicaraguan Cocoa (2020?2023)

? National Strategy on Firewood and Charcoal (2011-2021)

? National Forestry Programme (2020-2030)

? National Strategy to Promote the Merchandising of Agriculture and Livestock Products in National and International Markets (2020?2023)

58. Nicaragua also has a legal framework, including enabling regulations and decrees related to the cattle raising and environmental sectors and to climate change that facilitate the implementation of

actions which play a role in the transformation of cattle raising, with a national vision and keyed toward promoting the sustainable, resilient and inclusive development of cattle raising.

59. The legal and regulatory framework governing the forestry, environmental and agriculture / livestock sectors include the following instruments:[37][37]

? General Environment and Natural Resources Law (Law 217, 1996)

? Enabling Regulations, General Environment and Natural Resources Law (Decree 9, 1996)

? Enabling Regulations for Protected Areas in Nicaragua (Decree 14, 1999)

? Law of Municipalities (Law 40 and 261, 1988)

? National Disaster Prevention, Mitigation and Disaster Response System (Law 337, 2000)

? Autonomous Regional Government System and Enabling Regulations (Law 28, 987; Decree 3584, 2003)

? Communal Property System for Indigenous Peoples and Ethnic Communities on the Nicaraguan Caribbean Coast Autonomous Regions (Law 445, 2003)

? National Forest Sector Sustainable Development Policy (Executive Decree 69, 2008)

? Forest Sector Conservation and Sustainable Development Law (Law 462, 2003)

? Enabling Regulations for Protected Areas in Nicaragua (Decree 01, 2007)

? Environmental Evaluation System (Decree 76, 2006)

? Decent and Equitable Treatment of Indigenous and Afrodescendant People Law (Law 757, 2011)

? Agro-Ecological and Organic Production Law (Law 765, 2011)

? Biological Diversity Conservation and Sustainable Use Law (Law 807, 2012)

? Ancestral Medicine Law (Law 759, 2011)

? Dairy Sector Development Law (Law 688, 2010)

? School Glass of Milk Law (Decree 75/09)

? Phytosanitary Protection Law (Law 1020)

60. It is worth highlighting that in 2014 reforms were incorporated to the General Environment and Natural Resources Law, originally enacted in 1996.[38][38]

61. An important factor that drives milk production since 2010 is the financing and implementation of the Dairy Sector Development Law (Law 688) and the School Glass of Milk Law and its Enabling Regulations passed in 2009. Business associations and cooperatives have used the law to hold massive campaigns that encourage the consumption of pasteurized milk and its derivatives.

2.4 Governance in the target territories

62. In Nicaragua, agricultural policy is a responsibility of the SNPCC, which consists of the following institutions:

? Ministry of the Environment and Natural resources (MARENA)

? Ministry of Agriculture and Livestock (MAG)

? National Forestry Institute (INAFOR)

? Ministry of Family, Community, Cooperative and Associative Economy (MEFCCA)

? Ministry of Development, Industry and Commerce (MIFIC)

? National Agricultural Technology Institute (INTA)

? Animal and Plant Health and Protection Institute (IPSA)

? Nicaraguan Fishery and Aquaculture Institute (INPESCA)

? Ministry of Finance and Public Credit (MHCP)

? Nicaraguan Institute of Territorial Studies (INETER)

? Secretariat of National Public Policy, Office of the Presidency (SPPN)

? Secretariat for the Development of the Caribbean Coast (SDCC)

? Authorities of the Autonomous Regional Governments of the North and South Caribbean Coast

63. According to the capacity needs study undertaken during Project formulation, the institutions that intervene in the target territory and have a direct presence in the FOLUR Project area through their regional offices are listed in the table below. These institutions will be the main partners and beneficiaries during project implementation as described in the Stakeholder section.

Table 3. Main project partners

Central Government and their regional offices	regional institutions and Indigenous territorial governments	Municipal governments
MARENA: Regional Office in Bluefields, Technical Territorial Office in Nueva Guinea. IPSA: Regional Office in Nueva Guinea. Human resources and field work teams (veterinarians, agronomists and specialists) as well as persons charged with epidemiological oversight, phytosanitary conditions, seeds production and food and nutrition safety. MEFCCA: Regional office in Nueva Guinea, including technical staff. INTA: Regional Office in El Rama, Technological Transfer and Development Centre offices in Nueva Guinea and Kukra Hill. INAFOR: Regional office in Bluefields, technical Territorial office in Nueva Guinea. GRACCS: All of the Secretariat?s Offices are on the premises of the regional government in Bluefields.	South Caribbean Autonomous Regional Governments (GRACCS) Indigenous and Afrodescendant Territorial Governments. Twelve (12) Indigenous and Afrodescendant communities in the Pearl Lagoon Basin Creole Communal Government, Bluefields	Bluefields Mayor?s Office El Rama Mayor?s Office Nueva Guinea Mayor?s Office Kukra Hill Mayor?s Office Pearl Lagoon Mayor?s Office San Carlos Mayor?s Office El Castillo Mayor?s Office

2.5. Private sector stakeholders and their baseline initiatives

Cocoa value chain

64. . The FOLUR project will coordinate actions with the RITTER Company through the project that they execute with the Inter-American Development Bank/Multilateral Investment Fund in Nicaragua titled ?Intelligent Cocoa Production? (NI-T1274).

65. The project aims to contribute to improving the income and resilience of cocoa-producing families in Nicaragua. The expected result is to improve the levels of productivity and commercialization of cocoa-producing families organized in cooperatives, through access to technologies associated with Precision Agriculture (AP), the management of cocoa agroforestry systems (SAF cocoa) and traceability. /certification of fine-sustainable cocoa for higher value markets.

66. The FOLUR project will coordinate actions with the RITTER Company to improve the productive efficiency of cocoa agroforestry systems based on its experience on plant genetics, plantation rehabilitation and access to genetic material with the Ritter Clonal Garden located in Waslala. Also to learn about their experience in developing an information management platform in cocoa cooperatives for the collection and processing of data at the farm level, traceability, carbon footprint and use of agricultural inputs.

Livestock value chain

67. . The FOLUR project will coordinate actions with the National Livestock Commission (CONAGAN, in Spanish) through the project executed with the Inter-American Development Bank / Multilateral Investment Fund in Nicaragua titled ?Sustainable Livestock Project in Nicaragua? (NI-T1237).

68. The objective of the project is to develop a pilot for a segregated model of scalable bovine production, which allows medium-sized producers to improve their competitiveness and increase their income through more stable sales relationships in the chain and the Nicaraguan livestock sector access to international markets of greater value and environmental sustainability. Since it is a new model, the project has the challenge of demonstrating, during its execution, the concrete benefits generated in terms of productivity improvement, environmental management and profitability.

69. The project will support the establishment of public-private coordination between the Institute for Agricultural Protection and Health (IPSA, in Spanish), the competent public authority of the STB and the SSPB, and CONAGAN, which will facilitate the implementation of the model at the pilot level, the certification of technicians and trainers, the qualification of private service providers and timely feedback, both at the level of instruments and regulatory frameworks for both systems.

Certification and Sustainable seals

70. The FOLUR project will also coordinate actions to advance through quality certifications and sustainable seals for the livestock and cocoa sector as follows

71. ***Cocoa***. Gold Standard project in Nicaragua. The RITTER Company in the course of 2014 to 2020, supported by the company Soil & More Impacts GmbH from Germany, began a process to establish and register a Gold Standard project in Nicaragua at its Finca El Cacao in Kukra Hill in the RACCS. The objective of the project is to reduce emissions from its cocoa plantation and make it climate neutral in the medium term. They base the reduced emissions model on the Gold Standard LUF (land use and forests) methodology. Measures such as the reforestation of fallow lands allowed us to create a sustainable cocoa plantation. In addition to reforestation, sustainability measures for cocoa production at the Ritter Sport plantation also include: biomass composting, minimal use of artificial fertilizers, and CO 2 sequestration in the soil.

72. ***Livestock***. Obtaining quality certificates and sustainable seals is no longer an added value, but has become an obligation to enter markets where Nicaragua has opportunities to export meat and dairy products. This implies ensuring the quality of the products, which includes safety and which in turn are linked to environmental protection and the well-being of its workers.

73. Europe has begun to request a certification as part of the requirements to enter that market, namely the Global GAP GRASP module. In Nicaragua, several companies have already been certified with this module and others are in the process of being implemented. In Nicaragua, through the Global GAP National Technical Working Group (NTWG), the first GRASP National Interpretation Guide for Nicaragua has been prepared, which once approved by the Global GAP Secretariat and will be published on its official website for public use by companies and producers that require certification with the GRASP module.

2.6. Baseline assessment of the Cocoa and Livestock value chains

Description of the cocoa value chain

The importance of cocoa in the Nicaraguan economy

74. In the year 2020 Nicaragua exported 6,002 tonnes of cocoa, worth USD 9.4 million dollars. This was a 29.5% increase in volume compared to the year 2019, and a 22% bounce in its export value. The average price for Nicaraguan cocoa beans has been 1,561 USD/t, which continues to demonstrate (as has been the case these past few years) that exports from the region are taking place at values far lower than those indicated on the New York stock exchange, the normal reference point for setting and negotiating prices.

75. As concerns cocoa derivatives, exports were of 27.3 tonnes, worth USD 99,936.00 at a price of USD 3,660.00 per tonne. Compared to 2019, this represents an 86% increase in volume and a 40% hike in hard currency, as the average sales price fell by 24%.

76. Currently cocoa is 41st on the list of Nicaraguan export products. The main markets for Nicaraguan cocoa are Guatemala and El Salvador, at regional level, and Germany, via Antwerp, Belgium. A large part of the cocoa sent to Europe is exported by Ritter Sport Nicaragua S.A. The tendency regarding cocoa exports in both volume and value over the past 11 years is one of growth (Figure 4), although prices are governed mainly by regional sales, which don?t reflect the reality of market prices, or are those paid by Ritter Sport, which pays New York Stock Exchange prices, plus positive differentials.

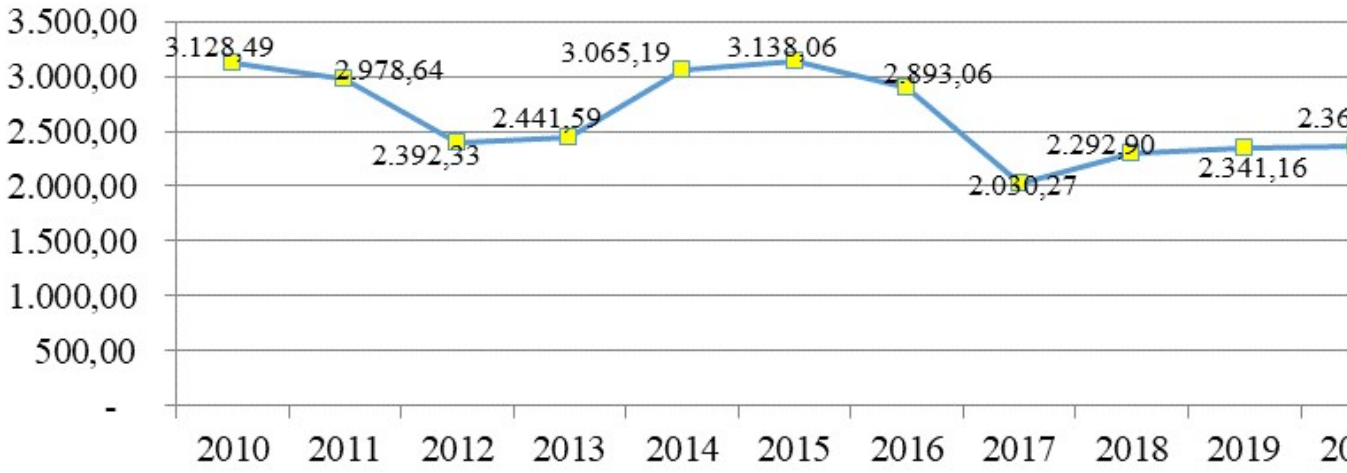
Figure 4. Cocoa Exports (2009-2020)

Source: FAO Study, 2021 (Green line = volume in kg: red line = prices in USD)

77. Cocoa prices in Central America are high due to large-scale consumption of its derivatives. This has allowed for relatively good prices to farmers (compared to many other Latin American countries, to say nothing of those in Africa). However, this situation has, on occasion, become an obstacle to the development of more productivity and efficiency in farm, harvest and process management by producers. Along the same lines, this regional market has been one of several factors that has frightened away many cocoa-buying companies who might otherwise establish themselves in the country, as their profit margins would not be compensated because of regional competition, in which at this point in time demand is unsatisfied. Another clear factor is low productivity in Central America.

78. Cocoa beans in Nicaragua are marketed as a commodity, with prices being established by international markets. According to information published by the International Cocoa Organisation (ICCO), the price of cocoa peaked in 2015, when a tonne of cocoa beans sold for USD 3,138.06. Since then, prices have decreased, and in 2019, a tonne of cocoa beans on international markets was valued at 2,341.16 USD/tonnes.

Figure 5. Average annual cocoa bean prices (USD7tonne)



Source: ICCO

79. Cocoa grown in an agroforestry system plays and will continue to play a very important role in the conservation of the country?s two most important natural reserves, Bosaw?s and Indio Ma?z, as it grows well in their buffer zones and thus contributes to halting deforestation and the advance of the agricultural frontier. The latest census taken among cocoa farmers shows there are currently 12,563 producers, of which 4,441 are in RACCN, 3,682 in the province of Matagalpa, 2,607 in Jinotega, 924 in R?o San Juan and 644 in RACCS. Together, they cover an area de 17,651 ha (MAG 2020).

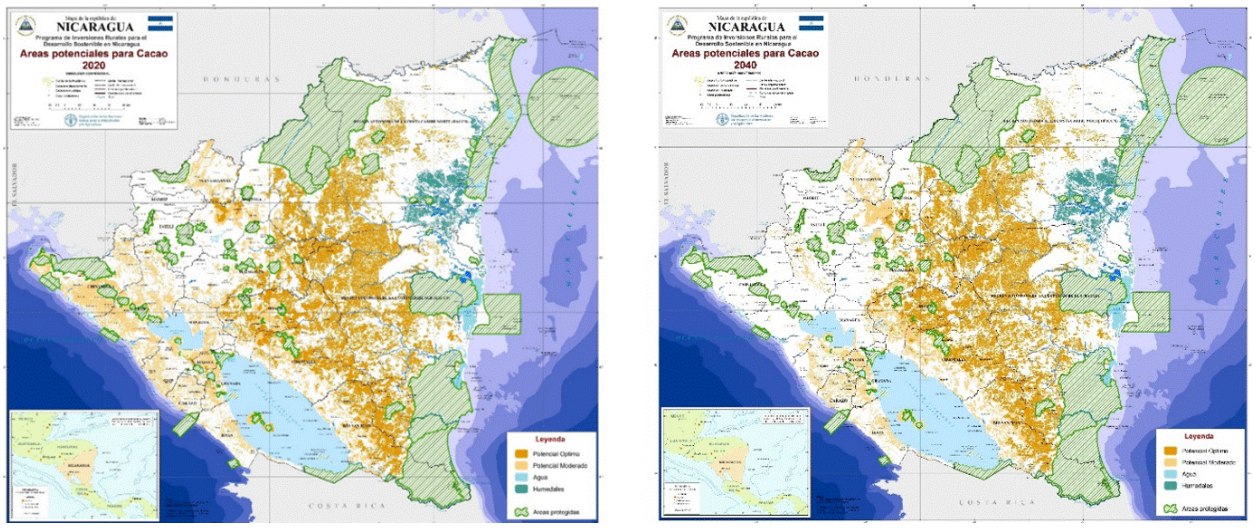
80. Cocoa agroforestry systems are forest relicts that are of considerable value in a landscape lacking original vegetation. The map (Figure 6) shows the current distribution of those areas in which cocoa is grown.

Figure 6. Distribution of cocoa-growing areas in Nicaragua

Source: FAO Study, 2021

81. The maps in *Figure 7* were made according to a soil and climate suitability analysis for growing cocoa and areas available in which to do so, based on factors such as agro-climate, buffer zone status, high levels of poverty, soil capacity and potential for adapting to climate change. The CIAT Atlas of Climate Change Impact on Cocoa Farming in Central America and the Caribbean was used as a reference.

Figure 7. Potential cocoa-growing areas (2020-2040)



Source: FAO Study 2021

Situation regarding cocoa in Project implementation zones

82. In late 2018 there were 10,938 cocoa farmers in Nicaragua producing the crop on 17,130.31 ha, with another 10,935.63 ha under development.[39][39] In the FOLUR Project area there are 1,882 cocoa farmers (17% of the total), 1.670,43 ha under development and 1,927.4 ha already producing (13% of the total). These farms are located in the municipalities of Nueva Guinea, Bluefields, El Rama, Kukra Hill, Pearl Lagoon, San Carlos and El Castillo. Production for the year in question was 5,251.70 MT (or 115,537.48 dry hundredweights, using a conversion factor of 2.75).

83. National cocoa production has grown over the past three years (2018-2020) as a result of a substantial increase the overall area under cocoa and the onset of production in parts of areas targeted for investments by private companies such as COCOAORO, KAKAU and MLR in RACCN, Ritter Sport in RACCS and the implementation of the Adaptation to Changes in Markets and the Climate (NICADAPTA-IFAD-CABEI). The production achieved by the ?El Cocoa? farm, which belongs to Ritter Sport and is located in the municipality of Kukra Hill and the production coming from cooperatives in the municipalities of El Rama, Nueva Guinea and El Castillo stand out.

84. In 2018 the average national yield was 12.98 hundredweights of cocoa in the pulp (4.72 dry hundredweights or 214.58 kg) per *manzana* (0.7 ha). This varies by territory, as can be seen in the table below:

Table 4. Average cocoa yields per territory

Province / Caribbean Coast Regions	Yields (kg/ha)
Average	**306.54**
RACCN	342.43
RACCS	291.46
RIO SAN JUAN	258.14
MATAGALPA	289.07
JINOTEGA	343.84
RIVAS	564.13

Source: Nicaragua Cocoa Sector Commission, APEN and SDC (2018-2019)

85. The most productive plantations are those in the province of Rivas, now that the farms in the Col?n area are in full production. These are places with low disease rates using highly productive grafts as genetic material. Among cocoa-growing areas in terms of the amount of land used for the purpose are the province of Jinotega and RACCN, whose yields are 11-12% higher than the national average. In the FOLUR Project zone, yields in RACCS and R?o San Juan are lower than average (5% and 6%, respectively).

86. In RACCS and R?o San Juan, the predominant features of the cocoa value chain are shown in Table 5, below.

Table 5. Features of the cocoa value chain

Value chain link	Main features

Production	Cocoa bean production at farm level takes place in smallholdings,[40][40] under agroforestry systems in association with musaceans and shade-providing fruit and timber tree species (see Appendix 1.a *Table of Most Used Tree Species in Cocoa Agroforestry Systems).* Agroforestry ensures the recycling of nutrients and diversification of food products consumed by farmer families. Farms tend to be small or medium-sized. In addition to cocoa they produce plantains, bananas, fruit, coffee, maize and beans, among other staple products. Some also raise livestock. There are many degraded low-yield areas and pastures that have been planted with cocoa. Cocoa tree density is low (192 trees/ha), considering that 625 plants are needed to achieve full productivity. Production technology is weak and there are many old cocoa trees in areas were planters are not organized. Few of these carry out production-increasing activities such as fertilization, pruning, cleaning, watershed/water source management and crop rehabilitation or renewal.
Post-harvest	In Central America the cocoa post-harvest can take place on farms or at processing plants. Nicaragua is the country with the best cocoa bean post-harvesting and processing capacity. The fermentation of small volumes of cocoa in the pulp may or may not take place on-farm. At processing plants run by cooperatives and private companies, fermentation and drying takes place using protocols defined by conventional or special markets. The following cocoa processing plants are located in RACCS and R?o San Juan:[41][41] El Rama: Cooperativa Multisectorial de Productores Org?nicos, R.L. (COMPOR R.L.) Nueva Guinea: Uni?n de Cooperativas Agr?colas Ahmed Campos, R.L. El Castillo: Cooperativa de Servicios M?ltiples Reserva Indio Ma?z, R.L. (COSEMUCRIM, R.L.) and the Cooperativa Multisectorial de Desarrollo Productivo R.L (COODEPROSA R.L).

Transformation	Most cocoa processing companies in Nicaragua produce finished goods for immediate consumption (beverages, sweets and cocoa powder in cereal mixes). Companies that process cocoa for export are *Chocolater?a Artesanal Momotombo; Castillo del Cocoa S.A; El Vergel S.A.; and Licor de Cocoa Don Jua*n. In addition, SOPPEXCA and *Chocolate Mussy de La Campesina* are introducing chocolate bars on the national market and Mussy exports cocoa mass. The processing sector can be divided in two types: *Industrial processors of typical products such as* Caf? Soluble S.A., LALA, CENTROLAC, INCOPASA and El Caracol. These companies buy mainly unfermented ?red cocoa? from merchants who acquire it from other traders that buy it from farmers in their municipalities. These industrial processors consume 1,330 metric tonnes of cocoa yearly to make and sell their products (beverages such as *pinolillo* and *tiste*) and powdered cocoa in cereal mixes, among others). In this intermediation chain, the only process undergone by the cocoa is the drying carried out by some of the intermediaries. *Artisanal or small-scale industrial processors* make cocoa mass, chocolate bars, candies and cocoa liquor. This subsector is still incipient and uses only small quantities of cocoa, albeit of high quality. Many processors are micro-enterprises or family-owned companies who usually buy their cocoa from small producers or cooperatives and then carry out the entire process until reaching the final product. Among the most important of these are: *Chocolates Momotombo ? Managua (12 tonnes /yr.)* *El Castillo del Cocoa ? Matagalpa (7 tonnes /yr.)* *Red Madre Cocoa - Managua: (2 tonnes /yr.)* *El Vergel S.A.* *Chocolates Tininiska ? Waslala (1.5 tonnes /yr.)* *Chocolates Mussy (1 tonnes /yr.)* *Chocolates Rustikao (2 tonnes /yr.)* *Chocolates Atelier (3.5 tonnes /yr.)*

Merchandising	There are two moments: Initial merchandising[42][42] of cocoa brought to a collection centre by the producer. Cooperatives often work with community cocoa collectors, who organise and motivate farmers to gather and sell them their product. Cocoa processing is done at centralized collection centres. Sale after postharvest and processing. There are three ways in which to merchandise cocoa: [43][43] First-tier foreign market: Ritter Sport (Germany), Ingemann (Denmark) and Ethiquable (France) account for 21.3 % of total exports during the season. This link includes national specialized intermediary companies, chocolate-making importers or commercial agents of confectionary, food and cosmetics chains (Riviana, ARCOR, etc.).[44][44] Second tier foreign market: Here the trade is in cocoa rejected by high quality cocoa exporters and unfermented ?red cocoa?. This market is controlled by formal and informal merchants in Guatemala, El Salvador and Honduras. In 2015 it bought 48.5 % of Nicaraguan exports, and is still the most significant component by volume. The internal market generally deals in unfermented cocoa bought from farmers by local intermediaries and wholesalers, although a small amount of the cocoa is of high quality. Trading takes place mainly in the Guanuca Market in Matagalpa; the Oriental Market in Managua; the Mayoreo Market, also in Managua, artisanal food processing companies, small cosmetics enterprises, etc. In 2015 these bought 30.2% of that year?s harvest.

Source: FAO Study 2021

87. According to the URACCAN socioeconomic and gender study commissioned by the FOLUR Project, 23.57% of those queried have a cocoa area on their farms. They participate mainly in the first link of the value chain. The study also investigated the participation of women in the cocoa chain (Table 6).

Table 6. Participation by women in the cocoa chain

Link	Activities	Males	Females
Primary	Keeping family work force operating		x
	Preparing land for cropping	x	

Production	Germination of cocoa seeds in nurseries / purchases of seedlings	x	x
	Transplanting of seedlings to growing area	x	x
	Clearing of cocoa growing area / weeding the plantation	x	
	Pruning cocoa trees	x	
Primary processing	Harvesting cocoa pods / fruit	x	x
	Shelling cocoa pods / removal of beans from pod	x	x
	Drying cocoa beans in the sun	x	x
	Fermenting cocoa beans	x	x
Gathering	Carrying cocoa beans from plantation drying or fermentation area	x	
Secondary processing	Roast cocoa beans over a fire		x
	Remove cocoa bean shells		x
	Grind cocoa beans		x
	Prepare different products (powder, little chocolate balls and bars, cakes, cold or hot beverages, mixed with other products such as ground maize for *pinolillo*, with calabash seeds to make *horchatas* (a rice-based beverage) or with alcohol to make liquor.		x
Market / merchandising	In the community		x
	At municipal level	x	x
	At regional level (Bluefields, El Rama) (San Carlos ? San Juan de Nicaragua)	x	x
	At national level (when participating in fairs)		x

Source: URACCAN Study for FAO 2021

Technical assistance in the cocoa chain

88. Along the cocoa production chain are a number of institutions, programmes and projects that support its functioning and make up the FOLUR Project baseline.

89. A governmental programme, NICADAPTA (2015-2020), coordinated by the Ministry of Family, Community, Cooperative and Associative Economy (MEFCCA), leveraged systemic productivity competitiveness for cocoa by providing seed capital with which to implement the national fine cocoa strategy. Through the programme the government also created a Cocoa Producer Register and a data base of 12,563 farms/producers, for cocoa sector zoning and classification purposes.

90. Technical assistance and training is offered by buying companies (Ritter Sport, ECOM, Cocoa Oro, Ingemann), state entities (usually through specific projects) and some international NGOs, among which are:

- ? ECOM has worked on propagation methods, in collaboration with CIRAD.
- ? Ingemann has worked on biochemical fermentation processes with the University of Copenhagen. It offers plants and genetic material of its registered variety to increase plantation size among its producers.
- ? Rikolto, WCF and CIAT support work on issues related to climate change, including infrastructure (germplasm, farmer parcels and large farms, laboratories at universities and the private sector), small funds for research (APEN, Rikolto, WCF) and international collaboration (CIRAD, ICCO, CATIE, others).
- ? Ritter Sport Nicaragua S.A.: The Company has a 4.2 ha planting stock nursery in the community of El Comej?n (Rancho Grande) with 28 international clones. It also owns 24.5 ha of planting stock on the El Cocoa farm in the municipality of Kukra Hill. The most prevalent varieties are ICS, UF and EET.
- ? UCA Ahmed Campos: owns 4.2 ha in Nueva Guinea.

91. According to MEFCCA, there are 16 cocoa cooperatives in the FOLUR Project area. These offer their members technical assistance services, finance inputs and hold training workshops in collaboration with state institutions.

92. There are government and private actors that provide seedlings, farm tools, fertilizer, insecticides, fungicides and genetic material considered adapted to local conditions and resistant to pests and diseases. INTA supplies seeds from its experimental station at El Recreo or via farmers on their own land, or ?elite trees? found in different parts of the country and a growing number of other sources. Rootstocks are produced on at least ten clonal gardens established with support from CATIE and INTA. The seedlings are grown by individual farmers, cooperatives and large commercial nurseries (ECOM/EXPASA and MERCON/Transplanta) work directly with buyers. Most smallholders receive high quality seedlings from cooperatives or NGOs subsidized by funding for development.

93. Cooperative members, farmers and producers acquire the supplies they need at local branches of commercial establishments such as RAMAC, SAGSA DISAGRO, FORMUNICA and CISA AGRO.

94. As part of the national cocoa development strategy, IPSA developed a phytosanitary oversight system which monitors the two most frequent diseases that affect this crop in Nicaragua, namely moniliasis (Moniliophthora roreri) and black pod rot (Phytophthora palmivora). Care is taken to control for the quarantine pest known as ?witches? broom? in order to avoid its entering the country and thus protect cocoa farms. For purposes of data collection in the field a mobile app called SATCOCOA is used.

Description of the cattle raising value chain

95. In Nicaragua, the historically dominant model of extensive cattle ranching has led to the concentration of land in few hands and the displacement of smallholders toward the new agricultural frontier, thus contributing to social polarization and alarming levels of deforestation. This model is both socially and environmentally unsustainable.

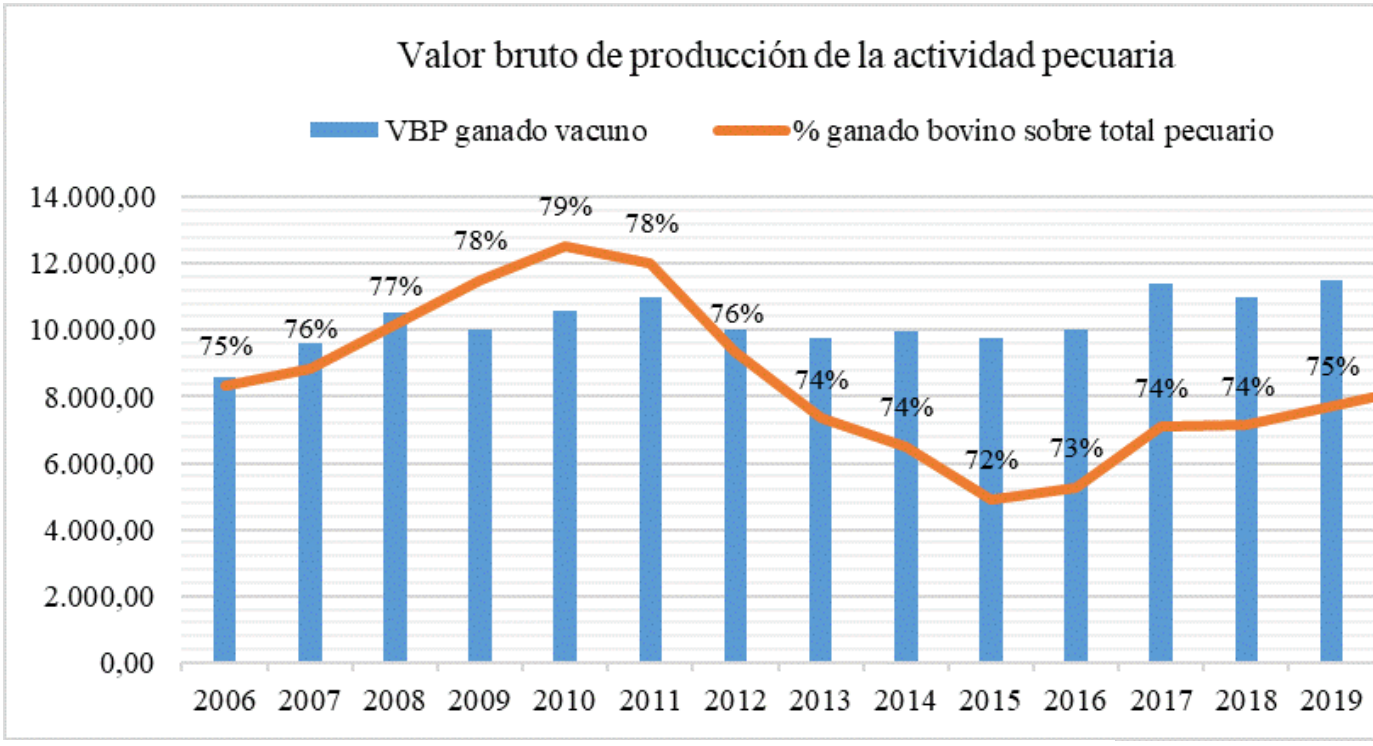
96. According to IV CENAGRO (2011), there were 4.1 million heads of cattle in Nicaragua that year. In 2018, the Ministry of Agriculture and Livestock (MAG) determined that there are 165,954 farms on which livestock, mostly cattle, are the part of the production process.[45][45] In 2011 there were 136,687 such holdings,[46][46]meaning that the average annual growth rate has been 2.45%. Most of this growth is related to colonization rather than the breaking up of farms for reasons of inheritance.

97. In 2011, 63% of the total cattle herd was on farms and ranches ranging from 7 to 139 ha, belonging to almost 80,000 producers (58% of all cattle ranchers). By 2018 the nation?s cattle herd had reached 5,484,863 animals (70% cows, 30% bulls). From 2011 to 2018 the herd grew by 4.11% per annum. Extrapolating this growth rate, it can be estimated that in 2020 there were 5,945,351 heads of cattle in Nicaragua.

The importance of cattle raising to the Nicaraguan economy

98. Raising cattle for dairy products and beef is one of the most important sectors in the economy. In 2020 cattle generated a gross export value of 11.732 billion in year 2006 c?rdobas, equivalent to 75% of all livestock activities (Figure 8).

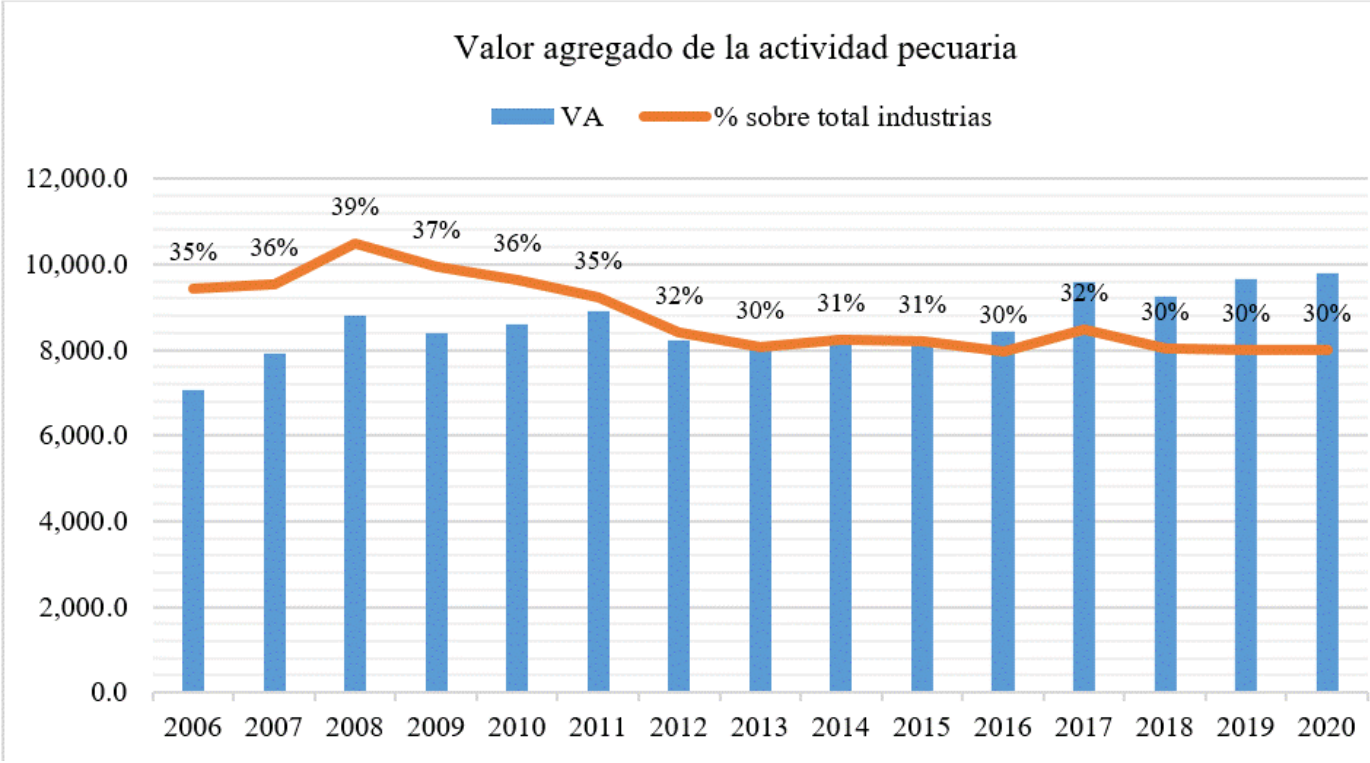
Figure 8. Gross value of cattle raising activities (in millions of 2006 c?rdobas)



Source: Nicaragua Central Bank

99. Cattle raising activities in 2020 reported 9.805 billion in year 2006 c?rdobas, or 30% of the total added value generated by all industries (Figure 9).

Figure 9. Added value of cattle raising activities

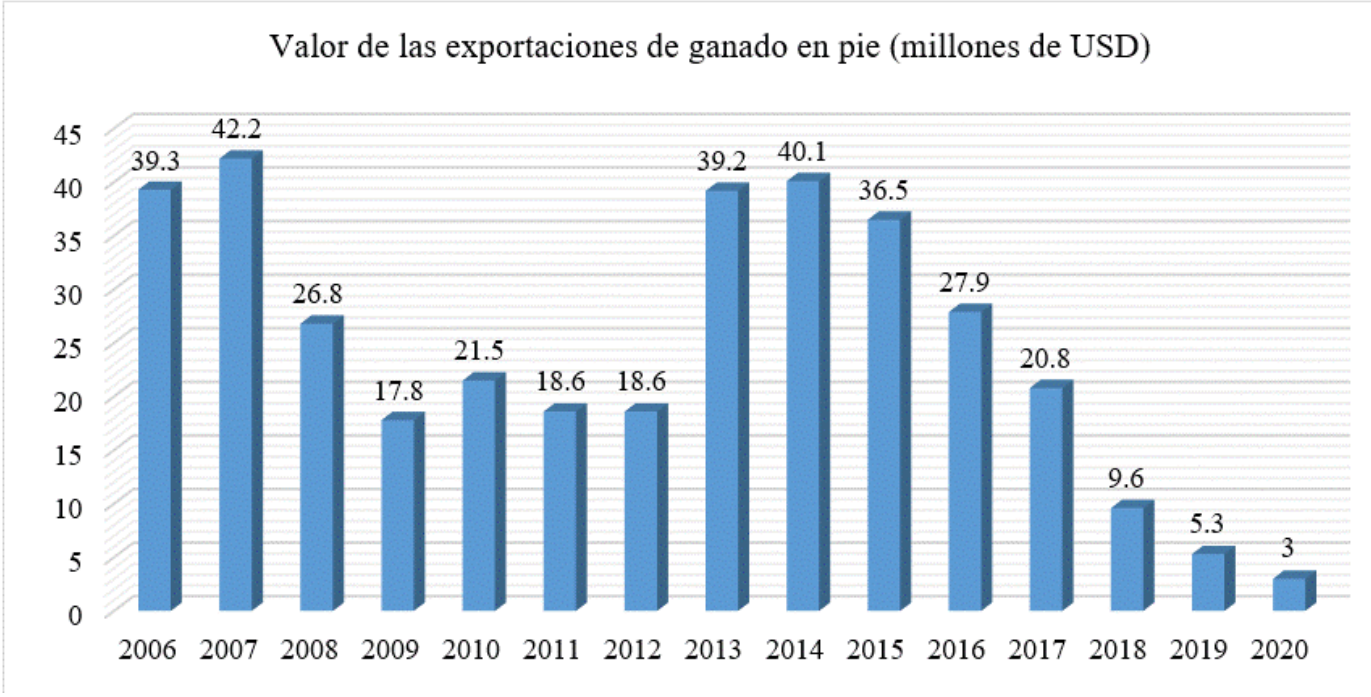


Source: Nicaragua Central Bank

100. The slaughter of cattle takes place at both industrial and artisanal levels, with the former being by far the largest. In 2020 a total of 825,000 animals were slaughtered, of which 714,400 were processed at slaughterhouses and 110,600 on-farm.

101. Exports of cattle-on-the-hoof have declined markedly since 2014. In 2020 exports were at their lowest, reaching a value of only USD 3 million.

