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# GUINEA

## GEF-7 CHILD PROJECT CONCEPT

CHILD PROJECT TYPE: FULL-SIZED CHILD PROJECT

PROGRAM: IP FOLU

<b>Child Project Title:</b>	<b>Integrated management of degraded landscapes for sustainable food systems and livelihoods in Guinea Forest Region and Upper Guinea</b>
<b>Country:</b>	Guinea
<b>Lead Agency</b>	FAO
<b>GEF Agency(ies):</b>	FAO

### A. INDICATIVE FOCAL/NON-FOCAL AREA ELEMENTS AND FINANCING

Programming Directions	Trust Fund	(in \$)	
		GEF Project Financing	Co-financing
BD-1-1 Mainstream biodiversity across sectors as well as landscapes and seascapes through biodiversity mainstreaming in priority sectors	GEFTF	3,290,564	17,000,000
LD-1-3 Maintain or improve flows of ecosystem services, including sustaining livelihoods of forest-dependent people through Forest Landscape Restoration (FLR)	GEFTF	1,707,535	12,000,000
CCM-2-6 Demonstrate mitigation options with systemic impacts for food systems, land use and restoration impact program	GEFTF	1,334,011	5,000,000
IP FOLU Promoting effective coordination and adaptive management for Food Systems, Land Use and Restoration	GEFTF	3,166,055	16,000,000
<b>Total Project Cost</b>		<b>9,498,165</b>	<b>50,000,000</b>

### B. PROJECT COMPONENTS AND FINANCING

<b>Project Objective:</b> To promote sustainable and comprehensive food systems that are deforestation free and provide ecosystem services, with a focus on palm oil productive landscapes						
Project Components	Component Type	Project Outcomes	Project Outputs	Trust Fund	(in \$)	
					GEF Project Financing	Co-financing
1. Development of integrated landscape management systems	TA	<u>Outcome 1.1</u> Selected landscape managed sustainably with increased restoration for agriculture and environmental services.  <u>Indicators (and targets):</u> (i) Land area covered by evidence-based participatory ILM plans (125,000 ha)	<u>Output 1.1.1.</u> Integrated land use plans for the target landscape developed based on field and remotely-sensed evidence and on stakeholder engagement  <u>Output 1.1.2.</u> Technical capacities of national and local authorities to plan, implement and update integrated green land use plans, are enhanced.  <u>Output 1.1.3.</u>	GEFTF	600,000	3,000,000

		(ii) Number of policy frameworks updated to foster ILM (at least 3)	<p>Agriculture and forestry policies and legal frameworks (e.g. NADP, PNIASA...) updated to foster ILM, restoration of degraded landscapes and deforestation free agricultural development</p> <p><u>Output 1.1.4:</u> Integrated national land use planning and monitoring system including forestry data in place with data sharing protocols, and used to report on national and international commitments (Rio conventions and LDN Targets, Bonn Challenge, AFR100)</p>			
2. Promotion of sustainable food production practices and responsible value chains	INV	<p><u>Outcome 2.1</u> Improved efficiency and sustainability of palm oil value chain.</p> <p><u>Indicators (and targets):</u> (i) Area of degraded farmland under improved management (10,000ha).  (ii) Area of palm oil plantation in process of certification (5,000ha).</p>	<p><u>Output 2.1.1</u> Climate-resilient and ecologically sound intensification models implemented in smallholder production systems of the selected landscape</p> <p><u>Output 2.1.2.</u> Stakeholders capacities strengthened with knowledge, equipment, tools and trainings (e.g. FFS at farmer's level) for a more efficient and responsible palm oil value chain from producer to buyer</p> <p><u>Output 2.1.3.</u> Inclusive business models catalyzed (addressing, inter alia, innovative finance, market access, IT, women empowerment) in</p>	GEFTF	4,043,697	21,500,000

			<p>collaboration with cooperatives and private sector</p> <p><u>Output 2.1.4.</u> Sustainable palm oil standards, certification and traceability schemes developed and implemented</p>			
3. Conservation and restoration of natural habitats	INV	<p><u>Outcome 3.1</u> Degraded sites of high environmental value restored and protected</p> <p><u>Indicators (and targets):</u> (i) Area of degraded farmland and forest under restoration/rehabilitation and improved management. (10,000ha, incl. 1,000ha in partnership with mining sector)  (ii) Metric tons of CO<sub>2</sub>e of GHG Emissions Mitigated (5,468,072 metric tons of CO<sub>2</sub>eq)</p>	<p><u>Output 3.1.1.</u> Restoration practices that will enhance the biodiversity and long-term climate-resilience of degraded forests and agrosilvopastoral systems implemented in selected sites of the landscape</p> <p><u>Output 3.1.2.</u> Local producers organizations strengthened to identify and run profitable NWFP and other green businesses</p> <p><u>Output 3.1.3.</u> Innovative arrangements for financing restoration of degraded areas tested, including partnerships with private sector (e.g. mining) and development of bankable projects</p>	GEFTF	4,002,174	24,000,000
4. Project Coordination, Collaboration, Communication and M&E	TA	<p><u>Outcome 4.1</u> Successful execution of the project in an effective manner, with knowledge shared through the FOLUR global platform.</p>	<p><u>Output 4.1.1:</u> Knowledge products, tools and approaches developed and shared through the FOLUR IP Global platform and other relevant platforms.</p> <p><u>Output 4.1.2:</u> Intersectoral and multistakeholder</p>	GEFTF	400,000	1,500,000

		<u>Indicators (and targets):</u> (i) Number of products, tools and approaches developed and effectively shared through the FOLUR IP Global platform (at least 20) (ii) Number of multistakeholder mechanisms strengthened (at least 25)	(including private sector) coordination and collaboration mechanisms established and / or strengthened at national and landscape level.  <u>Output 4.1.3:</u> Operational project M&E system in place .			
Subtotal				GEFTF	9,045,871	50,000,000
Project Management Cost (PMC)				GEFTF	452,294	
<b>Total Project Cost</b>					9,498,165	50,000,000

**C. INDICATIVE SOURCES OF CO-FINANCING FOR THE PROJECT BY NAME AND BY TYPE, IF AVAILABLE**

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount (\$)
Donor Agency	World Bank	Public Investment	Investment mobilized	40,000,000
Recipient Country Government	ANAFIC	Public Investment	Investment mobilized	5,000,000
Donor Agency	IFAD	Public Investment	Investment mobilized	5,000,000
<b>Total Co-financing</b>				<b>50,000,000</b>

Describe how any "Investment Mobilized" was identified.

World Bank: *Guinea Natural Resources, Mining and Environment Project*

ANAFIC: Communal budget allocations (annual) *National Agency for Local Financing (ANAFIC)*

IFAD: Resilience and Market Project in Upper and Middle Guinea (AgriFARM)

**D. TRUST FUND RESOURCES REQUESTED BY AGENCY(IES), COUNTRY(IES), FOCAL AREA AND THE PROGRAMMING OF FUNDS**

GEF Agency	Trust Fund	Country/Regional/Global	Focal Area	Programming of Funds	(in \$)		
					GEF Project Financing (a)	Agency Fee (b)	Total (c)=a+b
FAO	GEFTF	Guinea	Biodiversity	BD STAR Allocation	3,290,564	296,151	3,586,715
FAO	GEFTF	Guinea	Land Degradation	LD STAR Allocation	1,707,535	153,678	1,861,213
FAO	GEFTF	Guinea	Climate Change	CC STAR Allocation	1,334,011	120,061	1,454,072
FAO	GEFTF	Guinea	Multifocal Area	IP FOLU	3,166,055	284,945	3,451,000

<b>Total GEF Resources</b>	<b>9,498,165</b>	<b>854,835</b>	<b>10,353,000</b>
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#### PROJECT PREPARATION GRANT (PPG)

Is Project Preparation Grant requested?

Yes ☐ If yes, PPG funds **have to be requested via the Portal** once the PFD is approved

No ☐ If no, skip this item.

#### E. PPG AMOUNT REQUESTED BY AGENCY(IES), TRUST FUND, COUNTRY(IES) AND THE PROGRAMMING OF FUNDS

GEF Agency	Trust Fund	Country/ Regional/Global	Focal Area	Programming of Funds	(in \$)		
					PPG (a)	Agency Fee (b)	Total c = a + b
FAO	GEFTF	Guinea	Biodiversity	BD STAR Allocations	103,932	9,354	113,287
FAO	GEFTF	Guinea	Land Degradation	LD STAR Allocations	53,933	4,854	58,787
FAO	GEFTF	Guinea	Climate Change	CC STAR Allocations	42,135	3,792	45,927
FAO	GEFTF	Guinea	MFA	IP FOLU	100,000	9,000	109,000
<b>Total PPG Amount</b>					<b>300,000</b>	<b>27,000</b>	<b>327,000</b>

#### F. PROJECT'S TARGET CONTRIBUTIONS TO GEF 7 CORE INDICATORS

Provide the relevant sub-indicator values for this project using the methodologies indicated in the Core Indicator Worksheet provided in Annex B and aggregating them in the table below. Progress in programming against these targets is updated at the time of CEO endorsement, at midterm evaluation, and at terminal evaluation. Achieved targets will be aggregated and reported at any time during the replenishment period. There is no need to complete this table for climate adaptation projects financed solely through LDCF and SCCF.

Project Core Indicators		Expected at PIF
1	<b>Terrestrial protected areas</b> created or under improved management for conservation and sustainable use (Hectares)	
2	<b>Marine protected areas</b> created or under improved management for conservation and sustainable use (Hectares)	
3	Area of <b>land restored</b> (Hectares)	10,000
4	Area of <b>landscapes under improved practices</b> (excluding protected areas) (Hectares)	15,000
5	Area of <b>marine habitat under improved practices</b> (excluding protected areas) (Hectares)	
6	<b>Greenhouse Gas Emissions Mitigated</b> (metric tons of CO <sub>2</sub> e)	5,468,072
7	<b>Number of shared water ecosystems</b> (fresh or marine) under new or improved cooperative management	—
8	Globally over-exploited <b>marine fisheries</b> moved to more sustainable levels (metric tons)	—
9	<b>Reduction</b> , disposal/destruction, phase out, <b>elimination</b> and avoidance of <b>chemicals of global concern</b> and their waste in the environment and in processes, materials and products (metric tons of toxic chemicals reduced)	
10	Reduction, avoidance of emissions of <b>POPs to air</b> from point and non-point sources (grams of toxic equivalent gTEQ)	
11	Number of <b>direct beneficiaries disaggregated by gender</b> as co-benefit of GEF investment	30,000 (15,000 women)

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

## PROJECT DESCRIPTION

### - Country Context (*maximum 500 words*)

*Describe the country's relevant environmental challenges and strategic positioning relative to the systems transformation proposed for the program, including relevant existing policies, commitments, and investment frameworks. How are these aligned with the proposed approach to foster impactful outcomes with global environmental benefits?*

From 2001 to 2018, Guinea lost 16% of its tree cover, equivalent to 1.32Mha, and leading to 306Mt of CO<sub>2</sub> emissions (Global Forest Watch). Concomitantly, the state of land over 18.40% of the country has degraded (SDG 15.1, FAO calculations). Deforestation, forest and land degradation resulting in land productivity losses are costing the country about 12% of its GDP, and are **mainly caused by agriculture and mining**, the two sectors that drive Guinea's economy. Unsustainable agricultural practices for **production of staple food crops** (rice, maize, cassava, palm oil) and **export commodities** (palm oil, cashew nut, mango, coffee, rubber...), coupled with inappropriate land uses, population pressures and climate change are negatively impacting the country's soils fertility, biodiversity and the ecosystem services it provides to the rest of the region. Frameworks to support harmonious land use planning through Local Development Plans at communal level and management plans for Protected Areas are not sufficient to address these pressures. The ecosystems of Guinea – also referred to as the “Water Tower” of West Africa – are under threat: the source of transboundary rivers (e.g. Niger and Senegal rivers) critical for agriculture regionally and the country's Protected Areas, recognized of global importance, are at risk of being further damaged.

Aware of these risks, the country has stepped up its commitments to halt degradation and deforestation, and to restore degraded landscapes. Building on Guinea's call to halt deforestation in its Vision 2040, the overarching **National Plan for Economic and Social Development (PNDES)** aims at sustainably managing Guinea's natural capital while transitioning towards an economy based on high value agricultural productions and sustainable agricultural practices. The **National Environment Policy (PNE)** and the **National Investment Plan for Environment (PNIE)** promote restoration of degraded forests and landscapes and environmentally-sound agriculture – commitments also highlighted in the agricultural sector frameworks. Over the last few years, Guinea has significantly advanced its Rio conventions agenda. In 2016, Guinea committed to restore at least 15% of degraded forests and natural ecosystems by 2020 in its **National Biodiversity Strategy and Action Plan (2016)** highlighting the role of crop diversification, Sustainable Land Management and Sustainable Forest Management in its Intended Nationally Determined Contribution (INDC, 2016). In 2017, the country launched its **REDD + process** and set its **Land Degradation Neutrality (LDN)** to restore 375,000 ha of degraded lands by 2030. On the other hand, Guinea pledged the aspirational goal to restore 2 million hectares by 2030 as part of the **Bonn Challenge**, endorsed the **New York Declaration on Forests** and joined the African Forest Landscape Restoration Initiative (**AFR100**).

In terms of the targeted agricultural systems, **palm oil is the second staple crop after rice**. It accounts for half of all calories consumed from edible oils by Guineans, which corresponds to about seven percent of total daily calorie supply per capita (USAID, 2017). Mostly produced in the tropical rainforest of Guinea Forest region, palm oil is identified by PNDES as one of the high agricultural value commodities of which production should be encouraged. **Eighty-five percent of palm oil is produced from the low-yielding variety Dura growing in natural stands, and the remaining 15% is produced in palm oil plantations (mostly managed by SOGUIPAH), from the improved variety Tenera**. Oil palm production is characterized by low use of inputs and technology, takes place in isolated producing areas and suffers from the limited availability of workers. Because of the lack of processing infrastructures, oil is mainly extracted by women at farm level using traditional labor-intensive



techniques, with ample scope for innovation (as attested by initiatives such as Eleis Farming, a start-up focusing on improved mechanization for oil-making, with reduction of the amount of water used by 80%). Product quality is highly variable. The limited availability of bottling possibilities alters marketing activities of an overall poorly structured value chain that also suffers from poor road infrastructure (only 5% of roads are paved), and high transportation and distribution costs.