Figure 10. Value of live cattle exports (in millons of USD)



Source: Nicaragua Central Bank

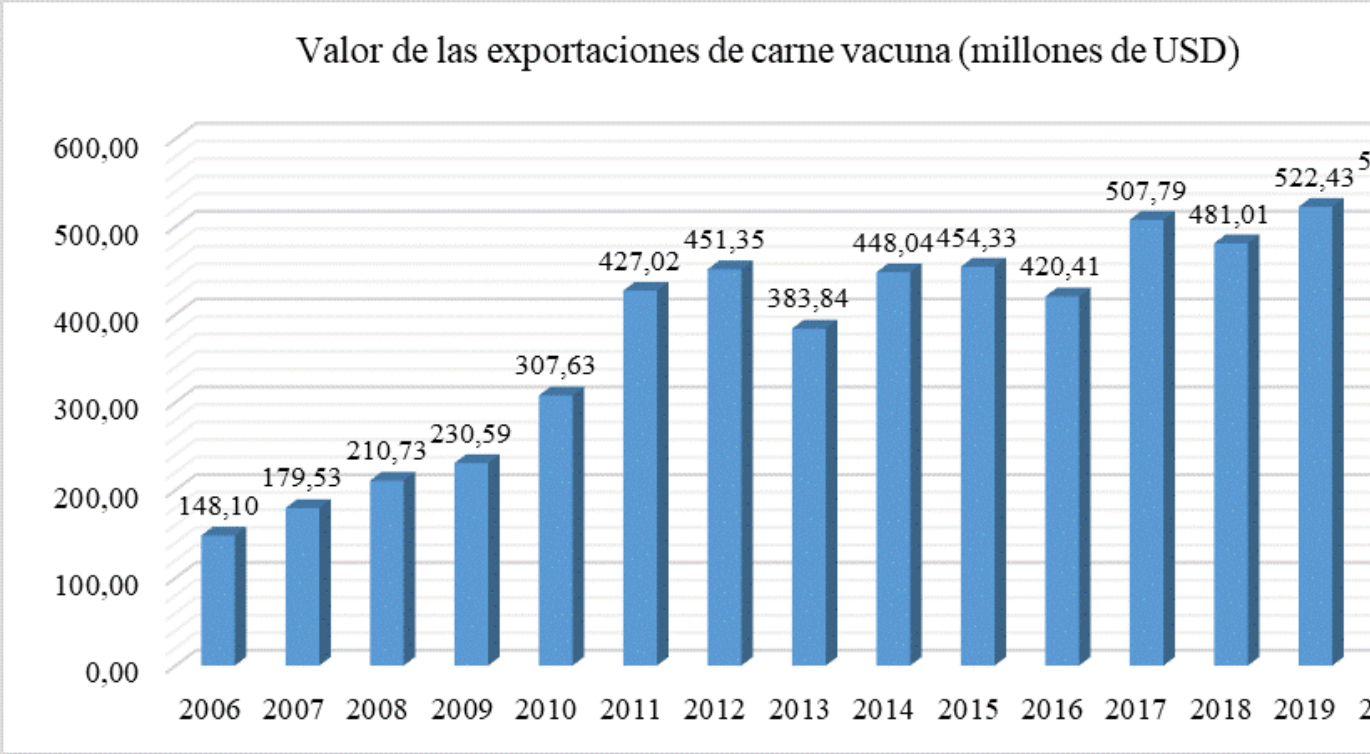
102. Much as in the case of its monetary value, the volume of cattle-on-the-hoof exports has tended downwards since 2013. Exports reported for 2020 were of 1,487.97 million kg (Figure 11).

Figure 11: Volume of live cattle exports (?000 kg)

Source: Nicaragua Central Bank

103. Beef exports, on the other hand, have been on the rise since 2006. The highest monetary value was achieved in 2020, at USD 541.54 million (Figure 12).

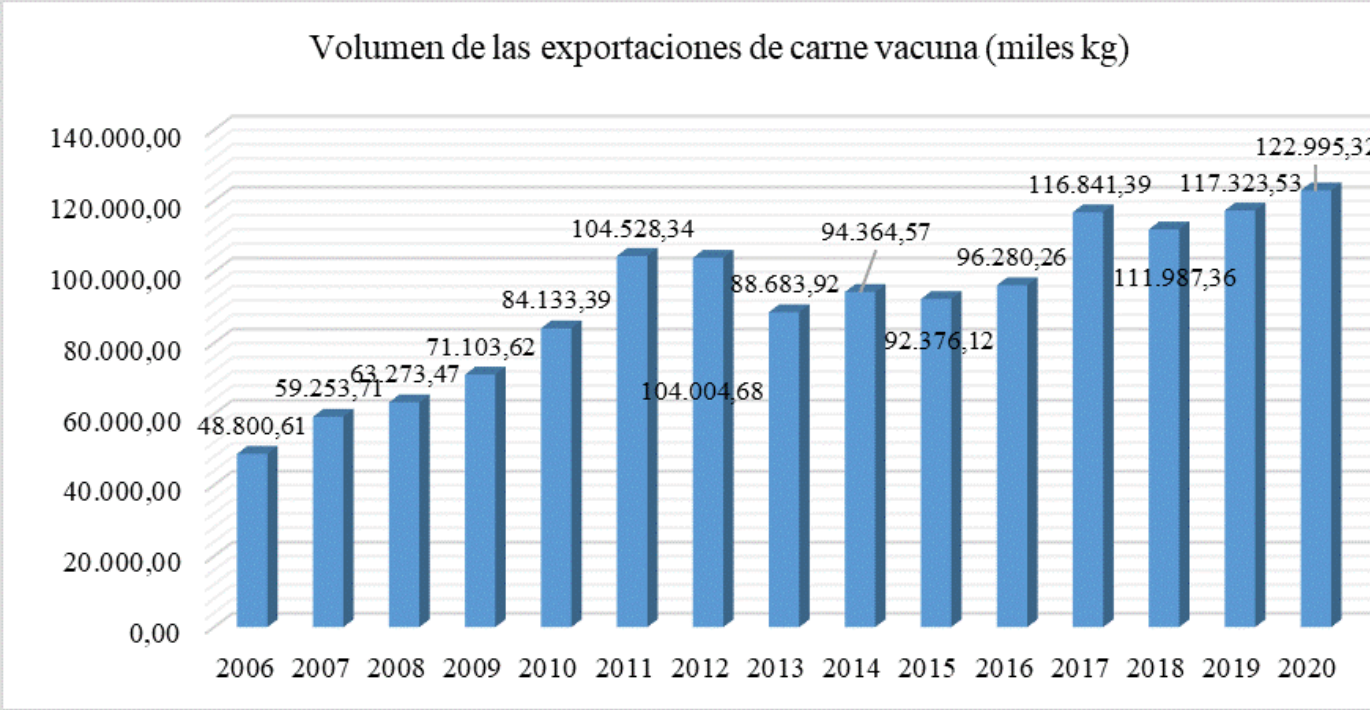
Figure 12: Value of beef exports (millons of USD)



Source: Nicaragua Central Bank

104. The volume of beef exports has also grown, reaching its highest value in 2020 at 122.995 million kg (Figure 13). Milk production too has shown considerable dynamism over time, and in 2020 a total of 176,935.1 million gallons were collected.

Figure 13. Volume of beef exports (?000 kg)



Source: Nicaragua Central Bank

Cattle raising in the FOLUR Project area

105. In the FOLUR Project area the situation regarding farms partially or entirely dedicated to cattle raising is as follows:[47][47] 14,033 farms with at least some cattle, for a total of 585,432 heads. Of these, 33% are equal to or smaller than 13.94 ha; 53% range from 13.94 to 69.72 ha; and only 7% are larger than 69.72 ha.

106. Five significant cattle raising areas have been identified in Nicaragua:[48][48] (see Table 7).

Table 7. Classification of cattle raising areas in Nicaragua

Zone	Description	Municipalities	
#	Name		
High production zone	**Socio-economic**: This is the area that is best integrated to the dairy products chain; good milk collection infrastructure, including processing plants and roads. **Agro-climate**: Good rainfall patterns and access to water sources. However, in some areas environmental degradation is severe, with loss of water sources, degraded soils and changes in rainfall patterns.	23	**Nueva Guinea (FOLUR area), El Rama (FOLUR area)**, Matigu?s, Boaco, Paiwas, Muelle de los Bueyes, Mulukuk?, Camoapa, San Lorenzo, Acoyapa, R?o Blanco, El Almendro, Muy, Santo Domingo, Villa Sandino, Comalapa, La Libertad, Santo Tom?s, Juigalpa, San Pedro de L?vago, San Jos? de los Remates, El Coral, San Francisco de Cuapa and Matagalpa.
Transition zone	**Socioeconomic**: A transition zone between the high dairy production area and the new agricultural frontier colonies. Currently enjoys good integration options (growing road network and expansion of the electrical grid). Road, milk collection and processing infrastructure is of medium to low quality. **Agroclimate**: Good rainfall patterns and access to water sources. However, in some areas environmental degradation is severe, with loss of water sources, degraded soils and changes in rainfall.	19	Wiwil? (Jinotega), Jinotega, Santa Mar?a de Pantasma, Jalapa, San Miguelito, Tuma-La Dalia, El Cu?, El J?caro, San Sebasti?n de Yal?, Rancho Grande, Wiwil? de N.S., Quilal?, Murra, San Ram?n, San Rafael del Norte, **San Carlos (FOLUR area),** Morrito, Esquipulas, San Dionisio and San Juan R?o Coco.
New agricultural frontier	**Socio-economic**: Agricultural frontier area with concomitant insecurity and conflicts. Very low on road milk collection and processing infrastructure. **Agroclimate**: Good conditions, but rapid rate of deforestation.	18	Siuna, Waslala, San Jos? de Bocay, La Cruz de R?o Grande, El Tortuguero, **El Castillo (FOLUR area), Bluefields (FOLUR area)**, Waspam, Puerto Cabezas, Rosita, El Ayote, **Kukra Hill (FOLUR area)**, Prinzapolka, **Pearl Lagoon (FOLUR area)**, Bonanza, Desembocadura de R?o Grande, San Juan del Norte and Corn Island.

Zone	Description	Municipalities	
Dry zone	**Socio-economic**: Road, milk collection and processing infrastructure is of medium to low quality. **Agroclimate**: Strong constraints caused by scarce and irregular rainfall, few water sources and poor soil quality.	60	Le?n, El Sauce, Estel?, Larreynaga, Villanueva, Condega, Villa El Carmen, Teustepe, Ciudad Dar?o, Achuapa, San Juan de Limay, Somotillo, Pueblo Nuevo, Somoto, Nagarote, Tipitapa, San Rafael del Sur, Telica, Santa Teresa, San Francisco Libre, Palacag?ina, La Paz Centro, La Trinidad, San Isidro, Santa Rosa del Pe??n, San Lucas, El Jicaral, Telpaneca, S?baco, Totogalpa, Nindir?, Terrabona, San Pedro del Norte, La Concordia, San Nicol?s, Diriomo, San Francisco del Norte, Cinco Pinos, Macuelizo, Mozonte, Las Sabanas, San Jos? de Cusmapa, La Conquista, Santa Mar?a, Santo Tom?s del Norte, Yalag?ina, Santa Luc?a, Ciudad Antigua, Mateare, El Crucero, San Fernando, Dipilto and Ocotal.
Pacific Coast	**Socio-economic**: Area with good roads and very good on-farm infrastructure. The most capital and work intensive cattle raising systems (genetics, pastures, infrastructure) are reflected in the highest milk yields per cow. **Agroclimate**: Deficient rainfall patterns, high deforestation levels, accelerated increase in agricultural exports that reduce land for cattle raising.	33	El Viejo, Tola, Diriamba, Chinandega, Bel?n, Posoltega, Jinotepe, Altagracia, Rivas, La Concepci?n, Masatepe, San Juan del Sur, Puerto Moraz?n, C?rdenas, Chichigalpa, Quezalguaque, Niquinohomo, Diri?, Moyogalpa, Ticuantepe, Potos?, Ciudad Sandino, San Marcos, Buenos Aires, La Paz de Carazo, El Rosario, Nandasmo, San Juan de Oriente, San Jorge, El Realejo, Catarina, Dolores, Corinto, Managua, Tisma, Masaya, Nandaime and Granada.

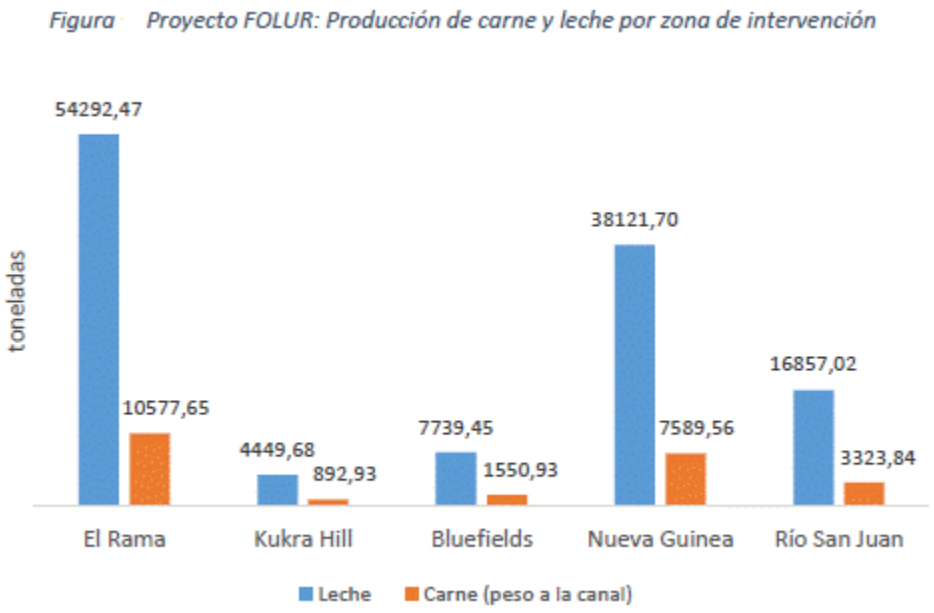
Source: Description of the dairy and beef production chain in Nicaragua, FAO, September, 2020

107. The municipalities in the FOLUR Project area are Nueva Guinea, El Rama, San Carlos, El Castillo, Bluefields, Kukra Hill and Pearl Lagoon. As can be seen in the table above, Nueva Guinea and El Rama belong in the High Dairy Production area; San Carlos to the Transition Zone; and El Castillo, Bluefields, Kukra Hill and Pearl Lagoon are in the New Agricultural Frontier. There are no FOLUR Project areas in the Dry and Pacific Coast Zones. The municipalities of El Rama and Nueva Guinea are those with most heads of cattle registered since the IV CENAGRO (2011).

108. In the municipalities of interest to FOLUR, in 2011[49] the number of dairy cows was 213,137, classified as follows: 28,271 in the pre-productive stage; 154,146 heifers less than three years old; and the remainder fully productive. Reported milk production in these municipalities for the year 2015 stood at 121,460.32 tonnes of milk and 23,934.91 tonnes of carcass meat. Approximately 76% of

both products are concentrated in El Rama and Nueva Guinea (Figure 14). The data show that production levels are of 0.26 tonnes of milk and 0.05 tonnes of carcass meat per ha of pasture.

Figure 14. FOLUR Project, beef and milk production by area of intervention



Source: FAO Study 2021

109. In the FOLUR Project area, water is widely available, with rainfall of between 1.400 and 2.500 mm over eight to nine months of the year.[50][50] These municipalities contain 81.9% of the national herd (IV CENAGRO 2011).

110. Cattle raising in the area is extensive and growth is based mainly on the expansion of pastureland (natural and cultivated). The level of technification for processing purposes is relatively low, as are calving rates (see Table 8).

Table 8. Description of the cattle raising value chain

Link in the value chain	Main features

Production	Cattle is raised with a double purpose (beef and milk production) ? The prevailing cattle raising system in Nicaragua has two purposes. Specialising only in milk or beef production is not very common. According to the 2011 census, between 68%[51][51] and 73%[52][52] of cattle raising takes place with a double purpose, and few farms raise cattle exclusively for milk or beef. The most frequent systems are: i) cattle rearing and milking; ii) cattle rearing, milking and development; and iii) cattle rearing, milking, development and fattening. ? Double purpose cattle raising takes place as a result of the comparative advantages afforded by closeness to markets. The less access a property has and the greater the distance to a sizeable town, the more likely it is the cattle will be raised mainly for beef production purposes.[53][53] ? As the size of double-purpose ranches increases, so does the participation of beef in the generation of income, reaching up to 58% of the total. ? Management may be of two kinds: traditional or technified. These differ depending on available working capital that allows for implementing practices to improve productivity and merchandising. Traditional practices are still common among smallholders, who make up the majority in the FOLUR Project intervention area. Extensive cattle raising ? The low cost of land on the agricultural frontier has encouraged the expansion of ranches, while promoting deforestation and strengthening the already extensive cattle raising system.[54][54] ? Considering that the global relation of pastureland to the animal load is of 1.24 heads/ha, Nicaraguan cattle raising qualifies as extensive. It is maintained and grows due to the expansion in the acquisition and use of land without major technological changes that is characterized by low productivity and the consequent degradation of natural resources such as soils, water and forests.[55][55] Feed is based on grazing ? The cattle is fed mainly by being left to graze, a system closely linked to and dependent on the availability, quality and sustainability of pasture and forages, both natural and improved, and these determine the amount of cattle and breeds that can be kept on a given ranch.[56][56] ? According to the 2020-2022 strategy to strengthen the productive and reproductive growth of the national cattle herd[57][57], there are 4,037,104 ha of pastureland, of which 67% (2.6 million ha) are natural, with low forage production, while 33% are improved pasture (1.33 million ha), mostly managed in a very traditional manner. ? The lack of adequate pasture management and forage production has resulted in the grazing of biomass with low nutritional quality, leading to low productive and reproductive outcomes. ? Feeding stands out as one of the main factors holding back competitiveness, notwithstanding the low costs of milk and beef production. ? In 2011 some 460.000 ha of pastureland were accounted for in what today is

Technology

? Historically there has been a low level of technification in cattle raising for milk and beef production.

? The low cost of land in the region and the difficulty of accessing long-term loans have made it so there is little incorporation of technology. The technological levels among ranchers is similar, except for practices that depend more on disposable capital, income and availabilities than the knowledge particular ranchers may have.

? In the municipalities selected for FOLUR Project intervention,[58][58] the majority of investments went to animal health ? internal and external deworming, vitamination (Olivitasan, B-12) vaccination (anthrax, blackleg), minerals and a small amount to genetic improvement by means of insemination. Only 20% of ranchers gave their cattle concentrate as a complement to improving their nutrition, and a mere 2% inseminated their cows. This is the case in all of the Project?s municipalities, regardless of ranch size, since essentially these practices are determined by economic conditions and access.

? As concerns genetics there prevail crosses between Brahman, Brown Swiss and Holstein. The genetic quality of reproductive cows and stud bulls has deteriorated due to the lack of selection and cross-breeding programmes. Fertility indicators are low, with calving at 48%, a cow-stud bull relation of 30.5 : 1[59][59] and a pregnancy rate of 49.5%.

? Calving rates are around 48% and 33% of the stud bulls sampled were subfertile or infertile.

? As for infrastructure, the most common are repairs of fences, galleys and corrals.

? The types of practices used depend on the producer?s size (see Table 5 below)

Table 5: Examples of technologies and practices used by cattle ranchers

Size	Small rancher	Medium rancher	Large rancher
Feeding	Grazing, salt, chopped grass w/ salt, molasses	Chopped grass + molasses + salt Taiwan grass + sugar cane Molasses + chopped maize + salt + honey + sugar cane Natural pasture, concentrates	Concentrates for milk cows + chopped grass Chopped grass + King grass Salt, improved pasture grazing
Health	Deworming and vitamins every 3 mo. Antibiotics	Ivermecticine ; control of mastitis; antibiotics;	Deworming every 3 mo. Vaccination (twice a yr.)

Processing	*Milk processing:* ? The milking of 1.2 million cows produces 359.1 million gallons of milk,[60][60] of which 61% is sold as fluid milk, 36% is used to make milk derivatives and 3% is consumed on-farm. ? Average production on ranches located in the high production zone (FOLUR area) is of 4.43, 3.77 and 3.79 litres/cow/day on large, medium and small ranches, respectively.[61][61] There has been a significant increase in milk production since 2011, reaching 156.285 gallons in 2019 (formal and artisanal collection).[62][62] ? In 2019, five industrial plants processed at least 39.5 million gallons: LALA, CENTROLAC, PROLACSA and NILAC. There are 110 milk collection centres, with a total capacity of 1,320,000 litres/day and some 50 cheese makers which process 165.2 million litres of milk. Another 154.4 million litres of milk are sold informally. ? Farms in the FOLUR Project area contribute significantly to national milk production, especially in El Rama and Nueva Guinea. ? For the dairy sector, the main stimulus has been the growing regional demand for artisanal cheese, mostly from El Salvador and in the past few years the United States. Put otherwise, semi-industrial plants are major drivers (36 plants are formally registered and operate under IPSA supervision), but so are the 10,000 artisanal cheese-makers located in the interior central part of the country (S?nchez, 2018). *Beef processing:* ? National beef stands at 81.00, 45.75 and 45.5 kg/ha/yr.[63][63] on large, medium and small farms, respectively. ? Based on the number of heads of cattle slaughtered, beef production in Nicaragua has diminished by 8.7% from 2011 to 2019.[64][64] ? According to IV CENAGRO, in the FOLUR Project area there were some 141,000 productive cows. Assuming a yield of three litres per cow, around 423,000 litres of milk are collected each day. The largest producers are the municipalities of El Rama, followed by New Guinea, as these have the most milk cows (respectively 50,546 and 49,925 litres). ? The buying and selling of cattle has two routes: slaughterhouses, which only accept steers heavier than 190 kg and cows heavier than 160 kg, and auctions, where bulls and cows of all sizes are sold. ? The largest slaughterhouses use feedlots, starting with calves and steer obtained from the double-purpose system and cattle rearing ranches. The current installed capacity at feedlots is of 223,000 steers per year.[65][65] ? There are seven certified industrial export quality beef-producing plants, with the capacity to process 3,600 animals/day, plus 100 municipal slaughterhouses, five feedlots that fatten 223,000 steers per year/year and three auction sites for cattle-on-the-hoof. ? The industrial slaughterhouses that process more than 85% of all animals are: San Mart?n, Nuevo Carnic, Novaterra, SuKarne, MACESA, NicaBeef and San Isidro, the latter in the municipality of El Rama. Together they process

Market	Dairy products ? Exports of dairy products[66][66] target three merchandising spheres. Self-consumption takes up 66.85%; local markets 24.72%; and 8.32% goes to traditional exports. ? In the 2015-20[67][67] beef and dairy product exports have increased as compared to 2011, while international prices have favoured both. The largest increase has been in sales of Morilique (semi-soft), mozzarella and cottage cheeses, and powdered milk. ? The demand for Nicaraguan cheese on regional markets is the driver of the milk sector. International markets with most demand for dairy products, artisanal cheeses in particular, are El Salvador and the United States. Beef ? Nicaraguan beef is exported to two main destinations: the United States (in the form of frozen meat) and Central American countries (mostly as refrigerated meat). Both markets have been growing over the past five years. ? Peak sales of Nicaraguan beef exports occurred in 2012 and again in 2020, earning a little over USD 500 million. Another factor encouraging beef production was that before 2007 it was legal to export cattle-on-the-hoof weighing less than 350 kg. ? Two companies have contributed significantly to beef production and the generation of hard currency via exports: SuKarne (Mexico) and WALMART (USA). The former plans to increase exports to Central America, Mexico, the United States and offer select cuts Nicaragua.

Source: FAO Study 2021

111. According to the URACCAN socioeconomic and gender study commissioned by the FOLUR project, of 132 ranchers surveyed, 82.57% produce milk. All (100%) participate in the production link, 21.21% in processing, 21.21% in small-scale milk sales, 23% in transport and 20% in the merchandising of processed products. It is important to highlight that there are producers who participate in several links of the dairy product value chain.

112. The study also contained an interesting analysis regarding the participation of women in work related to the cattle raising chain, as can be seen in Table 9, below.

Table 9. Participation by women in links of the beef and dairy value chain (focus group data)

Link	Activities	Men	Women	Both
Inputs	Cattle registration		x	
	Technical assistance from veterinarians, IPSA, PRODESA	x		
	Purchases such as de-wormers, vitamins, salt, molasses			x
	Buckets, milk cans, ropes, manila	x		
	Purchase of cattle		x	
Production	Establish pastures / planting grass / building fences		x	
	Fence repair and weeding		x	
	Care of cattle (applying medications, de-worming)		x	
	Complementary cattle feed			x
	Assist calving		x	
	Herding cattle			x
	Milking cows			x
	Washing milk cans / milking buckets	x		
	Bathe cattle		x	
	Branding cattle	x	x	
	Security: daily cattle count	x	x	x
Transport	Transferring milk from field to home or deliver to buyer		x	
	Transport		x	

Processing	Curdle milk, cut, squeeze and make curd	x		
	Make cheese		x	
	Skim milk	x		
	Make milk candy, atole, rice pudding, gruel, milk caramel, ice cream, chocolate balls, yogurt, bakery	x		
Market / merchandising	Sale of curd, milk, ice cream, bakery (in the community)	x		
	Sale of milk and cheese, cattle-on-the-hoof (municipal)		x	
	Sale of cheese and cattle-on-the-hoof (community and intermediaries)	x		

Source: URACCAN-FAO Study 2021

Current types of technical assistance, services, inputs and financing of the cattle value chain

113. Technical assistance and input provision services are supplied mainly by the private sector. The main change promoted is improved pastures, but there has been an increase in other products too, such as silage systems, different hay types and the incorporation of many agro-industrial subproducts (sugar cane, etc.). Leadership in this process has been taken by private input companies, NGOs and the government (through INTA and MEFCCA).

114. Animal health services are provided mainly by the state. The creation in 2014 of the Agriculture and Livestock Health Institute (IPSA) by means of Law 862 has come to strengthen animal health surveillance, quarantines, traceability and food safety, to the benefit of beef exports. In RACCS and the province of R?o San Juan, IPSA offers important services such as quarantines, laboratories, epidemiological surveillance and inspections of veterinaries, issuing of notification, visits to farms and dairy product plant inspections, designed to ensure food safety.

115. As concerns traceability, a system is in place that includes farm registration, monitoring of movements and process traceability. Epidemiological surveillance takes place during field visits to ranches by veterinarians, notifications filed by census takers or reports filed by workers, the ranch owner or other local producers who have become aware of a health-related situation on a particular ranch. IPSA also regulates cattle raising inputs sold by private companies.

116. In the cattle raising sector the knowledge and technological transfer system receives support from government programmes and NGOs. In addition to the INTA and MEFCCA programmes which offer direct attention to animal health, there are important programmes run by NGOs such as

TECHNOSERVE, NITLAPAN, CATIE), cooperatives (NICACENTRO; COOPROLECHE), associations of cattle ranchers (UPANIC) and private services.

117. According to the study of the cattle raising value chain, 18% of cattle ranches received some type of technical assistance or training, of which 60% was provided by government institutions (INTA, IPSA, MEFCCA) and the remaining 40% by NGOs, micro-finance entities and cooperatives. Among these there stand out the training offered by INTA on new technologies, management and use of social networks, the establishment of parcels with improved pastures and good farming practices that contribute to the increased production of safe milk.

118. Currently INTA, MEFCA and IPSA are participating in the implementation of a cattle raising programme with EU financing titled ?Programme in Support of the Cattle Value Chain in Nicaragua?, which involves some 9,000 cattle ranching families, including protagonists whose holdings are located in El Rama, Nueva Guinea, San Carlos and El Castillo. In 2020, the ?Bovine Artificial Insemination Programme?, headed by MAG, was approved to increase the cattle herd and improve animal quality, and in 2021 a three-year programme titled ?Development of Livestock Feed Management Using Total Mixed Rations (TMR)? began, with support from the government of South Korea. It is coordinated by INTA.

119. MEFCCA has identified 17 cattle rancher cooperatives in the FOLUR Project area. These cooperatives provide their 465 members with technical assistance, financing for inputs and training workshops together with state institutions. Table 10 indicates which cattle rancher cooperatives are located in the Project area.

TablE 10. CATTLE RAISING CooperativES IN THE proJect AREA

No.	Municipality	Cooperative	Members	No. of Men	No. Of Women
1	KUKRA HILL	Cooperativa Agropecuaria Multisectorial PALMEROS DE KUKRA HILL NO. 2 R.L. (COMAPALKU 2)	26	24	2
2	KUKRA HILL	Cooperativa Agropecuaria Multisectorial PRODUCTORES DE PALMA DE KUKRA HILL R.L (COMAPALKU, R.L.)	28	20	8

3	KUKRA HILL	Cooperativa de Producci?n Agropecuaria R?O ESCONDIDO R.L. (COOPA-R?O ESCONDIDO R.L.)	15	9	6
4	N. GUINEA	Cooperativa Agropecuaria de Producci?n LOS PINITOS R.L. (COOPINO R.L.)	15	0	15
5	N. GUINEA	COOPERATIVA AGROPECUARIA DE PRODUCCION PROVIDENCIA EN ACCION R.L.	23	17	6
6	N. GUINEA	Cooperativa Agropecuaria de Productores del Norte de Nueva Guinea R.L. (COOPRONORTENG, R.L.)	19	13	6
7	N. GUINEA	Cooperativa Agropecuaria Multisectorial FRANCISCO ?LVAREZ R.L. (COOPAMFA R.L)	25	3	22
8	N. GUINEA	Cooperativa Multisectorial de Productores de Semilla de Nueva Guinea NUEVO AMANECER R.L. (COOMUPROSNANG, R.L)	19	12	7
9	EL RAMA	Cooperativa Agropecuaria WAPI-MONTE ROSA R.L. (COAGROWAPI-MONTE ROSA R.L.)	43	40	3

10	EL CASTILLO	Cooperativa Agropecuaria FUERZA DE AGUAS SACRAS, R.L. (COPAFAS, R.L.)	14	13	1
11	EL CASTILLO	Cooperativa Agropecuaria TESORO DEL RAUDAL, R.L .(COOPATER,R.L,)	26	23	3
12	SAN CARLOS	Cooperativa Agropecuaria CAMPOS VERDE EL CAMPESINO, R.L. (COPACVECAM, R.L.)	16	11	5
13	SAN CARLOS	Cooperativa Agrotur?stica LA CARLE?A DEL SUR, R.L. (COACARSUR, R.L.)	15	11	4
14	SAN CARLOS	Cooperativa de Servicios M?ltiples Agropecuaria TIERRA FERTIL, R.L. (COMATIFER, R.L.)	17	12	5
15	SAN CARLOS	Cooperativa de Servicios M?ltiples MELCHORITA R.L. (COOPEMEL R.L.)	28	19	9
16	EL RAMA	Cooperativa de Producci?n y Comercializaci?n de Cocoa y Carne, R.L. (COOPROCAR, R.L.)	34	14	20
17	N. GUINEA	COOPERATIVA AGROPECUARIA DE SERVICIOS NUEVA VIDA, R.L. (COASNUVI, R.L.)	102	64	38

TOTAL	465	305	160

Source: MEFCCA, 2020.

120. It should be noted that the Technological Development Centres (CDTs) run by INTA in Nueva Guinea and the Augusto C. Sandino Technological Development Centre in Kukra Hill carry out applied and adaptive research using an agroecological approach, technology transfer and training in bioinputs, staple foods (mainly beans, rice, maize), roots and tubers, coconut, coffee and cocoa. As regards the animal component, there are studies in grasses, genetic improvement and concentrates for cattle and smallstock. There is also a germplasm bank (cocoa, musaceans, avocado, coffee, aromatic species, bamboo, citrus, exotic fruit, grasses, peach palm, roots and tubers), for the purpose of providing seeds or vegetative material of the various species to the productive sector in the region. There is also a cocoa clonal garden which produces buds with which to reactivate unproductive cocoa plantations by introducing highly productive fine and aromatic cocoa species. The Transfers Directorate holds events at these CDTs, including training sessions and practical demonstrations, in coordination with cooperatives, companies and universities in Nueva Guinea.

121. There are three main types of financing available: coverage, costs and financial products. Sixteen per cent (16%) of cattle ranches received financing, with those ranging from 3.5 to 35 ha receiving more loans than smaller or larger ones. The cost of financing is high, and the main sources are microfinance institutions, cooperatives and rural savings and loans associations (73%), with the remaining credits coming from milk collection centres and commercial houses that sell agricultural inputs, private lenders, the government and NGOs (27%).

122. Regarding fiscal incentives for investment, there has been a strengthening of policies that encourages foreign investment. Examples are the Mexican companies SuKarne and LALA, as well as the alliance between PARMALAT and CENTROLAC

3) Proposed alternative scenario with a brief description of expected outcomes and components of the project and the project?s Theory of Change

3.1 General Project intervention approach and theory of change

123. The FOLUR Nicaragua Project follows the strategic lines of the global FOLUR Impact Programme, adapted to Nicaraguan reality and needs. The FOLUR Impact Programme promotes sustainable food production systems through comprehensive planning and basic product value chains free of deforestation. The FOLUR Impact Programme is based on the premise that production systems should be able to produce sufficient food and raw materials without deforesting or degrading the natural habitats.

124. The FOLUR Nicaragua Project takes for its point of departure the existence of a high degree of pressure to deforest and degrade forests, due mainly to the expansion of the agricultural frontier and extensive cattle raising practices. Because ecosystemic services provided by forests are undervalued, opportunity costs of standing forest are low compared to activities that already have established markets, such as cattle raising and cocoa. Therefore, biologically rich, high-diversity forestland is being transformed into low productivity farming and ranching systems, leading to increased degradation and poverty.

125. In Nicaragua, the FOLUR Project will promote value chains of basic export products (beef, milk derivatives and cocoa), by means of interventions that contribute to diminish the loss of tropical forests caused by productive activities, as well as improve systemic resilience and productivity. This is to occur in areas close to the PAs, for the purpose of diminishing pressure on forest relicts inside and outside of these. At the same time, and on a large scale, there is a need to restore degraded areas to productive conditions or natural ecosystems in currently productive but degraded areas, where more efficient systems will be established, based on the incorporation of sustainable, deforestation-free practices that increase efficiency, tree cover and biological corridors.

126. Governance, joint planning through intersectoral dialogue and the institutional capacity to regulate and control land and forest use is limited. Therefore, actions taken at landscape level or in the production of beef, milk derivatives and cocoa must be supported by a facilitating environment (nationwide policies and incentives). The FOLUR Project will strengthen governance, dialogue, planning, capacities and generate incentives. Likewise, special care will be taken to ensure the participation of Indigenous and Afrodescendant Peoples, in line with consultations and the Plan prepared during the PPP (see Annex J).

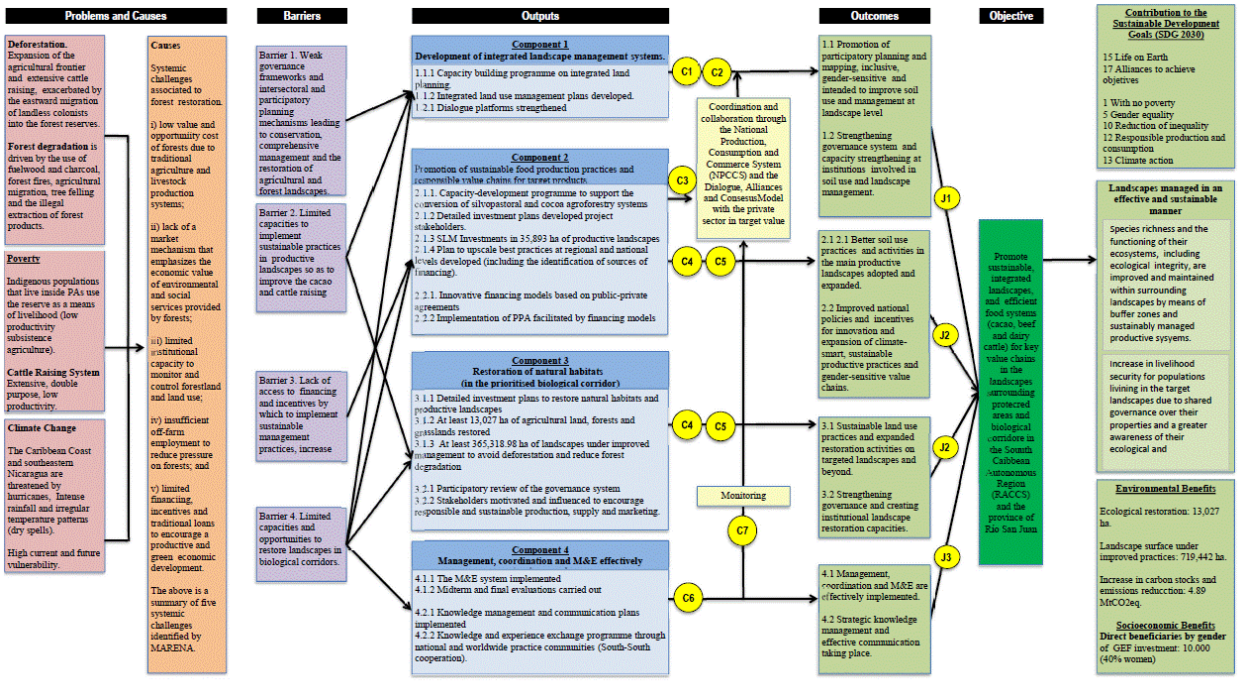
127. The FOLUR Project will support more comprehensive planning schemes that improve land use through integrated landscape management schemes that improve governance and capacities to increase productivity in sustainable, deforestation and degradation-free systems. Landscape-scale interventions based on comprehensive planning and strengthening of capacities and investments are expected to contribute to a shift toward more environment-friendly and sustainable food production and land use systems.

128. The FOLUR Project will promote the implementation and scaling up of more efficient production practices to be developed in more sustainable and resilient landscapes, with support from agribusinesses, the food processing industry and exporters. Finally, the Project will promote

strengthening knowledge exchanges within the Nicaragua and with other countries facing similar challenges, use similar value chains and implement the FOLUR Impact Programme.

129. Based on the foregoing, the Project has put forth an intervention logic that illustrates its theory of change (*Figure 15*). The intervention seeks to attack the root causes of degradation, such as the deforestation caused by the expansion of the cattle raising frontier and the barriers and limitations to addressing these processes, such as weak governance and intersectoral planning mechanisms (see Table 1, Section 1). The theory of change proposed describes the process by means of which, based on Project interventions, multiple environmental benefits will accrue, such as a reduction in the deforestation of high-conservation value forests, the restoration of degraded land (for instance by implementing silvopastoral systems), increasing sustainable production and strengthening the capacities of actors in the cocoa and cattle value chains, as well as reducing the emissions of greenhouse gases (in particular intended to lower land use change to cattle raising systems).

Figure 15. Theory of Change



Assumption

C1	Political support and commitment forthcoming from the highest levels of government to cooperate cross-sectorally in order to deliver the landscape approach. Key sectors include the ministries of Environment & Natural Resources, Agriculture & Forestry, Education, Culture & Sport, Energy & Mines and other relevant entities (e.g.Institute of Aqueducts & Drains, Institute of Rural Development, Institute for Women and Tourism Institute).
C2	Ministry of Environment & Natural Resources and key partners commit to mainstreaming the landscape approach across the project's entire project (i.e. biological corridors)This will ensure that the enitre area surrounding key biodiversity areas within Nicaragua is safeguarded by landscapes under integrated sustainable management, be it for conservation or production purposes.
C3	Government stakeholders from different administrative authorities and across many sectors willing to cooperate and, where necessary, compromise in order to resolve conflicts of interest and enable the landscape approach to be flexibly and effectively applied to a range of scenarios that include buffer zones (biological corridors) for protected areas under restoration, and agricultural and forest production systems. Synergies and conflicts of interest will be addressed through management agreements between relevant parties (partners including local communities) and based on principles of sustainable, integrated land management.
C4	Livestock and cocoa producers agree with investment plans and are willing to invest time to get trained and funds to carry out the investment plansPrivate sector, local stakeholders (including indigenous peoples and afrodescendent communities) willing to cofinance investment activities.
C5	Financing models prove effective and the national finance sector supports the provision of financing to project stakeholders
C6	Communications Strategy is effective in delivering key messages across multiple sectors about the values of Iconservation, the benefits of the landscape approach and the importance of sustainable financing to secure and enhance the integrity of the project area
C7	Effective monitoring informs PA planning and management cycle.
J1	Necessary enabling environment (i.e. strong stakeholder capacity, partnership agreements) in place to support the delivery of benefits from integrated/participatory planning and use of natural resources
J2	Innovative financing from the national financing system, capacity and willingness to invest from project stakeholders support increased efficiency in target value chains, the improvement of livelihoods and food security, and the delivery of global environmental benefits
J3	Development and adoption of best practices, combined with lessons learned from experience, delivers project objective.

3.2 Project Objective, components, outcomes, outputs and activities

130. The **objective of the Nicaragua FOLUR Project** is to promote sustainable and integrated landscapes and efficient food systems (cacao, beef and dairy cattle) in key value chains in landscapes surrounding protected areas (PAs) and biological corridors in the South Caribbean Autonomous Region (RACCS) and the province of R?o San Juan. To achieve this objective, the Project has been structured into four components as follows:

Component 1. Development of Integrated Landscape Management Systems

131. The first barrier identified in Nicaragua to achieve sustainable systems is weak governance frameworks and intersectoral and participatory planning mechanisms leading to the conservation, comprehensive management and restoration of agricultural and forest landscapes (Theory of change ? Barrier 1). To overcome this situation, the FOLUR Project?s first component expects to promote better planning and institutional governance by (i) Promoting participatory planning and mapping to improve land use and management at landscape level; and (ii) Strengthening governance systems and creating capacity at institutions involved in land use management at landscape and national levels.

Outcome 1.1. Participatory, inclusive and gender-sensitive planning and mapping promoted to improve land management and sustainable food systems in the target landscapes

Output 1.1.1. Capacity building program on integrated and participatory landscape planning developed and under implementation for national, regional and local government partners

132. The Programme will design a capacity development programme on comprehensive and participatory landscape planning, aimed mainly at national, regional and local government partners. This is to be done based on a needs diagnostic and definition of target groups, while contents and means will be determined in consultation with them. Different existing modalities of formal and non-formal training will be considered (on line, face-to-face or a combination), daily or on weekends, workshops or courses, postgraduate or master?s degree level, etc.

133. A consultant will be engaged to design the capacities development programme. This person will select the modality to be used jointly with the Interinstitutional Technical Team (MARENA, MEFCCA, INTA, IPSA, INAFOR, INIFOM, SDCC/GRACCS) and an interinstitutional agreement will be reached for the design and approval of the training programme.

134. This training programme will be designed and implemented with the inclusive participation of Indigenous and Afrodescendant peoples and women, for the purpose of improving the land use and management at landscape level. In the capacity strengthening programme on comprehensive and participatory planning, specific modules on methodologies will be developed that incorporate gender equality and traditional Indigenous knowledge. The goal is for the seven municipalities to achieve that 30% of Indigenous, Afro-descendant and mestizo women from the private sector and 20% from the public sector take part in participatory planning for landscape restoration.

135. As specifically concerns Indigenous and Afrodescendant peoples, it must be highlighted that the government of Nicaragua is advancing with a land titling process. They have been granted a communal property title and now progress is being made on their economic and social development. There is still an issue regarding the invasion of these communally-owned lands by colonists and efforts are underway to resolve this through what are known as ?Peaceful Coexistence Agreements?, accompanied by a rules manual.

136. The FOLUR Project will promote compliance with the Voluntary Guidelines on Responsible Governance (VGGT) of land, water and forest tenure, in the context of national food security[68][68] developed by FAO. In addition, the Project will support the implementation of Innovative Development Plans (IDPs), good agricultural practices and development plans in Indigenous and Afrodescendant territories.

137. Activities toward reaching this output are as follows:

? Activity 1.1.1.a Design and implement a training programme on comprehensive and participatory landscape planning, with the inclusive participation of Indigenous and Afrodescendant peoples, women and youths, leading to better land use and management at landscape level.

Output 1.1.2: Integrated participatory management plans developed in project target areas to restore landscapes, conserve forests, and support climate-resistant production systems

138. The Project will establish and facilitate a comprehensive, participatory land use planning system in Project target areas. Support will be provided to institutions, smallholders, cooperatives and territorial Indigenous and Afrodescendant governments so they collaborate in the formulation of municipal, territorial and communal landscape restoration plans. The goal is for at least 30% of the participants in the training workshops to be women living in the FOLUR project area.

139. The main objective of the planning process will be landscape restoration based on an intersectoral dialogue with all actors involved, in particular Indigenous and Afrodescendant authorities, women and youths in the territorial planning process articulated at diverse scales.

140. The methodological framework for the process of participatory, comprehensive territorial planning, based on mapping and evidence to establish Project target areas. This planning will have for its most pertinent pillars landscape restoration, forest conservation and support to sustainable, resilient and deforestation-free production systems. Restoration will focus on silvopastoral systems in cattle-ranching areas, cacao agroforestry systems, forest restoration, reforestation, protection and sustainable management of native forestland.

141. Use will be made of tools developed by FAO to evaluate land use and comprehensive territorial planning with other organizations in different countries, but that will be adapted to conditions prevailing in Nicaragua. Among existing FAO methodologies are comprehensive planning, participatory mapping, frameworks for the development of integrated land use plans and NDT planning tools. These methodologies are being developed and applied by other GEF-financed programmes and projects (i.e. the Dry Lands Impact Programme in Turkey, among others). These efforts are aligned with the STAP guidelines for the application of the NDT scientific framework and include information-gathering and mapping of the biophysical aspects of degradation and sustainable land management (e.g. LADA-WOCAT methodologies), as well as socioeconomic baseline data (e.g. SHARP, PRAGA, GLEAM/LEAP), all used with GIS tools (Collect Earth Online and SEPAL). The outputs emerging from the use of these methodologies and tools will allow for identifying the current situation regarding natural capital and the forest degradation levels that affect it, as well as the relevant socio-economic aspects and thus plan a more sustainable, evidence-based use of the territory.

142. This comprehensive and participatory planning process will take place in the framework of and in articulation with government programmes and strategies, such as the National Cacao Culture Development Strategy (see baseline and associated projects).

143. The activities under this output are as follows:

? Activity 1.1.2a. Support smallholders, producers, cooperatives and Indigenous and Afrodescendant territorial governments as they collaborate to design municipal, territorial and communal landscape restoration plans which are to include silvopastoral, cacao

agroforestry, forest restoration, reforestation and sustainable management of native forests (including participatory mapping methodologies).

Outcome 1.2 Strengthening of governance systems and capacity building for national/local institutions in landscape and land use management institutions and at the national level

Output 1.2.1 Dialogue platforms between the public and private sectors supported to define strategies both on and off the farms and at the landscape level to restore biodiversity and safeguard protected areas

144. The Project will contribute to strengthening dialogue platforms between the public and private sectors through the National Production, Consumption and Commerce System (NPCCS) in RACCS and the province of R?o San Juan. The purpose of the dialogue will be to strengthen the concept of sustainable landscape management and to define strategies by which to manage communal land both on and off-farm, restore biodiversity and safeguard protected areas.

145. The Project will involve multiple actors at local, regional, national and international levels in the effort to eliminate deforestation by means of a shift to sustainable production and value chains. This will take place through NPCCS sessions on key topics related to sustainable, deforestation-free production in the cattle raising and cacao value chains that promote dialogue by strengthening capacities.

146. To that end, the Project will take advantage of FAO?s extensive and world-wide work on climate-smart management of integrated landscapes, agriculture and cattle raising, landscape restoration, integrated pest management, access to markets, drought management, climate resilience and risk management. The main objective will be to share this acquired knowledge and experience with local actors in an effort to strengthen their capacities and ensure significant participation in land-related decision-making. In addition, the formalization and entering into multiple actor and multiple level agreements is facilitated, always for the purpose of restoring the landscape and ensuring forest conservation in RACCS and the province of R?o San Juan. These multiple actor and multiple level agreements can include actors in the various value chains, from beef and dairy product cattle raising to cacao and Robusta coffee growing in Nueva Guinea and the forestland in R?o San Juan.

147. The Project will also facilitate the formalisation of multiple actor and multiple level agreements that contribute to restoring the landscape and ensuring forest conservation in RACCS and the province of R?o San Juan. This is to be done under the OPIM modality / OPA MARENA-FAO Agreement.

148. The activities to achieve this output are:

? Activity 1.2.1.a Strengthen dialogue platforms between the public and private sectors through the National Production, Consumption and Commerce System (NPCCS) in RACCS and the province of R?o San Juan.

? Activity 1.2.1.b Facilitate the conclusion and formalization of multiple actor and multiple level agreements that contribute to restoring the landscape and ensuring forest conservation in RACCS and the province of R?o San Juan.

Component 2. Promotion of sustainable food production practices and responsible value chains for target products

149. In this component the Project seeks to implement climate-smart, sustainable soil use practices by improving the cattle and cacao value chains, as well as undertaking landscape restoration activities and improving policies and incentives for the innovation and expansion of these practices. The challenge here is to strengthen sustainable production, reduce deforestation in protected areas that border on farms and ranches, and restore biological corridors in productive areas.

Outcome 2.1. Implementation of Best Practices for land use and restoration activities in the target production landscapes

150. In order to achieve this outcome, a capacity development programme will be formulated and investments sought to encourage the adoption of more sustainable land use systems.

Output 2.1.1 Capacity development program with an ethnic and gender focus developed and implemented to support the conversion to (i) a low-emission, technologically intensive, silvopastoral livestock system; and (ii) intensive and diversified cacao agroforestry systems, which will contribute to the restoration of landscapes and biological corridors

151. One of the barriers to be overcome are the limited capacities to implement sustainable practices in productive landscapes and improve value chains (cacao and cattle raising), leading to increased productivity under sustainable, deforestation and degradation-free systems (Theory of Change ? Barrier 2). To overcome this limitation a research and capacity development programme will

be designed for the various links in both the cattle raising and cacao value chain (production, post-harvest, transformation/processing, merchandising /market).

152. In this scenario, the Project will promote more sustainable food production systems in order to catch up with demand and improve the economy generated by consumption of these products at regional, national and local levels.

153. A training programme will be designed and implemented for smallholders and cooperatives, for the purpose of improving the productive efficiency of sustainable cattle raising systems that are resilient and low in carbon emissions. This will imply (i) fostering the efficiency of cattle production and resource use; 2) intensify recycling efforts and minimising losses to achieve a circular bioeconomy; 3) capitalize nature-based solutions in order to increase carbon compensation; and 4) make efforts to ensure people are consuming healthy and sustainable diets. The Goals: 7,000 trained livestock producers (at least 20% of participants in the training workshops are female livestock producers in the FOLUR project area) and 3,500 trained cocoa producers (at least 20% of participants in the training workshops are women cocoa producers in the area of the FOLUR project).

154. Further, a training plan for smallholders, cooperatives and Indigenous and Afrodescendant territorial governments will be designed and implemented with the aim of improving the productivity of cacao agroforestry systems. In addition to productivity, the plan?s thematic pillar will be sustainability and diversification, and the issues to be covered include rehabilitation, pruning, fertilization, genetic improvement, forest management and renovation. This will take place in alignment with the Nicaraguan Fine Cacao Development Strategy 2020-2023.

155. Furthermore, the adding of value to products in the cattle and cacao chains will be promoted, with a view toward improving competitiveness in product transformation. This is to be done through training and technical accompaniment.

156. Some of the measures intended to develop climate resilience among cacao farmers are as follows (see Climate Risk Assessment):

- ? Investment in manuals with climate-smart agricultural practices.
- ? Pest and disease prevention measures.
- ? Investment in climate-resistant varieties that respond well to stress caused by droughts, pests and diseases, while preserving good yields and bean quality.
- ? Investment in early warning systems and improvement of access to meteorological and climate-related information (rainfall and droughts, respectively), as well as associated risks (pests and diseases) for end users.
- ? Mapping of high-risk areas (prone to flooding, landslides and strong winds).
- ? Among digital innovations are locally made agrometeorological apps.

157. The Project will develop this capacity strengthening programme with support from alliances forged with buyers/exporters who currently provide technical assistance (Ritter Sport, ECOM, Cacao Oro, Ingemann) and UCA Ahmed Campos, Rikolto, WCF and CIAT, making use of small research funds made available by APEN, Rikolto, WCF and international collaboration (CIRAD, ICCO, CATIE, others) (see baseline).

158. This outcome will take into consideration what women told their interviewers during the gender study concerning the actions and issues they feel would be useful to include in the training and technical assistance to be received:

- ? Genetic improvement of planting stock
- ? Genetic improvement of double purpose cattle
- ? Negotiation and sales technique
- ? Cattle raising based on a sustainability strategy
- ? Pasture grass varieties
- ? Cattle feed preparation and supplements
- ? Technical teams to facilitate work (improvements to galleys, thermometers to measure yogurt temperature)
- ? Techniques to improve transformation, packing and labelling of milk derivatives
- ? Expansion of markets
- ? Business administration
- ? Accompaniment during reforestation; regulation of indiscriminate forest felling in the Indio-Ma?z Biological Reserve
- ? Strengthening of cooperatives

159. A fundamental pillar for the training programme will be the INTA Technological Development Centres (TDCs), with whom alliances are to be forged both for the implementation of improved practices and forest restoration / expansion.

160. Work will also take place with the 16 cacao and cattle raising cooperatives that offer their members services such as technical assistance, financing of inputs and training workshops conducted by state institutions.

161. In order to design and organise the training programme agreements will be entered into with specialised research and teaching centres such as CATIE, CIAT, Nicaraguan universities and the private sector in the area. The training programme is to include a module on methodologies for incorporating gender equality and traditional Indigenous knowledge. To design the programme, validation sessions will take place with the Interinstitutional Technical Team (MARENA-MEFCCA-INTA-IPSA- INAFOR-INIFOM-SDCC/GRACCS).

162. The activities to achieve this output are:

- ? Activity 2.1.1.a Develop research, validation and capacity strengthening programmes for technicians on environment-friendly technologies and/or practices that increase productivity and add value to growing cacao and raising cattle.
- ? Activity 2.1.1.b Design and implement a training programme for smallholders and cooperatives aimed at improving the productive efficiency of the cattle raising system by making it sustainable, low in carbon emissions and resilient.
- ? Activity 2.1.1.c Design and implement a training programme for smallholders, cooperatives and Indigenous and Afrodescendant territorial governments so as to improve productive efficiency, sustainability and diversification of the cacao agroforestry system in a manner that is aligned with the Nicaraguan Fine Cacao Development Strategy 2020-2023.

Output 2.1.2 Detailed investment plans developed by project stakeholders to ensure sustainable management of the target production landscapes.

163. Capacity strengthening will be bolstered by the formulation and implementation of investment plans in support of smallholders, cooperatives and Indigenous and Afrodescendant Territorial Governments (IATGs) as a means to promote technological reconversion to sustainable systems that are low in carbon emissions, resilient and deforestation-free. In the case of cattle raising systems, transformation will be geared to making them more intensive, with plant cover, high biodiversity and low carbon emissions. As for cacao, diversified, productive and resilient agroforestry systems will be created.

164. Investment plans will be developed with Project protagonists that ensure full coherence with environmental, economic and social needs.

165. Likewise, alliances will be forged and a better organizational level established for merchandising and exports, with support from the private sector that plays a role in the cattle and cacao value chains. The goal is to achieve 100% compliance by all approved protagonists with their investment plans and that at least 20% of beneficiaries of the investment plans are women producers in livestock and cocoa in the area of the FOLUR project.

166. The selection of technologies and sustainable systems will use good practices platforms such as WOCAT.

167. For purposes of implementing the investment plans in sustainable, low carbon, resilient and deforestation-free cattle raising, as well as sustainable and resilient cacao plantations, agreements will be signed with INTA, MEFCCA and IPSA.

168. The activities to achieve this output are:

- ? Activity 2.1.2.a Formulate and implement investment plans to support smallholders, cooperatives and IATGs in their technological reconversion to sustainable, resilient, deforestation-free cattle raising systems low in carbon emissions.
- ? Activity 2.1.2.b Formulate and implement investment plans investment plans to support smallholders, cooperatives and IATGs in their technological reconversion to sustainable, resilient, deforestation-free cacao agroforestry systems low in carbon emissions.

Output 2.1.3. 35,893 hectares of productive landscapes (prioritized in product 2.1.2) subjected to sustainable land management through silvopastoral and agroforestry systems in buffer zones of protected areas of the RACCS and the Indio Ma?z Biological Reserve (RBIM).

169. Buffer zones in protected areas in RACCS and the IMBR (see Figure 3) require more sustainable management leading to a reduction in degradation, restoration and the creation of biological corridors.

170. The Project will implement sustainable management systems in productive landscapes located in the buffer zones of the Punta Gorda, Cerro Silva and Cerro Wawashang National Reserves in the South Caribbean Autonomous Region.

171. The Project will select the most appropriate sustainable management and restoration systems in a participatory manner and based on the most relevant degradation problems identified, among them slashing-and-burning, extensive grazing, reduction of plant cover and erosion. The systems to be used both inside the biological corridors (output 3.1.2) and outside if the corridors (output 3.1.3) have yet to be detailed.

172. Silvopastoral and agroforestry systems will be implemented on 35,893 ha, thus increasing livestock and agricultural productivity, while promoting a reduction in land degradation, the restoration of biodiversity and the establishment of biological corridors in these productive areas. In the case of cattle raising, the core objective is to promote this activity in silvopastoral systems, with low emissions and using more intensive technologies. The goal includes that at least 30% of women have approved plans for the restoration of productive landscapes.

173. This output is closely linked to and complements output 3.1.1, which refers to the restoration of productive landscapes located in the biological corridors in RACCS and the province of R?o San Juan. In the case of this particular output, the restoration of biological corridors in productive systems will be promoted by means of an increase in plant cover (silvopastoril systems, diversified agroforestry systems under sustainable management).

174. In addition to ameliorating pastureland by converting it to silvopastoral systems, there will be genetic and cattle fertility improvement, the adoption of better pasturage and good quality feed.

Taken together, these will increase overall productivity. It needs to be considered that the most important foundation of technological change as concerns increasing productivity, competitiveness and profitability in double purpose systems is the adoption of improved grass species in more than 60% of the pastures, accompanied by investments in fenced areas in order to establish more efficient rotational management and achieve higher amounts of biomass, complemented with a strategic, forage-based dietary supplement (Holmann, 2015). The establishment of more nutritive pastures, including forages with high protein contents, will make for better-fed cattle and more intensive management.

175. As for cacao, intensive and diversified agroforestry systems will be promoted. This will contribute to the restoration of landscapes and biological corridors (see output 3.1.1). Access to markets will be promoted for a greater diversity of products growing in the cacao agroforestry systems. Capacities will be strengthened to implement new technologies in cacao management (especially the fine and aromatic varieties), as well as improved phenological and post-harvest management.

176. To achieve resilient systems, it is necessary to incorporate climate change adaptation measures, considering that the main climate-related threats (WCF, 2018 in Climate Risk Assessment, Appendix 4) for cacao plantations in tropical environments in terms of production are:

- ? *Drought* may lead to high mortality among seedlings, smaller-size beans, more attacks by capsids and other insects, Cherelle wilt, abortion of flowers and smaller yields.
- ? *Intense and prolonged rainfall* may cause high mortality among seedlings and increase pests and diseases (black pod, trunk canker, pink disease other fungal diseases), abortion of flowers, erosion of soil surface and exhaustion of its nutrients, fungi on the beans and smaller yields.
- ? *Stress caused by heat* can diminish yields, close of stomas due to a reduction in photosynthesis, a decline in flowers and fruit, wilting of leaves, smaller beans, high mortality among seedlings, and so on.

177. Other threats along the value chain have also been reported, for instance during the processes of drying, storage and at the markets. The quality and quantity of the beans, as well as of cacao derivatives, may compromise the availability of this product in international and national markets.

178. These risks and the approaches needed to work with farmers to mitigate and adapt to climate-related dangers must be considered. It is necessary to work with agricultural associations in support of cacao drying and fermentation infrastructure, for the purpose of improving product quality and negotiations must take place with financial institutions to provide credits and insurance to farmers so they are able to implement mitigation and climate change adaptation measures.

179. This is to be achieved through agreements between MARENA and specialised centres such as CATIE, CIAT, national universities and the private sector.

180. The activities to achieve this output are:

? Activity 2.1.3.a Implement sustainable management systems in production landscapes in the buffer zones of the Punta Gorda, Cerro Silva and Cerro Wawashang national reserves in the South Caribbean Autonomous Region (RACCS).

? Activity 2.1.3.b Implement sustainable management systems in production landscapes in the Indio-Ma?z Biological Reserve in the province of R?o San Juan.

Output 2.1.4 Plan to upscale best practices at regional and national level developed and implemented (includes identifying additional funding)

181. For the expansion of best practices, a plan will be designed with the actors involved, and actions will be coordinated with cattle and cacao processing and merchandising companies (e.g. Ritter Sport), so these practices are incorporated to their production standards and their replication is encouraged. To this end there will be financing mechanisms and incentives (see outcome 2.2), intended to promote a sustained expansion which it is expected will continue once the Project comes to a close.

182. The replication of best practices will be based on productive standards with environmental results that are low in carbon emissions and resilient. In the cattle raising chain, emphasis will be placed on more intensive practices that are based on more nutritious and digestible grasses and forages, for the purpose of improving productivity and reducing GHG emissions per animal. There will also be a focus on compliance with the most relevant regulations in force as concerns animal health, the labelling of cattle feed, safety, the registry of veterinary inputs and products, cattle transport and operation certificates, among others.

183. In the cacao value chain, the focus will be on expanding good practices to all actors (government and private) who provide seedlings, tools, fertilizers, insecticides, fungicides and genetic material, as is the case with INTA at the *El Recreo* experimental centre, the use of ?elite trees? found in the various regions of the country and clonal gardens established with support from CATIE and INTA. Seedlings are produced by farmers, cooperatives and large commercial nurseries (ECOM/EXPASA and Mercon/Transplanta), the latter linked to buyers. Most smallholders gain access to high quality seedlings through cooperatives or NGOs that are subsidized with development funds and with whom the Project will also work.

184. This output is related to output 2.2.1 and output 2.2.1, through which innovative financing models will be strengthened or established. Once these practices are incorporated to financing mechanisms (e.g. microcredits), their expansion will receive a boost.

185. The activities to achieve this output are:

? Activity 2.1.4.a Design and implement a plan by which to replicate best practices at regional and national level.

Outcome 2.2. Enhanced policies and incentives support innovation and scaling up of climate-smart sustainable production practices and gender-sensitive value chains at the national level.

Output 2.2.1. Innovative financing models based on public-private arrangements identified and designed to support the implementation and expansion of good practices (Trusts, Capitalization of the National Environmental Fund, Nature-based Economic Solutions, Ecotourism, Soft Credit, Incentives, NAMA, among others).

186. The objective of this output is to overcome the third barrier to more sustainable land management in Nicaragua, which is the lack of access to financing and incentives by which to implement sustainable management practices, increase productivity through technological innovation and restore landscapes (Theory of Change ? Barrier 3).

187. The FOLUR Nicaragua Project will identify and design innovative financing mechanisms based on public-private arrangements identified and managed through instruments such as trust funds, capitalization of the National Environment Fund, nature-based economic solutions, ecotourism, microcredits, soft credits, incentives, NAMA, watershed funds and market-based mechanisms, among others.

188. Conservation and restoration of biodiversity will be achieved by implementing integrated and diversified agroforestry and silvopastoral systems. These systems will be promoted through the establishment of economic incentive packages such as trust funds, improved access to markets and green investment funds, which will allow to mobilise sustainable resources in order to promote investment at different scales and to facilitate landscape restoration.

189. A baseline and a feasibility study for financing models to promote landscape restoration and forest conservation in the RACCS and the province of R?o San Juan will be prepared.

190. The Nicaraguan National Financial System has taken actions to increase the availability and absorption of funds for environmental and climate change themes, among which are the following mechanisms:

? **BANPRO** ? L?neas Verdes (Green Lines)[69][69]

These ?Green Lines? are funding lines for energy efficiency and renewable energy Projects and environmental protection measures aiming at generating higher business profitability, saving costs, increasing productivity and generating less environmental impact linked to climate change. Projects eligible for funding include:

- Enhanced efficiency of agro-industrial chains: coffee, peanut, sugar, staple food (rice, maize, beans, sorghum), fruits and vegetables, roots and tubers, cacao, and others (plantains, soybeans).

- Drip, sprinkler or pivot irrigation systems.
- Improved irrigation systems that save at least 20% in water and energy
- Water harvesting
- Renewal of coffee plantations
- Efficient coffee wet mills
- Energy efficiency in post-harvest processing
- Renewable energy in general: solar pumps, use of biomass, small hydroelectric and wind power plants, etc.

? **BANCO LA FISE- BANCENTRO. ECOCREDITOS**[70][70]

The overall objective of the ECOCREDITOS is to offer its clients financial products to facilitate the implementation of technologies for greater energy efficiency, renewable energy and cleaner production to increase their productivity, competitiveness and profitability, while being environmentally-friendly as well.

It is aimed at projects related to technological changes, substitution of raw materials, inputs, more efficient production lines, processes based on good practices, solid and liquid waste management, with the aim of improving the environmental performance of business operations.

? **BAC CREDOMATIC-Cr?ditos Verdes (Green Credits)** **[71]**[71]

These ?Green Loans? finance energy efficiency and renewable energy Projects in order to support the improvement of trade, production and innovation processes.

The feasibility of a multilevel scheme making more use of international Green Finance mechanisms, carbon credits and other climate funds feeding national and local incentive and financial schemes, as well as technical assistance, thus mobilising international resources aimed at local farmers, will be explored.

191. Financial incentives will complement the training programme to ensure the adoption of sustainable practices (see output 2.1.1), as well as support the implementation of investment plans (output 2.1.2). Resources, incentives and investments will thus be mobilized for the adoption of practices facilitating the conversion of current systems into more intensive, productive, sustainable and resilient systems, which includes improving land, soil, water and forest use practices. In the case of cattle, investments will be directed at various links of the value chain as well as to genetic improvements and the management of low-emission cattle intended to reduce the GHG. In the case of cacao, investments will also aim at the diversification of agroforestry system markets, thereby achieving highly productive and diversified integrated systems and reducing impacts on biodiversity.

192. For a study of the existing models and agreements and the design of financing models applicable to the target landscapes, an agreement will be made between MARENA (or the MHCP) and specialized centres.

193. The design of these financing models will include the analysis of existing instruments applicable to farming systems of the target landscapes, and their potential for expansion. The diversity of innovative funding mechanisms already implemented in the region and around the world for the purpose of promoting the adoption and extension of conservation practices, sustainable management and restoration practices will be taken into account.

194. The financing models selected in output 2.2.1 will be implemented. This will require arranging for public-private agreements, a closer approach between the financial and the agriculture and environment sectors, and the establishment of a mechanism for effective resource mobilization to accompany the capacity-building and investment plans (output 2.1.1. and 2.1.2).

195. The financing mechanism developed to support the cattle value chain will involve at least four dairy companies, two industrial slaughterhouses and twenty cattle cooperatives (producers of beef and milk derivatives).

196. To finance the cacao value chain, three international companies to which Nicaragua exports cacao and five cooperatives will be involved.

197. In both cases, agreements will be made between MARENA (or the MCHP) with an institution or team for the implementation of financing models to be developed.

198. The activities to achieve this output are:

- ? Activity 2.2.1.a Identification and negotiation of public-private arrangements for the development of financing models through trust funds, capitalization of the National Environmental Fund, nature-based economic solutions, ecotourism, soft credits, incentives, NAMA, among others.
- ? Activity 2.2.2.b Public-private financing models facilitated for the cattle value chain: four dairy companies, two industrial slaughterhouses and twenty cattle cooperatives (for beef and milk derivatives).
- ? Activity 2.2.2.c Public-private financing models facilitated for the cacao value chain: three international companies to which Nicaragua exports cacao and five cacao-growers? cooperatives.

Output 2.2.2 Partners, value chain actors, financiers and investors summoned, informed and coordinated to promote innovation, investment, replication and scale-up.

199. Actors of the value chain, as well as financial institutions and investors will be regularly convened for the intersectoral dialogue, the drafting of plans and strategies, and the arrangement of agreements for the promotion of innovation, replication, and the extension of technological innovation within each value chain.

200. In the case of cattle, innovation refers to a low-carbon cattle production, while in the case of cacao, innovation will focus on sustainable and resilient production.

201. This output is articulated with component 4, on knowledge management, exchange of experiences and South-South cooperation with other countries on innovative ways to promote the sustainability of value chains and landscape restoration systems.

202. The activities to achieve this output are:

- ? Activity 2.2.2.a Facilitation of dialogue to promote innovation, replication and extension of technological innovation for low-carbon cattle raising.
- ? Activity 2.2.2.b Facilitation of dialogue to promote innovation, replication and extension of technological innovation for sustainable and resilient cacao production.

Component 3: Restoration of natural habitats

Outcome 3.1 Sustainable land management practices and restoration activities implemented in target landscapes are upscaled to similar ecosystems in the target biological corridor

203. Biological corridors will be restored to increase carbon sinks, promote the integration of biodiversity and reduce land degradation, while complying with international commitments, including those made to REDD+. The restoration of degraded landscapes will allow for maintaining and generating ecosystem services that are essential for sustainable production in a land area with 301,161 inhabitants.

Output 3.1.1 Detailed investment plans (based on products 1.1.1 and 1.1.2) developed by project stakeholders to restore natural habitats and productive landscapes in the biological corridors of the RACCS and the department of R?o San Juan

204. This output is related to output 2.1.1., through which capacities will be built for the adoption of sustainable management practices (e.g. silvopastoral and agroforestry systems).To formulate

investment plans, the most adequate and viable systems for restoration will be defined and prioritized (e.g. silvopastoral, assisted restoration, enrichment, reforestation, natural regeneration, protection and sustainable management of native forests, soil conservation, etc.) for each intervention area, on a participatory basis and in accordance with the current land use system and its ecological, market and social viability.

Project interventions will prioritize biological corridors covering 167,236 ha (currently described in Annex O. This land is divided into the following uses: 60%: 29% forest; 8% crops; and 3% other uses. https://projectgeffao.users.earthengine.app/view/nicaragua-folur

To implement the landscape restoration actions in the project area, the map of Priority Areas will be used, which was built on the basis of the 2015 National Map of Land Use, in which all the areas that are located less than 500m from a patch of remnant forest and proposal of types of action that are based on an analysis of territorial aptitude and together with the field visits will serve as a guide for the selection of the site. The most appropriate practices for each site will be determined based on the socioeconomic conditions and the restoration plans to be developed through product 3.1.1 for each intervention area, in a participatory manner and in accordance with the current land use planning and its ecological viability, commercial and social.

According to local experts consulted in the design of the project, the most suitable proposed areas for interventions in the prioritized area are the following:

Silvopastoral: mainly in San Carlos, Bluefields, Nueva Guinea and El Rama.

Agroforestry: mainly in Nueva Guinea, El Rama and El Castillo.

Forest Protection and Management: mainly in Kukra Hill, Laguna de Perlas and El Castillo.

The type of restoration that will be implemented includes support to establish the silvopastoral system through planting trees within the area of cattle farms associated with pastures and also support the agroforestry system through planting trees within farms that have cocoa cultivation. Tree plants will be used for live shrub barriers and live grass barriers that are produced in nurseries registered by the National Forestry Institute in the project area, that is, forest species from the area will be used and the preparation of the site, the care of planted seedlings and other forest management interventions will be assumed by the beneficiary producers of the project to restore the forest, protect it.

Forest protection and management interventions will focus on managing the natural regeneration of the forest in water recharge protection zones or on the banks of rivers to conserve and restore riparian forest located in the project area.

In order to implement restoration and investment plans, alliances will be created between MARENA and national universities or regional institutions, such as CATIE and CIAT, that have experience in sustainable management and landscape restoration. In addition, there will be a technical support specialist for each municipality to formulate individual plans.

205. Investments for the purpose of increasing productivity and intensifying production will be promoted, thus adding value to the cattle and cacao chains.

206. The Project will also work on agricultural traceability as a measure by which to avoid deforestation, and on product quality in accordance with market access and standards.

207. With the aim of launching restoration and investment plans, alliances will be created between MARENA and national universities or regional institutions, such as CATIE and CIAT, who have experience in sustainable management and landscape restoration. In addition, there will be a technical support specialist for each municipality to formulate individual plans.

208. The activities to achieve this output are:

? Activity 3.1.1.a Assisting smallholders, cooperatives and IATGs in the formulation of investment plans to restore natural habitats and production landscapes, depending on the municipality and modalities: i) silvopastoral, ii) cacao agroforestry, iii) forest restoration and reforestation, and iv) protection and sustainable management of native forest.

Output 3.1.2 At least 13,027 hectares of agricultural land restored under priority systems in output 3.1.1) (contributes to Core Indicator 3).

209. Once the restoration systems are selected and the plans for restoration in biological corridors are developed (output 3.1.1), these will be implemented through workshops held to design the strategy for application of improved management and restoration practices.

210. Sustainable management measures to be implemented include: crop diversification, reduction and management of erosion (soil management at sowing and harvesting times, drainage, etc.), and groundwater management. Likewise, measures will be implemented to reduce the use of agrochemicals.

211. Workshops will be held on the adoption of these practices, and a field team will be formed for the purpose.

212. Agreements will be reached between MARENA and a government agency (INTA) or an NGO to form a field team and support the adoption of silvopastoral practices in cattle raising and cacao cultivation. The proposal is for MARENA to implement the adoption of forest restoration, reforestation, protection and management practices.

213. An exchange of experiences with Cuba and other countries about the adoption and expansion of sustainable management practices through mechanisms such as farmer field schools will be taken into consideration (component 4).

214. The activities to achieve this output are:

- ? Activity 3.1.2 a Establishing a field team for the implementation of prioritized systems.
- ? Activity 3.1.2.b. Implementing prioritized systems: agroforestry, silvopastoral, forest restoration and reforestation, and protection and sustainable management of native forest.

Output 3.1.3 At least 167,236 ha of landscapes (prioritized landscape area in the Biological Corridor of the RACCS and department of R?o San Juan) under improved management to avoid deforestation and reduce degradation in the forests of the biological corridors (outside protected areas)

215. The Project will implement sustainable land management practices and expanded restoration activities in the target landscape (outside or inside the selected biological corridor) covering 167,236 ha. This land is divided into the following uses: 60% pastures, 29% forests; 8% crop lands; and 3% other uses. Online land use maps can be seen in the google earth engine application located at: https://projectgeffao.users.earthengine.app/view/nicaragua-folur

216. To implement the landscape restoration actions in the project area, the map of Priority Areas will be used, which was built on the basis of the 2015 National Map of Land Use, in which all the areas that are located less than 500m from a patch of remnant forest and proposal of types of action that are based on an analysis of territorial aptitude and together with the field visits will serve as a guide for the selection of the site. The most appropriate practices for each site will be determined based on the

socioeconomic conditions and the restoration plans to be developed through product 3.1.1 for each intervention area, in a participatory manner and in accordance with the current land use planning and its ecological viability, commercial and social.

217. According to local experts consulted in the design of the project, the most suitable proposed areas for interventions in the prioritized area are the following:

- ? Silvopastoral: mainly in San Carlos, Bluefields, Nueva Guinea and El Rama.
- ? Agroforestry: mainly in Nueva Guinea, El Rama and El Castillo.
- ? Forest Protection and Management: mainly in Kukra Hill, Laguna de Perlas and El Castillo.

218. The type of restoration that will be implemented includes support to establish the silvopastoral system through planting trees within the area of cattle farms associated with pastures and also support the agroforestry system through planting trees within farms that have cocoa cultivation. Tree plants will be used for live shrub barriers and live grass barriers that are produced in nurseries registered by the National Forestry Institute in the project area, that is, forest species from the area will be used and the preparation of the site, the care of planted seedlings and other forest management interventions will be assumed by the beneficiary producers of the project to restore the forest, protect it.

219. Forest protection and management interventions will focus on managing the natural regeneration of the forest in water recharge protection zones or on the banks of rivers to conserve and restore riparian forest located in the project area. In order to implement restoration and investment plans, alliances will be created between MARENA and national universities or regional institutions, such as CATIE and CIAT, that have experience in sustainable management and landscape restoration. In addition, there will be a technical support specialist for each municipality to formulate individual plans.

220. The most appropriate systems will be defined on a participatory basis. These systems will include practices and technologies to reduce degradation and thus increase productivity and hinder the advance of the agricultural frontier. In the case of cattle raising areas, tree nurseries and silvopastoral systems with a high level of biodiversity will be established. Trees and bushes will be planted as living fences, as well as for shade and for fodder, thereby providing perches for birds, food for vectors and pollinators. This will strengthen and restore the dynamic of the current flora and fauna and thus create biological corridors. In addition, measures will be taken for the improvement of pasture, rotation of grazing areas, rational grazing, or stabling of livestock (mainly goats).

221. In the case of cacao agroforestry systems, emphasis will also be made on their diversification, with key species for frugivorous animals, with growth cycles providing habitat, nesting

sites and food for frugivorous animals and other species throughout the year. Likewise, in areas with forest remnants, activities will be carried out for their protection, enrichment and diversification, for conservation and expansion purposes.

222. The definition of the systems to be implemented will also be made on the basis of each considered system?s contribution to carbon sequestration. On this biological basis, economic and market studies will be carried out to define the necessary systems and investments, thereby ensuring economic, environmental and social benefits.

223. In addition, protection and restoration measures will contribute to habitat conservation and the protection of high value forests for the conservation of biodiversity, including two critically endangered species, according to MARENA and the category of the UICN list of endangered species.

224. Under this output, field teams will also be formed to support the adoption of the promoted practices.

225. The activities to achieve this output are:

? Activity 3.1.3.a. Validating and adopting sustainable land use practices and implementing extended restoration activities in the target landscapes (outside or inside the selected biological corridor).

Outcome 3.2 Strengthening of governance and institutional capacity building for landscape restoration

Output 3.2.1 *Inter-sectoral and multilevel dialogue facilitated for a participatory review of the governance system, identification of bottlenecks, and necessary reforms for landscape restoration.*

226. In addition to strengthening participatory intersectoral planning as programmed in expected outcome 1.1, dialogue between different sectors (agriculture, environment, trade, economy, etc.) and between different levels (local, regional, national, international) will be promoted. The main purpose of this dialogue will be a joint analysis of the governance structure and bottlenecks hampering transformation towards more sustainable management and towards conservation and restoration of farming systems and habitats. On the basis of this analysis, the reforms necessary for landscape restoration, such as legal, political, financial and administrative reforms at all levels will be identified.

227. This output will take into consideration the concepts and tools for the formulation of strategies to integrate sustainable land use into policy frameworks and other decision-making processes, such as financing mechanisms, land use planning and local management plans.

228. To achieve this output, dialogue workshops and sessions will be held with the NPCCS and a consultant to facilitate the aforementioned review. The results of this analysis will be formulated as reform proposals, and these will be tackled with all institutions involved in order to define the strategy for their achievement.

229. The activities to achieve this output are:

? Activity 3.2.1.a. Strengthening of intersectoral and multilevel public-private dialogue platforms, with a focus on governance of cattle raising and cacao chains.

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Output 3.2.2 Stakeholder (partners, value chain actors, financiers and investors) are convened, informed and coordinated, to encourage resilient (responsible) and sustainable production, sourcing and marketing.

230. The Project will apply innovative mechanisms and instruments to encourage responsible and sustainable production, supply and merchandising in cattle and cacao chains. Efforts will be made to unite all partners and actors of the value chain (producers, processors, traders) with funders and investors so as to jointly define strategies for the planning, financing, implementation and monitoring of activities for more resilient and sustainable production, supply and merchandising.