The **Agricultural development national policy (PNDA)** and the **National Agriculture and Food Security Investment Plan (PNIASA)**, commit to unlock palm oil's potential as major cash crop by increasing production and professionalization along its value chain. Over the recent years, the country's area under palm oil cultivation has increased – although to a limited extent that doesn't yet reflect the growing global demand, especially for certified palm oil. Guinea is now among the top-20 world exporters of palm oil fruit, behind neighboring countries (Ghana, Cote d'Ivoire). Internal instability, including poor governance, political instability, and corruption – that are among the main underlying drivers of poverty in Guinea in recent years – have impacted national production in the recent years. To meet the growing national demand, palm oil imports have been growing steadily since 1995, and increased four times only between 2008 and 2015. Trade restrictions, such as the exemptions of tariffs on staple foods imports (including edible oils) in alignment with the Common External Tariff of the West African Economic and Monetary Union; European Union ban on palm oils for biofuels starting by 2020 will be influencing Guinean oil importance on the export and on the internal markets. Within an emerging regional market, more Guinean land is expected to fall under commercial palm oil cultivation, and more forest is at risk. The National Investment Plan for agriculture and food and nutrition security (PNIASAN, 2018 - 2025) stipulates that national palm oil production was estimated at 251,615 tons in 2015, with an average yield of 7 tons per hectares and plans to increase production by a third in order to reach 336,000 tons in 2030, with an average yield of 9 tons per hectares – an increase that would need significant yield improvements in order not to cause detrimental changes to landscapes of key production areas. **The project will focus on palm oil to harness the sustainability of this commodity and accompany the development of its commercial and traditional value chains.** Within this context, the national dynamics engaged through PNIASAN, aiming at strengthening structuration of key agricultural value chains via capacity building, support to the emergence of inter-professional organizations for strategic products and promotion of “value chains roundtables” to facilitate dialogue across stakeholders and scales will be highly conducive to the project. Further, activities envisioned under PNIASAN to promote certification (e.g. through RSPO or APOI schemes, still not taken onboard in Guinea) and labelling of Guinean agricultural products and to strengthen the legal frameworks for Public Private Partnerships to attract private sector investments while ensuring smallholders inclusion will be supportive of the project.

Moreover, with Guinea's participation in the FOLUR IP, the potential to transform the agriculture commodity system in the region is enormous, given the possibility to cluster with other FOLUR IP countries in the region, Liberia and Nigeria - both focusing on palm oil amongst other commodities. How this could be done will be further assessed during the PPG phase.

## - **Project Overview and Approach** (*maximum 1250 words*)

- a) **Provide a brief description of the geographical target(s), including details of systemic challenges, and the specific environmental threats and associated drivers that must be addressed;**

The project will work in a large coherent biophysical and administrative landscape representing nearly 40% of the country (97,961 km<sup>2</sup>) that is spread over nine prefectures of Guinea Forest Region

(Guéckédou, Kissidougou, Kérouané, Macenta, Beyla, Yamou, Nzérékoré, Beyla and Lola) and three selected prefectures of Upper Guinea (Faranah, Kouroussa and Kankan) (see maps in Annex 2). This mosaic landscape encompasses a variety of land uses and ecosystems, including of recognized regional and global environmental value. It harbours in particular three Ramsar sites (Tinkisso, Niger-Tinkisso and Niger-Niandan-Nilo) critical because of their hydrological functions for the whole Niger River watershed and Biosphere Reserves (Upper Niger, Ziama Massif and Mount Nimba) of global renown because of their biodiversity (fish, water birds, mammals incl. chimpanzees). The total land surface classified as Protected Areas in the target landscape is 31,543 km<sup>2</sup>. Situated South-East of the country, the target landscape shares borders with three other West African countries (Côte d'Ivoire, Liberia and Sierra Leone) and can be characterized as a "frontier" landscape where opportunity exists to pre-empt expansion and get ahead of commercial commodity-driven forest loss.

More than 80% of the country's active population is engaged into the exploitation of natural resources that procure food, fiber, feed and fuel (PNIASA 2013-2017) to a quickly growing population (2.8% population growth rate in 2018, World Bank). In the selected landscape, **direct and indirect drivers of land degradation and biodiversity loss** stem from this high reliance of human activities on natural resources and from eco-climatic variations:

**Subsistence agriculture.** To satisfy their growing food needs, local populations rely on the expansion of agricultural land, shifting cultivation and overgrazing that are ultimately degrading the productivity of soils and their ability to produce the needed quantities of staple food crops (in particular rice, maize, cassava) for local consumption, ultimately resulting into further forest encroachment and degradation.

**Uncontrolled logging.** Biomass (firewood and charcoal) is still the main energy source for 85% of households at country level (INDC). High reliance on wood for energy and construction is causing unsustainable forest management with overexploitation of forests for timber, fuelwood and charcoal.

**Commercial agriculture.** At the same time, the growing international demand for cash commodities generates both a tremendous development opportunity and additional detrimental pressure on land – especially for the cultivation of palm oil, rubber and cocoa in Guinea Forest region; and cotton, mango and cashew nut in Upper Guinea. With a growing national and international demand for palm oil, accrue pressure to further expand palm oil plantations, especially in Guinea Forest Region (Guinean region with the highest yield potential), is expected within the next few years. Rapid expansion of this commodity would lead to the generalization of unsustainable practices that can be witnessed in the palm oil sector in neighboring countries and throughout the world. Government's objectives to significantly increase national palm oil production bears a high risk to replace traditional systems based on the sustainable harvesting of natural palm stands into commercial monoculture plantations. Deforestation of the last primary forests of Guinea, deforestation of secondary forests currently harboring natural palm stands, shifting of current agricultural practices (oil palm on fallow land, perennial agroforests) into palm mono-cropping are to be expected. The selected frontier landscape, bordering Cote d'Ivoire and Liberia who are major producers of palm oil in the region, might be further pressured by commercial commodity-driven deforestation to respond to this growing global demand.

**Mining.** The country is rich in mineral deposits, and mining for iron, gold and diamond is a major cause of degradation in the selected landscape. The magnitude of degradation directly caused by mining is important but remains highly localized. However, because it attracts workers, this profitable economic activity also generates indirect pressures on land that cannot be neglected, especially as an important number of concessions are located close to sites with high biodiversity value.

**Climate change is worsening this situation.** Extreme weather events (hurricanes, droughts, etc.) are observed with a highest occurrence. Bushfires coupled with agricultural expansion and logging for fuelwood are the biggest and most dangerous threats to forest ecosystems.

The systemic challenges that the project will tackle include:

- 1) Sector-specific approaches to development, incentive and planning frameworks that impede compatibility between interests of productivity, food security and environmental sustainability.
- 2) Lack of human and organizational capacities amongst land users and lack of public service delivery mechanisms to be able to promote and manage farming systems and landscapes sustainably and generate GEBs.
- 3) Fragmented value chains and unsustainable production systems.
- 4) Knowledge and information on the status of natural resources and on options for sustainable management that are inadequate and not shared.

**b) Describe the existing or planned baseline investments, including current institutional framework and processes for stakeholder engagement and gender integration;**

Specifically relevant to the FOLUR IP are the National Agricultural and Food Security and Nutrition Investment Plan (PNIASAN), the West Africa Agricultural Productivity Program (WAAPP) – all of which support research, regional transfer of innovations and climate-smart technologies to farmers on a range of commodities including palm oil. Furthermore, the Forest and Landscape Restoration National Committee (currently being established) is mandated to coordinate programs for the restoration of forest and landscapes in Guinea. As such, it is in charge of facilitating and supporting forest and landscape restoration initiatives across sectors and guide land use planning – some land use plans are in the process of being developed in the target area as a results of ROAM assessments, however, support will be needed to fully translate these into commune level plans or specific investment and development plans at landscape level. Finally, the National Forest Programs for Guinea and their related policies, laws and regulations under the Ministries of Natural Resources, provide an important baseline for the wider conservation and restoration of Guinea’s rich forest landscapes.

The project will leverage also on external baseline investments largely focused on preventing deforestation, promoting agriculture production and productivity for food security and improved livelihoods in agroecosystems where palm oil is a key crop, and facilitating decentralization processes. While these respond to and recognize the problems of land degradation that affect the landscape, they are not adequate to maximize global environmental benefits nor to address issues operating across landscape, between sectors and among diverse stakeholders. The proposed FOLUR Country Project is well positioned to capitalize on these ongoing investments, by adopting good practices, replicating successful approaches, drawing on expertise and integrating with existing Government led coordination and project implementation systems.

**Baseline investment programs** include:

World Bank project for natural resources, mines and environment management (2020-2024). This project is articulated around three main components, namely : (A) improvement of the policy, regulatory and institutional frameworks of the mining and environment sectors ; (B) Policies, institutions, governance and economic inclusion of the mining sector ; and (C) Natural resources and environment management. Component C focuses on (i) building institutional capacities of MEEF for improved management and monitoring of PAs ; (ii) strengthening environmental and social standards of MEEF ;

and (iii) developing appropriate tools for improved PAs management across the country and piloting them in targeted zones. Those targeted zones include: the Niger river basin (Upper Niger National Park and Ramsar sites of Niger Source and Niger-Tinkisso); Guinea Forest Region (Pic de Fon, Mont Nimba, Diécké, Béro); Kounounkan and marine Protected Areas. Building on this baseline, the GEF project will specifically work in buffer zones of PAs targeted by the World Bank project under its Component (C) in the selected landscape and will promote oil palm as one of the restoration options in secondary degraded forests, forests concessions, and agricultural fallow land. Palm oil production and commercialization will benefit from infrastructures (roads, fire breaks, hydrological monitoring) and governance investments (local communal committees) in those areas by the GEF project.

#### **IFAD Project for Family Farming, Resilience and Market in Upper and Central Guinea**

**(AgriFARM, 2018-2024).** The AgriFARM project, with an overall budget of 91.4 million USD, is implemented in 15 prefectures and aims at (i) increasing productivity and production of the main value chains (rice and maize, and associated crops) of family farming in a production basin, (ii) reducing commercial transaction costs of agricultural products; and (iii) involving economic actors to seize for commercial opportunities. Building on this baseline, the GEF project will “green” the local development plans of selected communes benefiting from the AgriFARM project (prefectures of Kérouané, Kouroussa and Kankan). It will restore and sustainably manage forests and lands in the upper watershed of the AgriFARM project area, which will enhance ecosystem services that are key to ensure the productive capacity of irrigated land in the lower watershed, where the baseline intervention is promoting irrigation and agriculture investments. The GEF project will also mainstream good practices for oil palm production into technical packages for production of rice and maize disseminated by AgriFARM, knowing that oil palm is integrated to all agroecosystems. Finally, the GEF project will directly benefit from infrastructure investments from AgriFARM, especially into roads, markets, and storage facilities whose lack currently hamper commercialization of palm oil.

**ANAFIC annual investments** into communal budgets within the selected landscape. The National Agency for Funding of Local Authorities (ANAFIC) was created in 2017 with the mandate to (1) manage the National Fund for Local Development (FNDL) that transfers financial resources to communes and (2) provide technical backstopping to communes in their local planning and investments.

Enhanced autonomy of communes is a major achievement of decentralization and the result of a long process, supported for 10 years by AFD, World Bank and IFAD through the Programme of Support to Rural Communities (PACV) and more recently by AFD through the Project to support ANAFIC (PANAFIC). Benefiting from well-established procedures and recurrent resources (mining taxes in particular), ANAFIC is entitled to fund communal investments related to education, health, agriculture, livestock, SFM, land use planning and urban development. The GEF project will build on ANAFIC’s mandate and strengthen communal capacities to plan and implement green investments.

Further to the above mentioned investments, the project will study at PPG phase the opportunity to develop partnerships with key **private sector players** in the selected landscape:

**SOGUIPAH**, the Guinean Society of oil palm and rubber tree that was created in 1987, is currently the only agro-industrial palm oil player in Guinea. SOGUIPAH has an overall concession of 22 000 hectares in Guinea Forest Region, of which about 12 000 could be exploited and 2 500 are planted with commercial oil palm (Tenera) of high yield. SOGUIPAH also supervises family plantations (1 400 over 1 771 ha) and has contracts with small private plantations (1 047 over 1 737 ha). SOGUIPAH also owns and manages an oil extraction plant, producing and directly selling palm oil to local traders (from Nzerekore), and a small soap factory. Through the GEF project, SOGUIPAH could be directly involved in setting certification frameworks such as RSPO to upgrade its value chain, and will be involved in the dissemination of good practices for production and transformation of palm oil.

**SMFG**, the Society of Iron Mines from Guinea, manages since 2003 an iron-mining concession of 625 hectares in the Mounts Nimba in Guinea Forest Region. The operation of the mining site, located in the close vicinity of protected areas where human activities are strictly regulated and bordering Liberia, will generate pressures on this biodiversity-rich landscape. The GEF project could engage with SFMG for the restoration of degraded sites in and around the concession, and the sustainable management of natural oil palm stands.

For **stakeholder engagement**, the project will build on existing structures established by Government, including the national gender committee and the national Forest and landscape restoration committee, this latter set in place during FAO's technical cooperation program for FLR. Additional stakeholders playing a role in the institutional arrangement of the project may include private sector representatives (e.g. Guinean Society of oil palm and rubber tree (SOGUIPAH), a. Mossmart Guinée, inputs providers, traders (e.g. c. Marie Louise Haba), exporters, start-up), cooperatives and federations of producers (e.g. Federation of oil palm and rubber tree growers (FEREPPAH), unions of producers of Diecke and Bignamou), research (Institute for Agronomic Research (IRAG)) and its research center in Sérédougne, focused on perennial crops), government (e.g. national agency for agricultural extension ANPROCA), NGOs and development partners with key experience in the palm oil value chain (e.g. GRET for lessons learnt on ACORH project, German cooperation on DERIK project, IFAD on PNAAFA project). A detailed Stakeholder Engagement Strategy will be developed during the project design phase. A Gender and Social Inclusion Strategy will be developed during the project design phase, building on Guinea's Gender Policy.

**c) Describe how the integrated approach proposed for the child project responds to and reflects the Program's Theory of Change, and as such is an appropriate and suitable option for tackling the systemic challenges, and to achieve the desired transformation with multiple global environmental benefits; and**

The targeted landscape is affected by land degradation and deforestation mostly because of agricultural expansion for cash crops and food crops, logging for fuelwood and charcoal, and mining. Population growth, political unrest and the overall influence of climate change are exacerbating pressure on land and remaining forests. As a result, natural habitats are lost, and already endangered plants and animals species are further threatened, critical water bodies of the "West African Water Tower" are affected and soils – the main wealth of Upper Guinea and Guinea Forest Region particularly – are depleted, disrupting local ecosystems and the services they provide, and, ultimately, negatively impacting the productive capacity of the landscape. The intertwined challenges of forest and landscape degradation and the resulting impacts on ecosystem services, biodiversity and climate change vulnerability correspond to the key problems on which the FOLUR IP Theory of Change (ToC) focuses.

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 palm oil value chain, sustainable food production and the restoration of degraded forest and lands. In this manner, the project is closely aligned with the FOLUR IP Theory of Change (ToC). Through its four components, the project will address the main barriers to sustainability of food systems in Upper Guinea and Guinea Forest Region, reflecting those highlighted in the FOLUR IP ToC:

**Component 1) Development of integrated landscape management systems**

**Barrier:** In the selected landscape, the absence of well-informed and negotiated plans for land use largely result in the uncontrolled expansion of agricultural land and in logging, at the expense of Protected Areas and forest remnants within the landscape. National capacities (at central and local

levels) to assess land status, threats and opportunities as well as capacities to facilitate negotiation processes across land users are largely missing. As a consequence, land use planning and negotiation processes cannot be implemented and regularly updated. National policy and legal frameworks, especially for agriculture, mining and natural resources, are sector-specific. Coherence and alignment across these frameworks towards sustainable landscapes, where trade-offs across production (e.g. commercial production of oil palm) and conservation objectives would have been reconciled, are not ensured.

**Outcome/outputs: To address this barrier, the project will, in full alignment with the FOLUR IP ToC, contribute to the development of an integrated landscape management system at national and local scales under Component 1.** Component 1 will lead to the sustainable management of the selected landscape, with an increased area of land restored for agriculture and environmental services. This outcome will be achieved through the delivery of various outputs, including: participatory jurisdictional ILM plans, capacity strengthening for ILM implementation, improved policies from cross-sectoral dialogue and enhanced national land use monitoring and reporting.

#### Component 2) Promotion of sustainable food production practices and responsible value chains

**Barrier:** Agricultural production is largely reliant on practices that are unsustainable (shifting cultivation, overgrazing) and inefficient (lack of access to inputs, improved varieties or mechanization): producers have little opportunities for capacity strengthening as the national agricultural extension system is weak, and cannot access the finance that would enable them to upgrade their practices. Despite its export potential and its nutritious value in local diets, oil palm lacks a specific focus in the current extension system, and environmentally-sound practices that have been successfully tested in the past have not been mainstreamed. In the absence of comprehensive technical support and without strong cooperatives, oil palm producers remain largely disconnected from palm oil value chain. Palm oil transformation remains highly inefficient and based on manual extraction – and as demand for palm oil grows, low yields bear heavy consequences on the need for expansion of the area under oil palm cultivation, further feeding into the vicious cycle of forest and land degradation.

**Outcome/outputs: To address this barrier, the project will focus under Component 2 on (i) promoting sustainable agricultural practices across the landscape to reduce negative externalities from oil palm, other cash crops (e.g. cashew nuts, cocoa and coffee) and food crops production and (ii) promoting a responsible and inclusive palm oil value chain from producer to buyer, as highlighted in the FOLUR IP ToC.** Component 2 aims at the improved efficiency and sustainability of palm oil value chain, that will be achieved through a combination of interventions: capacity development of producers on climate-smart agricultural practices and sustainable land management options, enhancement of linkages between small producers and palm oil value chains and development of standards and certifications promoting zero-deforestation along the value chains.

#### Component 3) Conservation and restoration of natural habitats

**Barrier:** Existing frameworks for the management of forests and Protected Areas have proven insufficient to maintain intact the remaining habitats of threatened species and to maintain critical ecosystem services flows – in particular water provisioning. In the absence of locally owned and recognized governance arrangements to guarantee the protection of those vulnerable areas, further degradation occurs. In addition, communities lack the awareness, interest and capacity to design and operate profitable “green” business models that are compatible with the sustainable management of Protected Areas buffer zones and forests outside PAs. Wherever degraded areas were successfully restored, no scalable models were designed and brought back into national frameworks to promote their mainstreaming.

**Outcome/outputs: Under Component 3, the project will address this barrier by directly conserving and restoring degraded areas with the full involvement of local stakeholders, in full alignment with FOLUR IP ToC.** Through Component 3, degraded sites of high environmental value will be restored and protected thanks to funding channeled via communal budgets and implementation of improved and participatory local management plans for degraded areas ; capacity strengthening of communities on

best practices for restoration ; and the implementation of innovative arrangements for financing restoration of degraded areas, including scalable partnerships with private sector (e.g. mining) and development of bankable projects.

Component 4) Project Coordination, Collaboration, Communication and M&E

*Barrier:* Information on land degradation and deforestation status and trends are largely missing. To date, there is no coherent cross-sectoral monitoring system, thus limiting the possibility for sound negotiations to take place at national and local levels. No operational cross-sectoral and multistakeholder (government, financial and technical partners, NGOs and cooperatives, private sector, research...) forums exist to share good practices and support their wide dissemination, and the country is largely lacking involvement into international networks and Communities of Practice that would support South-South knowledge exchange and catalyze new cooperation opportunities.

*Outcome/outputs:* **To address this barrier, the project will support coordination and collaboration at country level and linkages with the Global IP FOLUR Platform under Component 4, reflecting the ToC of the FOLUR IP.** Component 4 will lead to successful execution of the project in an effective manner, with knowledge shared through the FOLUR Global Platform.

The project will generate socioeconomic benefits for the 30,000 beneficiaries (50% women) directly benefiting from the project as well as Global Environmental Benefits of 10,000 ha of land restored; 15,000 ha of landscape under improved management practices; and 5,468,072 tCO<sub>2</sub>e GHG emissions mitigated.

**d) Describe the project's incremental reasoning for GEF financing under the program, including the results framework and components.**

The project will promote sustainable and socially acceptable approaches to farming systems and integrated landscape management, in order to recognize spatial dynamics of land use changes, drivers and ecosystem service flows, and deliver multiple GEBs. It has the potential to transform palm oil and rice production systems in the selected landscape of Upper Guinea and Guinea Forest Region, towards a path of sustainability, supporting the Government of Guinea in meeting its goal of increasing agricultural production, while delivering major benefits for globally important forest ecosystems. While palm oil landscapes will be prioritized, the project intends to take a comprehensive food system approach that looks into the diversified production systems characterizing the landscape as a whole - in other words, it is not the intention of the project to focus just on greening the palm oil supply chain but rather to support the integration of sustainable palm oil production within the wider productive landscape where rice production is predominant. To meet the multiple objectives of ecosystem restoration, promotion of deforestation-free agriculture and sustainable food systems, farming systems diversification is considered critical (polycropping, agro-forestry, crop-livestock integration etc). Focusing exclusively on a single commodity value chain approach (palm oil in this case) would lead farmers to production specialization, perpetuating the monoculture-centered models whose environmental and economic limits are abundantly clear today.

The project will follow the component structure of the FOLUR program:

Component 1 will lead to the creation of the enabling conditions for upscaling ILM throughout Guinea. Under this component, GEF funds will be used to gather the evidence-base needed to feed into the participatory multistakeholder dialogues that will serve to assess and negotiate land use options within the jurisdictional boundaries of the landscape. Sound land-use plans that are shared across sectors (especially agriculture, forestry, mining) will be elaborated based on the result of these dialogues at communal level; successful practices could then become a model for replication in other regions. Technical capacities on the application of appropriate tools (SEPAL, Collect Earth OpenForis) and

methods (Restoration Opportunities Assessment Methodology (ROAM), Green Negotiated Territorial Development (GreenNTD) for land use assessment and planning will be strengthened, and will feed existing land monitoring systems where data is lacking. The evidence gathered will be used to update relevant policy frameworks and strategies in support of integrated landscape planning (in close coordination with the World Bank project) and integrated approaches to food system sustainability and landscape restoration, in a way that will promote sustainable management of palm oil production while pre-empting unsustainable commodity driven deforestation. During the PPG more in-depth studies on how the policy environment will be enhanced to encourage sustainable palm oil value chains will be conducted.

Unsustainable subsistence and commercial agricultural systems leading to agricultural expansion and land degradation will be addressed under Component 2, with a focus on the palm oil value chain. The project will work in an integrated manner throughout the palm oil value chain and throughout the selected landscape, by enhancing agricultural production in the landscape through the promotion of climate-resilient and ecologically sound intensification models for key agroecosystems; improving transformation and marketing of palm oil, in particular by strengthening producers' capacities for a more efficient and responsible value chain, by catalyzing inclusive business models and by supporting the creation of opportunities for responsible sourcing of palm oil by supporting the development and deployment of sustainable palm oil standards, certification and traceability systems. GEF funds will leverage the investments made by the AgriFARM project in support of business models for rice and maize) and tailor these models to the palm oil value chain while disseminating good agricultural practices widely to farmers in the focus landscape. GEF funds will also support dissemination of improved agricultural practices by extending the Farmer Field Schools (FFS) network established by AgriFARM in Upper Guinea throughout the targeted landscape, widening curricula to include relevant climate-smart agricultural practices beyond the focus crops of AgriFARM (rice and maize) – to palm oil and other key crops, and facilitating knowledge exchange across beneficiary communes through exchange visits and the organization of a Club Dimitra radio program. A capacity needs assessment of the current formal and informal extension services active in the landscapes will be conducted during PPG to identify gaps. Overall, the project wishes to equip agricultural and forestry extension services and farmers groups with the know how on how to promote innovations and improved practices in a way that prevents further degradation from happening.

Component 3 will tackle the lack of arrangements for the protection of buffer zones surrounding selected Protected Areas in the landscape and the restoration of deforestation and forest degradation frontiers. The project will directly invest into the restoration of degraded sites and put in place measures for their protection over the long run, building especially on a strong community involvement and capacity development. "Green" businesses, that are synergetic with restoration actions will be identified and selected local cooperatives and SMEs will be strengthened (FFF approach), equipped with skills and tools (e.g. RuralInvest), and accompanied in their use to run profitable businesses. To scale-up successes, innovative arrangements for financing restoration of degraded areas will be tested by establishing a partnership with mining companies or other key land users in the landscape (SOGUIPAH), and developing bankable projects to various funds (e.g. GCF). Under component 3, GEF funds will complement investments by the WB project and ANAFIC, to fund income generating activities for the sustainable management of restored sites. In addition to ANAFIC's and WB funding to communes will cover the costs for the implementation of afforestation / reforestation, firebreaks and other restoration activities, GEF funding will strengthen capacities of local communities to lead the planning, implementation and monitoring of these restoration activities, and to maintain restored sites over time through locally-relevant governance arrangements (e.g. site management committees). GEF funding will also support the identification of NWFP businesses and strengthen producers' organizations and SMEs capacities to operate them, thus ensuring the sustainability of the baseline investments into income generating activities



Component 4 will reinforce synergies between the project and baseline interventions, and across stakeholders (including private sector) by funding improved coordination across sectors. GEF funds will ensure the effective dissemination of results for enhanced institutional memory and will contribute to establishing effective coordination mechanisms, and generate knowledge and innovations for transformation of the global palm oil supply chain. The project will share innovative tools and approaches through the global platform, that will also enable the project to access and share information, increasing the potential for replication in other palm oil producing countries.

- **Engagement with the Global / Regional Framework (*maximum 500 words*)**

*Describe how the project will align with the global / regional framework for the program to foster knowledge sharing, learning, and synthesis of experiences. How will the proposed approach scale-up from the local and national level to maximize engagement by all relevant stakeholders and/or actors?*

Knowledge sharing, learning and synthesis of experiences is directly built into the project as one of its four components, with the critical purpose to enable upscaling of successes and learning from failures throughout project implementation and beyond. The project will catalyze knowledge sharing from the bottom up (from the landscape to the national, regional and global levels), from the top down (from global to landscape), and horizontally (across peers in neighboring landscapes and countries) to maximize cross-fertilization of ideas and innovation.

Good practices and lessons learnt from the project will feed into the global FOLUR platform, while tools, methods, and expertise will be drawn from the global FOLUR platform to enhance project implementation. The global FOLUR platform will critically serve to leverage South-South cooperation with other FOLUR beneficiary countries in West Africa. Synergies will be sought especially with Liberia, a neighboring country from Guinea whose GEF7 FOLUR project has a common value chain focus (palm oil), a common transboundary landscape (Bong and Lofa counties in Liberia and Guinea Forest Region) and common drivers of degradation (logging for fuelwood and charcoal production, mining, and agriculture). Coordination and engagement mechanisms with other FOLUR national child projects focused on palm oil will be detailed at PPG stage following consultations with other FOLUR partners and beneficiary countries.

The project will engage with global, regional and national networks, platforms and initiatives of relevance to share experiences and allow for cooperation and networking among peers, awareness raising and ultimately upscaling. Networks and initiatives focusing in particular on palm oil value chain (e.g. African Palm Oil Initiative, Roundtable on Sustainable Palm Oil (RSPO), sustainable agriculture (e.g. West Africa CSA Alliance (WACSAA) and Global Alliance for Climate Smart Agriculture (GACSA) and landscape restoration (e.g. Global Partnership on Forest and Landscape Restoration (GPFLR), Global Landscape Forum (GLF), African Forest Landscape Restoration Initiative (AFR100) will be targeted. Guinea is one of the beneficiary countries of FAO's Forest and Landscape Restoration Mechanism, a global programme targeting 20 countries throughout the globe, that leads implementation of 5 national child projects under the GEF6 "The Restoration Initiative" and as such, the project will benefit from a wealth of learning opportunities (regional / global workshops and trainings, online Communities of Practice) on selected topics.