231. To this effect, a contract will be made with a specialized centre for the drafting of a proposal for innovative mechanisms and instruments. In addition, dialogue workshops and consultations about proposals of innovative mechanisms will be held with the public and private sector.

232. This output will also be articulated with component 4, in order to include the topics of innovate mechanisms and instruments for responsible and sustainable production, supply and merchandising in the cattle and cacao chains in the exchange of experiences.

233. The activities for this output are:

? Activity 3.2.2.a Innovative mechanisms and instruments are validated and implemented to encourage responsible and sustainable production, supply and merchandising in the cattle and cacao chain.

Component 4 Program coordination, collaboration and capacity building

Outcome 4.1 M&E system and stakeholder collaboration support project and FOLUR programme delivery

Output 4.1.1 M&E system implemented, monitoring and evaluating and reporting in the context of the global coordination program.

234. A monitoring and evaluation system (M&E) will be implemented to follow up on Project progress and its consistency and alignment with developments in the global FOLUR programme. Regular M&E workshops will be held.

235. The implementation of the monitoring system includes building technical capacities and equipment to ensure the monitoring and evaluation (M&E) of the Project?s progress at the national level (MARENA), regional level (SERENA and Secretariat for Production), provincial level (R?o San Juan), as well as the monitoring of carbon and emissions reductions in the cattle raising and cacao chain. This strengthening will allow the baseline survey and Monitoring & Evaluation of the project, a specialist in gender methodology and indigenous peoples, a specialist in biodiversity and monitoring of emission reduction in the Livestock and Cocoa chain in the FOLUR project area. Likewise, both carbon and emissions reductions will be monitored in the cattle raising value chain. Implementation arrangements for the monitoring system will be coordinated under the leadership of MARENA, and agreements will be established for the gathering and systematization of the information with actors involved in components 2 and 3.

236. The activities for this output are:

? Activity 4.1.1.a. Implementation of the monitoring and evaluation system of the FOLUR Nicaragua Project, including the building of technical capacities and equipment, establishment of the baseline and the monitoring of carbon and emissions reductions in the cattle and cacao chains.

Output 4.1.2 Midterm and final evaluations carried out

237. An independent mid-term and final evaluation will be carried out, and the integration of the evaluation?s results will be ensured so as to constantly improve Project activities.

238. The activities to achieve this output are:

? Activity 4.1.2.a. Direct and facilitate the development of Project evaluations.

Outcome 4.2 Strategic Knowledge Management and Communication programmes effectively implemented.

Output 4.2.1 Knowledge management and communication program in execution, including the systematization of experiences in the agricultural and forestry sector based on the restoration of biodiversity and developed with women, youth, indigenous peoples, Afro-descendants and local communities.

239. Knowledge and communication management will be a fundamental pillar of the Project, in order to involve all actors and promote the necessary reforms, implementation and expansion of conservation, sustainable management and restoration practices.

240. A knowledge management programme will be designed and implemented with key actors, mainly farmers, women, youth, Indigenous peoples, Afrodescendants, and local communities. This knowledge management programme will ensure the strengthening of ancestral Indigenous and Afrodescendant knowledge and practices of communities such as the Creoles in Bluefields, the territorial governments of Rama Kriol and the Pearl Lagoon Indigenous and Afrodescendant territories.

241. As part of the knowledge management programme, a plan will be designed for communication and sensitization on sustainable food systems and Project progress and impact, articulated with all programmes and activities for capacity-building and facilitation of dialogue. On the one hand, this plan will include thematic aspects that need to be underpinned in various target groups, such as the importance of deforestation-free production, sustainable land management, land restoration, climate-smart cattle-raising, the world view of Indigenous and Afrodescendant peoples on sustainable food systems and climate change. On the other hand, the communication plan will help to inform Project progress and share experiences and lessons learnt.

242. Knowledge management will be fed by the activities developed on the Global Knowledge to Action Platform of Food Systems, Land Use and Restoration FOLUR GEF (see Section 8 *Knowledge Management*).

243. Consultants will be hired for the design of the knowledge management plan and the communication plan. MARENA will implement the knowledge management programme as well as the communication programme, both with FAO support.

244. The activities to achieve this output are:

- Activity 4.2.1.a Design and implementation of a knowledge management programme through case studies and participation in activities of the FOLUR GEF Global Platform.
- Activity 4.2.1.b Implementation of a plan for communication and sensitization on sustainable food systems.

Output 4.2.2 Knowledge and experience exchange program through national and global communities of practice (South-South Cooperation)

245. A programme for the systematization, communication and exchange of knowledge and experiences will be designed and implemented. Project experiences, its overall strategy and the experiences of the cattle raising and cacao chains will be continuously systematized and communicated. This will be done through exchange of experiences and participation in national and world-wide communities of practice.

246. This programme will articulate the South-South initiatives related to sustainable land management, climate change, restoration and food systems at intra-regional and inter-regional levels.

247. In the framework of the South-South exchange and cooperation programme to be developed, the FOLUR Nicaragua Project will implement exchange workshops with national and international organizations, in order to support the various processes of capacity-building and forging of alliances.

248. During the gender analysis, one of the recommendations made by respondents was to arrange for exchanges of experiences with other women who have had successful experiences in their ventures related to the cacao value chain. This activity will be taken into account and several exchanges among women will be held.

249. This programme for systematization, communication and knowledge exchange and South-South experiences will be internally articulated with the capacity-building programme (Output 2.1.1) and the knowledge management programme (Output 4.2.2). Externally, the programme will be developed in close coordination with, and receiving the contributions and the support of, the Global FOLUR platform (see Section 8. *Knowledge Management*).

250. The activities for this output are:

- ? Activity 4.2.2.a Implementation of a plan for systematization and exchange of experiences (needs, interesting experiences, solution providers, etc.)
- ? Activity 4.2.2.b Facilitation of the participation of the Project?s key actors in a South-South exchange, based on the good cultural and production practices of internal regional, national and international Indigenous and Afrodescendant communities of the FOLUR GEF Programme.

4) Alignment with GEF focal area and/or Impact Program strategies

1. The Project is aligned with objectives BD 1-1, LD 1-1, CCM 2-6 and FOLUR IP. There follows a description of how the Project outcomes and products correspond with the specific objectives of each focal area and the FOLUR Impact Programme.

? *Objective BD 1-1, Mainstream biodiversity across sectors as well as landscapes and seascapes through biodiversity mainstreaming in priority sectors*, will be achieved through outcome 1.1, by promoting participation in the design of sustainable management plans for landscapes, forests and production systems. In addition, Outcome 1.2 will improve institutional capacities for sustainable landscape management and integrated natural resources planning.

? The outputs promoted by the first outcome of component 2 are aligned with *Objective LD-1-1, Maintain or improve flow of agro-ecosystem services to sustain food production and livelihoods through SLM*, as the capacities of local communities are improved and SLM practices and efficient farming systems are promoted to meet growing demand for cocoa and cattle derivatives, which will generate benefits for communities that depend on these value chains. These actions will contribute to making them sustainable. In addition, efforts will be made to replicate lessons learnt and good practices at regional and national levels.

? On the other hand, Component 3 will concentrate on the restoration of degraded areas to recover and improve the flow of ecosystem services. To this aim, outcome 3.1 will focus on the implementation of restoration activities and sustainable land management to avoid deforestation and diminish forest degradation, while outcome 3.2 seeks to strengthen governance and institutional capacity to restore landscapes. These activities will strengthen the accomplishment of outcomes to achieve objectives *LD 1-1* as well as *Objective CCM 2-6 Demonstrate mitigation options with systemic impacts for FOLUR*.

? Finally, Objective *FOLUR IP (Promote effective coordination and adaptive management for FOLUR)* will be achieved through outcomes 1.2, 2.2, and component 4, which will promote public-private dialogue spaces, financing models, and incentives for innovation and adoption of sustainable practices, and the exchange of experiences with the international community through the FOLUR Global Knowledge to Action Platform. A detailed explanation on how the components of the Project contribute to the impact of the FOLUR programme is presented in section 1c.

5) Incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and co-financing

2. **Component 1.** The project will develop integrated landscape management systems, including improved land use governance. This includes the participatory planning of the management strategy for (i) landscape restoration; (ii) forest conservation; (iii) climate-resilient production systems; and (iv) support for public-private dialogue platforms to define on- and off-farm strategies to restore biodiversity and safeguard protected areas.

? **Baseline and co-financing:** Funding will be available from the following institutions: MARENA, MEFCCA, INAFOR, INTA, IPSA and the RACCS Government, including the contribution of these institutions? staff and operative expenses, in support of governance mechanisms in the Project intervention area. The estimated co-financing is the in-kind contribution and public investment by MARENA through loans and donations by CABEI and the Green Climate Fund. This will complement the operation and development of land use governance mechanisms. The total amount of contributions expected by all programme partners is USD 7.5 million.

? **GEF support and financing:** The GEF Project will assist the development of collaborative planning for landscape restoration, forest conservation and sustainable food systems. It will also support public-private dialogue platforms, and the definition of on- and off-farm strategies, in order to restore biodiversity and safeguard protected areas. The proposed GEF donation for this component is USD 900,088.

3. **Component 2.** Promotion of sustainable food production practices and responsible commodity value chains, including (i) providing tools to redirect stakeholders? practices to sustainable productive use and investments in landscape restoration; (ii) providing incentives for innovation and expansion of sustainable and climate-smart farming practices and gender-sensitive value chains, and to convene stakeholders to promote innovation, replication and expansion.

? **Baseline and co-financing:** The baseline is the budget of MEFCCA, INTA, IPSA and INAFOR, which includes the contribution of staff, operative expenses and contributions made by other projects implemented by these institutions in FOLUR?s geographical area of influence, such as the PAISAN, NICADAPTA and BOVINOS projects (see Table 2). Co-financing consists of in-kind contributions and the public investment available for these institutions, and the private sector investment mobilized in the agriculture and forestry sectors, amounting to total expected contributions by all programme partners of USD 14.2 million.

? **GEF support and financing:** The GEF Project will lend support to ensure that 167,236 ha receive improved management to enhance biodiversity. The Project will develop a capacity-building programme for the conversion of cattle raising and cocoa cultivation into intensive agroforestry and forestry systems, which will contribute to landscape restoration (including biological corridors). Support will also be provided to capacity-building activities for the development of a more resilient and low-emission livestock system. Additionally, the GEF Project will offer support for public-private arrangements for financing models (trust funds, capitalization of the National Environment Fund, nature-based economic solutions, ecotourism, soft loans, incentives, and others). The proposed GEF funding for this component is USD 1,707,268.

4. **Component 3.** Restoration of natural habitat, including the expansion of restoration activities beyond the target sites and landscapes, strengthening of governance and capacity-building for landscape restoration, and capacity-building of stakeholders participating in the selected value chains. Capacity-building programmes for environmental restoration, management of supply chains and biological corridors in farming areas.

? **Baseline and co-financing:** The budget of MARENA, MEFCCA, INTA, IPSA and the Government of the RACCS, including the contribution of staff and operative costs of these institutions in support of the capacity-building actions implemented in the Project intervention area. The co-financing is the in-kind contribution by MARENA through donations, the CABEI loan and GCF support to capacity-building, restoration of degraded pasture and second-growth forest, as well as agroforestry systems with cocoa and commercial sub-projects for community-based forest management and community-based forestry restoration in Indigenous territories outside protected areas. This will add another USD 14.7 million in contributions expected from Project partners.

? **GEF support and co-financing:** The GEF Project will help to restore degraded agricultural lands through gender-inclusive practices in the biological corridors of the RACCS and the province of

R?o San Juan. Likewise, support will be given to activities to improve production landscapes under sustainable land management through agroforestry (cocoa) and silvopastoral systems, for the benefit of the biodiversity in the buffer zone of the Indio Ma?z Biological Reserve (IMBR). Silvopastoral systems in combination with improved forage increase the availability of high-quality food, allow for soil restoration, increase resistance to extreme climate events (droughts, excessive rains), supply firewood and contribute to the food security of households. In addition to providing the animals with shade and food, trees generate additional income through the sale of wood and fruit. Due to the importance of cattle raising, massive adoption of the foregoing can have a profound impact. The proposed GEF funding for this component is USD 1,771,336.

5. **Component 4.** This component focuses on programme coordination, knowledge management, awareness raising and knowledge exchange in the context of the Global FOLUR programme.

? **Baseline and co-financing:** The budget of MARENA, INAFOR, INTA and IPSA, including the contribution of staff and operative costs of these institutions in support of the monitoring, knowledge management and communications programme actions implemented in the Project intervention area. The co-financing is the in-kind contribution of staff, premises and means of these institutions in support of the knowledge and communications management developed by the FOLUR Project. This contribution, together with the CABEI loan and GCF donation supporting the development of information and communications products, amount to a total USD 6.0 million in expected contributions from all programme partners.

? **GEF support and financing:** The Project will develop capacities and knowledge management around the experiences of promoting deforestation-free products, inclusive and sustainable food systems and landscape restoration. These knowledge products can contribute to secondary FOLUR projects. There will be exchanges with other FOLUR projects, particularly ones in similar situations, e.g. related to products in Mesoamerica. The Project teams will actively participate in the FOLUR community of practice and, together with government allies, will represent their Project at global fora. This will also include sharing lessons and efforts on the Global Platform, through FOLUR as well as directly to the broader community of food products and systems.

The Project will promote and provide information to strengthen dialogue platforms for cocoa and cattle products at the local, internal regional, national and global level, which in turn will create the architecture to support the exchange of knowledge, learning processes and the synthesis of experiences. These products will include learning processes on gender and cultural relevance. GEF support and financing: GEF donation for this component is USD 720,915.

6) Global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF)

6. The Project will achieve various global environmental benefits aligned with the FOLUR programme. In particular, the proposed activities respond to several objectives related to the focal areas of biodiversity, land degradation, and climate change. In short, the aim is to address the causes of deforestation of high-value forests for the conservation of biodiversity, restoration of degraded production landscapes and the reduction of greenhouse gas emissions. The proposed project will produce the following global environmental benefits:

? First, the proposed project will support the restoration of **13,027 ha** of degraded lands including: 5,569 ha of agricultural lands (Core Indicator 3.1), 2,057 ha of forest lands (Core Indicator. 3.2), and 5,401 ha of grasslands (Core Indicator. 3.3). These hectares (and the project beneficiaries) will be selected in accordance with the restoration plans for biological corridors developed under Component 1 (Output 1.1.2) and the business plans under Component 3 (Output 3.1.1). This target will be achieved by promoting good practices for the restoration of land, such as soil management in sowing and harvesting times, diminished use of agrochemicals and crop diversification.

? Additionally, the programme will support the application of sustainable land management principles on **35,893 ha** of degraded production landscapes (Core Indicator 4.3)**.** The project will support low-emission silvopastoral systems (in the cattle value chain) and agroforestry systems (in the cocoa value chain). These systems will help to increase productivity, curb land degradation and will foster the conservation of biodiversity in biological corridors and the buffer zones of the Indio-Ma?z Biological Reserve (IMBR).

? Finally, and to complement the sustainable management and restoration activities, the Project will additionally work on improving the management of **167,236 ha** of landscapes for the benefit of biodiversity. These areas are located in the biological corridors of IMBR. To achieve this, the project will enter into agreements with stakeholders on the most adequate systems to increase the productivity of production systems and thwart the advance of the agricultural frontier.

7. Based on the previously mentioned interventions, the project will sequester and avoid **4.89 Mt of CO2-eq emissions** in the AFOLU sector (Core Indicator 6.1). Finally, capacity development programmes, restoration activities and the improvement of above mentioned productivity will directly benefit and estimated 10,565 people, with a target of 40% women (Core Indicator 11).

7) Innovativeness, sustainability, potential for scaling up and capacity development[72]

8. **Innovation**: In general, the main Project innovation consists of addressing the barriers that impede the development of sustainable value chains (cattle and cocoa) with a broad approach that covers the strengthening of production, restoration of degraded areas, conservation of high value areas, and improvement of the enabling environment in the surrounding regions of protected areas. The main challenge faced by the Project is the generation of a sustainable, deforestation-free production system in farming units around protected areas (PAs), and to restore biological corridors in farming areas.

9. To achieve this goal, several innovative tools are available in the country context. For example, various FAO tools will support the comprehensive planning process and participatory mapping for land use and the achievement of goals related to land degradation. These tools and methodologies, such as LADA/WOCAT, SHARP, PRAGA, CLEAM/LEAP will allow for establishing the baseline on environmental and socio-economic aspects that will be used to monitor Project progress. In addition, the FAO tool Rural Invest will be used to support farmers and communities in project formulation and investment plans for sustainable production.

10. The mechanisms to summon partners and actors of the value chains (including farmers, buyers, processors and traders), in order to finance sustainable production, will constitute an important space for the innovative generation of efficient, productive and deforestation-free production systems. Therefore, the Project also includes capacity-building and improved incentives for the conversion of farming methods into sustainable and resilient systems with added value.

11. **Sustainability**: The Project components are designed for collaborative work towards the sustainability of results and obtaining benefits derived from its implementation. In general, the intervention will tackle the main causes of degradation and barriers to sustainable production in the cattle and cocoa value chains, while generating opportunities to increase productivity and incentivise responsible and sustainable production and merchandising, involving all stakeholders. To complement this approach, the Project will contribute to the generation of an enabling environment for the improvement of policies and incentives for sustainable production throughout the country. Thus, the activities proposed under this FOLUR Project will jointly address different dimensions and strengthen the restoration, the capacities for sustainable production, governance, dialogue, planning, and the generation of incentives and long-lasting environmentally friendly production systems that generate economic and social benefits at the local, internal regional and national level.

12. The Project design conceives sustainability in its three dimensions: environmental, social and economic. There follows a description of Project contributions to the achievement of sustainability in each dimension.

13. **Environmental Sustainability**: The key to ensure the Project?s environmental sustainability is planning deforestation-free cattle and cocoa value chains. In this sense, the Project proposes to promote conservation and the restoration of high value forests and implement more appropriate and productive systems to meet the demand for food and generate added value. Furthermore, this work will be carried out outside the PAs, as a means of curbing the advance of the agricultural frontier towards strategic areas for biodiversity conservation.

14. As for forest conservation and restoration, the Project proposes concrete activities for the restoration of biological corridors, which will allow to increase carbon sequestration and conserve biodiversity. Additionally, the proposal is to restore highly degraded production landscapes by implementing sustainable production systems with added value. This activity will help to consolidate the biological corridors in the region. The logic behind this joint intervention is to eliminate incentives for the conversion of highly important forests into low productivity production systems that lack an adequate appreciation of ecosystem services.

15. **Social sustainability**: Project activities are based on land use planning processes with the participation of stakeholders in different sectors and with different roles in the value chains: smallholders, Indigenous peoples and women, as well as relevant actors of government and the private sector. This approach will ensure that, during Project implementation, activities will aim at benefitting all stakeholders. Additionally, the Project proposes training programmes with Indigenous peoples, Afrodescendants, and women, and will guide these actors on sustainable land management, while incorporating considerations about gender equality and the promotion of traditional Indigenous practices.

16. Economic sustainability: Various actions have been planned with the aim of ensuring continuance of the sustainable production practices promoted by the Project: in the first place, public-private dialogue platforms intended to consolidate strategies for land management that can meet demand, increase production and improve the internal regional and national economy, while conserving and safeguarding biodiversity and ecosystem services. These dialogue platforms will be complemented by various training strategies to help smallholders improve farming efficiency by using sustainable production systems in the cattle and cocoa value chains. These development programmes will benefit from private sector participation (companies purchasing primary products). Furthermore, the Project proposes mechanisms to promote market access and added value in the selected value chains. Together with economic incentive mechanisms, financial packages and trust funds, these activities will help smallholders advance, improve their productivity and establish sustainable production systems.

Upscaling potential and Capacity building

17. The Project promotes capacity-building and the generation of possibilities to generalise lessons learnt and good practices of the Project at different levels. In the first place, various spaces are planned to improve the capabilities of stakeholders, including comprehensive and participatory landscape planning at the local, internal regional and national level (Component 1); the technical conversion of cattle raising and cocoa agroforestry systems (Component 2); and the institutional

capacity for landscape restoration (Component 3). These capacity development programmes will be complemented with spaces for the participation of all stakeholders, to ensure the national ownership of the Project. For example, the comprehensive and participatory planning of land use, promoted by component 1, will include participation by a diversity of local, internal regional and national (government and private sector) actors, who will be able to replicate the experiences in other national contexts. In addition, the findings of these dialogues will be used to identify the reforms needed to improve incentives for sustainable farming nationwide.

18. On the other hand, by involving the private sector and cattle and cocoa processing and merchandising companies, sustainable productive practices and standards will be developed, which could be replicated nationally and internationally. From year one, an exchange of experiences will be organized with private sector companies already applying good land management practices in the target Project area, i.e. the area of the seven municipalities covered by FOLUR Project. There follow two examples:

19. In the municipality of Kukra Hill, the company Ritter Sport has acquired experience on a farm called El Cocoa. In 2019, the first chocolate made from cocoa grown on their own plantation in Nicaragua was proudly presented. El Cocoa is one of the largest plantations in the world, with 1 million cocoa trees on 2,500 hectares, and it has started a process to certify carbon sequestration in the soil and on its plantation.

20. The experience of Robusta coffee by the Mercon Coffee Group has already led to the diversification of coffee lands for over 550 agricultural producers in the municipality of Nueva Guinea. In this region there is a clear potential for environmental impact through emissions reduction and protection of biodiversity, and to verify the fact that a higher amount of sequestration can be reached when shifting from cattle raising towards coffee production.

21. Lastly, the Project proposes a knowledge management strategy that includes the exchange of experiences with the international community. This programme will allow the Project to learn from other contexts, and will also serve as a platform to disseminate lessons learnt in the Nicaraguan context about the development of sustainable and resilient cattle raising and cocoa systems.

8) Summary of changes in alignment with the project design with the original PIF

Project Outcomes Framework

Expected Outcomes and Outputs (PIF stage)	Proposed change during preparation (PPG stage)	Supporting Arguments
Component 1. Development of Comprehensive Landscape Management Systems		
Output 1.1.2 Participatory planning in Project target areas to restore landscapes, conserve forests, and to support climate resilient production systems.	Output 1.1.2 Comprehensive and participatory design of management plans in Project target areas to restore landscapes, conserve forests and support climate-resistant production systems.	Additions done to output to provide more accuracy
Output 1.2.1 Support provided to dialogue platforms between the public and private sectors in order to define strategies both in and outside farms to restore biodiversity and safeguard protected areas. 1.2.1. Support provided to dialogue platforms between the public and private sectors to define both on and off-farm strategies (these are more related to cash-generating activities) at landscape level, for the purpose of restoring biodiversity and safeguarding protected areas.	Output 1.2.1 Support to public-private dialogue platforms to define strategies both on- and off-farm and at landscape level to restore biodiversity and safeguard protected areas.	Addition to include the landscape scale
Component 2. Promote sustainable food production practices and responsible commodity value chains		
Outcome 2.1 Improved land use practices and restoration activities in major production landscapes adopted and scaled up.	Outcome 2.1: Improved land-use practices and restoration activities in major production landscapes adopted and scaled up.	Change from soil to land (landscape approach)

Output 2.1.1 Capacity-building programme with a gender and ethnic focus implemented to support technological reconversion to more intensive, low-emissions cattle and agroforestry (cocoa) systems for increased resilience.	2.1.1 Programme for technology development, validation and dissemination, as well as capacity-building, with an ethnic, intercultural and gender-sensitive approach to support technological conversion into (i) a cattle raising system under technologically intensive, low-emission silvopastoral systems; and (ii) intensive and diversified cocoa systems, which contribute to the restoration of landscapes and biological corridors.	Structure: Capacity building was considered in both component 2 and 3. New wording to be more specific and to include the approach of both interventions in livestock and cocoa
Output 2.2.1. Private-public arrangements designed for the development of financing models (Trust Funds, Capitalization of the National Environment Fund, Nature-Based Economic Solutions, Ecotourism, Soft Credit, Incentives, NAMA, among others).	Innovative financing models based on public-private arrangements identified and designed in support of the implementation and extension of good practices (trust funds, capitalization of the National Environment Fund, nature-based economic solutions, ecotourism, incentives, NAMA, among others).	Structure: Capacity building was considered in both component 2 and 3. New wording to be more specific and to include the approach of both interventions in livestock and cocoa
Output 2.2.2 Facilitated implementation of financing models (under 2.2.1).	Output 2.2.2 Facilitated implementation of selected financing models (designed in output 2.2.1)	Wording improvement
Output 2.2.3 Partners, value chain actors, funders and investors regularly convened, motivated and influenced to promote innovation, replication and expansion.	Output 2.2.3 Partners, actors in the value chain, funders and investors, regularly convened, motivated and influenced so they promote innovation, investment, replication and expansion.	Integration of investments
Component 3. Restoration of natural habitats		

Outcome 3.1 Sustainable land use practices and restoration activities expanded in target landscapes and beyond.	Outcome 3.1 Sustainable land management practices and restoration activities implemented in target landscapes and extended to similar ecosystems.	Wording improvement
Output 3.1.2 Nearly 13,027 ha of degraded agricultural land prioritized under 3.1.1 restored (contributes to the Core 3 Indicator).	Output 3.1.2 Nearly 13,027 ha of agricultural land **restored under systems prioritized in output 3.1.1** (contributes to Core Indicator 3).	Reference to the restoring systems prioritized in 3.1.1, not the areas.
	3.2.1 Intersectoral and multilevel dialogue facilitated for the purpose of a participatory review of the governance system, identification of bottlenecks and reforms needed for landscape restoration.	Output included as a mean to improve specific bottlenecks of the governance system
Output 3.2.2 Partners, value chain actors, funders and investors regularly convened, motivated and influenced to encourage responsible & sustainable production, sourcing & marketing.	Output 3.2.2 Partners, actors in the value chain, funders and investors regularly convened, motivated and influenced to encourage resilient (responsible) and sustainable production, supply and merchandising.	
Component 4. Programme Coordination, Collaboration, and Capacity Building		

Output 4.2.1 Knowledge management and communications programme under implementation, including the systematization of experiences in the agricultural and forestry sector based on biodiversity and developed with women, youth, Indigenous peoples, Afro-descendants and local communities.	Knowledge management and communications programme under implementation, including the systematization of experiences in the agricultural and forestry sectors, based on the restoration of biodiversity and involving women, youth, Indigenous peoples, Afrodescendants and local communities.	Wording improvement to focus on biodiversity restoration
Output 4.2.2 Exchange programme through national and global communities of practice.	Output 4.2.2 Programme for the exchange of knowledge and experiences through national and worldwide communities of practice (South-South Cooperation).	Wording improvement

[1] Critical Ecosystems Partnership Fund (https://www.cepf.net/our-work/biodiversity-hotspots/mesoamerica)

[2] MARENA (2019). Causas de la deforestaci?n en Nicaragua. Please see section 1.2 below.

[3] http://www.marena.gob.ni/Enderedd/wp-content/uploads/MemoriasOrganizados/Investigaciones/Atlas.pdf

[5] MARENA (2019). Causas de la deforestaci?n en Nicaragua

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[7] Atlas de Cobertura Forestal y Deforestaci?n en Nicaragua 1969 - 2015. [Atlas of Forest Cover and Deforestation in Nicaragua 1969-2015]. First ed., Managua, 2018.

[8] This is equivalent to an annual deforestation rate of 1.8%. For the 2005-2015 period deforestation was lower than for the years from 2000 to2010, when it was of 2.3% per year.

[9] Rapid evaluation of land degradation undertaken as part of the PPG in five municipalities in RACCS and the province of R?o San Juan, January 2021.

[10] World Bank, 2015. Agriculture in Nicaragua: performance, challenges, and options. http://documents.worldbank.org/curated/en/532131485440242670/Agriculture-in-Nicaragua-performance-challengesand-options

[11] WDI 2012, in World Bank, 2015

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[13] Bean & Co. is a global cocoa company that owns large-scale cocoa plantations worldwide (South America, Africa, Oceania and Asia).

[14] FAOSTAT, Crops data. Consulted on 13 April 2020.

[15] International Cocoa Organization (ICCO)

[16] Sector analysis study of livestock (milk/beef) and cocoa value chains, carried out as part of the PPG for this FOLUR Project by FAO and MARENA, November 2020.

[17] Desciption of the Cocoa Sector in Nicaragua. Governance and Advocacy in the Cocoa Value Chain. APEN ? SDC, 2020.

[18] Wiegel, J., del R?o M., Guti?rrez, J., Claros L., S?nchez D.,G?mez L., Gonz?lez, C., Reyes, B., (2020). Coffee and Cocoa Market Systems in the Americas: Opportunities to Support Renovation and Rehabilitation. International Center for Tropical Agriculture (CIAT). Cali, Colombia.

[19] Estimates based on FAOSTAT. Sector analysis study of livestock (milk/beef) and cocoa value chains, carried out as part of the PPP for this FOLUR Project by FAO and MARENA, November 2020.

[20] Ibid.

[21] Information obtained from the FAOSTAT statistical page.

[22] Sector analysis study of livestock (milk/beef) and cocoa value chains, carried out as part of the PPP for this FOLUR Project by FAO and MARENA, November 2020.

[23] Ibid.

[23] Ibid.

[24] https://www.economiafamiliar.gob.ni/estrategias-nacionales/

[25] Nicaragua Cocoa Sector Commission, APEN, SDC, 2018 (BioClima Project Document).

[26] Rapid evaluation of land degradation, carried out for the formulation of this ProDoc at the target sites (province of R?o San Juan and Bluefields in RACCS, January 2021).

[27] Sector analysis study of the cattle and cocoa value chains, carried out as part of the PPP for this FOLUR Project by FAO and MARENA, November 2020.

[28] MOCCA Baseline Report: Coffee and Cocoa Market Systems in the Americas: Opportunities for Support to Renovation and Rehabilitation. Wiegel, J. del R?o, M. Guti?rrez, J. Claros, L. S?nchez, D. G?mez, L. Gonz?lez, C. Reyes, B. Biodiversidad Internacional - CIAT ? MOCCA, 2020.

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https://www.lavozdelsandinismo.com/wp-estaticos/2019/05/PPCC-2019-2020_100519.pdf

[32] National Family Agriculture for Food Security Promotion Strategy
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[33] National Forest and Climate Change Strategy to Reduce Poverty
https://plataformacelac.org/politica/481#:~:text=La%20Estrategia%20Nacional%20de%20Bosques,inversiones%20propias%20y%20atraer%20inversi%C3%B3n

[34] https://www.economiafamiliar.gob.ni/estrategias-nacionales/

[35] The funds are provided by the World Bank, the Green Climate Fund (GCF), the Green Development Fund (GDC) and the Central American Bank for Economic Integration (CABEI), among others.

[36] Link:
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http://extwprlegs1.fao.org/docs/pdf/nic138661.pdf

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[41]https://www.economiafamiliar.gob.ni/wp-content/uploads/2020/12/Catalogo_Cooperativas_Cocoa_Cafe.pdf

[42] Study by INIAP ? FONTAGRO, 2018.

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[46]IV National Agriculture and Livestock Census (CENAGRO), MAG 2011

[47] IV Censo Nacional Agropecuario, MAGFOR 2011

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[49] IV CENAGRO, MAG 2011

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[51] Barberena, 2018

[52] Alem?n, 2020

[53] Ibid.

[54] Polvorosa and Bastiansen (2016) write that cattle ranches have expanded and continue to do so under a land-expansion model, instead of adopting intensive and environment-friendly production practices. This is likely to continue for as long as the land is cheap on the agricultural frontier and impoverished producers are willing to live and work in these regions.

[55] IICA et al., 2014

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[57] INTA, 2019

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[60] National Strategy for the Development of Dairy Production and Processing 2020 ? 2023

[61] Sep?lveda and Ayestas, 2015

[62] MAG-BCN 2020

[63] Sep?lveda and Ayestas (2015)

[64] MAG-BCN 2020

[65] Vel?squez, 2019

[66] IV CENAGRO, MAG 2011

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[68] Voluntary Guidelines on Responsible Governance (VGGT) of land, water and forests in the context of national food security. http://www.fao.org/3/i2801s/i2801s.pdf

[69] https://www.banprogrupopromerica.com.ni/banca-de-empresas/financiamiento/l%C3%ADneas-verdes/

[70] https://www.lafise.com/blb/banca-corporativa/ecocreditos

[71] https://www.baccredomatic.com/es-cr/pymes/financiamiento/capital-de-trabajo/green-pymes

[72] System-wide capacity development (CD) is essential to achieve more sustainable, country-driven and transformational results at scale as deepening country ownership, commitment and mutually accountability. Incorporating system-wide CD means empowering people, strengthening organizations and institutions as well as enhancing the enabling policy environment interdependently and based on inclusive assessment of country needs and priorities.

- Country ownership, commitment and mutual accountability: Explain how the policy environment and the capacities of organizations, institutions and individuals involved will contribute to an enabling environment to achieve sustainable change

- Based on a participatory capacity assessment across people, organizations, institutions and the enabling policy environment, describe what system-wide capacities are likely to exist (within project, project partners and project context) to implement the project and contribute to effective management for results and mitigation of risks.

- Describe the project?s exit / sustainability strategy and related handover mechanism as appropriate.

1b. Project Map and Coordinates

Please provide geo-referenced information and map where the project interventions will take place.

243. The Project interventions will take place in different parts of the biological corridor, as defined in section 2.3, where there are prioritized areas and preselected intervention types according to the suitability of the terrain. The biological corridor runs through five municipalities of the RACCS (El Rama, Kukra Hill, Pearl Lagoon, Nueva Guinea and Bluefields) and two municipalities in the province of R?o San Juan (San Carlos and El Castillo) (see map).

Coordinates of study area municipalities:

TABLE 14. GEOGRAPHICAL POSITION OF STUDY AREA MUNICIPALITIES

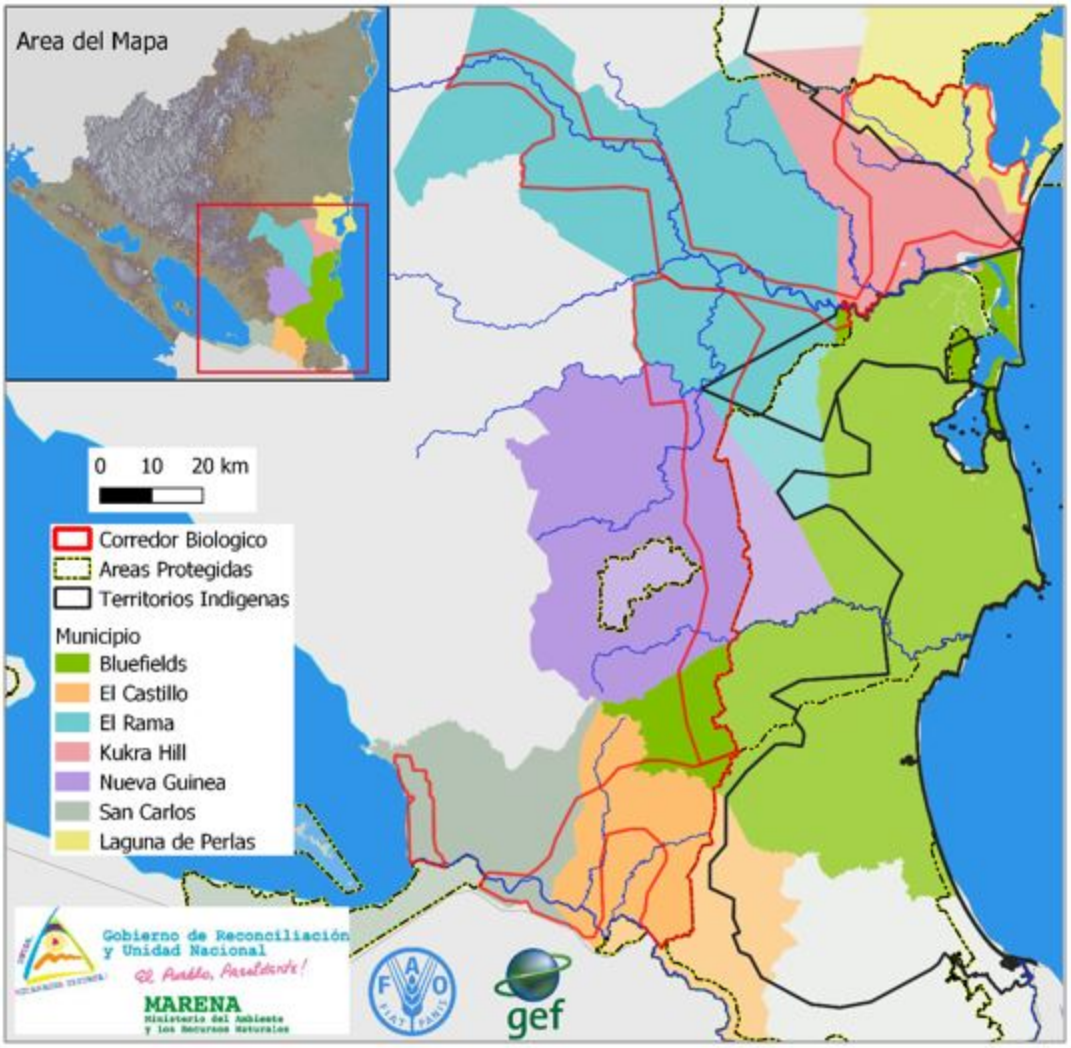
Municipality	Position		Surface area km?	Altitude (m.a.s.l.)
	North Latitude	West Longitude		
El Rama	12?09?	84?13?	3, 752.9	9.71
Nueva Guinea	11?41?	84?27?	2,677.46	210.22
Bluefields	12?00?	83?45?	4,774.75	20

Kukra Hill	12?14?	83?45?	1,193.23	50
Pearl Lagoon	12?20?	83?40?	1,963.43	3
San Carlos	11?07?	84?46?	1,444.80	39
El Castillo	11?02?	84?28?	1,654.81	50
Total			13,708.48	

Source: INIDE, 2018

The areas can be seen in KML archives or *Shapefiles*, which can be downloaded on these sites: https://projectgeffao.users.earthengine.app/view/nicaragua-folur

Figure 1. Map of the Biological Corridor and FOLUR Project Municipalities



Source: FAO study 2021

1c. Child Project?

If this is a child project under a program, describe how the components contribute to the overall program impact.

Overall contribution to the FOLUR Programme

1. By promoting sustainable and integrated landscapes and efficient food systems in the Southern Caribbean Coast Autonomous Region and province of R?o San Juan, the Project is aligned with the main objective of the FOLUR Impact Programme. Specifically, the project will (i) promote sustainable cocoa and livestock systems to meet growing global demand for these products; (ii) will reduce forest degradation and deforestation in 167,236 ha in key biodiversity corridors and promote deforestation-free agricultural commodity supply chains in 35,893 ha of degraded production

landscapes to slow loss of tropical forests; and (iii) will promote the restoration of degraded landscapes in 13,027 ha of agricultural lands located key biodiversity corridors to maintain ecosystem services.

2. Additionally, the Project contributes to the achievement of the three specific programme objectives: a) promotion of sustainable food systems to meet the growing global demand for food; b) promotion of value chains of deforestation-free agricultural commodities to reduce the loss of tropical forest; and c) promotion of the restoration of degraded landscapes for sustainable production and conservation of ecosystem services. The Project is aligned with the FOLUR programme in each of its components, as follows:

? *Promoting Sustainable food systems to meet growing global demand.* The participatory management plans promoted by component 1 will improve land use and management at landscape level. Furthermore, public-private dialogue platforms will serve as spaces for the identification and replication of good landscaping practices for the production of agricultural commodities in the cattle and cocoa value chains. These activities help to plan a more efficient use of the natural resources in food systems.