A number of tools and approaches will be used to foster learning, knowledge exchange and cooperation among practitioners. At landscape level, the project will use proven methods for participation and engagement of local stakeholders, such as the Restoration Opportunities Assessment Methodology (ROAM) to develop integrated landscape management plans. The project will also rely on participatory, people-centered methods for learning, e.g. [Farmer Field Schools \(FFS\)](#), and for

disseminating information, e.g. [Club Dimitra](#). More classic approaches, like exchange visits, will be used to strengthen linkages with ongoing efforts (in particular baseline projects) and to highlight past successes (e.g. [SARA](#) project). Lessons learnt from local implementation will be institutionalized in the departmental planning processes, and will feed into the national cross-sectoral platform for FLR and into the above mentioned regional and global online Communities of Practice, that will uptake and further disseminate within their own countries the fruits of those exchanges.

Links with palm oil fora at national and supra-national levels, and engagement with private actors involved in the palm oil value chain (including especially SMEs and cooperatives but also potential investors such as impact funds, interested in social and environmental returns) will be key to gather and share best practices, generate ideas for a sustainable palm oil value chain and identify barriers to unlock. Those elements will in turn feed national dialogues and generate policy actions to promote the sustainability of the palm oil value chain in Guinea and in other West African countries.

## Annex A: GEF 7 Core Indicator Worksheet

<b>Core Indicator 1</b>	<b>Terrestrial protected areas created or under improved management for conservation and sustainable use</b>						
	Hectares (1.1+1.2)						
	Expected			Achieved			
	PIF stage	Endorsement	MTR	TE			
<b>Indicator 1.1</b>	<b>Terrestrial protected areas newly created</b>						
Name of Protected Area	WDPA ID	IUCN category	Hectares				
			Expected		Achieved		
			PIF stage	Endorsement	MTR	TE	
		(select)					
		(select)					
		Sum					
<b>Indicator 1.2</b>	<b>Terrestrial protected areas under improved management effectiveness</b>						
Name of Protected Area	WDPA ID	IUCN category	Hectares	METT Score			
				Baseline		Achieved	
					Endorsement	MTR	TE
		(select)					
		(select)					
		Sum					
<b>Core Indicator 2</b>	<b>Marine protected areas created or under improved management for conservation and sustainable use</b>					<b>(Hectares)</b>	
	Hectares (2.1+2.2)						
	Expected			Achieved			
	PIF stage	Endorsement	MTR	TE			
<b>Indicator 2.1</b>	<b>Marine protected areas newly created</b>						
Name of Protected Area	WDPA ID	IUCN category	Hectares				
			Expected		Achieved		
			PIF stage	Endorsement	MTR	TE	
		(select)					
		(select)					
		Sum					
<b>Indicator 2.2</b>	<b>Marine protected areas under improved management effectiveness</b>						
Name of Protected Area	WDPA ID	IUCN category	Hectares	METT Score (Scale 1-3)			
				Baseline		Achieved	
				PIF stage	Endorsement	MTR	TE
		(select)					
		(select)					
		Sum					
<b>Core Indicator 3</b>	<b>Area of land restored</b>					<b>(Hectares)</b>	
	Hectares (3.1+3.2+3.3+3.4)						
	Expected			Achieved			
	PIF stage	Endorsement	MTR	TE			
		10,000					
<b>Indicator 3.1</b>	<b>Area of degraded agricultural land restored</b>						
			Hectares				
			Expected		Achieved		
			PIF stage	Endorsement	MTR	TE	
			5,000				
<b>Indicator 3.2</b>	<b>Area of forest and forest land restored</b>						
			Hectares				
			Expected		Achieved		
			PIF stage	Endorsement	MTR	TE	
			5,000				
<b>Indicator 3.3</b>	<b>Area of natural grass and shrublands restored</b>						

			Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 3.4	Area of wetlands (including estuaries, mangroves) restored					
			Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Core Indicator 4	Area of landscapes under improved practices (hectares; excluding protected areas)					(Hectares)
			Hectares (4.1+4.2+4.3+4.4)			
			Expected		Expected	
			PIF stage	Endorsement	MTR	TE
			15,000			
Indicator 4.1	Area of landscapes under improved management to benefit biodiversity					
			Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 4.2	Area of landscapes that meet national or international third-party certification that incorporates biodiversity considerations					
Third party certification(s):			Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 4.3	Area of landscapes under sustainable land management in production systems					
			Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
			15,000			
Indicator 4.4	Area of High Conservation Value Forest (HCVF) loss avoided					
			Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Core Indicator 5	Area of marine habitat under improved practices to benefit biodiversity					(Hectares)
Indicator 5.1	Number of fisheries that meet national or international third-party certification that incorporates biodiversity considerations					
Third party certification(s):			Number			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 5.2	Number of large marine ecosystems (LMEs) with reduced pollution and hypoxial					
			Number			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Core Indicator 6	Greenhouse gas emission mitigated					(Tons)
			Tons (6.1+6.2)			
			Entered		Entered	
			PIF stage	Endorsement	MTR	TE
		Expected CO2e (direct)	5,468,072			
		Expected CO2e (indirect)				

Indicator 6.1	Carbon sequestered or emissions avoided in the AFOLU sector						
			Tons				
			Entered		Entered		
			PIF stage	Endorsement	MTR	TE	
	Expected CO2e (direct)		5,468,072				
	Expected CO2e (indirect)						
	Anticipated Year						
Indicator 6.2	Emissions avoided						
			Hectares				
			Expected		Achieved		
			PIF stage	Endorsement	MTR	TE	
	Expected CO2e (direct)						
	Expected CO2e (indirect)						
	Anticipated Year						
Indicator 6.3	Energy saved						
			MJ				
			Expected		Achieved		
			PIF stage	Endorsement	MTR	TE	
Indicator 6.4	Increase in installed renewable energy capacity per technology						
		Technology	Capacity (MW)				
			Expected		Achieved		
			PIF stage	Endorsement	MTR	TE	
		(select)					
		(select)					
Core Indicator 7	Number of shared water ecosystems (fresh or marine) under new or improved cooperative management					(Number)	
Indicator 7.1	Level of Transboundary Diagnostic Analysis and Strategic Action Program (TDA/SAP) formulation and implementation						
		Shared water ecosystem	Rating (scale 1-4)				
			PIF stage	Endorsement	MTR	TE	
Indicator 7.2	Level of Regional Legal Agreements and Regional Management Institutions to support its implementation						
		Shared water ecosystem	Rating (scale 1-4)				
			PIF stage	Endorsement	MTR	TE	
Indicator 7.3	Level of National/Local reforms and active participation of Inter-Ministerial Committees						
		Shared water ecosystem	Rating (scale 1-4)				
			PIF stage	Endorsement	MTR	TE	
Indicator 7.4	Level of engagement in IWLEARN through participation and delivery of key products						
		Shared water ecosystem	Rating (scale 1-4)				
			Rating		Rating		
			PIF stage	Endorsement	MTR	TE	
Core Indicator 8	Globally over-exploited fisheries Moved to more sustainable levels					(Tons)	
			Metric Tons				
			PIF stage	Endorsement	MTR	TE	
Core Indicator 9	Reduction, disposal/destruction, phase out, elimination and avoidance of chemicals of global concern and their waste in the environment and in processes, materials and products					(Tons)	
			Metric Tons (9.1+9.2+9.3)				
			Expected		Achieved		
			PIF stage	PIF stage	MTR	TE	

Indicator 9.1	Solid and liquid Persistent Organic Pollutants (POPs) and POPs containing materials and products removed or disposed					
POPs type			Metric Tons			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
(select)	(select)	(select)				
(select)	(select)	(select)				
(select)	(select)	(select)				
Indicator 9.2	Quantity of mercury reduced					
			Metric Tons			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 9.3	Number of countries with legislation and policy implemented to control chemicals and waste					
			Number of Countries			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 9.4	Number of low-chemical/non-chemical systems implemented particularly in food production, manufacturing and cities					
		Technology	Number			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Core Indicator 10	Reduction, avoidance of emissions of POPs to air from point and non-point sources					(Grams)
Indicator 10.1	Number of countries with legislation and policy implemented to control emissions of POPs to air					
			Number of Countries			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 10.2	Number of emission control technologies/practices implemented					
			Number			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 10.3	Number of countries with legislation and policy implemented to control chemicals and waste					
			Number of Countries			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Core Indicator 11	Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment					
			Number Achieved			
			PIF stage	Endorsement	MTR	TE
		Female	15,000			
		Male	15,000			
		Total	30,000			

## **ANNEX B - Maps of land degradation in project intervention area**

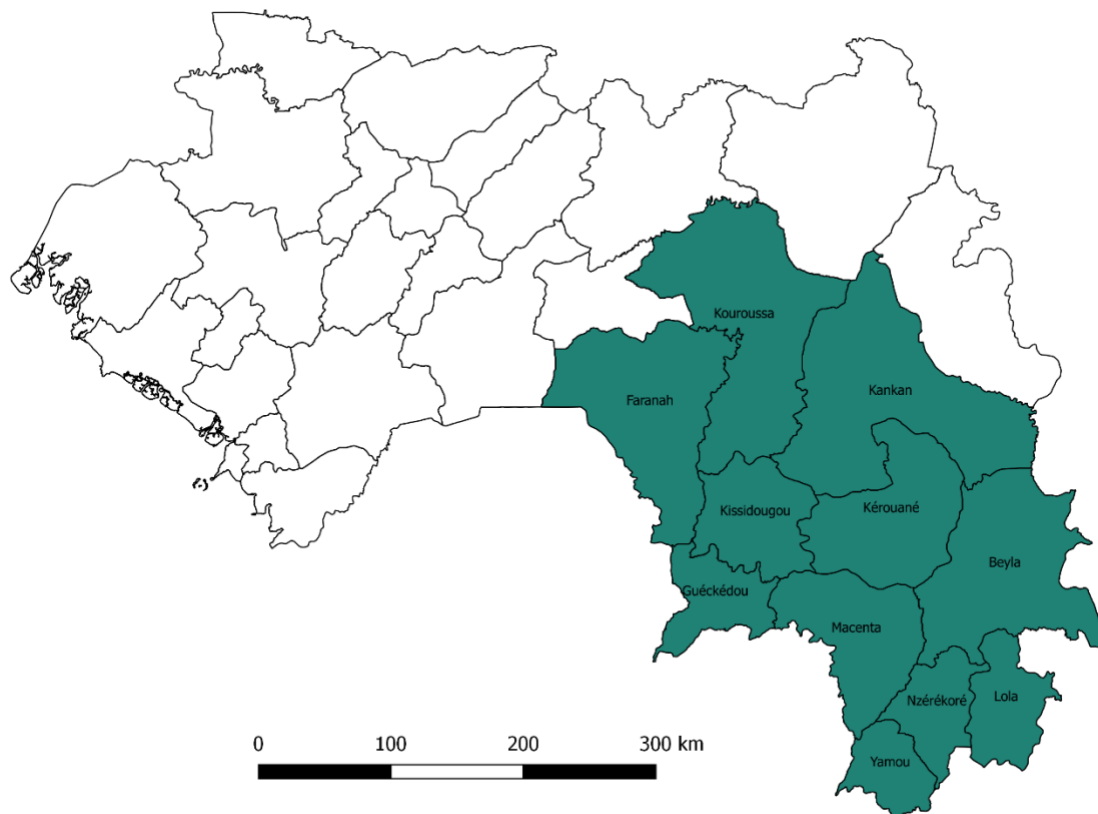


Figure 1. Selected landscape (FAO, 2018)

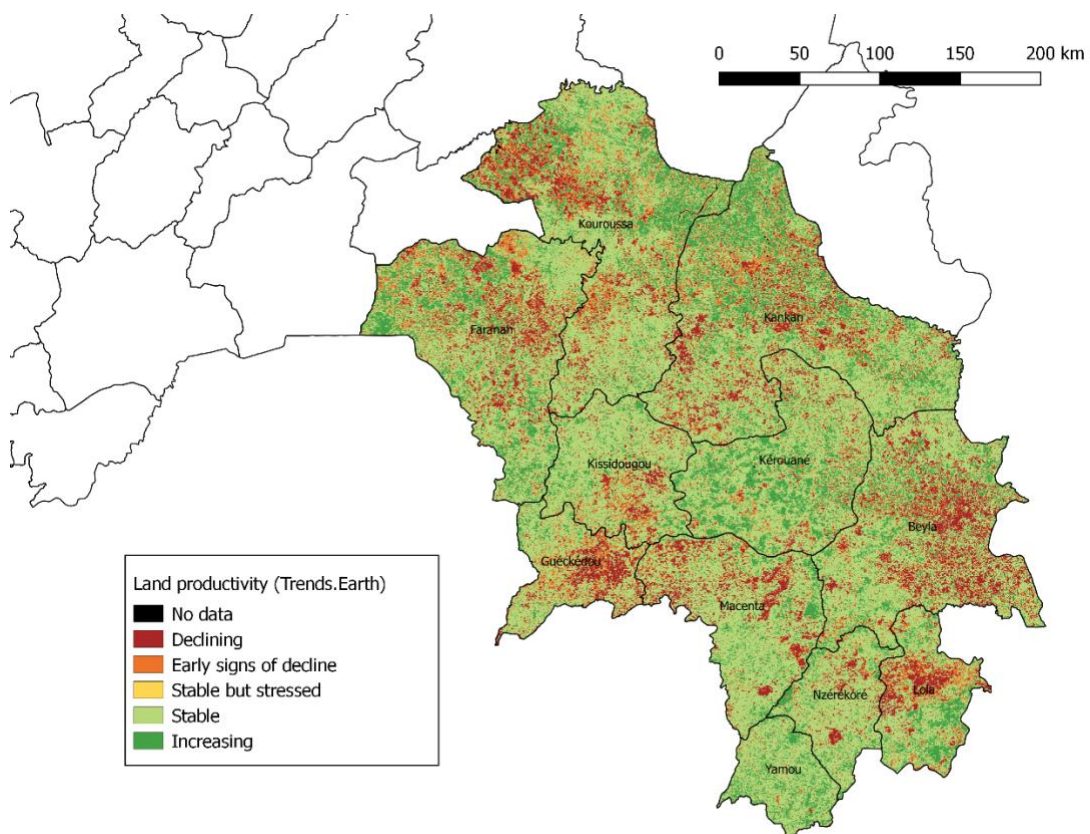


Figure 2. Land productivity map in selected landscape (FAO, 2018)

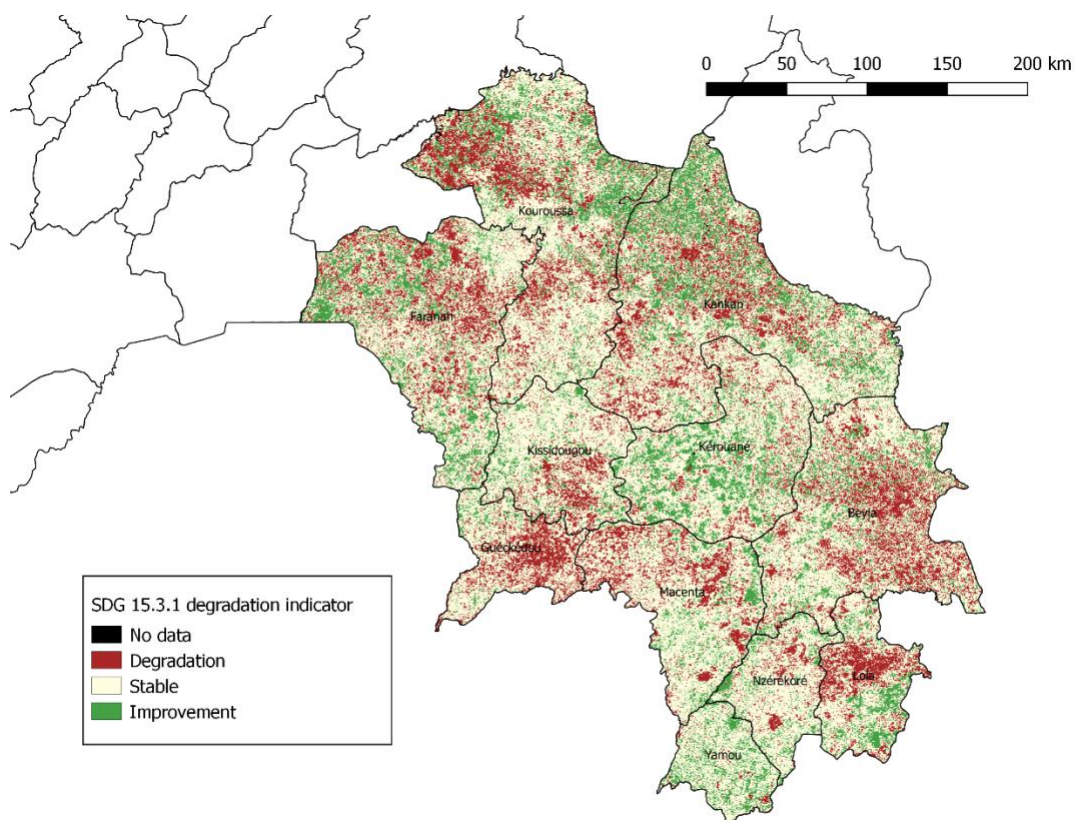


Figure 3. Degradation map in selected landscape (FAO, 2018)



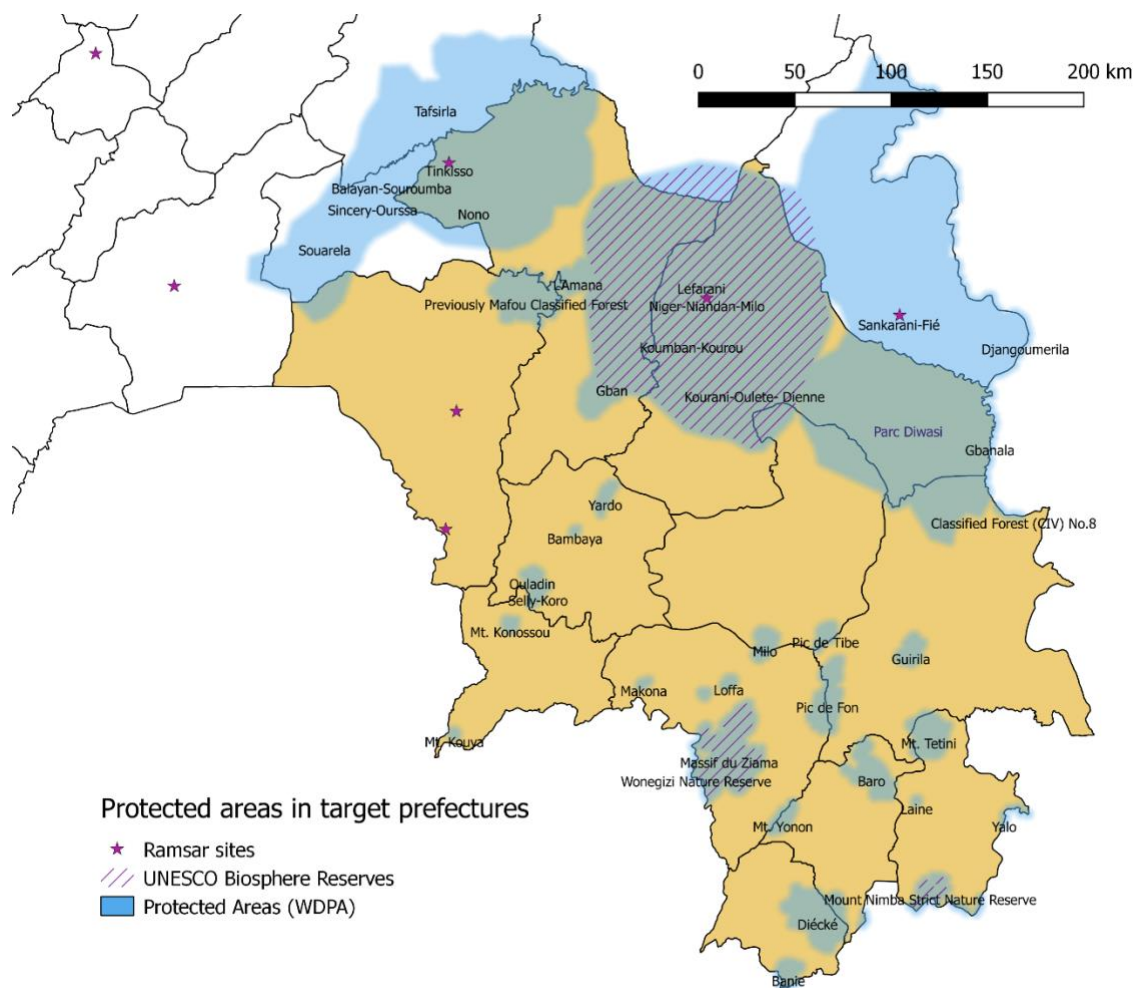


Figure 4. Protected areas map in selected landscape (FAO, 2018)

## GEF-7 CHILD PROJECT CONCEPT

**KENYA**

CHILD PROJECT TYPE: Full-sized Child project

PROGRAM: IP FOLU

<b>Child Project Title:</b>	Integrated Landscape Management for conservation and restoration of the Mt. Elgon Ecosystem in Western Kenya
<b>Country:</b>	Kenya
<b>Lead Agency</b>	FAO
<b>GEF Agency(ies):</b>	FAO

### INDICATIVE FOCAL/NON-FOCAL AREA ELEMENTS AND FINANCING

Programming Directions	Trust Fund	(in \$)	
		GEF Project Financing	Co-financing
BD-1-1 Mainstream biodiversity across sectors as well as landscapes and seascapes through biodiversity mainstreaming in priority sectors	GEFTF	2,181,078	15,200,000
LD-1-1 Maintain or improve flow of agro-ecosystem services to sustain food production and livelihoods through Sustainable Land Management (SLM)	GEFTF	1,338,647	22,000,000
IP FOLU Promoting effective coordination and adaptive management for Food Systems, Land Use and Restoration	GEFTF	1,834,862	14,000,000
<b>Total Project Cost</b>		<b>5,354,587</b>	<b>51,200,000</b>

### PROJECT COMPONENTS AND FINANCING

<b>Project Objective:</b> To promote sustainable, integrated management of Mt. Elgon landscape through the development of inclusive responsible coffee value chain and sustainable staple food production systems						
Project Components	Comp. Type	Project Outcomes	Project Outputs	Trust Fund	(in \$)	
					GEF Project Financing	Co-financing
1. Development of integrated landscape management systems	TA	<u>Outcome 1.1</u> Mt. Elgon landscape managed sustainably with increased restoration for agriculture and provision of environmental services.  <u>Indicators:</u> # of ILM plans in place, informed by multi-stakeholders dialogue.	<u>Output 1.1.1:</u> Integrated participatory landscape management plans developed and implemented in the Mt. Elgon landscape.  <u>Output 1.1.2:</u> Capacity building programs implemented to support participatory development and implementation of ILM.  <u>Output 1.1.3:</u> Multi-stakeholders dialogue and County Environment Committees strengthened to harmonize and influence policies, actions, and	GEFTF	1,000,800	12,000,000

			catalyze and scale-up green investments.			
2. Promotion of sustainable food production practices and responsible value chains	INV	<p><u>Outcome 2.1</u> Improved efficiency and sustainability of coffee and maize production systems.</p> <p><u>Indicators:</u></p> <ul style="list-style-type: none"> <li>- # of new business models adopted based on improved climate resilient farming practices with innovative finance mobilized.</li> <li>- # hectares of landscapes under improved practices.</li> </ul>	<p><u>Output 2.1.1:</u> Sustainable climate-smart agricultural practices and innovative technologies promoted.</p> <p><u>Output 2.1.2</u> Capacity development programs implemented for smallholder farmers, cooperatives and other value chain actors to promote sustainable coffee and maize production.</p> <p><u>Output 2.1.3:</u> Sustainable coffee standards, certification and traceability systems developed and promoted with innovative incentive mechanisms.</p> <p><u>Output 2.1.4:</u> Incentive mechanisms established to promote sustainable coffee value chain development.</p>	GEFTF	1,947,207	20,000,000
3. Conservation and restoration of natural habitats	INV	<p><u>Outcome 3.1</u> Increased Mt Elgon landscape area under conservation and restoration.</p> <p><u>Indicators:</u></p> <ul style="list-style-type: none"> <li>- # hectares of degraded farmland and forest under restoration/rehabilitation and improved management.</li> <li>- # metric tons of CO2e of GHG Emissions Mitigated</li> </ul>	<p><u>Output 3.1.1:</u> Capacity of county and community-level institutions for conservation, restoration and rehabilitation of degraded lands and forest habitats strengthened in both degraded forest and agricultural landscapes.</p> <p><u>Output 3.1.2:</u> Highly degraded forest sites restored.</p> <p><u>Output 3.1.3:</u> Highly degraded agricultural lands restored.</p>	GFTF	1,451,000	14,000,000

4. Project Coordination, Collaboration, Communication and M&E	TA	<u>Outcome 4.1</u> Successful execution of the project in an effective manner, with knowledge shared through the FOLUR global platform.	<u>Output 4.1.1:</u> Knowledge products, tools and approaches developed and shared through the FOLUR IP Global platform and other relevant value chain platforms.  <u>Output 4.1.2:</u> Transboundary integrated M&E and knowledge system established for the Kenyan and the Ugandan Mt. Elgon landscape.  <u>Output 4.1.3:</u> Cross-sectoral coordination mechanisms strengthened/established at county and landscape levels.	GEFTF	700,600	2,900,000
Subtotal				GEFTF	5,099,607	48,900,000
Project Management Cost (PMC)				GEFTF	254,980	2,300,000
<b>Total Project Cost</b>					<b>5,354,587</b>	<b>51,200,000</b>

For multi-trust fund projects, provide the total amount of PMC in Table B, and indicate the split of PMC among the different trust funds here: ( )

**INDICATIVE SOURCES OF CO-FINANCING FOR THE PROJECT BY NAME AND BY TYPE, IF AVAILABLE**

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount (\$)
Recipient County Government	Bungoma County	Public Investment	Recurrent expenditure	15,000,000
Recipient County Government	Trans Nzoia County	Public Investment	Recurrent expenditure	15,000,000
Recipient Country Government	KWTA	In-kind	Recurrent expenditure	1,000,000
Recipient Country Government	KFS	In-kind	Recurrent expenditure	1,500,000
Recipient Country Government	KWS	In-kind	Recurrent expenditure	1,500,000
Recipient Country Government	MINADER	In-kind	Recurrent expenditure	5,000,000
Civil Society Organization	Vi-Agroforestry	Grant	Investment Mobilized	1,000,000
Private Sector	Coffee Cooperatives	Grant	Investment Mobilized	4,000,000
GEF Agency	FAO	Grant	Investment Mobilized	2,000,000
GEF Agency	FAO	In kind	Recurrent Expenditure	200,000
Civil Society Organization	Solaridad	Grant	Investment Mobilized	5,000,000
<b>Total Co-financing</b>				<b>51,200,000</b>

**Describe how any “Investment Mobilized” was identified.**

The project will mobilize additional investments both in the forms of new public programs and through the private sector. Potential future partnership with Impact Investors with interest on sustainable/certified coffee value chain will be explored during the PPG phase such as Moringa Partnership, Commonland or Althelia. Detailed targets will be provided at formulation stage.

**TRUST FUND RESOURCES REQUESTED BY AGENCY(IES), COUNTRY(IES), FOCAL AREA AND THE PROGRAMMING OF FUNDS**

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	(in \$)		
					GEF Project Financing (a)	Agency Fee (b)	Total (c)=a+b
FAO	GEFTF	Kenya	Biodiversity	BD STAR Allocation	2,181,078	196,297	2,377,375
FAO	GEFTF	Kenya	Land Degradation	LD STAR Allocation	1,338,647	120,478	1,459,125
FAO	GEFTF	Kenya	MFA	MFA	1,834,862	165,138	2,000,000
<b>Total GEF Resources</b>					<b>5,354,587</b>	<b>481,913</b>	<b>5,836,500</b>

**PROJECT PREPARATION GRANT (PPG)**

Is Project Preparation Grant requested?