? *Promoting deforestation-free agricultural commodities and supply chains to slow loss of tropical forest.* Component 2 of the Project focuses on the promotion of sustainable production practices. Through its two outcomes, this component aims at improving land use practices, including the implementation of silvopastoral and agroforestry systems in buffer zones of protected areas. Thereby, it aims at improving production practices in the surrounding regions of areas with high importance for forest conservation and avoiding the advance of the agricultural frontier and concomitant changes in soil use towards these areas. In addition, the Project will collaborate with the relevant actors to improve policies and production incentives through public-private arrangements and the implementation of financing models.

? *Promoting restoration of degraded landscapes for sustainable production and to maintain ecosystem services.* The Project will promote the restoration of natural habitats in target landscapes through the implementation of component 3: efforts will be made to restore agricultural lands and reduce degradation in forests of high conservation value areas. These activities will support the production activities promoted by the Project, while reversing the negative impacts of degradation to maintain the flow of ecosystem services.

3. The last component, on Project coordination and knowledge management, seeks to systematise the experiences and communication about the Project activities with the aim of replicating and disseminating good restoration practices, sustainable land management and promotion of sustainable food systems. This component is highly important as a contribution to the FOLUR global platform for programme coordination.

Alignment with FOLUR Global Knowledge Action Platform

4. The proposed project will put in place mechanisms to coordinate the Nicaragua Child Project with global, regional and transboundary efforts under the FOLUR IP and beyond. The project will finance participation in Global meetings of FOLUR partners and CPs; participation in Regional commodity platform gatherings as well as discussions with private and public sector representatives; participation/contribution to training workshops, regional communities of practice (sharing knowledge, successes); contribution of achievement and success stories for the FOLUR IP Annual report; engagement with media within country, as well as consultation toward annual work planning; contributions to global knowledge products and flagship reports (peer reviews, technical inputs); and annual M&E results reporting to the GP for consolidation and reporting to GEF.

5.

The proposed project is fully aligned with the FOLUR global knowledge management strategy and thus will engage robustly with the FOLUR Global Platform (GP) to share lessons learned outward and bring lessons, investment and good practice into Nicaragua. This engagement will be a two-way street with the GP enabling catalytic engagement by the child projects to benefit from global level dialogue and action (Pillar A).

6. The proposed project will support the preparation and dissemination of sub-sectoral solutions and guidance notes for the cocoa and livestock sectors for the benefit of other child projects and other non-child project countries engaging with the FOLUR Global Platform. Moreover, the child project will, based on a capacity needs analysis by the Global Knowledge to Action Platform (GKAP), seek to maximize alignment with and leverage relevant GKAP deliverables such as the Sustainable Landscape Production Tool Kit and others to implement the FOLUR programmatic components

7. Lessons learned across the portfolio of programmes will strengthen global-level IP outcomes on leveraging global coalitions to pursue FOLUR objectives and outcomes and promoting public and private investments in ILM, deforestation-free commodities influenced by FOLUR, in FOLUR countries and globally (Pillar B). Diagnostic value chain assessments carried out during project design are available to support global public knowledge. Similarly, the formal establishment of public-private partnerships in Nicaragua under Component 1 will contribute to strengthening the FOLUR Community of Practice and it members and coalition partners.

8. Finally, regarding pillar C of the Global Platform, the proposed project will contribute the vision for Strategic Knowledge Management and Communications. Specifically, the project will make available a series of tools and approaches to support community based natural resources management (including newly developed Google Earth Engine Apps) and will participate in knowledge management events and south-south exchanges. The project team is also part of the Community of Practis

2. Stakeholders

Select the stakeholders that have participated in consultations during the project identification phase:

Civil Society Organizations Yes

Indigenous Peoples and Local Communities Yes

Private Sector Entities Yes

If none of the above, please explain why:

Please provide the Stakeholder Engagement Plan or equivalent assessment.

In addition, provide a summary on how stakeholders will be consulted in project execution, the means and timing of engagement, how information will be disseminated, and an explanation of any resource requirements throughout the project/program cycle to ensure proper and meaningful stakeholder engagement

1. During project formulation, a broad consultation process took place with key stakeholders including: the Ministry of Environment and Natural Resources (MARENA); the Ministry of Family, Community, Cooperative and Associative Economy (MEFCCA); the National Forestry Institute (INAFOR); the Nicaraguan Institute of Agricultural Technology (INTA); Institute of Plant and Animal Protection and Health (IPSA); the South Caribbean Autonomous Regional Government (GRACCS); and the mayors? offices in Bluefields, Nueva Guinea, El Rama, Kukra Hill, Pearl Lagoon, El Castillo and San Juan de Nicaragua. The consultation meetings are summarized below, the description of participants, the recommendations from the consultation and the inputs to project design are presented below:

Event	Who and how many participants	The recommendations resulting from the consultations	Inputs to project design

Event	Who and how many participants	The recommendations resulting from the consultations	Inputs to project design
Inception workshop	Date: August 14, 2020 a) representatives of institutions participating in the project (32 participants): MARENA (6), MEFCCA (4), MHCP (2), INTA (4), IPSA (4), INAFOR (4), INIFOM (4) and Secretariat of Development of the Caribbean Coast (SDCC) (4); b) 4 representatives of the Autonomous Regional Government of the South Caribbean Coast (GRACCS); c) 2 representatives of each Indigenous Territorial Government (6 participants): Twelve indigenous and Afro-descendant communities from the Laguna de Perlas basin, Creole Territory of Bluefields and Rama and Kriol Territory in the RACCS; d) 2 representatives from each of the 6 Municipalities (12 participants): El Castillo, San Carlos for the department of R?o San Juan and Bluefields, El Rama, Nueva Guinea, Kukra Hill. e) Participating from FAO (8): LTO-Raixa Llauguer (SLM); Task Manager for GEF Mesoamerica, Nadia Mujica; Juan Henao, FAO-GEF Headquarters; Mar?a Fernanda S?nchez-Task Manager FAO-GEF Nicaragua; Cesar Garc?a, FAO-LADA WOCAT expert; Institute of Tropical Geography of Cuba, Dr. Jorga Luis Machin and Dr. Angel De la Colina; Denis Fuentes Ortega, FAO Nicaragua specialist. Total participants: 48 participants.	The presentation of the political and strategic framework of the project by the colleague Liliana Diaz from MARENA addressed the general context of the project from the area of incidence, the national actions to combat deforestation and forest degradation that promote this initiative. She also discussed the issue of tenure and the situation of land use in the area of incidence of the FOLUR project, the favorable conditions for its implementation and legal support and finally the initiatives under implementation that also contribute to the conservation and restoration production model. The representatives of the Autonomous Regional Government of the South Caribbean Coast expressed the importance of the FOLUR project to support the work processes for restitution of rights that the Government of Nicaragua implements with the Indigenous and Afro-descendant Peoples in the Caribbean Coast. In particular for the FOLUR project, it is	To define and validate the methodologies to be used for Project implementation, monitoring, follow-up and evaluation. To confirm institutional roles and Project actors. To define local and national contact persons for the implementation of activities. To define a participatory consultation and coordination mechanism to offer intervention spaces to the Project beneficiaries.

Event	Who and how many participants	The recommendations resulting from the consultations	Inputs to project design
Livestock and Cocoa Chain Focus Group Workshop in the FOLUR project area.	Dates: ? Monday, October 5, Tuesday, October 6 in Bluefields and Thursday, October 8 and Friday, October 9, 2020 in San Carlos. ? Work sessions with the inter-institutional technical team: Total participants: 81 participants. a) representatives of institutions participating in the project (12 participants): MAG (2), MARENA (2), MEFCCA (2), INTA (2), IPSA (2), INAFOR (2); b) 4 representatives of the Autonomous Regional Government of the South Caribbean Coast (GRACCS); c) 2 representatives of each Indigenous Territorial Government (6 participants): Twelve indigenous and Afro-descendant communities from the Laguna de Perlas basin, Creole Territory of Bluefields and Rama and Kriol Territory in the RACCS; d) 2 representatives from each of the 7 Municipalities (14 participants): El Castillo, San Carlos for the department of R?o San Juan and Bluefields, El Rama, Nueva Guinea, Kukra Hill and Laguna de Perlas. e) Producers from RACCS and from the department of Rio San Juan, a total of 41 participants. f) Participating on behalf of FAO (2): Denis Fuentes Ortega, specialist FAO Nicaragua and Gustavo Benda?a (FAO). Roundtables of experts on low-GHG emission livestock promoted by FAONI were held: ? 4 events held, on Tuesday, January 26 and Thursday, January 28, 2021, where 81 experts participated.	Information collected on the status of the links in the livestock and cocoa chains on issues such as the acquisition of inputs, production, processing, distribution, marketing and consumption of the selected products. ? Identification of the problems and challenges in technologies, infrastructure, financing and marketing, cross-cutting issues such as Climate Change, faced in the Livestock chain - Meat-Milk- and Cocoa. ? Identification of public and private actors to integrate them into the strategies and action plans to solve the identified gaps and challenges.	The prioritized measures for each link in the livestock and cocoa chains are considered in the design of components 1, 2 and 3. A summary of the recommendations is included in the Appendix 1a to the value chain assessment study (available in Spanish)

Event	Who and how many participants	The recommendations resulting from the consultations	Inputs to project design
Workshop LADA WOCAT / RAPID ASSESSMENT OF LAND DEGRADATION	Work sessions with the inter-institutional technical team: / Date: September 30, 2020, April 8, 2021. Participants: 15. Workshop in Bluefields. Date: Tuesday, January 12, 2021. Participants: 40. Workshop in the department of R?o San Juan. Date: Thursday, January 14, 2021. Participants: 27. Total of participants: 82 participants a) representatives of institutions participating in the project (12 participants): MAG (2), MARENA (2), MEFCCA (2), INTA (2), IPSA (2), INAFOR (2); b) 4 representatives of the Autonomous Regional Government of the South Caribbean Coast (GRACCS); c) 2 representatives of each Indigenous Territorial Government (6 participants): Twelve indigenous and Afro-descendant communities from the Laguna de Perlas basin, Creole Territory of Bluefields and Rama and Kriol Territory in the RACCS; d) 2 representatives from each of the 7 Municipalities (14 participants): El Castillo, San Carlos for the department of R?o San Juan and Bluefields, El Rama, Nueva Guinea, Kukra Hill and Laguna de Perlas. e) Producers from RACCS and from the department of Rio San Juan, a total of 42 participants. Exhibitors: ? Soledad Bastidas / Specialist in Sustainable Land Management and Territorial Planning / FAO. ? Dr. C?sar Luis Garc?a / FAO International Consultant in LADA WOCAT /LDN.	? Identified the types of degradation in the area by the management of the Forest, Livestock and Agriculture, Identify causes (at the objective landscape level according to the dynamic map of land productivity presented in the workshop). ? Identified the main barriers (environmental, economic, technical, political and cultural barriers) to implement the type of interventions in the prioritized area: Agroforestry, Forest Protection and Management, Restoration and Reforestation and Silvopastoral. ? Validated on the map of the type of interventions in the prioritized area presented at the workshop, the areas of your municipality in which there is a more favorable environment for the project to work on demonstration of practices and have a greater impact among producers.	The types of interventions in the prioritized area were selected: ? Forest Protection and Management: mainly in Kukra Hill, Laguna de Perlas and El Castillo. ? Restoration and Reforestation: mainly in El Rama, Nueva Guinea, Bluefields and El Castillo. ? Agroforestry: mainly in Nueva Guinea, El Rama and El Castillo. ? Silvopastoral: mainly in San Carlos, Bluefields, Nueva Guinea and El Rama. The map of the Biological Corridor was prepared and the tool for component 1 and component 3 was used for land use planning in the target landscape.

Event	Who and how many participants	The recommendations resulting from the consultations	Inputs to project design
Workshops of the Socioeconomic Study in the area of the FOLUR project	Work sessions with the inter-institutional technical team: / Date: November 8, 2020, March 22 and June 21, 2021. Participants: 15. Conducting surveys in 157 rural households in the FOLUR project area, which took place over 10 days, from February 24 to March 5, 2021, with the participation of 12 interviewers. From the municipal level; 7 surveys were from Laguna de Perlas, 13 from Bluefields, 18 from Kukra Hill, 26 from El Rama, 26 from San Carlos, 28 from El Castillo and 39 surveys were from Nueva Guinea. 14 interviews were conducted with rural socioeconomic organizations: i. Iboo Flowers Community Cooperative (Almond Flower). ii. Savings cooperative THE KUKRAS. RL iii. Cooperative for the Production and Marketing of Cocoa and Meat, RL (COOPROCAR, RL) iv. Multisectoral Cooperative of Organic Producers of El Rama RL (COMPOR RL) v. San Antonio Peasant Fund Savings and Credit Cooperative (COOPEFACSA R. L). vi. Agricultural Producers Cooperative (COPAC RL) vii. Union of Cooperatives AHMED CAMPOS CORREA RL viii. Agricultural Production Cooperative (Providencia en Acci?n RL). ix. Multisectorial Agricultural Cooperative Francisco ?lvarez, RL (COOPAMFA RL). x. Agricultural Cooperative of Services "Nueva Vida", RL (COASNUVI, RL). xi. Los Guatuzos Rio San Juan RL Multisectoral	An analysis of the economic and social situation and characterization was obtained, including gender equality in the area of the FOLUR project. The main themes characterized were the following: livelihoods Agricultural and forestry activities Cattle and cattle activities Viability and climate change Organization Gender in dairy chains Gender in cocoa chains See appendix 5	Study recommendations are considered for the design of components 1, 2 and 3. Develop programs that lead to the strengthening of the capacities of the producers through the implementation of strategies in terms of: technical support, dialogue of knowledge and promotion of community economies (improvement of the quality of the products they generate, market, negotiation techniques, costs, among others), incorporating the gender and generational perspective. Promote programs and projects to strengthen the cocoa and livestock value chains, based on three basic aspects: Training, organization and information. Develop strategies that motivate the interest of producer families to protect natural resources and establish forest plantations in their production units.

Event	Who and how many participants	The recommendations resulting from the consultations	Inputs to project design
Gender consultation workshops in the FOLU project area	3 focus groups held with women ranchers and cocoa farmers located in the FOLUR project area: in Bluefields, Nueva Guinea and El Rama-RACCS and another in San Carlos-Rio San Juan. The first focus group that was held in the municipality of Bluefields on March 10 and 11, 2021. The focus group was held at the URACCAN University facilities with the participation of 14 women representing the municipalities of Kukra Hill, Laguna de Pearls and Bluefields. In Nueva Guinea, the focus group was held on Tuesday, April 27, 2021 at the URACCAN campus with the participation of 22 women, 16 of whom were cattle producers from the La Fonseca, El Serrano, El Escob?n and Rio Plata communities. Four cocoa producers from the El Escobin Community and finally two women who combine cocoa and livestock from the communities of El Escobin and Nueva Guinea, respectively . In San Carlos Rio San Juan, the focus group was held on Friday, April 30, 2021 at the facilities of the Mart?n Lutero University with the participation of 17 women, 12 from the municipality of San Carlos from the communities of Laurel Gal?n, Santa Isabel, Comarca La Argentina and the El Castillo municipality of the communities of Mauricio Guti?rrez, Nueva Quezada, Buena Vista and Comarca El Bosque.	Information on gender roles in the dairy value chain was obtained. Information was obtained on gender roles in the cocoa value chain. See appendix 6	Study recommendations are considered for the design of components 1, 2 and 3 and the gender action plan of the project. To address benefits and overcome the inequity of participation, men and women consider that strategies should be developed to strengthen the participation of women in training sessions and demonstration activities, facilitate access to formal or semi-formal financial services, facilitate access to information and training related to food quality standards, facilitating access to gender-sensitive business development services and opening training processes to change resistance to the recognition of women's rights in value chains. The women ranchers, participants in the focus groups, expressed their interest in the genetic improvements of cattle for dual purpose (milk and meat), considering that there is still no established market for derived

Event	Who and how many participants	The recommendations resulting from the consultations	Inputs to project design
Free, Prior and Informed Consultation workshops in indigenous and Afro-descendant communities of Pearl Lagoon and Bluefields within the framework of the FOLUR project	T he Autonomous Regional Government, as the governing entity for development in the South Caribbean Autonomous Region, has agreed to be the guarantor before the signing of the consent "agreement" of the prior, free and informed consultation process of the FOLUR project. The activities were carried out on the following dates: On May 12, 2021, the first induction workshop was held with the members of the directorate of the Indigenous and Afrodescendant Territorial Government of the Pearl Lagoon basin. On May 13, 2021, the first induction workshop was held with the members of the directorate of the Communal Creole Afrodescendant Government in Bluefields. On June 3, 2021, the pre-consultation session took place with the members of the directorate of the Indigenous and Afrodescendant Territorial Government of the Pearl Lagoon basin. On June 15, 2021, the pre-consultation session took place with the members of the directorate of the Regional Council of the Southern Caribbean Coast Region. The consultation was carried out in the period from 6 to 20 August 2021 and the consent stage from 23 to 25 August 2021. RACCS Technical Team: i. Cro. Danilo Chang / GRACCS Executive Director ii. Cro. Nazario Mart?nez Technician SETEC / CRACCS iii. Cro. Haniel Arce SERENA / GRACCS iv. Cro. Randolph Brown / CRACCS Regional Councilor v. Cra. Glenne Narcisso / President GCCB vi. Cra. Jackie Berry / GRACCS Logistics Support vii. Cro. Noel Abella /	The result of the process of Prior, Free and Informed Consultation for consent in indigenous and Afro-descendant communities of Pearl Lagoon and Bluefields within the framework of the FOLUR project has allowed the following: Consult the communities by providing clear and timely information on the project that allows an open dialogue based on the principle of good faith between the parties. Promote the participation of the community in an equitable and inclusive manner, based on their cultural and traditional norms during the consultation process. Systematize the criteria and cultural and social elements to be considered at the time of project design and implementation.	In the FPIC implementation process, the activities have been identified for each component that will have an impact on the two Indigenous and Afro-descendant Territories: i) Creol-Bluefields Afro-descendant Communal Government and ii) Territorial Government Ten Indigenous and Afro-descendant Communities of Laguna de Perlas. In the process of formulating 7 municipal plans for landscape restoration (Component 1), contribute to comprehensive and participatory planning in immediate project target areas or within the two indigenous territories to restore landscapes, conserve forests and support production systems resistant to climate. Contribute to the implementation of best land use practices (soil) and restoration activities strategies both inside and outside the two indigenous territories. Contribute to the implementation of investments for technological

Event	Who and how many participants	The recommendations resulting from the consultations	Inputs to project design
final workshop	Dates: August 30 and 31, 2021 Work sessions with the inter-institutional technical team: / Date: August 30 and 31, 2021. Participants: 20. Final session with authorities of the Institutions: September 10, 2021. a) representatives of institutions participating in the project (12 participants): MARENA (3), MEFCCA (2), INTA (2), IPSA (2), INAFOR (2) and Secretariat of Development of the Caribbean Coast (SDCC) (one); b) 5 representatives of the Autonomous Regional Government of the South Caribbean Coast (GRACCS); c) FAO: 3 participants.	Contributions were obtained from the interinstitutional technical team to PRODOC. A final letter of approval was obtained from PRODOC and letters of co-financing from the Minister and Vice Minister of MARENA as Focal Points before the GEF on September 10, 2021. Co-financing letters were also received from MEFCCA, INTA, IPSA and INAFOR on September 10, 2021.	Clearance was obtained for the final PRODOC.

2. Consultation mechanisms, recommendations and dates of the implemented process are described in Annex I1 (Stakeholder Engagement Matrix), on stakeholder participation, as are proposals for the Project implementation phase, including the inception workshop held on August 14, 2020 and the final validation workshop held in August 2021.

3. Below is a detailed plan for stakeholder participation during project implementation, which will be analysed and updated in detail at Project outset.

Event	Participants	Implementation period	Objective

Event	Participants	Implementation period	Objective
Inception workshop	Associations, farmers? organizations, cattle-rancher and cocoa-grower cooperatives, women?s organizations, private enterprises working in the Project area, civil servants of the SNPCC: MARENA, MEFCCA, INTA, IPSA, INAFOR, INIFOM, as well as GRACCS and IATGs.	Three months after the first disbursement.	To define and validate the methodologies to be used for Project implementation, monitoring, follow-up and evaluation. To confirm institutional roles and Project actors. To define local and national contact persons for the implementation of activities. To define a participatory consultation and coordination mechanism to offer intervention spaces to the Project beneficiaries.
Workshops for the formulation of seven municipal landscape restoration plans (component 1)	Cattle-rancher and cocoa-grower cooperatives, women?s organizations, private companies working in the Project area, civil servants of the SNPCC: MARENA, MEFCCA, INTA, IPSA, INAFOR, INIFOM, of the GRACCS and Indigenous Territorial Governments.	According to the first year work plan for component 1.	To contribute to comprehensive and participatory planning in Project target areas for landscape restoration, forest conservation and support to climate-resistant production systems.
Workshops to strengthen public-private dialogue platforms through the SNPCC in RACCS and the province of R?o San Juan.	Cattle-rancher and cocoa-grower cooperatives, women?s organizations, private companies working in the Project area, civil servants of the SNPCC, MARENA, MEFCCA, INTA, IPSA, INAFOR, INIFOM, of the GRACCS and Indigenous Territorial Governments.	According to the calendar of SNPCC sessions on sustainability-related topics of the cattle and cocoa chain: four sessions per year over the five-year Project duration.	To assist in the definition of on- and off-farm strategies, at landscape level, to restore biodiversity and safeguard protected areas.

Event	Participants	Implementation period	Objective
Workshops or courses of the training programme for smallholders and cooperatives, to improve the productive efficiency of the sustainable, low-carbon and resilient cattle system, and the productive efficiency, sustainability and diversification of the cocoa agroforestry system (component 2).	Cattle-rancher and cocoa-grower cooperatives, women?s organizations and Indigenous Territorial Governments. Universities and/or specialised centres working with the cattle and cocoa value chain. SNPCC: MARENA, MEFCCA, INTA, IPSA, INAFOR, INIFOM, GRACCS	According to the plan to be approved in the first year of the Project	To contribute to the implementation of better practices for land use (soil) and restoration activities in the main production landscapes.
Workshops for the formulation of detailed investment plans developed by the Project protagonists to ensure sustainable management of production landscapes (Component 2).	Smallholders, cooperatives and IATGs. SNPCC: MARENA, MEFCCA, INTA, IPSA, INAFOR, INIFOM, GRACCS	According to the planning to be approved in the first year of the Project	To contribute to the implementation of investments for technological conversion to sustainable, low-carbon cattle systems and resilient, sustainable and deforestation-free cocoa agroforestry systems
Workshops to identify and manage public-private arrangements for the development of financing models (Component 2).	Private national commercial banks, four dairy companies, two industrial slaughterhouses, twenty cattle cooperatives (beef and milk). MARENA - MHCP	Year 2	To contribute to the facilitation of improved incentives for innovation and expansion of climate-smart sustainable production practices, and to implement restoration activities in the main production landscapes.

Event	Participants	Implementation period	Objective
Planning workshops with smallholders, cooperatives and IATGs on the implementation of investment plans for the restoration of natural habitats and productive landscapes, according to their location in municipalities and their modalities: i) silvopastoral, ii) cocoa agroforestry, iii) forest restoration and reforestation, and iv) protection and sustainable management of native forest (Component 3)	Smallholders, cooperatives and IATGs. SNPCC : MARENA, MEFCCA, INTA, IPSA, INAFOR, INIFOM, GRACCS	According to the planning to be approved in the first year of the Project.	To encourage sustainable land management and restoration activities implemented in the target landscape and extended to similar ecosystems.
Event to share results of the final evaluation (Component 4)	Cattle-rancher and cocoa-grower cooperatives, women?s organizations, private companies working in the Project area, civil servants of the SNPCC: MARENA, MEFCCA, INTA, IPSA, INAFOR, INIFOM, of the GRACCS and Indigenous Territorial Governments.	At the end of the Project?s financial execution.	To share the results of the final evaluation, consultation with protagonists, especially cattle-ranchers and cocoa-growers, and to identify weaknesses and strengths at the operative and institutional level (locally and nationally). To share experiences.

Event	Participants	Implementation period	Objective
Workshops for the systematisation of experiences in the agricultural and forestry sectors, based on the restoration of biodiversity and involving women, youth, Indigenous and Afrodescendant peoples and local communities (Component 4)	Smallholders, cooperatives and IATGs. SNPCC: MARENA, MEFCCA, INTA, IPSA, INAFOR, INIFOM, GRACCS	Year 3 and Year 5.	To contribute to effectively implemented strategic knowledge management and communication.
Final workshop (Component 4)	Cattle-rancher and cocoa-grower cooperatives, women?s organizations, private companies working in the Project area, civil servants of the SNPCC: MARENA, MEFCCA, INTA, IPSA, INAFOR, INIFOM, of the GRACCS and Indigenous Territorial Governments	Three months before Project termination.	To disseminate the Project outcomes and discuss the lessons learnt, for future Projects. To share success stories with and within benefited organizations and with other actors of the farming sector, especially cattle-ranchers and cocoa growers, which will serve as inputs for the Project closure report.
Publication of the final evaluation (Component 4)	MARENA, FAO	After the end of the Project	Public dissemination of the results of the final evaluation

4. The proposed project place in the territories of the following Indigenous and Afrodescendant peoples: Laguna Perla (ten Indigenous and Afrodescendant Communities) and the RACCS Creole Afrodescendant Communal Government in Bluefields. During project design, Free, Prior and Informed Consent (FPIC) was sought from both these Indigenous and Afrodescendant Territorial Governments. An Indigenous and Afrodescendant Peoples Plan was developed, to be implemented during the FOLUR Project. The Plan is presented in Annex J.

5. The consultation process with Indigenous and Afrodescendant peoples started with the inception workshop for the detailed Project formulation, carried out on August 14, 2020, when the Project was explained to the authorities to know their perspective. Subsequently, consultation workshops were held to understand the Project and identify, together with the consulted population and authorities of the Indigenous and Afrodescendant peoples, the activities they were interested in. The following workshops were held:

? On May 12, 2021, the first induction workshop was held with the members of the directorate of the Indigenous and Afrodescendant Territorial Government of the Pearl Lagoon basin.

? On May 13, 2021, the first induction workshop was held with the members of the directorate of the Communal Creole Afrodescendant Government in Bluefields.

? On June 3, 2021, the pre-consultation session took place with the members of the directorate of the Indigenous and Afrodescendant Territorial Government of the Pearl Lagoon basin.

? On June 15, 2021, the pre-consultation session took place with the members of the directorate of the Regional Council of the Southern Caribbean Coast Region.

? The consultation was carried out in the period from 6 to 20 August 2021 and the consent stage from 23 to 25 August 2021.

6. During the consultation process, the majority decided that at present, the State had recognized the rights of the Indigenous and Afrodescendant peoples through the ratification of Convention 169. At the same time, it had actively carried out strengthening processes in their communities, based on their culture and world vision, thus inserting them in entrepreneurship programmes, recognising their land tenure by legitimising their royal titles. This setting facilitates the development of jointly managed initiatives for the protection of the environment and biodiversity, with the purpose of achieving resilience for their communities and the natural ecosystem, with measurable results attributable to this Project.

7. During the FPIC process, activities were identified for each component which will exert an influence on the two Indigenous and Afrodescendant territories, namely the Creole Afrodescendant Communal Government in Bluefields and the ten Indigenous and Afrodescendant communities in Pearl Lagoon.

8. There follows a detailed preliminary plan for the participation of stakeholders, which will be analysed and updated more thoroughly at the start of the Project.

Table 16. Preliminary Plan for the Participation of Indigenous and Afrodescendant Peoples

Event	Participants	Implementation period	Objective

Event	Participants	Implementation period	Objective
Inception workshop	i) Creole Afrodescendant Communal Government in Bluefields, and ii) Territorial Government of Ten Pearl Lagoon Indigenous and Afrodescendant Communities/GRACCS-SDCC/MARENA	Three months after the first disbursement	To define and validate the methodologies to be used for Project implementation, follow-up and monitoring. To make coordination arrangements for the implementation of activities
Workshops for the formulation of 7 municipal landscape restoration plans (Component 1)	i) Creole Afrodescendant Communal Government in Bluefields, and ii) Territorial Government of Pearl Lagoon Ten Indigenous and Afrodescendant Communities/ GRACCS-SDCC/ MARENA	According to the work plan of the first year for component 1	To contribute to comprehensive and participatory planning in Project target areas lying close to or within Indigenous territories, to restore landscapes, conserve forests and support climate-resistant production systems.
Workshops to strengthen public-private dialogue platforms through the SNPCC in the RACCS and the province of R?o San Juan (Component 1)	i) Creole Afrodescendant Communal Government in Bluefields and ii) the Government of Ten Pearl Lagoon Indigenous and Afrodescendant Communities/ GRACCS-SDCC/ MARENA	According to the calendar of sessions of the SNPCC on sustainability-related topics of the cattle and cocoa chain: 4 sessions per year over the five-year Project period.	To assist in the definition of strategies inside as well as outside the two Indigenous territories, to restore biodiversity and safeguard protected areas.

Event	Participants	Implementation period	Objective
Workshops or courses of the training programme for smallholders and cooperatives, to improve the productive efficiency of the sustainable, low-carbon and resilient cattle system, and the productive efficiency, sustainability and diversification of the cocoa agroforestry system (Component 2).	i)Creole Afrodescendant Communal Government in Bluefields, and ii) the Government of Ten Pearl Lagoon Indigenous and Afrodescendant Communities/ GRACCS-SDCC/ MARENA	According to the calendar as approved in the first year of the Project,	To contribute to the implementation of better practices for land use (soil) and strategic restoration activities inside as well as outside of both Indigenous territories.
Workshops for the formulation of detailed investment plans developed by the Project protagonists to ensure sustainable management of production landscapes (Component 2).	i)Creole Afrodescendant Communal Government in Bluefields, and ii) Territorial Government of Pearl Lagoon Ten Indigenous and Afrodescendant Communities/ GRACCS-SDCC/ MARENA	According to the calendar as approved in the first year of the Project.	To contribute to the implementation of investments for the technological conversion to sustainable, resilient and deforestation-free cocoa agroforestry systems.
Workshops to identify and manage public-private arrangements for the development of financing models (Component 2).	i)Creole Afrodescendant Communal Government in Bluefields, and ii) Territorial Government of Pearl Lagoon Ten Indigenous and Afrodescendant Communities/ GRACCS-SDCC/ MARENA-MCHP	Year 2	To contribute to the facilitation of improved incentives for innovation and expansion of climate-smart sustainable production practices, and to implement restoration activities in both Indigenous territories.

Event	Participants	Implementation period	Objective
Planning workshops with smallholders, cooperatives and IATGs on the implementation of investment plans for the restoration of natural habitats and productive landscapes, according to their location in the municipalities and their modalities: i) silvopastoral, ii) cocoa agroforestry, iii) forest restoration and reforestation, and iv) protection and sustainable management of native forest (Component 3)	i)Creole Afrodescendant Communal Government in Bluefields, and ii) Territorial Government of Ten Pearl Lagoon Indigenous and Afrodescendant Communities/ GRACCS-SDCC/ MARENA.	According to the calendar as approved in the first year of the Project.	To encourage sustainable land management and restoration activities implemented in both Indigenous territories.
Event to share results of the final evaluation (Component 4)	i)Creole Afrodescendant Communal Government in Bluefields, and ii) Territorial Government of Ten Pearl Lagoon Indigenous and Afrodescendant Communities/ GRACCS-SDCC/ MARENA	At the end of the Project?s financial execution.	To share the results of the final evaluation and consultation with both Indigenous territories in order to share experiences.

Event	Participants	Implementation period	Objective
Workshops for the systematisation of experiences in the agricultural and forestry sectors, based on the restoration of biodiversity and involving women, youth, Indigenous and Afrodescendant peoples and local communities (Component 4)	i)Creole Afrodescendant Communal Government in Bluefields, and ii) Territorial Government of Ten Pearl Lagoon Indigenous and Afrodescendant Communities/ GRACCS-SDCC/ MARENA	Year 3 and Year 5	To contribute to strategic knowledge management and effectively implemented communication.
Final Workshop (Component 4)	i)Creole Afrodescendant Communal Government in Bluefields, and ii) Territorial Governments of Ten Pearl Lagoon Ten Indigenous and Afrodescendant Communities/ GRACCS-SDCC/ MARENA	Three months before the end of the Project	To disseminate the Project outcomes and discuss the lessons learnt, for future Projects. To share success stories with and within the two Indigenous territories, which will serve as inputs for the final Project report.

Source: FAO Study, 2021

9. Additionally, communication mechanisms and a Project dissemination plan have been agreed upon by both Indigenous territories, based on the National ENDE REDD+ Strategy and the Emissions Reduction Programme coordinated by MARENA.

Select what role civil society will play in the project:

Consulted only;

Member of Advisory Body; Contractor;

Co-financier;

Member of project steering committee or equivalent decision-making body;

Executor or co-executor; Yes

Other (Please explain)

3. Gender Equality and Women's Empowerment

Provide the gender analysis or equivalent socio-economic assesment.

1. On the basis of the GEF Gender Equality Action Plan, the FAO Strategy and Policy on gender equality, the National Policy for Climate Change Adaptation and Mitigation and Law No. 648 for Equal Rights and Opportunities in Nicaragua, the FOLUR Project will adopt the necessary means to ensure the participation of women in all relevant activities. The Project will ensure that women?s specific needs will be taken into account and that they enjoy equal access to its activities.

Socioeconomic assessment

2. URACCAN University carried out a socioeconomic and gender study for the FOLUR Project in 62 communities in five RACCS municipalities (Bluefields, Kukra Hill, Pearl Lagoon, El Rama and Nueva Guinea) and another two in the province of R?o San Juan (El Castillo and San Carlos).

3. The information was gathered by means of in-situ visits to (i) 157 producers who raise cattle and/or grow cocoa, (ii) 14 cooperatives, (iii) six state institutions, and (iv) one NGO participating in the different links of the target value chains. The KoBoCollect tool was used to hold structured interviews with social and economic cocoa growing and/or cattle raising organisations, territorial governments in corridor and others. The distribution of those interviewed was as follows: 24.84% or the respondents were in Nueva Guinea, 17.83% in El Castillo, 16.56% each in El Rama and San Carlos, 11.46% in Kukra Hill, 8.28% in Bluefields and 4.46% in Pearl Lagoon.

4. The results of the socioeconomic and gender study are summarized below:

a) By sex the distribution of producers interviewed was 63.69% male and 36.31% female. This indicates there is a 27.5% gap in women?s participation as compared to men, in particular as concerns decision-making.

b) By age group, the producers surveyed (71% men, 29% women) ranged from 16 to 45 years. Fifty-five per cent (55%) of men and 45% of women are over 46. As for children and adolescents between 0 and 15 years of age, 54% are male, 46% female.

c) In terms of schooling, 42.03% have attained the following levels: 30.57% completed primary school; 5.73% completed secondary school; 1.27% completed technical level; and 4.46% completed university studies. Sixty-one persons (38.86%) began some sort of academic education but did not finish, while thirty (19.11%) have no academic education. This reflects a complex reality, because in rural areas the deepening of poverty and high levels of unemployment have placed considerable pressure on the household economy, with a serious negative impact on education. It is difficult for children in rural areas to gain access to secondary school, technical school or higher education. Being prepared to perform successfully in life is a challenge faced by rural communities in FOLUR target municipalities, due to their geographic location and the difficulty in getting an education, a basic service.

d) Regarding land tenancy, 97.46% of those surveyed said they work their own land, 1.7% are tenant farmers and 0.84% work on communal land. Of the two persons who work on communal land, one is located in the Rama Creole territory and the other in the land belonging to the ten Indigenous and Afrodescendant communities in the Pearl Lagoon Basin. Only one of them signed a peaceful coexistence contract with the Indigenous authorities.

e) According to the information provided by 155 of 157 respondents, 64.52% have public deeds, 20% a land title, 5.16% have access rights, 3.87% an agrarian reform land title, 3.23% a communal land title, 1.94% a document from the mayor?s office and 1.28% other types of documents (one has a government certificate and another an as yet unregistered inheritance title).

f) The average farm size is of 35.15 ha; the largest has 278.9 ha and the smallest 1.4 ha.

g) The perception of respondents regarding the economic reality of their productive activities and factors in their production process indicates that 53.5% consider their economic situation reasonable, 24.2% perceives it as good, 13.38% as poor, 5.73% as very poor and 5% as excellent.

h) Farm products are sold on the local market. There are companies that process these for local, national and international consumption.

i) The atomization of agricultural holdings, their low volume, minimal or non-existent added value and individual sales leaves these farmers and ranchers at a disadvantage when negotiating and setting prices. As a consequence, they obtain low prices for the sale of their products.

j) Producers surveyed stated that their most significant investments are made in cattle raising, (59.88%), followed by fertilizers (12.74%) and seeds (12.74%), and finally agricultural equipment and pesticides.

Constraints to gender equality and Gender Action Plan

5. According to the socioeconomic and gender study carried out by the University of the Autonomous Regions of the Nicaraguan Caribbean Coast (URACCAN) for the FOLUR Project, the main constraints for gender equality are the following:

? Little recognition of the contributions of women in the livestock and cocoa chain,

? inequalities in the participation and decision-making of women in the family and community organization of the cattle and cocoa chains,

? women have limited access to inputs, technologies, and financial services

? scarce land tenure among women

? limited technical capacities for product processing, communication and marketing, and

? restricted access of Indigenous, Afrodescendant and mestizo women to inputs and funds for investment in land, crops and cattle.

6. During the Project preparation process, a gender gap study was carried out and women?s roles and expectations in relation to Project activities were identified (Full report available in Spanish). A gender action plan was formulated to be implemented in the FOLUR Project. The detailed Gender Action Plan is available in Spanish, but the summary table is presented below.