Yes ☒ If yes, PPG funds **have to be requested via the Portal** once the PFD is approved

No ☐ If no, skip this item.

**PPG AMOUNT REQUESTED BY AGENCY(IES), TRUST FUND, COUNTRY(IES) AND THE PROGRAMMING OF FUNDS**

GEF Agency	Trust Fund	Country/ Regional/Global	Focal Area	Programming of Funds	(in \$)		
					PPG (a)	Agency Fee (b)	Total c = a + b
FAO	GEFTF	Kenya	BD	BD STAR Allocation	112,500	10,125	122,625
FAO	GEFTF	Kenya	LD	LD STAR Allocation	37,500	3,375	40,875
<b>Total PPG Amount</b>					<b>150,000</b>	<b>13,500</b>	<b>163,500</b>

**PROJECT'S TARGET CONTRIBUTIONS TO GEF 7 CORE INDICATORS**

Provide the relevant sub-indicator values for this project using the methodologies indicated in the Core Indicator Worksheet provided in Annex B and aggregating them in the table below. Progress in programming against these targets is updated at the time of CEO endorsement, at midterm evaluation, and at terminal evaluation. Achieved targets will be aggregated and reported at anytime during the replenishment period. There is no need to complete this table for climate adaptation projects financed solely through LDCF and SCCF.

Project Core Indicators		Expected at PIF
1	<b>Terrestrial protected areas</b> created or under improved management for conservation and sustainable use (Hectares)	
2	<b>Marine protected areas</b> created or under improved management for conservation and sustainable use (Hectares)	
3	Area of <b>land restored</b> (Hectares)	10,000
4	Area of <b>landscapes under improved practices</b> (excluding protected areas) (Hectares)	50,000
5	Area of <b>marine habitat under improved practices</b> (excluding protected areas) (Hectares)	
	Total area under improved management (Hectares)	
6	<b>Greenhouse Gas Emissions Mitigated</b> (metric tons of CO2e)	5,390,174

Project Core Indicators		Expected at PIF
7	<b>Number of shared water ecosystems</b> (fresh or marine) under new or improved cooperative management	———
8	Globally over-exploited <b>marine fisheries</b> moved to more sustainable levels (metric tons)	———
9	<b>Reduction</b> , disposal/destruction, phase out, <b>elimination</b> and avoidance of <b>chemicals of global concern</b> and their waste in the environment and in processes, materials and products (metric tons of toxic chemicals reduced)	
10	Reduction, avoidance of emissions of <b>POPs to air</b> from point and non-point sources (grams of toxic equivalent gTEQ)	
11	Number of <b>direct beneficiaries disaggregated by gender</b> as co-benefit of GEF investment	60,000 (30,000 women)

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

Preliminary estimates have been calculated through EX-Ante Carbon-balance Tool (EX-ACT). The accumulated sequestration due to direct project implementation in restoring 5,000 ha of forest land and 5,000 of cropland in the selected landscape amounts to -3.8 tCO<sub>2</sub>-e per hectare per year, or about -5.3 million tCO<sub>2</sub>-e over the entire 20-years-period of analysis (5 years implementation + 15 years of capitalization phase).

During PPG, the indirect impact and associated GHG emissions will be assessed when more detailed information will become available of actual co-financing and more precise EX-ACT assessment will be provided when project sites will be better identified, in particular restoration sites and avoided deforestation areas.

## PROJECT DESCRIPTION

### (i) Country Context (*maximum 500 words*)

**Describe the country's relevant environmental challenges and strategic positioning relative to the systems transformation proposed for the program, including relevant existing policies, commitments, and investment frameworks. How are these aligned with the proposed approach to foster impactful outcomes with global environmental benefits?**

Agriculture is key to Kenya's economy, contributing 26% of the GDP and another 27% of GDP indirectly. The sector employs more than 40% of the total population and more than 70% of Kenya's rural people. The importance of Kenya's agricultural sector is emphasized through Vision 2030 and most recently the President's Big Four priority agenda for 2017-2022. The Government of Kenya (GOK) has put in place the **Agricultural Sector Transformation and Growth Strategy** (ASTGS, 2019-2029) to address the challenges that constrain agricultural productivity, natural resource management, and the effects of land degradation and climate change in Kenya. The ASTGS transformative approach will include the creation of a national multi-stakeholder and cross-sectoral platform to coordinate activities along the various agricultural value chains with a monitoring and reporting framework<sup>1</sup>.

The major challenge facing Kenya is how to sustain the ever-increasing demand for food, water and energy (wood fuel) from a rapidly growing population against a diminishing resource base. This will lead to further degradation of ecosystems, loss of globally significant biodiversity, reduced productive capacity and livelihood resilience.

Recognizing the need for sustainable action, the GoK developed a set of Strategies and action plans to ensure economic growth will go hand in hand with sustainable management and protection of natural ecosystems to ensure ecosystem services. The **Green Economy Strategy and Implementation Plan 2016-2030** enables Kenya to transition to green economy embedding the **principles of sustainable development** in the overall national growth strategy. In 2018 the **Integrated National Export Development and Promotion Strategy** was also launched to stimulate increased production of goods and services for target export value chains (including coffee) and to ensure coordinated and sustainable approach to export development.

The **Kenya Climate-Smart Agriculture Strategy (2017–2026)** was jointly developed by the Ministry of Agriculture, Livestock and Fisheries (MoALF), the Ministry of Environment and Natural Resources (MENR) and other government ministries to facilitate agriculture that sustainably increases productivity, enhances resilience and minimizes greenhouse gas emissions.

A **National Land Use Policy** has been developed in 2017 to provide a legal, administrative, institutional and technological framework for optimal utilization and productivity of land related resources in a sustainable and desirable manner at national, county and community levels. Both national and county governments as well as land users must take a variety of measures to ensure efficient, productive and sustainable use of land.

The Kenya Coffee Research Institute has devoted considerable effort and resources in developing several coffee technology packages. Among these is the breeding of Batian and Ruiru 11 coffee varieties, which

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<sup>1</sup> Linkage with the platform will be sought to facilitate scale-up at national level.

combine characteristics of high yields, resistance to coffee berry disease and coffee leaf rust and superior coffee quality [12]. Through various research programmes, CRI has developed a package of recommendations on various coffee agronomic practices aimed at enhancing coffee productivity while keeping the cost of production low and these constitute the best agricultural practices for the smallholder coffee farmer in Kenya. Farmer Field Schools have been widely used as coffee extension intervention to facilitate the dissemination and utilization of these research outputs to smallholder coffee farmers in Kenya. The Kenya Coffee Platform (launched in 2017 with the support of GIZ and the Global Coffee Platform) identified the need to harmonize the various training manuals being used by various stakeholders in Kenya to educate farmers. Through collaboration, the platform has developed a standard training material – the **Kenya Coffee Sustainability Manual (KCSM)** – which is geared towards improving farmers’ knowledge with view to increasing coffee production and improve quality.

According to the Global Forest Resources Assessment Report in 2015, the forest cover was estimated at 7.2% based on the national projection from the 2010 forest cover data. An analysis of land-use change over the period 1990-2015 has established that Kenya lost 311,000 Ha of forestland. Forest cover loss is mostly due to conversion to settlements, crop farming and infrastructure developments. Under the leadership of the Ministry of Environment and Forestry a **National Strategy for achieving and maintaining over 10% tree cover by 2022** was launched in 2019.

In line with priorities identified in nationally determined contributions (NDC) to the Paris Agreement, Kenya committed to reduce GHG emissions by 30% below the 2030 business as usual scenario. The emission reduction target in the forestry sector is 20.10 MtCO<sub>2e</sub> by 2030 through forest restoration, afforestation, reforestation, and reduction of deforestation and in the agriculture sector it is 2.77 MtCO<sub>2e</sub> by 2030 through agroforestry, minimum tillage systems, manure management, and efficiency in livestock management (NCCAP, 2018).

Moreover, Kenya has also joined the Land Degradation Neutrality process and has voluntarily set targets<sup>2</sup> to avoid, minimize and reverse land degradation through:

- increase forest cover through Afforestation/Agroforestry in existing forests; areas of shrubs/grassland; wetlands; croplands by 5.1 M Ha under Bonn Challenge/AFR100;
- increase by 16% net land productivity in forest, shrubland/grassland and cropland showing declining productivity; achieved through SLM practices;
- increase soil organic carbon by 319,626 total tons in cropland land use achieved through SLM practices;
- halt the conversion of forests to other land cover classes by 2030.

Mt. Elgon has been identified as one of the hotspots of land degradation and the target set is the following : LDN is achieved in the Lake Victoria region (Nile basin) of Kenya by 2030 as compared to 2015 and an additional 9 % of the zone has improved (net gain).

Kenya ranks among the leading producers in Africa and the world in several commodities including Coffee (4<sup>th</sup> largest in Africa & 16<sup>th</sup> in the world). Coffee production has dramatically reduced since peak production in 1987 to only 43,000 ton in 2017 and most of the coffee is geared towards export. To counter and reverse this trend, the GoK has put in place several strategies and programmes both at the national

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<sup>2</sup> [https://prais.unccd.int/sites/default/files/pdf\\_reports/unccd\\_Kenya\\_2018.pdf](https://prais.unccd.int/sites/default/files/pdf_reports/unccd_Kenya_2018.pdf)



and local level to improve both coffee productivity and production. Mt. Elgon is part of the key coffee production areas within Bungoma and Trans-Nzoia counties in western Kenya. Both counties have committed through their County Integrated Development Plans to become the lead coffee producing counties in the country. Bungoma County Government projects to have an increase in coffee production area in their County with 400 ha to a total of 6,774 hectares in 2020 compared to 2019. The production of coffee has led to encroachment of natural ecosystems, loss of biodiversity and reduced ecosystem services to name but a few.

Kenya is ranked 4<sup>th</sup> largest in Africa (FAOSTAT, 2018) in terms of maize production and Bungoma and Trans-Nzoia counties are called the bread-basket of Kenya as they produce up to 80% of national maize consumption. Intensive maize farming has been going on for decades using unsustainable practices and misuse of chemical fertilizers leading to not only increased run-off and pollution of waterbodies but also soil acidification. The Ministry of Agriculture estimates that around 50 percent of smallholder farms in western Kenya have soil pH below 5.5 (optimum pH for plant growth is 6.5).

The FOLUR IP provides an enormous opportunity for Kenya to address the drivers and barriers to both development of sustainable and inclusive coffee value chain and sustainable maize production system and contribute to the achievement of the multiple FOLUR global environmental benefits – as well as socio-economic benefits. As a child project, Kenya will benefit from best practices and lessons learned both regionally and globally from the FOLUR IP. As focus will be on sustainable coffee value chain and maize production systems, the other child projects could learn from the approaches used in terms of inclusive market development, integrated land-use management approach and best agricultural practices. The project will in particular synergize activities and experience from the IP sister project on the Ugandan side of Mt. Elgon ecosystem through set-up of a transboundary management and knowledge exchange platform. Sectoral transboundary collaboration exists already between Kenya and Uganda and this project will build upon experiences for a more integrated approach to avoid leakages across the landscape.

## **(ii) Project Overview and Approach (maximum 1250 words)**

**Provide a brief description of the geographical target(s), including details of systemic challenges, and the specific environmental threats and associated drivers that must be addressed;**

The project will work in the Kenyan side of the Mt. Elgon landscape within the Bungoma and Trans-Nzoia counties. The landscape constitutes one of Kenya's five key water towers and is of vital importance for biodiversity, agriculture and water provision in the entire region. The Mt. Elgon forests harbor a rich plant and animal biodiversity (37 globally threatened species<sup>3</sup>) and was designated as a UNESCO biosphere reserve in 2003 and three areas within the landscape are designated as KBA<sup>4</sup>/IBAs, i.e. Mount Elgon; Kitale West and Endebess. The landscape is characterized by a mosaic of gazetted forest areas, National Park, agricultural buffer zones and food systems focusing on maize and coffee production.

The total area of Bungoma and Trans-Nzoia counties is 467,700 Ha. The Mt. Elgon landscape covers an area of 208,821 ha of which 16,916 consist of Mount Elgon National Park managed by Kenya Wildlife Service (KWS); 90,905 consist of the gazetted Mount Elgon Forest Reserve and Chepkitala National Reserve managed by Kenya Forest Service (KFS) and Bungoma County Government; and, 101,000 ha

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<sup>3</sup> Biodiversity status of Mount Elgon Forest Ecosystem. KEFRI, 2018

<sup>4</sup> Key Biodiversity Areas (KBA).

consist of an agricultural buffer zone. It is important to note that this only is the direct project area and the interventions of the project will contribute to improved management of a larger area.

The Mt Elgon landscape is being degraded by agricultural expansion both in gazetted areas as in buffer zones. Since 2000 Mt Elgon Water Tower has experienced a 1.4% annual loss of forest cover<sup>5</sup>. Other factors also contribute to this continued degradation (such as fuelwood collection, weak governance and low land-use planning and implementation), and the commitments towards enhanced coffee and maize production in both Counties could threaten the safeguarding of the remaining forest areas.

The maize producing smallholder farmers in Western Kenya suffer from years of land degradation which has had a serious impact on soil productivity. The limited access to credit and technologies to adopt SLM practices provides a significant barrier for farmers, as well as limited knowledge on resilient, climate-smart agricultural practices. Extension services to smallholder farmers also have been limited and although physical access to markets has improved, the transaction costs to market information and marketing processes are high and as such limited to wealthier farmers. Changing climate patterns characterized by erratic rains and pest invasions – Fall Army Worm and desert locust – exacerbate the problems. In addition, farmers have been converting maize farms into sugar cane plantations threatening food security and placing further pressure on the landscape.

Barriers that need to be addressed for sustainable and inclusive coffee value chain development include lack of coordinated integrated land-use planning and management, weak governance and capacity of cooperatives, limited technical capacity to adopt sustainable coffee production practices, limited access to improved technologies, limited access to finance and markets.

The utilization of unsustainable agricultural practices combined with small land sizes, lack of financial/market instruments to promote sustainable practices, lack of investment and poor extension services, and means for applying a landscape and integrated approach across sectors and counties has created an immense pressure with encroachment of critical landscapes as a result. The renewed increased attention of coffee value chain development in Kenya, and in both respective Counties threatens the integrity of the landscape and the provision of ecosystem services to surrounding production systems.

While the world coffee price has been volatile, in August 2018 the benchmark price for coffee slipped below one US dollar per pound, its lowest point for 13 years. At the same time, production costs have continued to rise; the true cost of coffee is now carried by farmers who simply don't make enough to survive. As such multi-stakeholder interventions are needed to ensure sustainable increase of productivity of coffee plantations, enhanced direct access to national and international markets (for ex. through certification standards) and improved benefit sharing amongst smallholder farmers.

**(iii) Describe the existing or planned baseline investments, including current institutional framework and processes for stakeholder engagement and gender integration;**

The project will build upon the **Kenyan Coffee Platform (KCP)** which was established in 2018 to spearhead Public Private Partnership to address the dramatic decline in coffee productivity and a lack of sustainability of the sector. The Kenya Coffee Platform is a forum that brings coffee value chain stakeholders together to develop a common approach and strategy to address the issues in the coffee industry. The key purpose of the platform is to facilitate dialogue through creation of inclusive and participatory National and County level coffee platforms that represent all coffee stakeholders. This allows discussions and a harmonized approach on critical issues affecting the sector for improved coffee production and quality. A study

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<sup>5</sup> Kenya Water Towers Status Report for Cherangany and Mt. Elgon. Kenya Water Towers Agency. 2018.

<sup>6</sup>carried out by the KCP in 2018 revealed that as coffee is pre-dominantly viewed as a male crop, women have often been excluded in areas of training, leadership positions and decision-making, resulting in a big gap between training and actual low rates of adoption of Good Agricultural Practices. The project will therefore pay specific attention to gender mainstreaming and gender-responsive interventions.

The project will also build upon **County Integrated Development Plans (CIDPs)** which give an overall framework for development and public investments at county level over five years. These plans are aiming to co-ordinate the work of both levels of the government in a coherent plan to improve the quality of life for all the people and contribute towards devolution. As articulated in the plans, both counties are committed to realize a food secure and wealthy County with sustainable management and utilization of land and water. The project will also build on spatial land-use plans and the Ecosystem Management Plans for the gazetted areas. Following the devolution process, Counties also are responsible to develop and implement **County Environment Action Plans** through the **County Environment Committees** to integrate environmental concerns into development and linking social, economic and environmental issues aimed at reducing poverty, enhancing equity and generating wealth for the present and future-generations in line with sustainable development principles.

There are a number of ongoing programmes and investments linked to the implementation of the CIDPs, which form part of the baseline for the proposed child project. Notably:

**Creating a Conducive Environment for Job Creation within the Agricultural Sector:** Implemented in 9 counties in Kenya and will support entrepreneurship and innovation by youth and women along agricultural value chains. It will create jobs along the value chains in the rural and urban areas. The programme will impact positively on the national food and nutrition security by ensuring improved production and productivity, processing, and low food losses and wastes. It will also promote sustainable exploitation of the natural resources base by encouraging appropriate agribusinesses practices. The project is funded by the EU (€5,000,000) and will be implemented by FAO from 2020 to 2025.

**Forest and Farm Facility:** Is a global programme supporting forest and farm producers and their organizations to enable Climate Resilient Landscapes and Improved Livelihoods. The programme works directly with government institutions and smallholder producer organizations to develop facilitating policies, entrepreneurship, adaptation/mitigation to climate change and Improved and equitable access to social and cultural services within forest and farm value chains. The project is funded by various donors (\$1,500,000) and is implemented by FAO until December 2022.

**Coffee milling factory:** The Mt. Elgon coffee society union and Bungoma County Government has jointly financed the construction of a coffee milling facility with an uptake of the entire Mt. Elgon area worth USD 500,000.

**Livelihoods Mt Elgon project:** Is implemented by VI-Agroforestry between 2016 – 2026 and funded by the Livelihoods Funds. The project is working with 30,000 smallholder farmers through 15 farmer cooperatives to improve livelihoods through sustainable farming and milk-water-carbon value creation as well as establishing connections to markets. The project will also sequester more than 1,000,000 tons of CO<sub>2</sub>eq and reduce pressure on ecosystems in the Mt. Elgon ecosystem.

**Food security through improved resilience of small-scale farmers in Ethiopia and Kenya:** Implemented by a consortium of NGOs, private sector including Solidaridad, Nestle, Coffee Research Institute and farmers cooperatives in Ethiopia and Kenya. The project is funded by RVO (€4,400,000) and is targeting more than 120,000 farmers. The objective is to assist farmers in making their coffee business more

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profitable and sustainable, while the food crop component helps them to improve their food and nutrition security.

**Coffee Cherry Advance Fund:** is a 2,000,000,000 Ksh (USD 20,000,000) Fund to be launched first quarter of 2020 by the Kenyan Government to increase the coffee production in Kenya by allowing coffee farmers to access finance for agricultural investments along the coffee value chain and synergies will be sought with the GEF project to pilot incentive mechanisms.

**Water Towers Climate Change Resilience Project:** The project goal was to support informed implementation of climate change adaptation and resilience activities in Mau Forest Complex, Cherangani Hills and Mt. Elgon Water Tower ecosystems through valuation of the ecosystem services from these ecosystems, capacity building and training, and strategic planning. The project was implemented between 2015 and 2018 and was funded by USAID (\$2,200,000).

**Agriculture Sector Development Support programme II (ASDSP II, 2019-2022):** second phase funded by Sida and aims to transform crop, livestock and fisheries production into commercially oriented entrepreneurs that ensure sustainable food production.

**Nescafé Plan III (Nestlé, 2019-2022):** through its implementation partner the Coffee Management Services (CMS) Limited, training and technical support will be provided to farmers (focus on youth and women smallholder farmers) on growing their coffee in an efficient and sustainable manner.

In terms of institutional frameworks for monitoring, the project will build on the **Integrated Water Towers Monitoring System** spearheaded by the Kenya Water Towers Agency to improve monitoring of indicators related to biodiversity, production and governance. In order to also avoid leakages across the Mt. Elgon landscape, the project will also work in synergy with the FOLUR IP child project in Uganda building on a Memorandum of Understanding already in place between Kenya and Uganda. Under the ongoing GEF6 project under The Restoration Initiative, capacity is being enhanced in terms of M&E using online tools and methodologies, and a national knowledge sharing platform on FLR will be spearheaded and the project will build on this ongoing work.

**(iv) Describe how the integrated approach proposed for the child project responds to and reflects the Program's Theory of Change, and as such is an appropriate and suitable option for tackling the systemic challenges, and to achieve the desired transformation with multiple global environmental benefits;**

This project is a child project under the FOLUR IP Program and as such it is fully aligned with the Program's Theory of Change. In particular, the project will adopt the **Integrated Landscape Management (ILM)** approach which is an important framework for addressing complex and interlinked agricultural and environmental issues. It brings together diverse stakeholders sharing one landscape but often with conflicting interests and offers innovative strategies to promote agricultural productivity, improve rural livelihoods, secure biodiversity and ecosystem services. The objective of the project is to promote sustainable, integrated management of Mt. Elgon landscape through the development of inclusive responsible coffee value chain and sustainable staple food production systems.

The expected outcome under the **first component** is to have Mt. Elgon forests and surrounding landscapes managed sustainably with increased restoration for agriculture and provision of environmental services. This will be achieved through addressing the fragmented land-use planning in different sectors involving different stakeholders. The project will be building on the existing County Integrated Development Plans (CIDPs) and the County Environmental Action Plans, as well as the Ecosystem Management Plans for the

gazetted forests and protected areas, and gaps and barriers will be identified in terms of policy and governance and this will be translated into the development of Integrated Landscape Management Plans for Mt Elgon landscape. This will include capacity building of county and decentralized stakeholders on the landscape approach and biodiversity mainstreaming into county and sectoral plans. The capacity for improved planning, implementation and monitoring for restoration will also be enhanced using the latest technologies and approaches (such as Collect Earth, SEPAL, ROAM) which will enable both counties to contribute effectively to national policies and commitments made (Bonn Challenge, 10% forest cover). The inter-institutional coordination between existing structures will be strengthened and support will be provided to disseminate and implement national policies at county level. Emphasis will be given on gender mainstreaming to ensure that proposed landscape approaches under component 2 and 3 are fully inclusive. Existing relevant platforms, such as the Joint Agricultural Sector Steering Committee (JASSCOM), which facilitates the counties to domesticate the ASTGS, the Kenya Coffee Platform and the inter-sectoral working group on FLR will be mobilized to share lessons learned and influence planning and upscaling in other coffee/maize growing areas.

A tentative list of stakeholders to be involved is presented in Annex D.

The expected outcome under the **second component** is “Improved efficiency and sustainability of both coffee value chain and maize production systems”. The project will adopt the sustainable agribusiness and food value chain approach promoted by FAO and other partners to identify different actors along the targeted value chains and assess their capacities/limitations. The technical and organizational gaps identified in the value chain analysis will facilitate formulation of targeted capacity development strategies. The aim is to promote more integrated farming practices both for coffee (banana trees, intercropping) and maize (agroforestry, conservation agriculture, intercropping). In particular, the project will support Coffee farmer cooperatives and farmer-based organisations focusing on the major food crops (maize and fruit trees). Coffee cooperatives need to be strengthened in terms of management and business development to get better linkage to markets. With the support of private sector and coffee value chain actors, the project will also look at supporting certification of coffee. Both the capacity of smallholders to promote Good Agricultural Practices (i.e. intercropping, agroforestry for maize) and following the standards (i.e coffee value chain) will be enhanced through the promotion of Farmer Field Schools and incentives and financing mechanisms (VC partnerships) will be identified during PPG to enable promotion of sustainable and responsible value chain. Potential SMEs will also be developed for enhanced waste management at pilot coffee mills to avoid pollution of water source for downstream water users.

The **third component** is about on-the-ground restoration of highly degraded sites with a special attention on important forest habitats, leading to increased area under restoration for agriculture and provision of environmental services (biodiversity and GHG mitigation). As identified under component 1, the project will actively restore degraded forests to ensure the provision of ecosystem services (such as water) to the surrounding production areas building on the existing information in the forest management plans. Degraded agricultural sites will also be restored mainly focusing through interventions as improved soil conservation, fruit trees on farms to bring back soil productivity for enhanced production. In terms of degraded coffee plantations, old plantations will be substituted by young ones and shade-growing will be promoted. The capacity of decentralized services will be strengthened at county level to ensure knowledge and availability of local species (inclusive local bamboo species) for restoration. The targeted ecosystems and their biodiversity will be restored through holistic, participatory and innovative approaches and key restoration options will be identified with all stakeholders involved.

Under the **fourth component**, the project will ensure the implementation of a robust M&E system to monitor and evaluate interventions and link up with county and national frameworks to ensure synergies. The KWTa Integrated Monitoring System for Water Towers will be followed. At the landscape level, coordination with the FOLUR IP child project in Uganda will be ensured to collate best practices and align ILM for the whole transboundary landscape. To share knowledge and experiences on innovations and best practices both for inclusive coffee value chain development and sustainable maize production systems, the project will also link up with the Global Knowledge Platform of the FOLUR IP to share best practices and learn from other initiatives, such as the M&E framework under the AFR100 and the ongoing support provided under the TRI.

With the integrated approach described, the project will generate the following Global Environmental Benefits: 10,000 ha of land restored; 50,000 ha of landscapes under improved management practices; and 5,390,174 tCO<sub>2</sub>e GHG emissions directly mitigated and sequestered by 2035.

**(v) Describe the project's incremental reasoning for GEF financing under the program, including the results framework and components.**

The US\$6 million project will add a global environment dimension to a baseline of around US\$51 million of public-private partnership commitments and actions under the County Integrated Development Plans and the Kenya Coffee Platform. Both Counties are also committed to increase coffee production and to enhance productivity of maize, and through this project this will be achieved following an inclusive integrated land-use planning and implementation.

The project will build on the empowerment work done under the Livelihoods Mt Elgon project which is focusing mainly on the dairy value chain actors. The project will build on the business hubs and cooperatives that are set up and build on manuals and knowledge generated on SLM practices and extension services.

The project will also build on extension support provided under the different private sector initiatives (Nestle, CRI, Solaridad) as well as their linkages to markets and ensure this is integrated in overall integrated land-use planning. The project will also work with the Kenyan Government and the proposed Coffee Cherry Advance Fund, and bring together smallholders and cooperatives to look at improving access to credit with a clear underlying criteria of adoption of SLM practices. Linkages could be foreseen with promotion of Saving and Loan associations as well.

The project will not only promote the adoption of good agricultural practices across the coffee and maize production systems, it will also build the institutional and technical capacity to enhance tree cover on the productive landscapes, actively restore degraded forest and agricultural lands and stop degradation of the gazetted forests of Mt Elgon and the associated biodiversity of global importance. Agrobiodiversity will be also promoted across the production systems.

A total of 10,000 ha of degraded landscapes (5,000 ha of coffee plantation and 5,000 ha of cropland) will be actively restored with variety of restoration options to be identified with project stakeholders and beneficiaries. A total of 50,000 ha of productive landscapes will be under improved management practices. GHG emissions will be sequestered for an estimated total of 1.49 MtCO<sub>2</sub>e over a 20-year period and avoided for an estimated total of 3.89 MtCO<sub>2</sub>e over 20-year period. Additionally, 60,000 people, 50 percent of which female, are expected to directly benefit from the project interventions.

The results framework and components are described in detail in the section above.