7. To address the identified barriers to gender equality, the Project includes specific activities that address the issue of gender equality in the four Project components, as detailed in the table below:

Gaps:

1. Unequal access to socioeconomic benefits and other services in the Livestock and Cacotera chains .

2. Low capacity development to incorporate women in the Livestock and Cocoa chains.

3. Access to incentives to improve the management of their lands and forests.

Project activities to respond to identified gaps	Indicators and goals	Timeline	Responsibilities	Budget
Component 1. Development of integrated landscape management systems.				
OUTCOME 1.1 : Outcome 1.1 Participatory, inclusive and gender-sensitive planning and mapping is promoted to improve land use and management at the landscape level. **Objective of the incorporation of the approach** in this component: development of women's capacities to improve land use and management at the landscape level.				
Product 1.1.1.				
A.1.1.1.1. Design and implement a training plan, with the inclusive participation of indigenous peoples, Afro-descendants and women, to improve land use and management at the landscape level *(invest in the development of women's capacities in the municipalities of Laguna de Perlas, Kukra Hill, El Rama and Nueva Guinea of the RACCS and in the municipalities of El Castillo and San Carlos in the department of R?o San Juan)*	At least 30% of the participants in the training workshops are women producers in livestock and cocoa in the FOLUR project area.	Year 1, Year3.	PIU-MARENA, esp. In methodology, gender and IP	Project budget US$ 84,000 (30% of the training budget)
Component 2 Promotion of sustainable food production practices and responsible value chains for basic products.				
RESULT.2.1. Best land use (soil) practices and restoration activities in major production landscapes adopted and scaled up.				
Objective of incorporating the approach in this component : (i) select women as specific beneficiaries; (ii) develop capacities in women				

Gaps:

1. Unequal access to socioeconomic benefits and other services in the Livestock and Cacotera chains .

2. Low capacity development to incorporate women in the Livestock and Cocoa chains.

3. Access to incentives to improve the management of their lands and forests.

Project activities to respond to identified gaps	Indicators and goals	Timeline	Responsibilities	Budget
Product 2.1.1.				
Activity 2.1.1.1 Design and implement a training plan for Small Producers and Cooperatives to improve the productive efficiency of the low-carbon livestock system. *(invest in the development of women's capacities in the municipalities of Laguna de Perlas, Kukra Hill, El Rama and Nueva Guinea of the RACCS and in the municipalities of El Castillo and San Carlos in the department of R?o San Juan)*	At least 20% of the participants in the training workshops are women livestock producers in the FOLUR project area.	year 2	PIU-MARENA	Project budget US$ 20,000.00 (20 % of the training budget)
Activity 2.1.1.2 Design and implement a training plan for Small Producers, Cooperatives and GTI to improve the productive efficiency of the Cocoa agroforestry system. *(invest in the development of women's capacities in the municipalities of Laguna de Perlas, Kukra Hill, El Rama and Nueva Guinea of the RACCS and in the municipalities of El Castillo and San Carlos in the department of R?o San Juan)*	At least 20% of the participants in the training workshops are women cocoa producers in the FOLUR project area.	year 2	PIU -MARENA	Project budget US$ 10,000.00 (20 % of the training budget)

Gaps:

1. Unequal access to socioeconomic benefits and other services in the Livestock and Cacotera chains .

2. Low capacity development to incorporate women in the Livestock and Cocoa chains.

3. Access to incentives to improve the management of their lands and forests.

Project activities to respond to identified gaps	Indicators and goals	Timeline	Responsibilities	Budget
Product 2.1.2.				
A.2.1.2.1. Formulate and implement investment plans to support Small Producers, Cooperatives and GTI in the technological reconversion to more intensive livestock systems with low emissions. (Select women as specific beneficiaries)	At least 20% of the beneficiaries of the investment plan are women livestock producers in the FOLUR project area.	Years 3 and 4	MEFCCA-INTA-IPSA	Project budget US$ 60,000.00 (2 0% of the investment budget)
A.2.1.2.2. Formulate and implement investment plans to support Small Producers, Cooperatives and GTI in the technological reconversion to resilient cocoa agroforestry systems . (Select women as specific beneficiaries)	At least 20% of the beneficiaries of the investment plan are women cocoa producers in the FOLUR project area.	Years 3 and 4	MEFCCA-INTA-IPSA	Project budget US$ 45,000.00 (2 0% of the investment budget)
Component 3: Restoration of natural habitats				
RESULT. 3.1. Sustainable land management (use) practices and restoration activities implemented (scaled up) in target landscapes and expanded to similar ecosystems (beyond).				
Objective of the incorporation of the approach in this component. (i) expand the participation of women in landscape restoration; (ii) invest in capacity building for women;				

Gaps:

1. Unequal access to socioeconomic benefits and other services in the Livestock and Cacotera chains .

2. Low capacity development to incorporate women in the Livestock and Cocoa chains.

3. Access to incentives to improve the management of their lands and forests.

Project activities to respond to identified gaps	Indicators and goals	Timeline	Responsibilities	Budget
Product 3.1.1.				
Activity 3.1.2.1 Implement the Prioritized Interventions: Agroforestry , Silvopastoral , Forest Restoration and Reforestation, and Protection and sustainable management of the native forest. (Select women as specific beneficiaries)	At least 20% of the beneficiaries of investment plans in systems: i) silvopastoral , ii) cocoa agroforestry, iii) Forest Restoration and Reforestation and iv) Protection and sustainable management of native forests, are women producers of livestock and cocoa in the FOLUr project area.	Years 2, 3 and 4	PIU - MARENA, MEFCCA and INTA	Project budget US$ 250,000.00 (2 0% of the investment budget)
Component 4. Program coordination, collaboration and capacity development				
RESULT 4.1. Management, coordination and M&E implemented effectively				
Objective of the incorporation of the approach in this component : (i) Develop women's capacities (ii) Develop capacities in women and men for the capture, registration and presentation of information disaggregated by sex, age group and ethnicity, as well as gender analysis.				
Product 4.1.1.				

Gaps: **1. Unequal access to socioeconomic benefits and other services in the Livestock and Cacotera chains .** **2. Low capacity development to incorporate women in the Livestock and Cocoa chains.** **3. Access to incentives to improve the management of their lands and forests.**				
Project activities to respond to identified gaps	**Indicators and goals**	**Timeline**	**Responsibilities**	**Budget**
Activity 4.1.1.1 Implement the monitoring and evaluation system for the FOLU Nicaragua project. (Women participate in the monitoring of local biodiversity in the productive landscapes of cattle and cocoa)	The project's M&E system is designed to capture, record, process, and present information disaggregated by sex, age group, and ethnicity. Technicians prepared to carry out gender analysis. At least 50% of the participants in the monitoring groups are women.	Year 2 and beyond	PIU MARENA	Project budget US$ 27,520.00 (10 % of the project monitoring budget)
OUTCOME 4.2 Strategic knowledge management and communications implemented effectively				
Product 4.2.1				
Activity 4.2.1.1 Implement knowledge management through case studies and participation in the activities of the FOLU GEF Global Platform.	Develop a case study on the experience of incorporating gender equality in the livestock and cocoa chains in the FOLUR project area	Year 4	IPU-MARENA, DTs and support from FAO	Project budget US$ 10,520.00 (10 % of the knowledge management budget)
TOTAL BUDGET GENDER ACTION PLAN				**$507,040.00**

Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment?

Yes

Closing gender gaps in access to and control over natural resources; Yes

Improving women's participation and decision making Yes

Generating socio-economic benefits or services or women Yes

Does the project?s results framework or logical framework include gender-sensitive indicators?

Yes

4. Private sector engagement

Elaborate on the private sector's engagement in the project, if any.

1. During Project implementation, private sector producers residing in the target landscape will be involved through the National Production, Consumption and Trade System (SNPCC, in Spanish), which works with private sector producers in the cattle raising and cocoa chains. Specifically, the project will involve private stakeholders from the livestock and cocoa sectors in the development of municipal, territorial and communal collaborative plans for the restoration of the landscape through silvopastoral systems, cocoa agroforestry systems, restoration and reforestation of forests, and protection and sustainable management of native forests.

2. Private sector stakeholders from the cocoa value chain will participate in the development of a capacity-building program to complement the support that cocoa buying companies such as Ritter Sport, ECOM, Cocoa Oro, ECOM, Ingemann, UCA Ahmed Campo, and Rikolto currently provide in the form of technical assistance. In the case of the livestock sector, the project will promote alliances with meat processing companies and dairy sector companies that work with livestock producers in the RACCS and the department of Rio San Juan.

3. The proposed project will also support the signing and formalization of multi-stakeholder and multi-level agreements for landscape restoration and forest conservation in the RACCS and the department of R?o San Juan. In this regard, the development of these agreements will be promoted by integrating the dialogue mechanisms of the Production, Consumption and Trade System (PCTS) with the unions organized through (i) the Nicaraguan Chamber of Bovine Meat Export Plants (CANICARNE), where work will be carried out with meat processing companies that buy cattle for meat in the project target areas (slaughterhouses San Mart?n, Novaterra, Nuevo CARNIC, MACESA); and (ii) with the Nicaraguan Chamber of the Dairy Sector (CANISLAC) as well as milk processing companies and cooperatives that buy and collect milk from the project target areas (LALA, Cooperativa NICACENTRO, CHONTALAC, CENTROLAC, others).

4. The FOLUR project will support the organization of meetings between the SNPCC and the productive sectors in the RACCS, the department of Rio San Juan and in the seven municipalities in the project target area.

Engagement of the private sector during project preparation

5. During the formulation process, the project design team organized four meetings and interviews with members of cattle-rancher and cocoa grower cooperatives located in the target landscape area. These meetings were used (i) to survey key stakeholders in order to understand the private sector?s view regarding current and future risks of the target value chains, (ii) to understand how the different enterprises could collaborate with the project team, and (iii) to understand their willingness to participate in the proposed FOLUR Project activities. A summary is presented below for each target value chains.

Cocoa Value Chain

? The cooperatives COMPOR and COOPROCAR in El Rama, and the cooperatives COOPROCAFUC and COOSEMUCRIM in R?o San Juan have expressed interest in partnering with the project during its implementation. They will provide access to their members and support with outreach activities

? Several institutions that manage genetic material and seeds have also confirmed interest in partnering with the project, including (i) the Autonomous Foundation for the Development of the Nicaraguan Atlantic Coast (FADCANIC, in Spanish), which currently runs a garden of plant material stretching over 22.5 hectares, with 30 different types of clones; (ii) El Recreo Experimental Centre managed by the Nicaraguan National Institute of Agricultural Technology (INTA, in Spanish) and (iii) private producer Ramona Quintero. These institutions will make genetic material available for restoration activities and will support with capacity building and knowledge sharing.

? Organizations such as Technoserve, Solidaridad, BICU University and CATIE will support project activities by supporting capacity building in cocoa cultivation.

Opportunities for alliances with cocoa collecting and processing companies

•Artisanal or small-scale industrial processors producing cocoa paste, chocolate bars, chocolates and cocoa liquor (alcohol) that have expressed interest in partnering with the project include:
? Chocolates Momotombo ? Managua: Its chocolates are of high quality, it has shops at the airport and has considerably internationalized the product. The company buys cocoa originating from Mombacho (Granada), La Dalia, Waslala and R?o San Juan and has capacity to process 12 tonnes per year.

? Chocolates Rustikao: Chocolate brand of UCA SOPPEXCA (formerly Quetzalcoatl Chocolates). It has made progress and its quality has improved considerably. It has received strong support from Christian Aid to improve the process, quality, packaging and innovation. Current capacity is 2 tonnes/year.

? The three most important quality cocoa buyers / exporters to the European and U.S. market are Ritter Sport Nicaragua S.A., Ingemann and Exportadora Atlantic (ECOM). All are present in the FOLUR Project area.

? **Ritter Sport Nicaragua S.A.** Over the last years, it has bought between 900 ? 1,200 tonnes of cocoa per year. Since 2011 it has developed a 1,200 ha cocoa plantation in the municipality of Kukra Hill, RACCS. All the cocoa bought in the country is used for its chocolates. Two years ago, it started producing a chocolate of Nicaraguan origin.

? **Exportadora Atlantic S.A. ? ECOM**: The company works directly with about 400 farmers in the different cocoa-growing regions, buying cocoa with a direct-purchase model to supply its markets and processing plants. Currently it uses protocols with low fermentation percentages and relatively speedy drying methods. In addition, the company offers its farmers the capacity to achieve certifications for farmers and organizations of farmers; the capacity for innovation and technology for genetic and traceability of promising clones and the multiplication of materials; access to cocoa world markets with its processing plant; trade links for cocoa varieties and processed cocoa.

? **INGEMANN**: This Danish company started as a trading company and exporter of honey; some years ago, it acquired the company XOCO to gain access to the cocoa sector. It works in alliance with farmers? organizations, intermediaries or buyers in the cultivation areas, and also buys directly along routes in different territories, such as Waslala, Rancho Grande, Nueva Guinea and El Cu??Bocay. In addition, it has alliances with farms in many regions of the country and works with about 1,000 cocoa farmers, whose harvests are transported to its processing plant in in San Benito, outside Managua.

? **RIKOLTO, WCF and CIAT**. Their support consists of infrastructure (germplasm available, farmer?s lots and large farms, laboratories in universities and in the private sector), small research funds (APEN, Rikolto, WCF) and international cooperation (CIRAD, ICCO, CATIE, and others).

Opportunities for Alliances in the cattle raising chain

•**DAIRY PRODUCTS:** The country has 4 industrial dairy plants, which processed at least 39.5 million gallons in 2019: LALA, CENTROLAC, PROLACSA and NILAC.

•**LALA:** This company works in Nicaragua with a focus on developing a web-based National Milk Quality System with the purpose of: registering the data about milk collection, quality standards and sustainability from cooperatives, and registering the production in two national data bases; designing and implementing a results-based financial mechanism with dairy companies that rewards dairy farmers for quality, health, safety and sustainability features of their milk; establishing environmental indicators for the production of sustainable milk with the national dairy chamber (CANISLAC).

•The LALA Group, together with TNC, TNS and CIPAV is demonstrating that it can help to advance the dairy sector towards sustainable cattle-ranching systems offering more economic resilience to dairy farmers. In alliance with CANISLAC, this association of four organizations started work in 2018 through the investment in the capacity development of more than 1,400 dairy farmers and six dairy cooperatives in the Nicaraguan provinces of Boaco and Matagalpa.

•**BEEF:** The country has six certified industrial plants for export beef, with a capacity of 3,600 head of cattle/day, in addition to 100 municipal slaughterhouses, five feedlots with a capacity to process 223,000 steers per year, and three auction centres for cattle-on-the-hoof. The industrial slaughterhouses San Mart?n, Nuevo Carnic, Novaterra, SuKarne, MACESA, Nica Beef processed 711,000 head of cattle in 2019 (85% of the total). Their joint processing capacity was 3,600 cattle per day, which was expanded to 4,200 in 2020 through the operation of the San Isidro Slaughterhouse in the municipality of El Rama, and will reach 4,800 before 2030, when the MAGANICSA Slaughterhouse is built and in full operation.

•**San Isidro Slaughterhouse:** Inaugurated in 2019, this 32 million US Dollar slaughterhouse built with Korean capital is located at km 278 of the road to El Rama. This industrial plant has over 200 employees and the capacity to slaughter 250 head of cattle /day, equivalent to 1,200 metric tonnes of beef / month, equivalent to 60 containers, and can guarantee annual exports worth around 70 million US Dollars.

5. Risks to Achieving Project Objectives

Elaborate on indicated risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, the proposed measures that address these risks at the time of project implementation.(table format acceptable):

Table 19. Risks to the Project

Description of risk	Impact	Probability of occurrence	Mitigation actions	Responsible party
Availability of information for decision-making and conflicts between stakeholders on sustainable land management	Low	High	The Project mitigates this risk by proposing participatory planning for land use. Thus, stakeholders will meet to exchange information and reach agreement on land use.	MARENA, supported by FAO, in coordination with other institutions and organizations. Local communities and GRACCS.

Description of risk	Impact	Probability of occurrence	Mitigation actions	Responsible party
Need to improve institutional capacity, especially for policy and strategy monitoring and evaluation, and the financing mechanisms for the promotion of sustainable food systems	Low / Medium	Low	During Project preparation, an action plan for capacity development was designed to accompany Project activities and ensure institutional capacity to maintain Project sustainability.	MARENA, supported by FAO, in coordination with other institutions and organizations. (MEFCCA, INTA, IPSA, INAFOR, GRACCS, mayors? offices)
Technical: The restoring of lands and biological connectivity and transition towards sustainable food systems requires multi-sectoral institutional coordination, policies that are sensitive towards protected areas and biodiversity, and lasting behavioural changes among farmers, owners and the private sector.	Medium	High	Participatory construction, as advances are made in capacity development and the forming of management groups, entities and mechanisms that can make significant contributions to the restoration of forests, important habitats and the achievement of sustainable management.	MARENA, supported by FAO
Stakeholders: The success of the Project will depend to a high degree on the commitment and ownership of the stakeholders.	Medium	100%	Increase ownership to reduce risk on the basis of capacities, entities and mechanisms developed with members of different institutions, organizations and the GRACCS (a) mechanisms that increase the sustainability of Project investments will be defined and implemented; and (b) agreements with local actors for participation in the implementation of Project activities will be incorporated.	MARENA, coordinating activities with the GRACCS, municipal governments, organizations, entrepreneurs and farmers.

Description of risk	Impact	Probability of occurrence	Mitigation actions	Responsible party
Stakeholders: Risk of adoption of financial mechanisms	Medium	Medium	The project will support the design of innovative financing models based on public-private arrangements to support the implementation and uptake of good practices. To reduce the risk of no-adoption, the project team will work with private sector financiers through the dialogue platforms (Banpro, Bancentro, Ecocreditos, BAC Credomatic, among others) during the design of investment programs and the capacity building programs to ensure alignment of incentives and needs	MARENA, private sector
Cofinancing. Availability of co-financing resources could be affected by possible changes in the priorities of co-financiers	High	Low	Cofinancing resources have been confirmed by government counterparts (public investment and recurrent expenses) and international donors (BCIE/GCF resources) and are available for the country. The risk of these resources not materializing is low. MARENA will monitor and report annually on the resources available.	MARENA, in coordination with other institutions and organizations.
Climate change. The restoration and forest conservation activities could be seriously affected by adverse consequences of climate change. Examples are: droughts and the high temperatures that can provoke wildfires or lead to the extinction of endangered species.	Medium	High	The Project is implemented precisely to strengthen resilience through the restoration of forests, habitats and livelihoods, reduce GHG emissions and build capacities in response to extreme events. Activities will partially consist in coordination with the National Climate Change Response System (SNRCC).	MARENA, in coordination with other institutions and organizations.

Description of risk	Impact	Probability of occurrence	Mitigation actions	Responsible party
Natural threats, including weather events and epidemiological risks (e.g. COVID-19) that could delay Project activities.	Medium	Medium	Awareness-raising about the situation in the field between interest groups, and the identification of green recovery measures. The evolution of the COVID-19 pandemic will be monitored closely to allow for sufficient time for the design of mitigation plans. The Project will ensure that meetings will follow the national guidelines to avoid contagion, and will supervise any impact that could delay the preparation of the Project. Implementation of the Project will start in 2021, when COVID-19 will hopefully be under control.	MARENA, in coordination with other institutions and organizations.

COVID-19 Risk analysis:

Possible impacts and mitigation actions during project design

1. During the initial stages of project implementation, the ongoing COVID-19 pandemic is likely to affect travel, meetings and consultations. Appropriate risk mitigation measures include the identification of remote tools and methodologies to develop meetings and consultations. Travel will be limited to the minimum essential to ensure relevant stakeholder participation to ensure free, prior and informed consent. Virtual meetings will be held whenever possible. Face-to-face meetings will be held strictly following national guidance to prevent transmission of the virus. During the entire duration of project implementation, the evolution of the pandemic will be monitored to include mitigation measures in the design of the project.

Risk analysis and mitigation strategies in the project

2. The project will start implementation in the second half of 2022. Even though vaccination rates increased during 2021 in Nicaragua, they have stabilized around 62% (fully vaccinated) and more than 80% of the population have received at least one dose. Nonetheless, the evolution of the virus will be monitored continuously and project activities will consider risk mitigation measures related to the availability of technical experts and capacities, stakeholder engagement process and the complexities associated with working with local communities and indigenous populations in isolated locations. This will be reflected in the project?s Annual Work Plans.

3. The restoration activities, business models for livelihood enhancement activities, partnerships and market articulation mechanisms considered by the project under Components 2 and 3 could be affected by the evolution of the COVID-19 pandemic or the emergence of other future diseases of zoonotic origin by the closure of roads, markets and quarantine measures that can hinder economic activity. The project will take the lessons learned from the ongoing COVID-19 pandemic into account in the design of the business models under outputs 2.1.2 and 2.1.3. Measures could include, for example, the support with digital transformation processes or the provision of financial support to increase liquidity among smallholders, but this will be discussed with the Project Steering Committee and the project advisory teams. Similarly, capacity building activities under Components 1, 2 and 3 will be carried out following national guidance updated FAO guidelines.

Finally, green investments are the one of the measures prioritized by the government of Nicaragua and partners to decrease the negative effects of COVID-19. The proposed project has an opportunity to prioritizes green investments to reduce the risks of biodiversity loss, land degradation and climate change effects via implementing landscape restoration and decrease land degradation that support sustainable environmental dimensions. It will build resilience to future pandemics to reduce the risks presented by climate change and biodiversity loss. Sustainable forest production methods and applications will also support this process

Climate Risks

A climate risk assessment was carried out during project preparation and is available in Spanish upon request. The main findings are summarized below.

Nicaragua?s Nationally Determined Contribution (NDC) updated in December 2020 indicates that the is highly threatened by climate variability and extreme events. The future scenarios presented in the Fifth IPCC report, adjusted to country conditions, indicate that out of the 156 municipalities, (i) 21 are threatened by hurricanes; (ii) 48 are vulnerable to drought; (iii) 33 are vulnerable to flooding, and 9 are threatened by sea level rise. One of the clear evidences of the country's high vulnerability to Climate Change is that, during 2020, extreme events occurred with the passage of two category 4 and 5 hurricanes affecting the entire country. Hurricane Eta (category 4) impacted the Autonomous Region of the North Caribbean Coast (RACCN) on November 3. Ten days later, Hurricane Iota (Category 5) impacted the same

region, affecting more than 3 million people and causing more than 738 million dollars in losses and damages (equivalent to 6.2% of the country's GDP).

FAO carried out a climatic vulnerability assessment for the Caribbean Coast of Nicaragua in 2020. This assessment shows that the target project area has also been affected by the tropical storms and hurricanes, as follows:

Name of the Tropical storm	**Month/Year**	**Incidencia en las regiones de la Costa Caribe**
Hurricane Joan	October 1988	Hurricane Joan entered the country with category of Hurricane. It caused damages due to high winds and rains in Corn Island, Kukrahill and Bluefields.
Hurricane Ida	November 2009	Made landfall on the Caribbean Coast, near Rio Grande, after hitting Corn Island. Strong winds affected the northern part of the Caribbean coast of Nicaragua.
Hurricane Otto	November 2016	Huricane Otto was a stationary Tropical Storm which contributed significantly to cloudiness, rains and strong winds in the south of the South Caribbean Autonomous Region and Rio San Juan.

Future Scenarios

Temperature. For the RCP4.5 scenario and the 2021-2040 period, an average temperature of between 26o-28oC is projected in most of the Caribbean coast, except in the northernmost part of the RACCN, where higher temperatures are projected, between 28o-30oC.

Precipitation. For the RCP4.5 scenario and the closest period (2021-2040), INETER projections show the north-south variability in accumulated precipitation along the Nicaraguan Caribbean coast. A clear gradient can be seen with the lowest rainfall in the northern part of the RACCN (2,500-3,000 mm) with an increase to the southernmost part of the RACCS, where the accumulated precipitation exceeds 5,000 mm.

Climate Resilience

The National Institute for Territorial Studies (INETER) is responsible for producing daily forecasts, climate bulletins (decadal and monthly), agrometeorological bulletins (15 days and monthly), El Ni?o Southern Oscillation-ENSO bulletins (monthly) and fishing bulletins (weekly). Regarding the agrometeorological bulletin, it provides an overview of current weather conditions, soil moisture, monitoring of agricultural stress conditions (using the FAO-developed Agricultural Stress Index System-ASIS), observed pests and diseases, and a set of recommendations for the main crops and forestry systems every 15 days (INETER, 2020).

Adaptation options for target value chains

Cocoa. Studies carried out by CIAT and CATIE in the period 2016-2017 confirm that in the future, Central America may become drier, showing higher temperatures and less precipitation. On the other hand, high-intensity precipitation during tropical cyclones may become a common feature for decades to come.

The variability of climatic factors, in addition to the physiological cycle of cocoa, positively conditions the probability of incidence of pests and negatively affects the yields of the Cocoa crop. An increase in climate variability will mean a reduction in productivity and in the supply of quality cocoa and a drop in income for stakeholders if adaptation measures are not taken.

An assessment conducted by APEN COSUDE during the project preparation process analyzed the suitability of the target areas for cocoa production in 2018 and 2050. The assessment concluded that the percentage of land without suitable condition for cocoa cultivation will increase from 3.1% to 17.4% and from 11.1% to 26.3% by 2050 in the Southern Coastal Caribbean Autonomous Region (RACCS) and the Rio San Juan Region, respectively. In other to address these risks, the project could implement the following adaptation measures

- Incremental Adaptation: these are areas for crop development through crop intensification, as well as diversification to mitigate market and environmental risks other than climate change. Approximately 139,748 and 42,228 ha could follow this approach in the RACCS and in R?o San Juan regions, respectively.
- Systemic Adaptation: These are areas where there is a need to make significant adaptation changes such as the adoption of seeds resistant to heat and drought. These practices could be applied in 1.81 million hectares within the RACCS and the Rio San Juan regions.

Other threats have been reported throughout the cocoa value chain, particularly during the drying process, storage and in the markets. For example, the quality and quantity of beans, as well as products derived from cocoa, can compromise the availability of this product in national and international markets. Therefore, the project will examine different entry points along the value chain to build climate resilience.

This includes raising awareness with growers about risks and approaches to mitigate and adapt to climate-related hazards, working with agricultural associations to support infrastructure related to drying and fermentation to improve product quality, or working with financial institutions to provide credit and insurance plans to producers.

Sustainable practices for cocoa production and measures to build climate resilience among cocoa farmers include (i) dissemination of climate-smart agricultural practices; (ii) implementation of measures to prevent pests and diseases; (iii) investments in climate-resilient varieties that can withstand stress conditions from drought and pests and diseases while preserving grain yield and quality; (iv) investments in early warning systems and improved access to meteorological (precipitation) and climatic (drought) information, as well as associated disasters (pests and diseases) for end users; and (v) mapping of areas with higher risk of danger (areas prone to flooding, landslides and strong winds).

Livestock. There are multiple practices/measures that the project could adopt to build climate resilience of livestock systems. Depending on the risk, the following practices are proposed to be implemented:

- ? Drought: construction of reservoirs and water basins to optimize water resources and limit the movement of livestock and reduce excessive grazing. In addition, the use of adapted cattle breeds that require little water and ensure high productivity during drought stress conditions.
- ? Heat tolerant: the use of breeds that can withstand high temperatures and reduce animal mortality.
- ? Land management: Small herd size prevents soil erosion and limits overgrazing. As included in the project results, the use of agrosilvopastoral systems improves carbon storage, improves soil fertility and diversifies the income of pastoralists.

In addition, the project will adopt mitigation and sustainable practices that are consistent with national policies and can be used to engage local institutions in the capacity building process. This includes the implementation of silvopastoral systems (including pasture rotation), silage of protein fodder, application of biodigesters, as well as production and application of biofertilizers at the farm level.

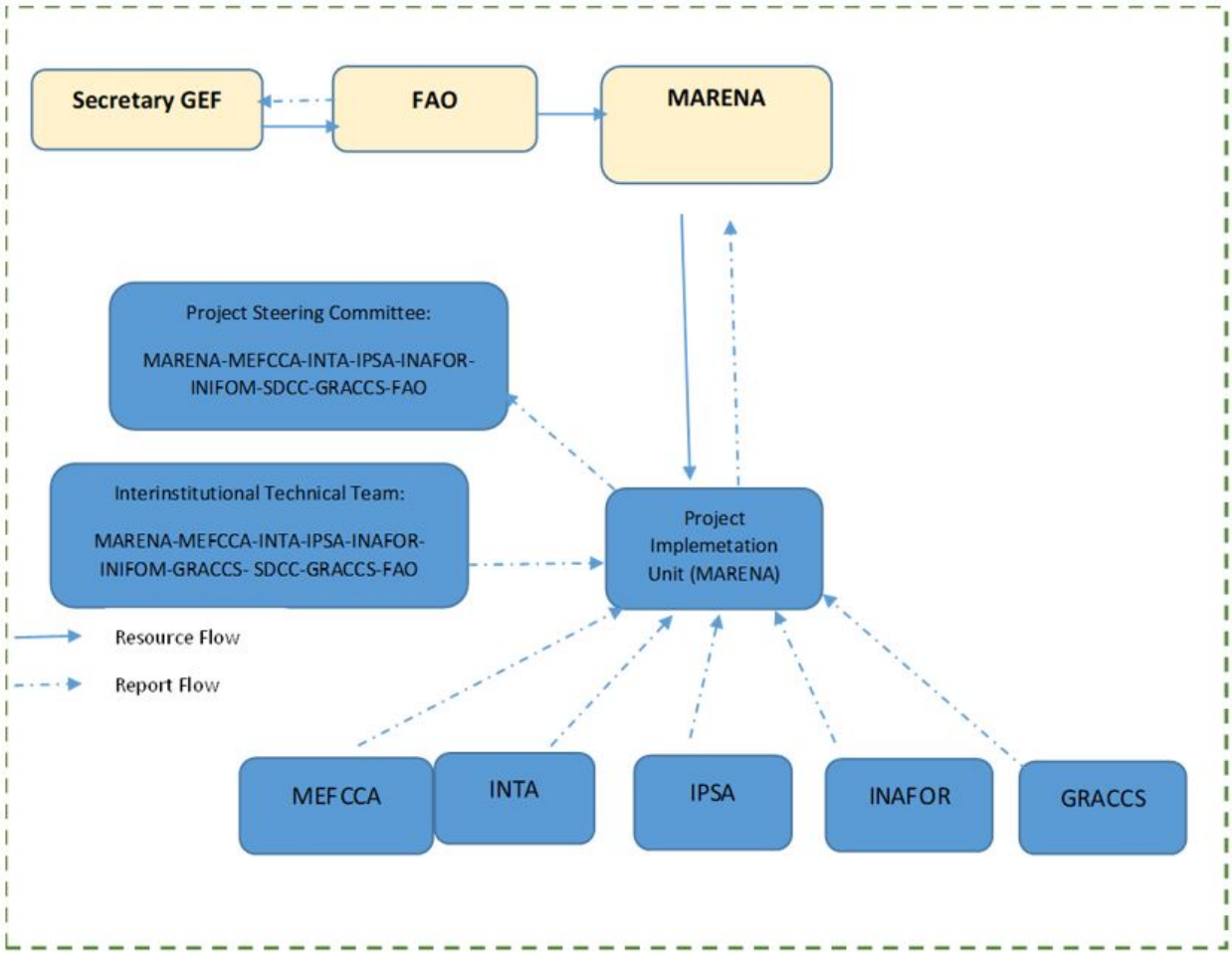
6. Institutional Arrangement and Coordination

Describe the institutional arrangement for project implementation. Elaborate on the planned coordination with other relevant GEF-financed projects and other initiatives.

6.a Institutional arrangements for project implementation.

274. The Ministry of the Environment and Natural Resources (MARENA) will be responsible for the general execution and the technical aspects of the Project, supervised by FAO as GEF Implementing Agency (see flowchart below)[1]. MARENA will act as the lead executing agency and will be responsible for the day-to-day management of project results entrusted to it in full compliance with all terms and conditions of the Operational Partnership Agreement signed with FAO. MARENA is responsible and accountable to FAO for the timely implementation of the agreed project results, operational oversight of implementation activities, timely reporting, and for effective use of GEF resources for the intended purposes and in line with FAO and GEF policy requirements.

Organisational Project structure:



275. **Project Steering Committee.** As the leading responsible entity, MARENA will chair the Project Steering Committee (PSC). Each year, the PSC will approve the annual work plans and budgets, and offer strategic orientation to the Project Management Unit (PMU) and to all executing partners. The PSC will consist of representatives of MARENA, MEFCCA, INTA, IPSA, INAFOR, INIFOM, GRACCS and FAO, who will function as Focal Points for the Project in their respective institutions. Thus, the Project will have one focal point in each participating institution. As focal points, the PSC members will: (i) technically supervise activities in their institution; (ii) ensure a smooth flow of information and knowledge between the institution and the Project; (iii) facilitate the coordination and linkages between Project activities and their institution?s work plan; and (iv) facilitate joint funding to the Project according to the modality agreed upon.

276. The Project Steering Committee (PSC) is the entity that supports decision-making; it will meet at least twice a year to: i) supervise and ensure the technical quality of the outputs; ii) approve the annual work plan and budget as well as semi-annual progress reports and the Project reports; iii) strengthen linkages between this Project and other ongoing and pertinent projects and programmes; iv) know and inform of joint funding from each of the parties; v) ensure the achievement of the Project?s key outcomes, including sustainability, expansion and replication; and vi) effectively coordinate the governmental partner?s work under this Project.

277. **Inter-Institutional Technical Team (ITT)**: MARENA will chair the ITT, in charge of preparing the annual work plans and budgets, and will support the operative management of the Project Management Unit (PMU) and all executing partners. The ITT will comprise representatives of MARENA, MEFCCA, INTA, IPSA, INAFOR, INIFOM, GRACCS and FAO.

278. A **Project Implementation Unit (PIU)** will be co-financed by GEF and will be established within MARENA, reporting directly to its executive management. The PIU?s main functions, under the guidance of the Project Steering Committee, are to ensure efficient overall Project management, coordination, implementation and monitoring, through the effective implementation of the annual work plans and budgets. The PIU is directed by MARENA?s General Division for Natural Heritage and Biodiversity, which will closely collaborate with a National Project Coordinator (NPC), who will be hired on a full-time basis for the duration of the Project. Additionally, the PIU will include: a financial specialist, a procurement specialist, an M&E specialist, a specialist in methodologies, gender and Indigenous peoples, and a biodiversity specialist. Their salaries will be paid from Project funds (See ToR in appendix 9).

279. The **National Project Coordinator (NPC)** will be in charge of day-to-day Project implementation, administration and technical supervision, on behalf of the operational partner and within the framework defined by the PSC. Detailed TORs for the NPC can be found in Annex M, but he/she will be responsible, among other things, for:

i. coordination with relevant initiatives;

ii. ensuring a high level of collaboration between participating national institutions and organizations

iii. ensuring compliance with all MARENA regulations during implementation, including timely reports and financial management;

iv. following up on Project progress and ensuring timely delivery of inputs and outputs;

v. approve and negotiate requests for financial resources, using the format provided by MARENA;

vi. monitor financial resources and accounting procedures to guarantee financial reports are accurate and trustworthy;

vii. ensure timely preparation and presentation of fund requests, financial and progress reports to FAO, according to MARENA report requirements;

viii. organize Project workshops and meetings to monitor progress and prepare the annual budget and work plan.

ix. present semi-annual Project progress reports (PPR) with the AWP/B to the PSC and FAO;

x. prepare the first draft of the annual Project Implementation Review (PIR) report;

xi. present the semi-annual technical and financial reports from MARENA to FAO, and facilitate the exchange of information between MARENA and FAO, if so required;

xii. inform the PSC and FAO that any delay or difficulty arising during implementation to ensure measures are taken and there is timely corrective support.

280. The Project?s financial execution will be carried out according to management instruments approved for the Project (ProDoc, AOP, Procurement Plan, and Monitoring and Evaluation Plan), using the FAO Operational Partners Implementation Modality (OPM)[2]. The Ministry of the Environment and Natural Resources (MARENA) as an Operating Partner (OP) will have general execution and technical responsibility for the project, with the supervision of FAO as the GEF Agency. In line with the results of the capacity assessment carried out, and completed in January 2020, MARENA is in the process of developing and implementing a plan to strengthen its capacities in the area of managing sub-partners or secondary partners. While the process is being completed, other sub-partners (including INTA, IPSA and MEFCA and specialized entities) are included in the project budget, for the development of certain activities whose nature merits the knowledge and experience of said entities. The sub-executing partners will be responsible to MARENA (as the main executing partner) and to FAO (as the implementing agency) for the proper administration and execution of financial resources through the Letter of Agreement Modality that will be signed with the sub-partners (including INTA, IPSA and MEFCA and specialized entities).

281. **Implementing Agency.** The United Nations Food and Agriculture Organization (FAO) will take on the following responsibilities:

i. Management of GEF funds in conformity with FAO norms and procedures;

ii. Supervision of Project implementation, according to the PRODOC, Global and Annual Operative Plan, budgets, Monitoring and Evaluation Plan, Procurement Plan, agreements with co-funders, agreements with operational partners, and other FAO norms and procedures;

iii. Preparation and signing of agreements with executing partners to transfer financial resources for the annual execution of the resources as approved in the Annual Operative Plan;

iv. Prepare and Sign Letters of Agreements (LOAs) with the sub-executing partners to transfer financial resources to carry out the annual execution of the actions and resources approved in the Annual Operational Plan for this purpose.

v. Supervision of the implementation, provision of guidelines and technical assistance to executing partners to ensure that the use of the funds generates the expected outcome and that funds are disbursed for the programmed purposes;

vi. Procurement services and financial management services for GEF funds, according to the agreements with MARENA established in the ProDoc budget;

vii. Technical guidance to ensure the adequate technical quality of all activities involved;

viii. At least one supervision mission per year; and

ix. Submission of reports to the GEF Secretariat and Evaluation Office through the Annual Review of Project implementation, Intermediate Review, Final Evaluation and Project Closure Report on Project progress;

FAO bears sole responsibility for accountability and Financial Reports to the GEF Trustee.

6.b Coordination with other relevant GEF-financed projects and other initiatives.

The proposed project will coordinate with the following GEF-financed projects executed by MARENA:

? GEFID Integrated Sustainable Biodiversity Management of the Indio-Ma?z Biological Reserve (RBIM, in Spanish), which aims to conserve biodiversity and improve ecosystem services in the Indio-Ma?z Biological Reserve by working in partnership with Indigenous peoples and local communities. The project will strengthen the enabling environment to ensure better governance and management of the Reserve; will strengthen capacities among Indigenous communities as well as national, regional and municipal authorities regarding landscape management to conserve biodiversity; and will ensure participatory management of the Indio-Ma?z Biological Reserve.

The proposed project will take place in the buffer zone of the RBIM, therefore significant coordination and exchange of information between both project teams will be required for their success. Specifically, the RBIM project will complement the implementation of components 1 and 3 of the proposed project in the Municipality of El Castillo, including: (i) Support smallholders, farmers, cooperatives and the Indigenous and Afrodescendant territorial government in designing municipal landscape restoration plans which are to include silvopastoral, cocoa agroforestry, forest restoration, reforestation and sustainable management of native forests, in Bluefields and El

Castillo, (ii) supporting dialogue platforms between the public and private sectors to define both on and off-farm strategies at landscape level, for the purpose of restoring biodiversity and safeguarding protected areas, and (iii) designing detailed investment plans to restore natural habitats and productive landscapes in the biological corridors of the RACCS and the R?o San Juan province.

? GEFID Managing Resilient Landscapes, which aims to reduce the degradation and fragmentation of strategic ecosystems by implementing a landscape management framework that strengthens the management and conservation capacity of target Protected Areas and responds to the needs of local stakeholder by improving their income and livelihoods, in exchange for the strengthening of conservation and natural resource management activities on their land. The project will support the restoration of 10,000 hectares of productive landscapes in biological corridors to improve connectivity between existing protected areas in the northern area of the country. The proposed project will ensure lessons learned and best practices on agroforestry (from cocoa and coffee growers in the region) and livestock are shared with stakeholders in the San Juan Region. Similarly, the proposed project will build on the experiences on monitoring and evaluation of biodiversity.

? GEFID Strengthening the Resilience of Multiple-Use Protected Areas (MU-PA) for the Generation of Multiple Global Environmental Benefits, which aims to improve the management effectiveness of twelve MU-PA in the dry, humid, semi humid and cloud forests of the western and north-central regions of Nicaragua. The proposed project will build on efforts and lessons learned to carry out participatory processes for integrated landscape planning and for biodiversity monitoring.

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[1] It should be noted that the identified Operational Partner(s) or OP, results to be implemented by the OP and budgets to be transferred to the OP are non-binding and may change due to FAO internal partnership and agreement procedures which have not yet been concluded at the time of submission

[2] It should be noted that the identified Operational Partner(s) or OP, results to be implemented by the OP and budgets to be transferred to the OP are non-binding and may change due to FAO internal partnership and agreement procedures which have not yet been concluded at the time of submission.

7. Consistency with National Priorities

Describe the consistency of the project with national strategies and plans or reports and assesments under relevant conventions from below:

NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc.

1. The proposed project is consistent with the national strategies and plans listed in the table below, and will contribute their goals and targets as follows:

International Convention	**Project contribution**
Convention on Biological Diversity (CBD)	Contributes to the implementation of the National Biodiversity Strategy. The Government has defined as a priority the conservation, protection and restoration of its 20 main biological corridors, including the Biological Corridor targeted by the FOLUR project. The proposed project will contribute to national efforts through the creation of alliances with the Regional Governments of the Caribbean Coast, with Municipal Mayors, with the Indigenous Territorial Governments, and the productive sectors.
United Nations Convention to Combat Desertification (CNULDS)	Contributes to the implementation of the Nicaraguan Goals to achieve Land Degradation Neutrality (LDN) by 2030, presented to the UNCCD in 2018, namely Goal 1: By 2030, forest cover in the country will have increased to 21.47% of the territory, including the conservation, natural regeneration and reforestation of 1.4 million hectares Goal 2: By 2030, improve management of 1.17 million hectares in productive areas affected by land degradation, including the restoration of land through agroforestry and silvopastoral systems and the promotion of silvicultural techniques that favor biological connectivity between forest ecosystems.
United Nations Framework Convention on Climate Change (UNFCCC)	The project will contribute to sustainable development with low CO2 emissions in Nicaragua, through the transformation of extensive livestock and agriculture by promoting production systems that avoid deforestation and that integrate the conservation of ecosystem services. These sustainable production systems will increase the resilience of the livelihoods of indigenous and Afro-descendant peoples, as well as other inhabitants in the South Caribbean Coast Region and in the department of R?o San Juan de Nicaragua.
Government Priorities	**Project contribution**

National Human Development Plan 2018-2021	The project contributes with actions related to (i) the prioritization of the conservation and recovery of soils, water and forests; (ii) by promoting the modernization and transformation of the agricultural and livestock sectors in an environment affected by climate change; (iii) by supporting capacity building, awareness raising, and human and institutional capacities in topics related to climate change mitigation, reduction of its effects, and early warning; and (iv) the coordination of participatory environmental management with the small farmers, communities and local governments present, focusing on climate change adaptation and mitigation.
Plan to fight poverty 2022-2026	Contributes to actions related to coping with the impacts of climate variability and climate change through the sustainable management of forests, the fight against desertification, the arrest and reversal of land degradation and the halt of the loss of biodiversity. Likewise, the project will reinforce the design and implementation of environmental policies, programs and projects for the protection of natural resources.
Development Strategy for the Caribbean Coast and Upper Wangki for the period 2020 - 2030	It contributes with actions related to promoting adequate levels of economic-productive development that allow improving the income of producer families in the South Caribbean Coast, with productive activities that generate income, products with value in markets and improvement of food security, with a focus on climate change. It will support the development of a regional strategy for innovation, extension and knowledge management to stimulate the processes of adoption, reconversion and transformation of production processes. It will support the development of Indigenous Territorial Development Plans, aligned with a green economy model, low in carbon emissions and in coordination with the Indigenous and Afro-descendant Territorial Governments of the Creole territory of Bluefields and the territory of Laguna de Perlas.
Creation of the National Climate Change Management System and establishment of the principles and guidelines of the National Climate Change Policy through Presidential Decree 15-2021	The policy contains a series of guidelines for adaptation to climate change, some of which are aligned with the proposal established in the Concept Note: i) agricultural and livestock development that is resilient to the impacts of current and future climate variability, with low carbon emissions; ii) the use and conservation of ecosystem services to achieve low-emission economic development adapted to climate change; and iii) conservation, restoration and rational use of forests, as well as the promotion of forest plantations in areas with afforestation potential.

Nationally Determined Contributions (NDCs)	The National Determined Contribution (NDC) was updated in December 2020. The Nicaraguan NDC indicates states that the country?s priorities are to mitigate and adapt to climate change, as well as to address economic, social and environmental matters. Regarding mitigation, the priorities are agriculture, forestry and other land uses (AFOLU), given that according to the Fourth Greenhouse Gases Inventory these were by far the main emitters at 79% or 22,790 GgCO2eq for the period from the year 2000 (base year) to 2015 (reference year). The AFOLU sector is followed by the energy sector, the waste sector, and industrial processes and products use with with 18%, 2%, and 1% of the greenhouse gas emissions, respectively. In 2000, CO2 emissionsaccounted for 78% of the emissions, followed by methane (CH4) at 15% and nitrogen oxide (N2O) at 7%. By the year 2015, with CO2 had decreased to 60%; CH4 increased to aconsiderably higher 27%; and N2O also much higher at 13%. This is a result of the growth of the cattle inventory, which today is one of the drivers of economic development. The project is aligned with the updated Nationally Determined Contributions (NDCs) through the promotion of land management and reforestation; enhancing capacity development for the development of a climate-resilient agricultural sector; and the protection of forest ecosystem services provided by forests for the most vulnerable native communities and small forest producers.
ENDE - REDD + 2008 - 2040	The project contributes to the strategy that aims to i) reduce GHGs caused by deforestation and forest degradation; ii) conserve and enhance forest carbon stocks; iii) and contribute to the protection of Mother Earth from climate change. The strategy was designed in a participatory manner and is national in scope. Likewise, ENDE-REDD + is based on the promotion of sustainable forest production, food security, the resilience of vulnerable areas, the protection of water recharge zones and the development of a financing mechanism. In addition, as an implementing platform, it takes into account the strengthening of strategic alliances, inter-institutional coordination and forest governance (MARENA, 2018).

Emissions Reduction Program to Combat Climate Change and Poverty on the Caribbean Coast, BOSAWAS Biosphere Reserve and Indio Ma?z Biological Reserve (ERPD).	The project contributes to the development of actions that promote the implementation of a model of protection of territorial production that is more intensive, more sustainable, more equitable and less dependent on carbon. Efforts to reduce emissions from deforestation and forest degradation will be supported in two areas of the carbon accounting zone that includes the RACCS, as well as the Indio-Ma?z Biological Reserve, including the department of R?o San Juan. With the execution of the FOLUR project together with the Bioclima project, actions will be developed that will allow the formulation of a Program of Payments for Results of ENDE REDD+, which could be presented to the financing mechanisms available for Nicaragua.

2. Finally, in addition to the country?s commitments to the different environmental instruments listed below (CBD, UNFCCC, UNCCD, Ramsar, among others), recently the government of Nicaragua committed to the ecological restoration of 2.8 million ha by 2020 (Bonn Challenge) and joined the ?Declaration for Restoration? at UNFCCC COP 25. Participating regional governments ratified their commitment to implement the *Caribbean Coast Development Plan*, and the private sector has joined these efforts for forest restoration.

8. Knowledge Management

Elaborate the "Knowledge Management Approach" for the project, including a budget, key deliverables and a timeline, and explain how it will contribute to the project's overall impact.

1. Knowledge management will be a fundamental Project pillar, developed with the help of the FOLUR GEF Global Knowledge to Action Platform. Thus, the FOLUR Project will contribute to a dual approach: participation in the Global Platform with its knowledge pillars (policy strengthening and the governance, financing and investment chains) will be useful for the implementation of the FOLUR Project in Nicaragua, and at the same time, the experience of FOLUR Nicaragua will feed the Global Platform and other participating GEF countries and executing agencies with the experience, innovations generated and lessons learnt.

2. Project design built on lessons learned from experiences from the government of Nicaragua and other donors and international financial institutions that have worked on the target value chains. For instance, recent assessments on lessons learned to develop agriculture value chains with small holders highlight capacity building for stakeholders to ensure they are up-to-date with the natural evolution of the chains, including market changes. Efforts should be centred on the development of inclusive business models while supporting transparent governance of the chain, including clear contractual relations between small producers and larger private investors. Finally, projects that build on the development of public-private alliances with producers are beneficial for local and global stakeholders. In order to ensure the

sustainability of this approach, efforts should support initiatives that increase the competitiveness of target value chains, generating benefits for participating stakeholders.

3. The knowledge management and communication programme planned in Nicaragua (expected outcome 4.2, output 4.2.1) will have a cross-cutting function for the development of multiple Project activities. The main programme mechanism will be the participation of women, youth, Indigenous-Afrodescendant peoples, local communities, while simultaneously absorbing information on FOLUR Global Platform activities.

4. The knowledge management programme in Nicaragua will underscore diverse processes proposed in the Project, related to capacity-building, facilitation of dialogue, implementation and extension of practices (see Appendix 8). The processes are as follows:

? Capacity-building programme for comprehensive landscape management planning (*Output 1.1.1*).

? Facilitation of the public-private dialogue platforms to define strategies in farms and landscapes to restore biodiversity and safeguard protected areas (*Output 1.2.1*)

? The capacity-development programme to support conversion into deforestation-free cattle and cocoa systems that will contribute to the restoration of landscapes and biological corridors (*Output 2.1.1*)

? The plan to replicate best practices at the internal regional and national level (Output 2.1.4)

? The selection and design of innovative financing models to support the implementation and extension of good practices (*Output 2.2.1*)

? The selection of systems and the adoption of improved land management practices and implementation of restoration activities (*Expected Outcome 3.1*)

5. The proposed Project will feed on the support activities of the Global Platform to Project countries, including capacity-building, technical assistance, multi-country alliances, leverage and mobilisation of resources, and knowledge generation and exchange. Similarly, the project will support knowledge exchange with (i) other GEF-funded programs described in Section 6b; (ii) the UN Decade on Ecosystem Restoration which will be implementing a flagship initiative in the Dry Corridor; (iii) the Five Great Forests Initiative supported by the Central American Commission for Environment and Development (CCAD); and (iv) FAO-supported initiatives associated to the Hand-in-Hand programme in Nicaragua which identified 5 value chains (including cocoa and livestock) as key to support economic growth in the country.

6. Knowledge management outputs will include key thematic aspects of the FOLUR Project, such as the importance and the development of deforestation-free production, sustainable land management, land restoration, biodiversity and climate-smart cattle-raising. The knowledge management programme will also include a communication plan that will help to report on Project advances and share its experiences, its overall strategy, the progress in the cattle and cocoa chains, and the restoration of degraded landscapes. Thus, the knowledge management programme will serve to make decisions and strengthen policies and the governance system, in order to underscore, in the long term, the processes developed and lessons learnt.

7. The Global Platform, which will act globally and regionally, will promote the exchange of experiences on key topics and gaps related to knowledge management and communication. The experience of the organizations of the Global Platform in other countries will be highly appreciated valued. The member organizations of the Global Platform are the World Bank International Finance Corporation (IFC), the Food and Land Use Coalition (FOLU), IFAD, the NDP *Green Commodities Programme*, which leads the *Good Growth Partnership* (GGP), founded by the GEF and implemented in collaboration with *Conservation International*, IFC, UNEP and WWF and the Global Landscapes Forum (GLF), led by Centre for International Forest Research CIFOR/CGIAR.

8. The exchange with organizations and other member countries of the Global Platform will be fundamental in key project instances, not only related to the development of deforestation-free value chains and restoration of biodiversity in biological corridors, but also related to issues such as financing mechanisms, gender and the private sector. The support of the Global Platform will be required mainly in the exchange of information and in documentation and dissemination of knowledge about innovation, practices and incentives for the different stakeholders, including local farmers, persons in the value chains, Indigenous peoples, women, and decision-makers.

9. In articulation with this global process, the Project plans to develop a knowledge and experiences exchange process (output 4.2.2), which will be built with the support of the FOLUR Global Platform, and in coordination with initiatives of bilateral, intra-regional and interregional South-South cooperation and exchange.An example of potential South-South knowledge exchange will be held in Ecuador on the subjects of climate-smart cattle-raising, development of fine and aromatic cocoa, microfinance mechanisms, and farmer field schools[1]. Likewise, exchange of knowledge will be sought with other tropical countries about climate-smart cattle raising, silvopastoral systems and cocoa development with other countries in Central America and other continents, such as Africa.

10. Finally, the knowledge management system will be linked to the Project Monitoring and Evaluation System, in order to contribute to the construction of global and common monitoring mechanisms of future FOLUR Projects. Knowledge and learning will contribute to the sustainability of the programme by ensuring that people the skills to plan and make rational business investment decisions, to have access to financial resources and technical support from the public-private partnerships with the target value chains, and to have access to markets for their products.

Table 22. Knowledge Management Plan

Output	Activities	Tasks	Budget (in USD)	Deliverables	Timeline
4.2.1 Knowledge management and communication programme under implementation, including the systematisation of the experiences of the agricultural and forestry sector, based on biodiversity restoration, and developed with women, youth, Indigenous peoples, Afrodescendants and local communities.	Activity 4.2.1.1 Implementation of knowledge management through case studies and participation in the activities of the FOLUR GEF Global Platform.	Design of the Project knowledge management programme	8000	KM Programme developed and adopted	Year 1
		Implementation of the Project Knowledge Management Programme	105,200	-Case studies assessed -Dissemination of knowledge products - Engagement with Global Platform	Years 2 to 5
	4.2.1.2 Implementation of the plan for awareness raising and communication on sustainable food systems.	Design of Project communication plan	10,000	Communications Plan developed and adopted	Year 1
		Implementation of Project communication plan	80,000	-Annual comms plan developed based on the strategy and implemented	Years 2 to 5
4.2.2 Programme for the exchange of knowledge and experiences through national and global practice communities (South-South Cooperation)	4.2.2.1. Implementation of the plan to systematize experiences and experience exchange programme	Design of plan to systematise experiences in cattle and cocoa chains	8,000	Work Plan developed	Year 1
		Systematisation of experiences in cattle and cocoa chains	72,535	-Needs assessment -Case studies, best practices -South-south exchanges -Field visits for beneficiaries	Years 2 to 5

Output	Activities	Tasks	Budget (in USD)	Deliverables	Timeline
	Activity 4.2.2.2 Participation in national and international practice communities of the FOLUR GEF programme	Facilitation of participation in events of the Global FOLUR GEF programme	UD 6,680	-Travel to international meeting	Year 3
		Total	290,415		

Source: Compilation by FAO

[1] These topics have been dealt with under the Climate-Smart Cattle Raising Project and the PROAMAZON?A Project in Ecuador.

9. Monitoring and Evaluation

Describe the budgeted M and E plan

1. Project monitoring will be carried out by the Project Implementation Unit (PIU) in MARENA and the FAO Representation in Nicaragua (acting as Budget Holder). Project performance will be monitored using the project results matrix, including indicators (baseline and targets) and annual work plans and budgets. At project inception, the results matrix will be reviewed to finalize identification of: i) outputs; ii) indicators; and iii) any missing baseline information and targets. A detailed M&E plan, which builds on the results matrix and defines specific requirements for each indicator (data collection methods, frequency, responsibilities for data collection and analysis, etc.) will also be developed during project inception by the Knowledge Management/M&E Officer appointed at the PCU.

2. Project oversight will be carried out by the PSC, FAO GEF Coordination Unit and relevant technical units in FAO headquarters. Oversight will ensure that: (i) project outputs are produced in accordance with the project results framework and leading to the achievement of project outcomes; (ii) project outcomes are leading to the achievement of the project objective; (iii) risks are continuously identified and monitored and appropriate mitigation strategies are applied; and (iv) agreed project global environmental benefits/adaptation benefits are being delivered. The FAO GEF Coordination Unit and HQ Technical Units will provide oversight of GEF financed activities, outputs and outcomes largely through the annual Project Implementation Reports (PIRs), periodic backstopping and supervision missions.

Project Launch

3. In the first quarter of Year 1, at the latest, the Inception or Kick-off Workshop will take place, with staff of all the involved actors: MARENA, PIU, territorial delegations, participating governmental institutions, RACCS government, authorities of Indigenous peoples, and FAO-GEF officials. The main objective of this Inception Workshop is to contribute to the ownership of Project objectives and targets, in order to formulate the first Annual Work Plan (AWP). To this end, the results framework (indicators, means of verification and assumptions) will be reviewed to make the necessary and relevant adjustments, adding precise and measurable performance indicators in the AWPs related to expected Project outcomes. Sessions of the executing agency with its counterparts or partners will also be planned, as will the sessions of the Project Steering Committee (PSC) and other instances considered to be of importance to good Project performance.

4. The Inception Workshop helps all members of the different work groups to understand in detail the roles, functions and responsibilities of each party within the decision-making structure and relations. The members of the different teams will get to know one another, and be informed of the capacities and contributions each team can offer toward satisfactory Project development, performance and the requirements to request support, as well as timeframes and purposes of the reports they will be asked to prepare.

Monitoring

5. Once the AWP for Year 1 is formulated, the PIU is responsible for following up on it and writing the regular reports that serve as feedback to the implementation process. For satisfactory operability, the AOP will be disaggregated into monthly, and later, weekly plans. The PIU will make monthly, quarterly, semi-annual and annual reports to monitor Project implementation and facilitate feedback. In addition to feeding the Project?s M&E system, the assessments made during these periods will contribute to the knowledge management on the basis of the identification of constraints and good implementation practices. The Project coordinator will be in charge of preparing the regular reports. He/she will coordinate with the MARENA territorial delegations the ministry?s headquarters in Managua, and in the case of the territories under the influence of Indigenous peoples and Afrodescendants, coordination will be made with the RACCS Government, in order to learn about the progress made in the territory. The analysis of contributions to knowledge management will be the task of the methods specialist, who will also be in charge of issues related to gender and Indigenous peoples, as well as ensuring that reports, learning experiences and new plans incorporate the requested approaches. The methods specialist will also support the semi-annual sessions of the territorial delegations and/or the PIU with Indigenous peoples, in order to follow up on the plans that were agreed upon with them.

6. Periodic monitoring: in addition to reports received from the territorial delegations, the PIU, for Project monitoring and follow-up purposes, will make quarterly field visits, on a rotating basis, in order to verified in situ completion of activities and implementation of subprojects in situ. Any progress observed in the field will be taken note of and recorded as evidence. These monitoring visits will also serve to identify constraints and seek alternatives to support implementation in the territory. Some of these visits will coincide with the sessions of the Commission for Communication with Indigenous Peoples, which PIU members will attend to learn about the advances made and make suggestions, if pertinent. A report will be written after each monitoring visit, and the findings will be documented and subsequently fed into the M&E system. It will be of particular importance to identify any qualitative aspects of the implementation which are as yet not registered in the system.

7. Annual monitoring: the FAO country office will make monitoring visits together with MARENA at least once a year, to learn about and verify progress made in situ. The team will determine which measures, if any, are to be taken, and thus facilitate a satisfactory performance of the Project, as well as ensure useful learning processes for the parties. In order to optimise resources, these joint monitoring visits will coincide with PIU and territorial delegation monitoring efforts. A sample of ongoing subprojects will be visited on a rotating basis. Whenever possible, sessions will be held with authorities and members of Indigenous peoples, and meetings with Indigenous and non-Indigenous women and other local actors, to understand the perception of the involved parties in relation to the Project implementation, and to give feedback to the decision-making processes. The most adequate date for these monitoring tasks will be the third quarters of every year, before starting the planning process for the following year and allowing time for feedback on implementation.

8. Periodic reports: The PIU will prepare different kinds of reports in accordance with frequency. The Project Coordinator is responsible for all of these reports. The following reports must be submitted:

9. Monthly reports: The PIU will prepare monthly reports based on the accomplishment of the activities programmed in the APO, their levels of completion, constraints, advances, and alternatives for more efficient implementation. These reports will cover the activities planned for the month, the information received from the territorial delegations through the competent division in MARENA, and implementation by the PIU itself.

10. Quarterly reports: These reports will be worked out on the basis of the monthly reports and the monitoring visits during the period, which must be registered and documented, so that experiences and qualitative aspects not registered in the quantitative system for completion of activities, but which enrich Project implementation, can be compiled.

11. Biannual report: This report will be made after the first half of the year, taking into account the implementation of the first two quarters, and will serve to inform the Project Steering Committee on the advances concerning implementation, and allow for receiving their orientations.

12. Annual report: This report will compile and systematise the information of the activities carried out throughout the year; the previous regular reports will be taken into account, as well as the records of the regular monitoring activities and the minutes of the joint monitoring task. A first preliminary annual report will be made after the joint monitoring, so that the planning for the following year can begin. Subsequently, in the last month of the year, the annual report will be adjusted to the quarter?s final activities. The annual report must contain an analysis of the advances made in each component, a gender analysis of the actions undertaken, coordination with the Indigenous peoples and other actors, and the incorporation of Project themes to their work agendas and development plans.

13. Final report: At the end of the five-year period, the Project Coordinator will submit a final report based on the outcomes achieved. This report will be prepared at least one quarter before terminating

operations, so there is time to submit it to the parties and receive their inputs. The report will be based on the results framework, identify the levels of achievement of the Project objective, and its contribution to the achievement of global objectives; it will explain compliances and non-compliances, constraints and strengths, the sustainability and replicability achieved, steps pending to achieve higher levels, and the main lessons learnt.

14. Specific thematic reports: Annual or regular reports may be accompanied by specific thematic reports whenever these contribute to extend Project achievements, facilitate learning processes, or if requested by the PSC and CT. Some of these reports must be included in the semi-annual and annual reports. Among these are:

? Monitoring of biodiversity, at least two reports related to the technical consultancies and monitoring efforts.

? Restoration of forests, habitats and degraded areas.

Evaluation Provisions

15. Two independent project evaluations, a Mid-Term Review (MTR) in the 3rd quarter of project year 3 and a Terminal Evaluation (TE) three months prior to the project end date, will be carried out. The BH will arrange an independent MTR in consultation with the PSC, the PCU, the LTO and the FAO-GEF Coordination Unit. The MTR will be conducted to review progress and effectiveness of implementation in terms of achieving project objective, outcomes and outputs. The MTE will allow mid-course corrective actions, if needed. The MTE will provide a systematic analysis of the information on project progress in the achievement of expected results against budget expenditures. It will refer to the Project Budget (see Annex A2) and the approved AWP/Bs. It will highlight replicable good practices and key issues faced during project implementation and will suggest mitigation actions to be discussed by the PSC, the LTO and FAO-GEF Coordination Unit.

16. The GEF evaluation policy foresees that all medium and large size projects require a separate terminal evaluation. Such evaluation provides: i) accountability on results, processes, and performance; ii) recommendations to improve the sustainability of the results achieved and iii) lessons learned as an evidence-base for decision-making to be shared with all stakeholders (government, execution agency, other national partners, the GEF and FAO) to improve the performance of future projects.

17. The Budget Holder will be responsible to contact the Regional Evaluation Specialist (RES) within six months prior to the actual completion date (NTE date). The RES will manage the decentralized independent terminal evaluation of this project under the guidance and support of OED and will be responsible for quality assurance. Independent external evaluators will conduct the terminal evaluation of the project taking into account the ?GEF Guidelines for GEF Agencies in Conducting Terminal Evaluation for Full-sized Projects?. FAO Office of Evaluation (OED) will provide technical assistance throughout the evaluation process, via the OED Decentralized Evaluation Support team ? in particular, it will also give quality assurance feedback on: selection of the external evaluators, Terms of Reference of the evaluation,

draft and final report. OED will be responsible for the quality assessment of the terminal evaluation report, including the GEF ratings.

18. After the completion of the terminal evaluation, the BH will be responsible to prepare the management response to the evaluation within four weeks and share it with national partners, GEF OFP, OED and the FAO-GEF Coordination Unit.

Disclosure

19. The project will ensure transparency in the preparation, conduct, reporting and evaluation of its activities. This includes full disclosure of all non-confidential information, and consultation with major groups and representatives of local communities. The disclosure of information shall be ensured through posting on websites and dissemination of findings through knowledge products and events. Project reports will be broadly and freely shared, and findings and lessons learned made available.

Publications

20. In the course of its life cycle, the Project duration, it will publish information for different actors and disseminate its results and experiences; in some cases, it may create and publish some technical summaries in order to share them with the other institutions involved. Regularly and according to proposals made by the Communication and Dissemination Committee and in coordination with Indigenous peoples, it will publish information on joint progress. For the purpose of giving visibility to the work with women and gender analysis in Project implementation, short publications will be prepared that identify their experience, their role in biodiversity conservation and habitat restoration. To cover the costs of these publications, annual amounts have been programmed and included in the Knowledge Management plan, described in the foregoing.

Audit

21. The Project and its subprojects will be audited in accordance with FAO administrative financial norms and procedures for Operational Partner Implementation Modality (OPIM.)

Table 23. M&E Work Plan and Budget for Activities

Type of M&E Activity	*Responsible entity*	*Budget in USD **	*Terms*
Inception Workshop	? Project Coordinator ? FAO country office ? FAO GEF	GEF: $ 3,000	During the first three months.
Inception Report	? Project work team ? FAO country office	PIU time	Immediately after the workshop.
Annual Plan of Operations (APO) and results-based budget (AWP/B)	? PIU in consultation with the LTO	PIU time	Within a month after Project onset; subsequently on an annual basis, covering the report period from January to December.
Information of updated baseline	? PIU in consultation with the LTO	PIU time	Project onset and termination.
Joint monitoring visits	? PIU, LTO, FLO	$ 12,000 FAO supervision missions will be covered from the GEF agency fee (Technical project staff from project travel budget, if required)	Annual
Project Progress Reports (PPR)	? PIU, LTO, BH	PIU time	At the latest, one month after each biannual report period (January-June and July-December)

Quarterly supervisions	? PIU, TDs, MARENA	PIU and MARENA time Project cost of operation	Every quarter
Semi-annual sessions with IP (Communication Committee with IP)	? PIU, TDs, MARENA, IP	PIU, MARENA, IP time Project cost of operation	Every six months
Regular Project progress reports	? UIP, TDs, MARENA	PIU time, TDs and MARENA	Monthly, quarterly, semi-annual and annual
Project Implementation Review (PIR)	? Written by the NPD, under the supervision of the LTO and BH. Approved and presented to the GEF by the FAO-GEF Coordination Unit	Fees of the GEF agency	August 1 of every year of reference
Co-financing reports	? PIU	PIU time	Annually together with PIR
GEF tracking tools	? LTO	Fees of the GEF agency	At the mid-term and end of Project
Independent Mid-term evaluation	? General Coordinator and Project work team ? FAO NI ? FAO-GEF ? External consultants (evaluation team)	GEF: $30,000	In the middle of Project year three

Independent Final Evaluation/Terminal Report	? General Coordinator and Project work team ? FAO NI ? FAO-GEF ? External consultants (evaluation team)	GEF: $45,000	At least five months before Project termination
Biophysical impact assessment	? External consultants	GEF: $50,000	At least five months before Project termination
Final Workshop	? General Coordinator of the Project ? FAO country office ? FAO GEF	GEF: $ 3,000	Two months before end of Project
Total Project M&E budget		GEF $ 155,000	

Source: FAO 2021

10. Benefits

Describe the socioeconomic benefits to be delivered by the project at the national and local levels, as appropriate. How do these benefits translate in supporting the achievement of global environment benefits (GEF Trust Fund) or adaptation benefits (LDCF/SCCF)?

1. The proposed project will deliver socioeconomic benefits associated with improved, more resistant and sustainable landscapes. It will promote the implementation and scaling up of more efficient

production practices within more sustainable and resilient landscapes, with support from agribusinesses, the food processing industry, and exporters. The project will support capacity-building activities for cooperatives and territorial indigenous and afrodescendant government to ensure that they become agents of change and lead the participatory planning processes to restore landscapes, conserve forests, and support climate resilient production systems.

2. Specifically, under component 2, the project will promote the implementation of best practices along the value chain to improve livestock and cocoa systems. Approximately $990,000 of GEF resources will be invested by INTA, MEFCCA and IPSA on the implementation of carbon resilient livestock and cocoa systems which will be upscaled by the GCF-funded BioCLIMA project. These activities will bring direct benefits to project beneficiaries in the form of improved production practices, more efficient value chains, increased income and improved resilience and food security.

3. Similarly, under component 3, the project will invest $1.35m to restore forests (assisted regeneration) and productive landscapes, targeting silvopastoral and agroforestry practices. Investments will be defined using a participatory approach and will include practices and technologies to reduce degradation and increase productivity. Restoration activities will support the creation of biological corridors and will include (i) living fences, pasture improvement, and rotational grazing, among others for livestock; and (ii) cocoa agroforestry systems that will support conservation activities. These activities will help increase the resilience of the landscape and will bring benefits to project stakeholders in terms of improved livelihoods.

4. In short, the Project seeks to restore environmental services that are concentrated in two blocks: (i) savings and avoided deforestations and emissions; and (ii) the creation of microclimates and conditions for the transit of species to facilitate their recovery in Project intervention areas, thus also contributing to the resilience and sustainability of local livelihoods.

11. Environmental and Social Safeguard (ESS) Risks

Provide information on the identified environmental and social risks and potential impacts associated with the project/program based on your organization's ESS systems and procedures

Overall Project/Program Risk Classification*

PIF	CEO Endorsement/Approval	MTR	TE
	Medium/Moderate		

Measures to address identified risks and impacts

Elaborate on the types and risk classifications/ratings of any identified environmental and social risks and impacts (considering the GEF ESS Minimum Standards) and any measures undertaken as well as planned management measures to address these risks during implementation.

Table 20. Environmental and Social Risk Classification: moderate risk x

Identified Risk	Risk classification	Potential impact	Mitigation actions	Follow-up indicators	Progress in mitigation actions

ESS 2: Biodiversity, Ecosystems and Habitats Will this Project be implemented an area legally designated as a protected area or its buffer zone? Yes.	Moderate	The Project will be implemented around protected areas in the Biological Corridors of the Indio-Ma?z Biological Reserve in the municipality of El Castillo and Bluefields. National Law No. 647 (Approved February 13, 2008, published in *La Gaceta*, Official Congressional Record, No.62, April 3, 2008) defines in Article 24: ?An adjacent or surrounding buffer zone will be established for each protected area. Buffer zone: Adjacent or surrounding area with direct and/or indirect impact on protected areas, subject to the promotion of sustainable development activities such as agrotourism, agriculture and agroforestry, among others, that support the management objectives and minimise negative impacts to protected areas?. Potential impacts include the spill-	The Project will design mechanisms for the participatory planning of land use. The Project will implement investment plans for sustainable farming practices around protected areas in order to avoid the advance of deforestation into its core region. Establishment of agroforestry systems around protected areas to avoid the advance of deforestation towards its core region. Recovered agricultural land prioritized in Project activities The Project will implement improved management practices in high conservation value forests.	Number of municipalities with participatory planning mechanisms. Number of ha with sustainable farming practices around protected areas. Number of ha with agroforestry systems Number of ha recovered and prioritized Number of ha with established land use frontiers.	Progress will be monitored and evaluated in biannual progress reports and in the annual Project reports. Person in charge: M&E specialist

ESS 9: Indigenous Peoples and Cultural Heritage Are there any Indigenous peoples living in the area where the Project is to be implemented? Yes	Moderate	Conflicts during the implementation of the Project activities hindering its progress and implementation.	Free Prior and Informed Consent was obtained for the implementation of Project activities.	FPIC signed and agreed upon with local communities before Project implementation. Participation of local communities in participatory land use planning processes.	Progress will be monitored and evaluated in biannual progress reports and in the annual Project reports. Person in charge: M&E specialist

Source: FAO 2021

Supporting Documents

Upload available ESS supporting documents.

Title	Module	Submitted
IP Communities - Consent Laguna Perla	**CEO Endorsement ESS**	
IP Communities - Consent Bluefields	**CEO Endorsement ESS**	
Climate Risk Screening Summary	**CEO Endorsement ESS**	
Environmental Risk Matrix	**CEO Endorsement ESS**	

ANNEX A: PROJECT RESULTS FRAMEWORK (either copy and paste here the framework from the Agency document, or provide reference to the page in the project document where the framework could be found).

Outcomes / Outputs	Indicators	Baseline	Mid Term Target	End of Project Targe	Means of verification	Assumptions	Responsible for data collection
Component 1: Development of integrated landscape management systems							
<u>Outcome 1.1</u> Participatory, inclusive and gender-sensitive planning and mapping promoted to improve land management and sustainable food systems in the target landscapes	Number of municipalities that apply improved planning and management practices to promote sustainable food systems	0	3	7 municipalities promote sustainable food systems via participatory and integrated land use planning and management	Approved land use plans	Active participation and effective coordination and consensus among government, sectoral and civil society stakeholders for the development of improved land use and management plans to be applied in selected landscapes	MARENA through the General Directorate of Natural Heritage and Biodiversity / Project implementation unit (PIU)
	Percent members of the land use planning teams that are indigenous, afro-descendant, and mestizo women	Low participation of women in planning processes	30%	30% of members in the land use planning and management teams are women (tracked by ethnic origin)	Meeting minutes		

Outcomes / Outputs	Indicators	Baseline	Mid Term Target	End of Project Targe	Means of verification	Assumptions	Responsible for data collection
1.1.1 Capacity building program on integrated and participatory landscape planning developed and under implementation for national, regional and local government partners.	Number of people trained on participatory land use planning from seven municipalities and six National Production, Consumption and Commerce System (NPCCS) institutions	0	40	[Core Indicator 11] 65 people trained from the six target municipalities and NPCCS institutions (MARENA, MEFCCA, INTA, IPSA, INAFOR and the GRACCS-Creole Indigenous and Afrodescendant Territorial Government of Bluefields and Pearl Lagoon)	Update reports on the implementation of the capacity building programme Aide memoires from workshops	Active participation of public officials invited to the training is achieved	MARENA/ PIU
	Percent participants in the training activities that are women	0	30%	At least 30% of the participants in the training workshops are women from the FOLUR project area			
Activity 1.1.1.a Design and implement a training program on comprehensive and participatory landscape planning, with inclusive participation of indigenous peoples, Afro-descendants, and women and youth, to improve the use and management of land at the landscape level.							

Outcomes / Outputs	Indicators	Baseline	Mid Term Target	End of Project Targe	Means of verification	Assumptions	Responsible for data collection
1.1.2 Integrated participatory management plans developed in project target areas to restore landscapes, conserve forests, and support climate-resistant production systems.	Number of management plans developed to support landscape restoration activities	0	4	11 plans, distributed as follows: - 2 plans in Indigenous Territories; - 1 plan at the RACCS level; - 1 plan at the level of the department of R?o San Juan, and - 7 municipal plans	Cartography developed Approved management plans	Active participation and effective coordination and consensus among government stakeholders, Small Producers, Cooperatives and Indigenous and Afro-descendant Territorial Governments for the development of restoration plans	MARENA/ PIU
Activity 1.1.2 a. Support Indigenous and Afro-descendant Small Producers, Cooperatives and Territorial Governments to design collaborative municipal, territorial and communal plans for landscape restoration through silvopastoral systems, cocoa agroforestry systems, forest restoration and reforestation, and protection and sustainable management of native forest (including participatory mapping methodologies).							

Outcomes / Outputs	Indicators	Baseline	Mid Term Target	End of Project Targe	Means of verification	Assumptions	Responsible for data collection
<u>Outcome 1.2</u> Strengthening of governance systems and capacity building for national/local institutions in landscape and land use management institutions and at the national level.	Number of functioning national mechanisms or platforms for multi-stakeholder dialogue for integrated landscape management, with the participation of women and indigenous peoples.	1	2 (SPCC with a Cattle table and a Cocoa table)	2 (SPCC with a Cattle table and a Cocoa table)	Aid-memory and minutes of multi-stakeholder meetings	Active participation and effective coordination between government, sectoral and civil society actors for the development of multi-actor dialogue platforms	MARENA/ PIU
	Multi-stakeholder platforms support implementation of planned activities	0	10% of planned activities implemented	60% of the participatory planning activities to restore biodiversity and conserve forests are implemented by the private-public sector dialogue platform			

Outcomes / Outputs	Indicators	Baseline	Mid Term Target	End of Project Targe	Means of verification	Assumptions	Responsible for data collection
1.2.1 Dialogue platforms between the public and private sectors supported to define strategies both on and off the farms and at the landscape level (i) to promote sustainable agricultural practices, (ii) to restore biodiversity, and (iii) to safeguard protected areas.	Number of multi-stakeholder and multi-level agreements for landscape restoration signed	0	2	4 in the RACCS and the department of R?o San Juan	Signed agreements	Private sector interested in joint efforts to invest on ecosystem restoration	MARENA/ PIU
Activity 1.2.1.a Strengthen dialogue platforms between the public and private sectors through the Production, Consumption and Trade System (SPCC) at the RACCS level and in the department of R?o San Juan. Activity 1.2.1.b Facilitate the celebration and formalization of multi-stakeholder and multi-level agreements for landscape restoration and forest conservation in the RACCS and the department of R?o San Juan.							
Component 2. : Promotion of sustainable food production practices and responsible value chains for target products							

Outcomes / Outputs	Indicators	Baseline	Mid Term Target	End of Project Targe	Means of verification	Assumptions	Responsible for data collection
Outcome 2.1 Implementation of Best Practices for land use and restoration activities in the target production landscapes	[Core Indicator 4.3] Area in which producers apply improved agricultural practices, including indigenous and traditional knowledge, as measured by SDG 2.4.1	0	30% of the area	35,893 hectares with improved practices	Progress reports for component 2	Producers and companies actively participate in the adoption of practices	MARENA/ PIU

Outcomes / Outputs	Indicators	Baseline	Mid Term Target	End of Project Targe	Means of verification	Assumptions	Responsible for data collection
2.1.1Capacity development program with an ethnic and gender focus developed and implemented to support the conversion to (i) a low-emission, technologically intensive, silvopastoral livestock system; and (ii) intensive and diversified cacao agroforestry systems, which will contribute to the restoration of landscapes and biological corridors	Number of people trained under the livestock and cocoa improvement program	0	30% progress relative to the total number of beneficiaries in the approved investment plans	[Core Indicator 11] A total of 10,500 producers trained, distributed as follows: - 7,000 livestock producers trained (an estimate of training 1,000 livestock producers for each of the 7 municipalities) - 3,500 cocoa producers trained (an estimate of training 500 livestock producers for each of the 7 municipalities)	Approved training plan Memoires from workshops	An active participation of livestock producers and cocoa farmers invited to the training is achieved	MARENA/ PIU
	Percent beneficiaries trained that are women	0	20%	40%			

Outcomes / Outputs	Indicators	Baseline	Mid Term Target	End of Project Targe	Means of verification	Assumptions	Responsible for data collection
Activity 2.1.1.a Develop research, validation and capacity building programs for technicians on environmentally friendly technologies and / or practices to increase productivity and add value in Cocoa and Livestock. Activity 2.1.1.b Design and implement a training program for Small Producers and Cooperatives to improve the productive efficiency of the livestock system on sustainable low-carbon and resilient livestock. Activity 2.1.1.c Design and implement training program for Small Producers, Cooperatives and indigenous and Afro-descendant territorial governments to improve the productive efficiency, sustainability and diversification of the cocoa agroforestry system, aligned with the themes of the National Development Strategy for Nicaraguan Fine Cocoa 2020-2023 .							
2.1.2 Detailed investment plans developed by project stakeholders to ensure sustainable management of the target production landscapes	Number of beneficiaries (farmers or micro-entrepreneurs) covered by the investment plans, disaggregated by value chain and type (IATGs, small producers, Cooperatives)	0	30% progress relative to the total number of beneficiaries in the approved investment plans	3,500 livestock producers (i.e. 500 livestock producers in each of the 7 municipalities) 1,750 cocoa producers (i.e., 250 cocoa producers in each of the 7 municipalities) (Note that these beneficiaries are a subset of those selected under Output 2.1.1)	Progress reports, supervision missions	Livestock and cocoa producers agree with investment plans and are willing to invest time to get trained and funds to carry out the investment plans	MARENA / UIP in coordination with MEFCCA, INTA and IPSA

Outcomes / Outputs	Indicators	Baseline	Mid Term Target	End of Project Targe	Means of verification	Assumptions	Responsible for data collection
	Percent beneficiaries that develop investment plans that are women	0	20%	40%			
Activity 2.1.2.a Formulate and implement investment plans to support Small Producers, Cooperatives and Indigenous and Afro-descendant territorial governments in the technological conversion to sustainable, low-carbon, resilient and deforestation-free livestock systems. Activity 2.1.2.b Formulate and implement investment plans to support Small Producers, Cooperatives and Indigenous and Afro-descendant territorial governments in the technological conversion to sustainable, diversified, resilient, low-carbon and deforestation-free cocoa agroforestry systems.							
2.1.3. At least 35,893 hectares of productive landscapes (prioritized in product 2.1.2) subjected to sustainable land management through silvopastoral and agroforestry systems in buffer zones of protected areas of the RACCS and the Indio Ma?z Biological Reserve (RBIM)	Area of buffer zones of protected areas under sustainable management of production landscapes	0	30%	35,893 ha in buffer zones of the following PAs: -Punta Gorda Nature Reserva (NR), -Cerro Silva NR -Cerro Wawashang NR -Indio Ma?z Biological Reserve	Impact assessment	An active participation of livestock and cocoa producers is achieved in the implementation of sustainable land management systems	MARENA / UIP in coordination with MEFCCA, INTA and IPSA

Outcomes / Outputs	Indicators	Baseline	Mid Term Target	End of Project Targe	Means of verification	Assumptions	Responsible for data collection
Activity 2.1.3.a Implement sustainable management systems for production landscapes in the buffer zone of RN Punta Gorda, RN Cerro Silva and RN Cerro Wawashang in the Autonomous Region of the South Caribbean Coast (RACCS). Activity 2.1.3.b Implement sustainable management systems for production landscapes in the buffer zone of the Indio Ma?z Biological Reserve in the department of R?o San Juan							
2.1.4. Plan to upscale best practices at regional and national level developed and implemented (includes identifying additional funding)	Number of best practices for the sustainable management of livestock and cocoa production landscapes included in the national and regional upscaling plan	0	2	4 2 for Livestock and 2 for Cocoa	Practices document approved by stakeholders in RACCS and department of R?o San Juan	Active participation of livestock and cocoa producers is achieved	MARENA / UIP in coordination with MEFCCA, INTA and IPSA
	Cofinancing mobilized from the private sector to implement the upscaling plan	0	tbd	tbd			
Activity 2.1.4.a Design and implement a replication plan for best practices at the regional and national level							

Outcomes / Outputs	Indicators	Baseline	Mid Term Target	End of Project Targe	Means of verification	Assumptions	Responsible for data collection
Outcome 2.2 Enhanced policies and incentives support innovation and scaling up of climate-smart sustainable production practices and gender-sensitive value chains at the national level	Number of incentive mechanisms implemented to strengthen value chains	0	30% progress of the process to establish at least 2 mechanisms	2 mechanisms implemented	Value chain analysis reports Mid-term and final evaluation reports.	There is provision of the sectors of the national financial banking (*) and / or the public financial sector in the country	MARENA / UIP in coordination with MHCP
2.2.1. Innovative financing models based on public-private arrangements identified and designed to support the implementat	Number of financing models designed	0	2	4 2 for Livestock and 2 for Cocoa	Approved design documents Project evaluation reports: mid-term and final evaluations	There is provision of the sectors of the national financial banking (*) and / or the public financial sector in the country	MARENA / UIP in coordination with MHCP

Outcomes / Outputs	Indicators	Baseline	Mid Term Target	End of Project Targe	Means of verification	Assumptions	Responsible for data collection
ion and expansion of good practices (Trusts, Capitalization of the National Environmental Fund, Nature-based Economic Solutions, Ecotourism, Soft Credit, Incentives, NAMA, among others).	Number of cooperatives of the Livestock and Cocoa chain participating in the implementation of the financing models	0	5	25 20 cattle cooperatives and 5 cocoa cooperatives	Approved Financing Reports Project evaluation reports: mid-term and final evaluations	There is provision of the sectors of the national financial banking (*) and / or the public financial sector in the country	
Activity 2.2.1.a Identify and manage public-private arrangements for the development of financing models through Trusts, Capitalization of the National Environmental Fund, Natural Economic Solutions, Ecotourism, Soft Credit, Incentives, NAMA, among others. Activity 2.2.2.b Public-private financing models facilitated for the livestock value chain: 4 dairy processing companies, 2 industrial slaughterhouses, 20 livestock cooperatives (beef and dairy). Activity 2.2.3.c Public-private financing models facilitated for the cocoa value chain: 3 international companies to which Nicaragua exports cocoa and 5 cocoa cooperatives							

Outcomes / Outputs	Indicators	Baseline	Mid Term Target	End of Project Targe	Means of verification	Assumptions	Responsible for data collection
2.2.2 Partners, value chain actors, financiers and investors summoned, informed and coordinated to promote innovation, investment, replication and scale-up.	Number of public-private agreements (PPA) facilitated to promote innovation, replication and expansion of Technological Innovation in the Livestock and Cocoa Chain	0	1 agreement in the Low Carbon Livestock value chain	2 PPA in the Low-Carbon Livestock value chain 1 PPA in the Cacao value chain.	Signed agreements	There is continuous will for public-private agreements on the part of the government and private companies	MARENA / UIP in coordination with MEFCCA, INTA and IPSA
Activity 2.2.2.a Facilitate dialogue to promote innovation, replication and expansion of Technological Innovation for Low Carbon Livestock Production. Activity 2.2.2.b Facilitate dialogue to promote innovation, replication and expansion of Technological Innovation for Sustainable and Resilient Cocoa Production							
Component 3: Sustainable Land Management and Restoration of natural habitats							

Outcomes / Outputs	Indicators	Baseline	Mid Term Target	End of Project Targe	Means of verification	Assumptions	Responsible for data collection
<u>Outcome 3.1</u> Sustainable land management practices and restoration activities implemented in target landscapes are upscaled to similar ecosystems in the target biological corridor	[Core Indicator 3] Area of degraded agricultural lands rehabilitated for conservation and ecosystem services in the prioritized Biological Corridor	0	30% progress in relation to the project goal for conservation and ecosystem services	13,027 ha restored for conservation and ecosystem services, including: ? 5,569 ha of agricultural land (Core. Ind 3.1) ? 2,057 ha of forest land (Core Ind. 3.2) ? 5,401 ha of grasslands (Core Ind. 3.3)	Land use mapping and Impact assessment Mid-term and final evaluation reports.	There is a continuous will for the restoration of degraded lands for the conservation and generation of ecosystem services	MARENA / UIP in coordination with MEFCCA, INTA and IPSA-INAFOR
	Percent women beneficiaries that increase their capacities for technological reconversion of production systems and landscape restoration	0	50%	50% of women representing different towns increase their capacities for technological reconversion of production systems and landscape restoration			

Outcomes / Outputs	Indicators	Baseline	Mid Term Target	End of Project Targe	Means of verification	Assumptions	Responsible for data collection
	[Core Indicator 4.1] Sustainable land use practices area and expanded restoration activities promoted in the target landscape (inside and outside the selected biological corridor).	0	30% progress in the process of expanding practices in the target landscape	167,236 hectares of landscapes with sustainable land use practices and expanded restoration activities			
3.1.1 Detailed investment plans (based on products 1.1.1 and 1.1.2) developed by project stakeholders to restore natural habitats and productive landscapes in the biological corridors of the RACCS and the department of R?o San Juan	Number of investment plans to restore natural habitats and productive landscapes	0	80% (in relation to the final goal)	7,000 investment plans formulated to restore natural habitats and productive landscapes (an estimate of 1,000 plans for each of the 7 municipalities)	Investment plans approved to restore natural habitats and productive landscapes Mid-term and final evaluation reports.	There is full participation of Small Producers, Cooperatives and IATGs in the elaboration of plans for the restoration of degraded lands for the conservation and generation of ecosystem services	MARENA / UIP in coordination with MEFCCA, INTA and IPSA-INAFOR
Activity 3.1.1.to Assist Small Producers, Cooperatives and Indigenous and Afro-descendant territorial governments to formulate investment plans to restore natural habitats and productive landscapes according to location by municipalities and according to the modalities: i) silvopastoral, ii) cocoa agroforestry, iii) Forest Restoration and Reforestation and iv) Protection and sustainable management of the native Forest							

Outcomes / Outputs	Indicators	Baseline	Mid Term Target	End of Project Targe	Means of verification	Assumptions	Responsible for data collection
3.1.2 At least 13,027 hectares of agricultural land, forest land and grasslands restored under priority systems in output 3.1.1) (contributes to Core Indicator 3).	Investment plan implementation area to restore natural habitats and productive landscapes	0	30% (in relation to the final goal of the project	At least 13,027 hectares of farmland and communal lands restored	Investment plan implementation reports Mid-term and final evaluation reports	There is full participation of Small Producers, Cooperatives and IATGs in the implementation of plans for restoration	MARENA / UIP in coordination with MEFCCA, INTA and IPSA-INAFOR
Activity 3.1.2 a Form a field team for the implementation of prioritized systems Activity 3.1.2.b. Implement prioritized systems: Agroforestry, Silvopastoral, Forest Restoration and Reforestation, and Protection and sustainable management of the native Forest							

Outcomes / Outputs	Indicators	Baseline	Mid Term Target	End of Project Targe	Means of verification	Assumptions	Responsible for data collection
3.1.3 At least 167,236 ha of landscapes (prioritized landscape area in the Biological Corridor of the RACCS and department of R?o San Juan) under improved management to avoid deforestation and reduce degradation in the forests of the biological corridors (outside protected areas).	Expanded restoration Plan document in the approved target landscape	0	30% (in relation to the final goal of the project)	At least 167,236 ha At the level of RACCS and the Department of R?o San Juan	Approved Expanded Restoration Plan document	There is a will for the restoration of degraded lands for the conservation and generation of ecosystem services in the target landscape	MARENA / UIP in coordination with MEFCCA, INTA and IPSA-INAFOR
Activity 3.1.3.a. Validate and implement sustainable land use practices and expanded restoration activities in the target landscape (outside or within the selected biological corridor)							

Outcomes / Outputs	Indicators	Baseline	Mid Term Target	End of Project Targe	Means of verification	Assumptions	Responsible for data collection
Outcome 3.2 Strengthening of governance and institutional capacity building for landscape restoration.	Number of jurisdictions that adopt improved approaches to restoration, with a target of 7 municipalities under improved management for the benefit of biodiversity.	0	3 municipalities with improved approaches to restoration for the benefit of biodiversity	7 municipalities with improved approaches to restoration for the benefit of biodiversity	Training workshop reports	Institutions and actors maintain an interest in restoration for the benefit of biodiversity and its ecosystem services.	MARENA through the General Directorate of Natural Heritage and Biodiversity / UIP
3.2.1 Inter-sectoral and multilevel dialogue facilitated for a participatory review of the governance system, identification of bottlenecks, and necessary reforms for landscape restoration.	Number of instruments identified with reform proposals to promote landscape restoration	0	2	4 2 for the livestock chain and 2 for the cocoa chain	Reports of instruments identified approved	There is active participation of the actors of the Livestock and Cocoa chains in the workshops to identify the instruments.	MARENA / UIP in coordination with MEFCCA, INTA and IPSA-INAFOR
Activity 3.2.1.a. Strengthen dialogue platforms between the public and private sectors at the intersectoral and multilevel level with a focus on the governance of the Livestock and Cocoa Chains							

Outcomes / Outputs	Indicators	Baseline	Mid Term Target	End of Project Targe	Means of verification	Assumptions	Responsible for data collection
3.2.2 Stakeholder (partners, value chain actors, financiers and investors) are convened, informed and coordinated, to encourage resilient (responsible) and sustainable production, sourcing and marketing.	Number of innovative mechanisms and instruments to encourage deforestation-free chains identified and disclosed	0	2	4 in the livestock and Cocoa chains	Report on innovative mechanisms and instruments to encourage deforestation-free chains approved	There is active participation of the actors of the Livestock and Cocoa chains in the dissemination workshops of the mechanisms	MARENA / UIP in coordination with MEFCCA, INTA and IPSA-INAFOR
Activity 3.2.2.a. Innovative mechanisms and instruments have been validated and implemented to encourage responsible and sustainable production, sourcing and marketing in the Livestock and Cocoa chains							
Component 4: Program coordination, collaboration and capacity building							

Outcomes / Outputs	Indicators	Baseline	Mid Term Target	End of Project Targe	Means of verification	Assumptions	Responsible for data collection
Outcome 4.1 M&E system and stakeholder collaboration support project and FOLUR programme delivery	Number of national, regional and global commodity platforms strengthened through the adoption of sustainability standards, traceability mechanisms or greater representation of stakeholders.	0	1 National Commodity Platform Designed 1 set of sustainability standards designed 1 traceability mechanism designed	1 national commodity platform implemented and articulated to regional and global platforms 1 M&E mechanism implemented (At least 50% of the participants in the monitor groups are women)	Platform underway Mid-term and final evaluation reports.		MARENA through the General Directorate of Natural Heritage and Biodiversity / UIP
4.1.1 M&E system implemented, monitoring and evaluating and reporting in the context of the global coordination program.	Number of annual monitoring reports prepared and disclosed	0	2	5	Monitoring reports approved and disclosed on the FOLUR platform worldwide	There is active participation of the actors of the Livestock and Cocoa chains in the workshops to disseminate the monitoring reports.	MARENA / UIP in coordination with MEFCCA, INTA and IPSA-INAFOR
Activity 4.1.1.a. Implement the monitoring and evaluation system of the FOLUR project Nicaragua, including the strengthening of technical capacities and equipment, a baseline survey and carbon monitoring and emission reduction in the Livestock and Cocoa chain							

Outcomes / Outputs	Indicators	Baseline	Mid Term Target	End of Project Targe	Means of verification	Assumptions	Responsible for data collection
4.1.2 Midterm and final evaluations carried out.	Midterm and final evaluation documents prepared and approved	0	1 Mid Term Review (MTR)	2 Final Evaluation (FE)	MTR and FE reports approved by project steering committee	There is active participation of public and private actors of the Livestock and Cocoa chains in the project evaluations	MARENA / UIP in coordination with MEFCCA, INTA and IPSA-INAFOR
Activity 4.1.2.a. Conduct and facilitate the development of project evaluations							

Outcomes / Outputs	Indicators	Baseline	Mid Term Target	End of Project Targe	Means of verification	Assumptions	Responsible for data collection
<u>Outcome 4.2</u> Strategic Knowledge Management and Communication programmes effectively implemented.	Number of attendees to events (virtual and face-to-face) and dissemination events to share knowledge with FOLUR countries through South-South exchanges, conferences and global events, including the community of practice of the global FOLUR GEF platform.	0	At least 500 participants in FOLUR knowledge exchange events (virtual and face-to-face) carried out through South-South cooperation and communities of practice # of documents that systematize the experience	At least 1,000 participants to FOLUR knowledge exchange events (virtual and face-to-face) carried out through South-South cooperation and communities of practice # of documents that systematize the experience (Note that event participants will be selected as a subset of the beneficiaries under Output 2.1.1)	Event reports (virtual and face-to-face) Communication documents	Information exchange with other countries and through communities of practice continues to be facilitated	MARENA through the General Directorate of Natural Heritage and Biodiversity / UIP

Outcomes / Outputs	Indicators	Baseline	Mid Term Target	End of Project Targe	Means of verification	Assumptions	Responsible for data collection
4.2.1 Knowledge management and communication program in execution, including the systematization of experiences in the agricultural and forestry sector based on the restoration of biodiversity and developed with women, youth, indigenous peoples, Afro-descendants and local communities.	Number of case studies disclosed	0	2	6 Case studies 3 in Livestock and 3 in Cacao	Case Studies Released	There is active participation of public and private actors of the Livestock and Cocoa chains in the preparation of the case studies.	MARENA / UIP in coordination with MEFCCA, INTA and IPSA-INAFOR
Activity 4.2.1.a. Design and implement a knowledge management program through case studies and participation in the activities of the FOLUR GEF Global Platform. Activity 4.2.1.b. Implement communication and awareness plan on sustainable food systems.							

Outcomes / Outputs	Indicators	Baseline	Mid Term Target	End of Project Targe	Means of verification	Assumptions	Responsible for data collection
4.2.2 Knowledge and experience exchange program through national and global communities of practice (South-South Cooperation)	Estimated number of attendees to events (virtual and face-to-face) and documents disseminated to share knowledge with FOLUR countries through South-South exchanges, conferences and global events, including the community of practice of the global FOLUR GEF platform.	0	500 event participants (virtual and face-to-face)	1,000 event participants(virtual and face-to-face) Events of systematization of experiences 4 in Livestock and 4 in Cacao (Note that event participants will be selected as a subset of the beneficiaries under Output 2.1.1)	Event memory aid	There is active participation of public and private actors of the Livestock and Cocoa chains in the systematization and exchange of experiences	MARENA / UIP in coordination with MEFCCA, INTA and IPSA-INAFOR
Activity 4.2.2.a. Implement a systematization plan and exchange of experiences (needs, experiences of interest, solution providers, etc.). Activity 4.2.2.b. Facilitate the participation of key people of the project in South-South exchange processes, based on good cultural and productive practices of regional, national and international indigenous and Afro-descendant communities of the FOLUR GEF Program							

ANNEX B: RESPONSES TO PROJECT REVIEWS (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF).

Council Comment	FAO Response for Nicaragua Child project

France Comments: ? The modification to the FOLUR IP project adds four countries, three of which incorporate deforestation + targeting of industries that are especially responsible for deforestation and of ?zero deforestation? industries, which is in line with the French National Strategy to Combat Imported Deforestation (Strat?gie Nationale Fran?aise de lutte contre la D?forestation Import?e SNDI): Coffee in Kenya, palm oil in Guinea, cocoa and beef/byproducts in Nicaragua	Noted.
Germany Comments: Germany approves the following PIFs in the work program but asks that the following comments are taken into account: Suggestions for improvements to be made during the drafting of the final project proposal: ? In order to enhance resilience and capacities for adaptation within the new project countries, Germany proposes that the full proposal should clearly identify and provide detailed information on how the local governments and civil society organizations in the respective new project countries will be strengthened as change agents of an enabling environment. Furthermore, it should be depicted how the national LDN Target Setting programmes are addressed (priority on avoiding land degradation) in order not to incentivize degradation through restoration support. The overall activities might be placed in the framework of the UN Decade on Ecosystem Restoration 2021?2030 to create further awareness with decision makers.	Noted. Significant efforts went into involving local communities (afro-descendants) and indigenous peoples in project design and implementation, including obtaining their free, prior and informed consent. IPs and local communities are at the center of the project design--the project was designed according to their needs and includes significant resources to build local capacity and ensure they become agents of change. Regarding LDN targets, the project will contribute to goal 2, namely that by 2030, degraded lands covering 166,362 ha will be under improved managmement through (i) agroforestry and silvopastoral systems (associated measure 1) and (ii) through the promotion of silvopastoral techniques to improve the functionality of the biological connectivity between forest ecosystems. The proposed project will be implemented in conjunction with GEFID 10674 (Sustainable Integrated Management of Biodiversity in the Indio-Ma?z Biological Reserve) which will also LDN goal 1 which aims to increase forest coverage in the country. Finally, the proposed project is working closely with the UN Decade team working on the flagship for the Mesoamerican Dry Corridor to ensure alignment of project activities.

United Kingdom Comments: ? Nicaragua ? What safeguards are in place to ensure funds are used according to the project outline.	As mandated by the GEF Policy, funds will be transferred to the National Government (MARENA, INTA, MEFFCCA). FAO will disburse funds in tranches to minimize financial risk based on PSC-approved annual work plans. In addition, FAO will carry out both a Spot Check and an Audit during every financial year. If the use of funds deviates from project outline, FAO will stop the disbursement of funds until a satisfactory solution has been found.

Switzerland Comments 1) Could you possibly reiterate again the theory of change for the entire program and explain how these specific child projects are aligned with the theory of change for the entire program?	1) In line with the overall focus and outcomes of the FOLUR IP, the project will adopt an Integrated Landscape Management (ILM) approach to simultaneously promote the development of a zero-deforestation value chain, sustainable food production and the restoration of degraded forest and agricultural lands. As described in the alternative scenario, the proposed project for Nicaragua is closely aligned with the FOLUR IP Theory of Change (ToC). The project will address the main drivers of deforestation and aims to overcome barriers that prevent the sustainability of food systems in the south-eastern part of Nicaragua. In full alignment with the FOLUR IP ToC, the project will: (i) contribute to developing integrated landscape management systems and coordination groups at national and local scales, (ii) support enabling policy for integrated landscape management; (iii) promote sustainable agro-silvopastoral practices across the target landscape to reduce negative externalities from cocoa and livestock sectors, (iv) engage private sector stakeholders (including key export companies) to improve the sustainability of the target value chains, (v) conserve and restore degraded areas with the full involvement of local stakeholders, and (vi) fully align with upcoming investments (i.e. GCF BioClima project) to ensure long term sustainability; (vii) support knowledge management at local, national and international levels.
2) In some cases, the co-financing numbers seem to be very high in our understanding in particular because the co-financing is often declared as in-kind contribution. Could you explain to us how you will ensure that the co-financing will materialize, in particular when it is declared as in-kind contribution? We prefer you indicate realistic co-financing figures, which can be met by all project and program partners.	2) Co-financing for this project has been carefully thought through and has been cautiously estimated. The project will build on approved programmes and projects to ensure cofinancing will materialize
3) You have only marked these projects with the climate change mitigation Rio Marker. We would also expect that the projects would lead to increased resilience and therefore would expect them to also be at least partially relevant for climate change adaptation. Could you explain, why you are not capturing the climate change adaptation benefits of the program?	3) The Nicaragua child project has also marked Climate Change Adaptation Rio Marker 1.
4) Can you explain how you will address the potential challenges and trade-offs between truly integrated sustainable land management and the creation of efficient sustainable supply chains, i.e. efficient production patterns?	4) Significant effort was made during preparation to ensure latest tools and participatory approaches for land use planning were used. In parallel, FAO?s Economic and Social Development Stream has been carrying out an analysis of key value chains in Nicaragua and their markets under FAO?s Hand-in-Hand Initiative in order to improve their efficiency. The proposed project builds on these efforts to ensure that the improvement of value chains does not come at a

STAP comment *(on PFD)*	**FAO Responses** (Nicaragua Child Project)
1) The STAP encourages additional quantification of key trends during the next phase of program preparation as a baseline from which to measure change, and further specification of the change mechanisms indicated in the theory of change, especially those essential to achieve scaling. The scale of outcomes is difficult to predict and highly dependent upon quality of stakeholder engagement processes at multiple levels. Given the geographic and commodity coverage of this IP, scaling up beyond country-level outcomes is integral to planned program-level outcomes, targeting fundamental transformation in food systems.	These comments are well-received and incorporated into the project design. Significant effort went into the establishment of the project baseline and its links with cofinancing activities to ensure scale up (particularly efforts related to the GCF project BioClima). Integration of the project with the global child programme will support the scaling up beyond country level outcomes
2) More detail should be provided during full program development regarding systematic risk identification and assessment of risk management options and strategies. [?] The PFD notes potential social and environmental risks posed by the country projects but does not specify these. While generic policy and governance risks are noted, there is inadequate explicit attention to political and economic interests that could (and are likely to) oppose desired changes.	2) Noted. A detailed analysis of risks was conducted during the project preparation phase (including FPIC and climate risks for each target value chain), and mitigation actions identified. Details can be found in the PRODOC, Section *5. Risks*
3) Gender equality aspects merit deeper analysis during full program preparation, particularly regarding barriers to gender-equitable resource access and tenure rights, and to inclusive decision-making in landscape-level planning and policy formulation.	3) A gender assessment was carried out during project preparation, and a detailed gender action plan is included in the PRODOC. Significant resources were included for gender-specific actions.
4) Climate mitigation and adaptation goals are well integrated in the high-level program description, and climate-smart agriculture (CSA) practices and technologies are integral to the planned landscape-level responses. Yet, assessment of program-level sensitivity to climate impacts is not presented; more detail is expected in development of country projects and in program-level monitoring and targeted capacity support functions.	4) Climate risks have been considered in the project design and proposed activities for each target value chain include climate considerations (eg. Monitoring of GHG emissions from livestock sector, use of adapted grass varieties, or health monitoring in the livestock sector; as well as the use of climate-resistant cocoa varieties validated by INTA and improved management of cocoa plantations), particularly in the production link of the value chain.

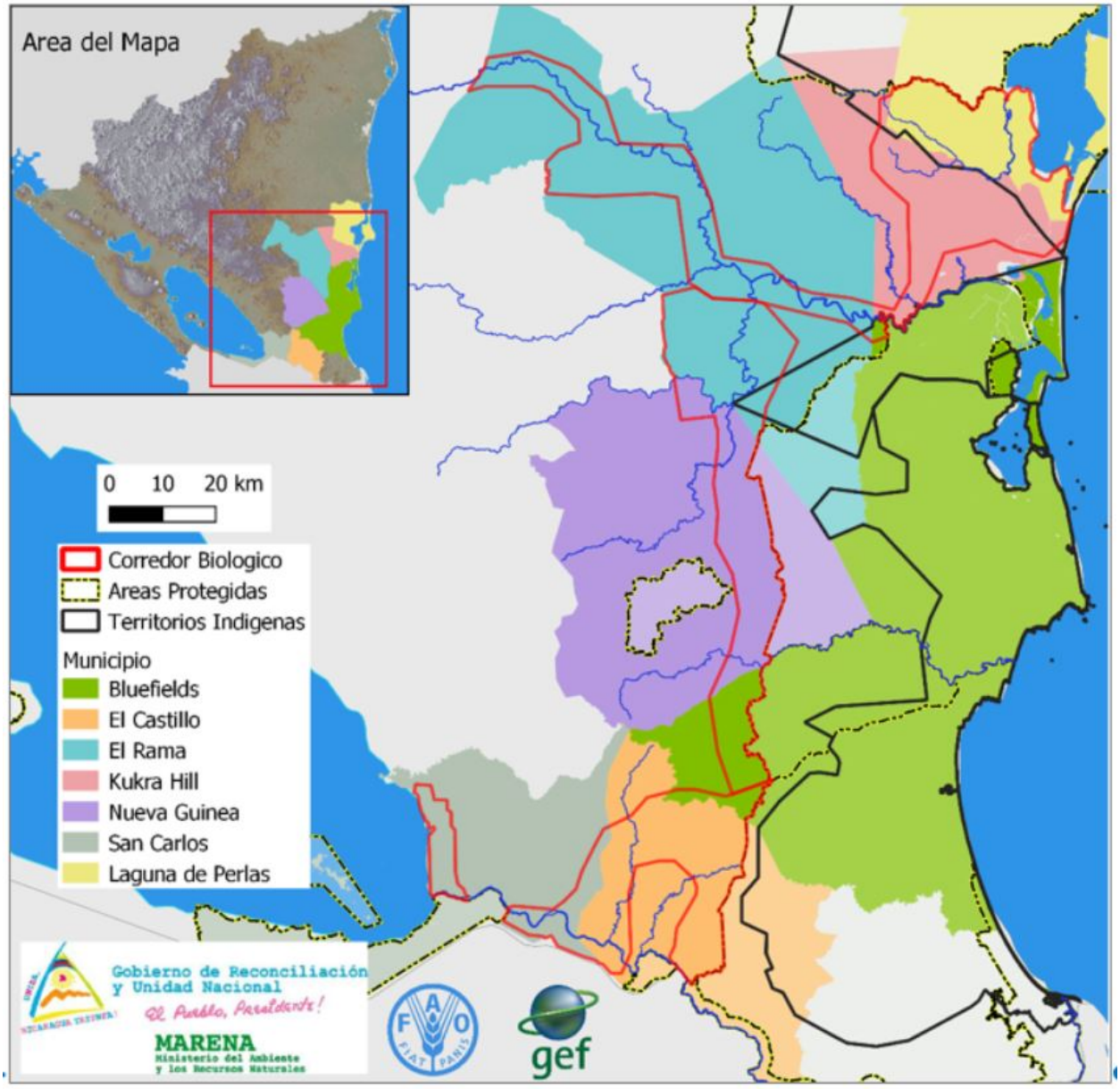
ANNEX C: Status of Utilization of Project Preparation Grant (PPG). (Provide detailed funding amount of the PPG activities financing status in the table below:

PPG Grant Approved at PIF: 150,000	
Project Preparation Activities Implemented	***GETF/LDCF/SCCF Amount ($)***

	Budgeted Amount	*Amount Spent to date*	*Amount Committed*
Activitiy 1 - Socioeconomic analysis	54,000	46,800	
Activity 2 - Value chains/sustainable production activities	12,400	12,900	
Activity 3 - Restoration activities	4,000	3,900	
Activity 4 - PRODOC drafting	46,143	33,000	6,000
Activity 5 - Stakeholder participation	33,457	47,400	
Total	150,000	144,000	6,000

ANNEX D: Project Map(s) and Coordinates

Please attach the geographical location of the project area, if possible.



Project Coordinates:

Municipality	Position		Surface area km?	Altitude (m.a.s.l.)
	North Latitude	West Longitude		
El Rama	12?09?	84?13?	3, 752.9	9.71
Nueva Guinea	11?41?	84?27?	2,677.46	210.22

Bluefields	12?00?	83?45?	4,774.75	20
Kukra Hill	12?14?	83?45?	1,193.23	50
Pearl Lagoon	12?20?	83?40?	1,963.43	3
San Carlos	11?07?	84?46?	1,444.80	39
El Castillo	11?02?	84?28?	1,654.81	50
Total			13,708.48	

ANNEX E: Project Budget Table

Please attach a project budget table.

FAO Cost Categories	Comp. 1	Comp. 2	Comp. 3	Comp. 4	PMC	Total GEF	M&E (Accounted for in Comp. 4)	MAREN A	INTA	MEFCCA	IPSA	FAO managed
5013 Consultants												
National Project Coordinator	**23,420**	**0**	**0**	**0**	96,580	**120,000**		120,000				
Operations specialist	**0**	**0**	**0**	**0**	66,000	**66,000**		66,000				
Value chains specialist	**0**	**66,000**	**0**	**0**		**66,000**		66,000				
NC1 - Capacity building plan	**8,000**	**0**	**0**	**0**		**8,000**		8,000				
NC2 - Design of methodological framework to develop municipal plans	**8,000**	**0**	**0**	**0**		**8,000**		8,000				
NC3- Preparation of 7 municipal plans (7 consultants, 12 months each)	**126,000**	**0**	**0**	**0**		**126,000**		126,000				
NC4- Design of agreements to implement plans	**24,000**	**0**	**0**	**0**		**24,000**		24,000				
NC5- Design of low carbon livestock plan	**0**	**8,000**	**0**	**0**		**8,000**		8,000				
NC6 - Design of low carbon resilient Cocoa	**0**	**8,000**	**0**	**0**		**8,000**		8,000				

NC7- Design Investment Plan for low carbon resilient livestock	**0**	**8,000**	**0**	**0**		**8,000**		8,000				
NC8- Design investment plan for low carbon resilient Cocoa	**0**	**8,000**	**0**	**0**		**8,000**		8,000				
NC9- Design plan to uptake best practices on sustainable landscape management	**0**	**8,000**	**0**	**0**		**8,000**		8,000				
NC10- Investment plans for project beneficiaries (restoration and productive landscapes)	**0**	**0**	**63,000**	**0**		**63,000**		63,000				
NC11- Action plan to strengthen PP platforms by value chain	**0**	**0**	**10,000**	**0**		**10,000**		10,000				
NC12- Design project M&E system	**0**	**0**	**0**	**12,000**		**12,000**	12,000	12,000				
NC13- Design KM programme	**0**	**0**	**0**	**8,000**		**8,000**		8,000				
NC14- Design Communications plan	**0**	**0**	**0**	**10,000**		**10,000**		10,000				
NC15- Design plan to sistematize best practices	**0**	**0**	**0**	**8,000**		**8,000**		8,000				
Sub-total national Consultants	**189,420**	**106,000**	**73,000**	**38,000**	**162,580**	**569,000**	**12,000**	**569,000**	**0**	**0**	**0**	**0**
5013 Sub-total consultants	**189,420**	**106,000**	**73,000**	**38,000**	**162,580**	**569,000**	**12,000**	**569,000**	**0**	**0**	**0**	**0**
5650 Contracts												
Establishment of multi-actor multi-level agreements to support implementation of municipal plans	**15,000**	**0**	**0**	**0**		**15,000**		15,000				
Low carbon resilient livestock - capacity building plan implementation	**0**	**70,000**	**0**	**0**		**70,000**		70,000				

Low carbon resilient Cocoa - capacity building plan implementation	**0**	**40,000**	**0**	**0**		**40,000**		40,000				
INTA - Technology research and validation programme		**40,000**				**40,000**			40,000			
INTA- Implementation of low carbon resilient livestock investment plan	**0**	**100,000**	**0**	**0**		**100,000**			100,000			
MEFCCA- Implementation of low carbon resilient livestock investment plan	**0**	**100,000**	**0**	**0**		**100,000**				100,000		
IPSA- Implementation of low carbon resilient livestock investment plan	**0**	**100,000**	**0**	**0**		**100,000**					100,000	
INTA- Implementation of low carbon resilient Cocoa investment plan	**0**	**75,000**	**0**	**0**		**75,000**			75,000			
MEFCCA- Implementation of low carbon resilient Cocoa investment plan	**0**	**75,000**	**0**	**0**		**75,000**				75,000		
IPSA- Implementation of low carbon resilient Cocoa investment plan	**0**	**75,000**	**0**	**0**		**75,000**					75,000	
Baseline studies for financing models	**0**	**50,000**	**0**	**0**		**50,000**		50,000				
Implementation of financing models for Livestock	**0**	**200,000**	**0**	**0**		**200,000**				200,000		
Implementation of financing models for Cocoa	**0**	**50,000**	**0**	**0**		**50,000**					50,000	
Design of logical framework to prepare investment plans for beneficiaries	**0**	**0**	**20,000**	**0**		**20,000**		20,000				
INTA- Silvopastoral practices in livestock	**0**	**0**	**500,000**	**0**		**500,000**			500,000			

INTA- Agroforestry practices in Cocoa	**0**	**0**	**350,000**	**0**		**350,000**			350,000			
Native forest restoration, protection and management	**0**	**0**	**400,000**	**0**		**400,000**		400,000				
Support adoption of sustainable practices on SLM and restoration	**0**	**0**	**100,000**	**0**		**100,000**		100,000				
Innovative instruments and mechanisms to support sustainable value chains	**0**	**0**	**30,336**	**0**		**30,336**		30,336				
Implement M&E system including baseline assessments	**0**	**0**	**0**	**275,200**		**275,200**		275,200				
Mid Term Review	**0**	**0**	**0**	**30,000**		**30,000**	30,000					30,000
Final Evaluation	**0**	**0**	**0**	**45,000**		**45,000**	45,000					45,000
Impact Assessment	**0**	**0**	**0**	**50,000**		**50,000**	50,000	50,000				
Implement KM programme	**0**	**0**	**0**	**105,200**		**105,200**		105,200				
Implement Communications Plan	**0**	**0**	**0**	**80,000**		**80,000**		80,000				
Sistematizing best practices in livestock and cocoa value chains	**0**	**0**	**0**	**72,835**		**72,835**		72,835				
Spot check (approx. $4275)	**0**	**0**	**0**	**0**	22,500	**22,500**						22,500
Audit (approx. $9025)	**0**	**0**	**0**	**0**	47,500	**47,500**						47,500
5650 Sub-total Contracts	**15,000**	**975,000**	**1,400,336**	**658,235**	**70,000**	**3,118,571**	**125,000**	**1,308,571**	**1,065,000**	**375,000**	**225,000**	**145,000**
5900 Travel												
Support preparation of municipal restoration plans (DSA)	**8,400**	**0**	**0**	**0**		**8,400**		8,400				
Facilitate multi-actor multi-level agreements (DSA)	**25,200**	**0**	**0**	**0**		**25,200**		25,200				

Replication of best practices at regional and national level (DSA)	**0**	**25,200**	**0**	**0**		**25,200**		25,200				
Annual Joint monitoring missions (MARENA/INTA/MEFCCA/IPSA)	**0**	**0**	**0**	**12,000**		**12,000**	12,000					
Travel (mobility) costs for experts and government/regional staff	**0**	**115,600**	**0**	**0**		**115,600**		115,600				
5900 Sub-total travel	**33,600**	**140,800**	**0**	**12,000**	**0**	**186,400**	**12,000**	**174,400**	**0**	**0**	**0**	**0**
5020 Training and workshops												
Capacity Dev Plan - design	**800**	**0**	**0**	**0**		**800**		800				
Capacity Dev Plan - implementation	**280,000**	**0**	**0**	**0**		**280,000**		280,000				
Implementation of municipal development plans	**70,000**	**0**	**0**	**0**		**70,000**		70,000				
Training on livestock value chains	**31,000**	**0**	**0**	**0**		**31,000**		31,000				
Training on Cocoa value chains	**31,000**	**0**	**0**	**0**		**31,000**		31,000				
Facilitation of agreements	**244,000**	**0**	**0**	**0**		**244,000**		244,000				
Agreements to promote sustainable management in buffer zones	**0**	**62,000**	**0**	**0**		**62,000**		62,000				
Agreements to promote sustainable management in buffer zones (RBIM)	**0**	**80,000**	**0**	**0**		**80,000**		80,000				
Upscaling best practices	**0**	**168,000**	**0**	**0**		**168,000**		168,000				
Discussion tables for Livestock	**0**	**80,000**	**0**	**0**		**80,000**		80,000				
Discussion tables for Cocoa	**0**	**80,000**	**0**	**0**		**80,000**		80,000				
Workshops with SNPCC	**0**	**0**	**142,000**	**0**		**142,000**		142,000				
Workshop on Innovative mechanisms and instruments	**0**	**0**	**156,000**	**0**		**156,000**		156,000				

Participation in GLOBAL FOLUR activities	**0**	**0**	**0**	**6,680**		**6,680**		6,680				
Inception Workshop	**0**	**0**	**0**	**3,000**		**3,000**	3,000	3,000				
Final Workshop	**0**	**0**	**0**	**3,000**		**3,000**	3,000	3,000				
5020 Sub-total training	**656,800**	**470,000**	**298,000**	**12,680**	**0**	**1,437,480**	**6,000**	**1,437,480**	**0**	**0**	**0**	**0**
6000 Expendable procurement												
Municipal plans	**5,268**	**0**	**0**	**0**		**5,268**		5,268				
Best practices	**0**	**15,468**	**0**	**0**		**15,468**		15,468				
6000 Sub-total expendable procurement	**5,268**	**15,468**	**0**	**0**	**0**	**20,736**	**0**	**20,736**	**0**	**0**	**0**	**0**
6100 Non-expendable procurement												
Laptop (1 por municipio)	**0**	**0**	**0**	**0**	19,600	**19,600**		19,600				
6100 Sub-total non-expendable procurement	**0**	**0**	**0**	**0**	**19,600**	**19,600**	**0**	**19,600**	**0**	**0**	**0**	**0**
6300 GOE budget												
GOE	**0**	**0**	**0**	**0**	2,800	**2,800**		2,800				
6300 Sub-total GOE budget	**0**	**0**	**0**	**0**	**2,800**	**2,800**	**0**	**2,800**	**0**	**0**	**0**	**0**
TOTAL	**900,088**	**1,707,268**	**1,771,336**	**720,915**	**254,980**	**5,354,587**	**155,000**	**3,532,587**	**1,065,000**	**375,000**	**225,000**	**145,000**

ANNEX F: (For NGI only) Termsheet

Instructions. Please submit an finalized termsheet in this section. The NGI Program Call for Proposals provided a template in Annex A of the Call for Proposals that can be used by the Agency. Agencies can use their own termsheets but must add sections on Currency Risk, Co-financing Ratio and Financial Additionality as defined in the template provided in Annex A of the Call for proposals. Termsheets submitted at CEO endorsement stage should include final terms and conditions of the financing.

N/A

ANNEX G: (For NGI only) Reflows

Instructions. Please submit a reflows table as provided in Annex B of the NGI Program Call for Proposals and the Trustee excel sheet for reflows (as provided by the Secretariat or the Trustee) in the Document Section of the CEO endorsement. The Agencys is required to quantify any expected financial return/gains/interests earned on non-grant instruments that will be transferred to the GEF Trust Fund as noted in the Guidelines on the Project and Program Cycle Policy. Partner Agencies will be required to comply with the reflows procedures established in their respective Financial Procedures Agreement with the GEF Trustee. Agencies are welcomed to provide assumptions that explain expected financial reflow schedules.

N/A

ANNEX H: (For NGI only) Agency Capacity to generate reflows

Instructions. The GEF Agency submitting the CEO endorsement request is required to respond to any questions raised as part of the PIF review process that required clarifications on the Agency Capacity to manage reflows. This Annex seeks to demonstrate Agencies? capacity and eligibility to administer NGI resources as established in the Guidelines on the Project and Program Cycle Policy, GEF/C.52/Inf.06/Rev.01, June 9, 2017 (Annex 5).

N/A