**(vi) Engagement with the Global / Regional Framework (*maximum 500 words*)**

**Describe how the project will align with the global / regional framework for the program to foster knowledge sharing, learning, and synthesis of experiences. How will the proposed approach scale-up from the local and national level to maximize engagement by all relevant stakeholders and/or actors?**

The country will benefit from the FOLUR framework through knowledge sharing and learning of best practices, approaches and tools on inclusive and sustainable coffee value chain development. As the child project will focus on both coffee and maize as major commodities, it will also share lessons learned both at the regional and global level through the development of knowledge products. Specific focus will be on sharing experiences with the IP brother project in Uganda which is also focusing on coffee value chain on the Western side of Mt. Elgon. This transboundary nature of both projects would provide ideal lessons learned for other countries to avoid leakages across borders.

Though the Global Platform, as largest global forum on integrated land-use, partnerships will be sought to mobilize and harness key global initiatives and existing coalitions such as the Food and Land Use coalition, the World Coffee Producer Forum (WCPF) and the Global Landscape Forum and its members. The Forest, Trees and Agroforestry programme for example provide a good opportunity to enhance capacity of project stakeholders and lessons can be learned from their efforts and experience on certification programs. The project will also link up with the International Coffee Organization and the Inter African Coffee Organization (ICAO) as they launched a regional Africa Coffee Facility to boost Africa's coffee industry and achieve a 40 percent increase in high-quality exports worth \$5 billion a year. Similar regional facilities have been implemented across the world, and valuable lessons can be learned on attracting private and public sector investment to transform Africa's coffee industry from a subsistence to a commercial or entrepreneurial approach.

The project will strengthen existing multi-stakeholder dialogue and coffee platforms and will act as the main knowledge hub to share lessons and to maximize engagement of all stakeholders on the ground. It will also learn and contribute to the knowledge hub created under the ongoing child project under GEF6 The Restoration Initiative. Through strong partnership with the private sector (local, national and international) innovative technologies will be scaled up and knowledge and lessons learned shared with other landscapes in Kenya and beyond.

**Annex A**  
**GEF 7 Core Indicator Worksheet**

<b>Core Indicator 1</b>	<b>Terrestrial protected areas created or under improved management for conservation and sustainable use</b>					
		<i>Hectares (1.1+1.2)</i>				
		<i>Expected</i>		Achieved		
		PIF stage	Endorsement	MTR	TE	
<b>Indicator 1.1</b>	<b>Terrestrial protected areas newly created</b>					
Name of Protected Area	WDPA ID	IUCN category	Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
		(select)				
		(select)				
		Sum				
<b>Indicator 1.2</b>	<b>Terrestrial protected areas under improved management effectiveness</b>					
Name of Protected Area	WDPA ID	IUCN category	Hectares	METT Score		
				Baseline		Achieved
					Endorsement	MTR TE
		(select)				
		(select)				
		Sum				
<b>Core Indicator 2</b>	<b>Marine protected areas created or under improved management for conservation and sustainable use</b>					<b>(Hectares)</b>
		<i>Hectares (2.1+2.2)</i>				
		<i>Expected</i>		Achieved		
		PIF stage	Endorsement	MTR	TE	
<b>Indicator 2.1</b>	<b>Marine protected areas newly created</b>					
Name of Protected Area	WDPA ID	IUCN category	Hectares	Hectares		
				Expected		Achieved
				PIF stage	Endorsement	MTR TE
		(select)				
		(select)				
		Sum				
<b>Indicator 2.2</b>	<b>Marine protected areas under improved management effectiveness</b>					
Name of Protected Area	WDPA ID	IUCN category	Hectares	METT Score (Scale 1-3)		
				Baseline		Achieved
				PIF stage	Endorsement	MTR TE
		(select)				
		(select)				
		Sum				
<b>Core Indicator 3</b>	<b>Area of land restored</b>					<b>(Hectares)</b>
		<i>Hectares (3.1+3.2+3.3+3.4)</i>				
		<i>Expected</i>		Achieved		
		PIF stage	Endorsement	MTR	TE	
		10,000				
<b>Indicator 3.1</b>	<b>Area of degraded agricultural land restored</b>					
				Hectares		
				Expected		Achieved
				PIF stage	Endorsement	MTR TE
				5,000		

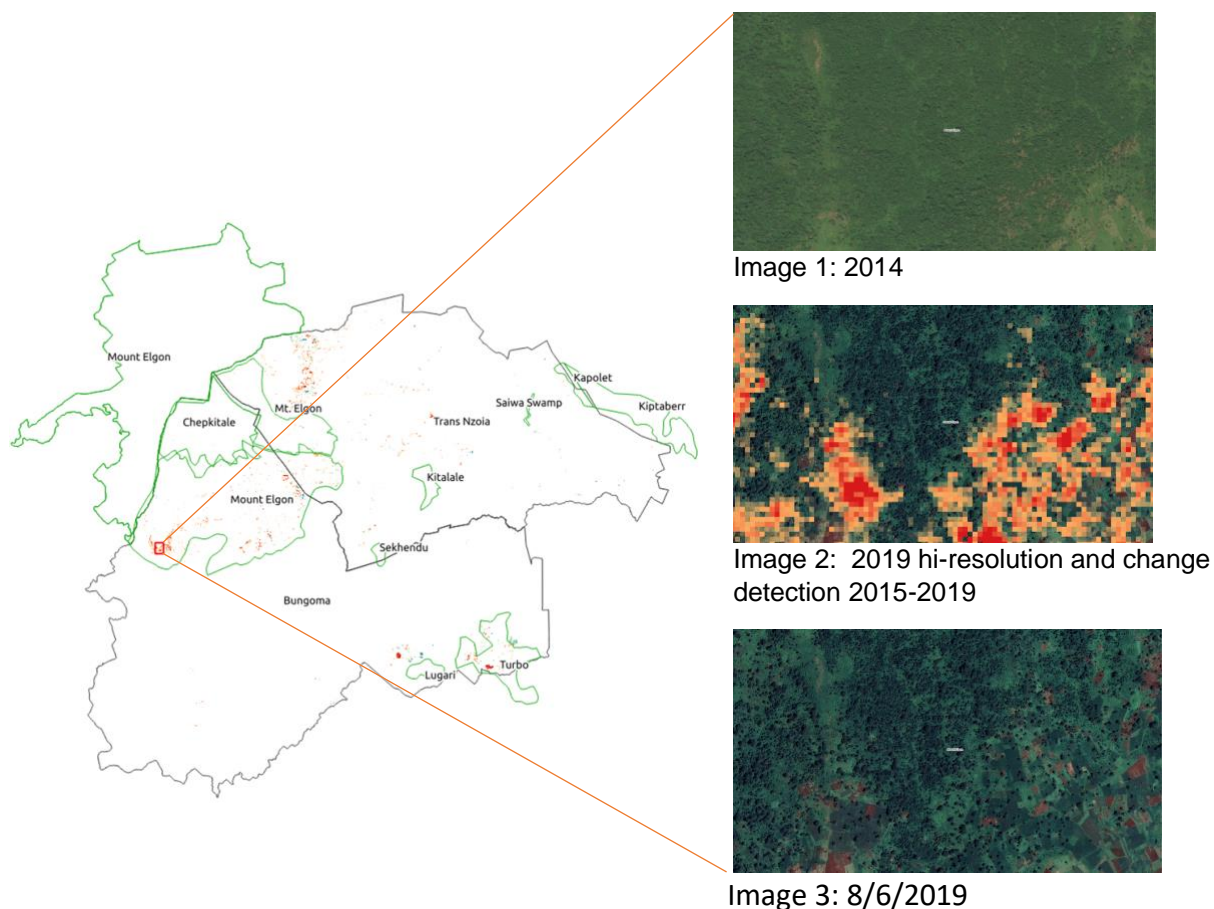


Indicator 3.2	Area of forest and forest land restored					
			Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
			5,000			
Indicator 3.3	Area of natural grass and shrublands restored					
			Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 3.4	Area of wetlands (including estuaries, mangroves) restored					
			Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Core Indicator 4	Area of landscapes under improved practices (hectares; excluding protected areas)					(Hectares)
			Hectares (4.1+4.2+4.3+4.4)			
			Expected		Expected	
			PIF stage	Endorsement	MTR	TE
			50,000			
Indicator 4.1	Area of landscapes under improved management to benefit biodiversity					
			Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
			5,000			
Indicator 4.2	Area of landscapes that meet national or international third-party certification that incorporates biodiversity considerations					
Third party certification(s):			Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 4.3	Area of landscapes under sustainable land management in production systems					
			Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
			45,000			
Indicator 4.4	Area of High Conservation Value Forest (HCVF) loss avoided					
			Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Core Indicator 5	Area of marine habitat under improved practices to benefit biodiversity					(Hectares)
Indicator 5.1	Number of fisheries that meet national or international third-party certification that incorporates biodiversity considerations					
Third party certification(s):			Number			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE

Indicator 5.2	Number of large marine ecosystems (LMEs) with reduced pollution and hypoxial					
			Number			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Core Indicator 6	Greenhouse gas emission mitigated					(Tons)
			Tons (6.1+6.2)			
			Entered		Entered	
			PIF stage	Endorsement	MTR	TE
		Expected CO2e (direct)	5,390,174			
		Expected CO2e (indirect)				
Indicator 6.1	Carbon sequestered or emissions avoided in the AFOLU sector					
			Tons			
			Entered		Entered	
			PIF stage	Endorsement	MTR	TE
		Expected CO2e (direct)	5,390,174			
		Expected CO2e (indirect)				
		Anticipated Year				
Indicator 6.2	Emissions avoided					
			Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
		Expected CO2e (direct)				
		Expected CO2e (indirect)				
		Anticipated Year				
Indicator 6.3	Energy saved					
			MJ			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 6.4	Increase in installed renewable energy capacity per technology					
		Technology	Capacity (MW)			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
		(select)				
		(select)				
Core Indicator 7	Number of shared water ecosystems (fresh or marine) under new or improved cooperative management					(Number)
Indicator 7.1	Level of Transboundary Diagnostic Analysis and Strategic Action Program (TDA/SAP) formulation and implementation					
		Shared water ecosystem	Rating (scale 1-4)			
			PIF stage	Endorsement	MTR	TE
Indicator 7.2	Level of Regional Legal Agreements and Regional Management Institutions to support its implementation					
		Shared water ecosystem	Rating (scale 1-4)			
			PIF stage	Endorsement	MTR	TE
Indicator 7.3	Level of National/Local reforms and active participation of Inter-Ministerial Committees					
		Shared water ecosystem	Rating (scale 1-4)			
			PIF stage	Endorsement	MTR	TE

Indicator 7.4	Level of engagement in IWLEARN through participation and delivery of key products					
		Shared water ecosystem	Rating (scale 1-4)			
			Rating		Rating	
			PIF stage	Endorsement	MTR	TE
Core Indicator 8	Globally over-exploited fisheries Moved to more sustainable levels					(Tons)
			Metric Tons			
			PIF stage	Endorsement	MTR	TE
Core Indicator 9	Reduction, disposal/destruction, phase out, elimination and avoidance of chemicals of global concern and their waste in the environment and in processes, materials and products					(Tons)
			Metric Tons (9.1+9.2+9.3)			
			Expected		Achieved	
			PIF stage	PIF stage	MTR	TE
Indicator 9.1	Solid and liquid Persistent Organic Pollutants (POPs) and POPs containing materials and products removed or disposed					
	POPs type		Metric Tons			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
	(select)	(select)	(select)			
	(select)	(select)	(select)			
	(select)	(select)	(select)			
Indicator 9.2	Quantity of mercury reduced					
			Metric Tons			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 9.3	Number of countries with legislation and policy implemented to control chemicals and waste					
			Number of Countries			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 9.4	Number of low-chemical/non-chemical systems implemented particularly in food production, manufacturing and cities					
		Technology	Number			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Core Indicator 10	Reduction, avoidance of emissions of POPs to air from point and non-point sources					(Grams)
Indicator 10.1	Number of countries with legislation and policy implemented to control emissions of POPs to air					
			Number of Countries			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 10.2	Number of emission control technologies/practices implemented					
			Number			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE





#### ANNEX C – List of vulnerable and global important species in targeted landscape

**Table 1. Bird species of conservation species in Mt. Elgon Forest Ecosystem**

Common English Name	Scientific Name	Status
African crowned eagle	<i>Stephanoaetus coronatus</i>	Near Threatened
Sharpe's Longclaw	<i>Macronyx sharpei</i>	Globally endangered
Lammergeier (Bearded Vulture)	<i>Gypaetus barbatus</i>	Near Threatened
Yellow-billed Shrike	<i>Corvinella corvina</i>	Range restricted
White-crested Turaco	<i>Tauraco leucolophus</i>	Range restricted
White-breasted Cuckoo-shrike	<i>Coracina pectoralis</i>	Range restricted
Splendid Glossy Starling	<i>Lamprotornis splendidus</i>	Range restricted
Elgon Francolin	<i>Scleroptila elgonensis</i>	Near Threatened
Ring-necked francolin	<i>Francolinus streptophorus</i>	Near Threatened

**Table 2. Mammal diversity in Mt. Elgon Forest Ecosystem**

Common English Name	Scientific Name	IUCN Status
Black and White Colobus monkey	<i>Colobus guereza</i>	Vulnerable

Blue monkey/ owl faced monkey	<i>Cercopithecus hamlyni</i>	Vulnerable
Bongo	<i>Tragelaphus eurycerus</i>	Near Threatened
Bushbuck	<i>Tragelaphus scriptus heterochrous</i>	Locally vulnerable but Not endangered
African Elephant	<i>Loxodonta africana</i>	Endangered
Giant forest hog	<i>Hylochoerus meinertzhageni</i>	Rare
Aardvark	<i>Orycteropus afer</i>	Vulnerable
Spotted hyena	<i>Orycteropus afer</i>	Not endangered, but vulnerable according to Kenya Wildlife act
Elgon shrew	<i>Crocidura elgonius</i>	Vulnerable
Barbour's vlei rat	<i>Otomys barbouri</i>	Endangered
African golden cat	<i>Felis aurata</i>	Vulnerable
Rudd's African mole-rat	<i>Tachyoryctes ruddi</i>	Local endemic
Thomas's pygmy mouse	<i>Mus sorella</i>	Local endemic

**Table 3. Reptile/Insect diversity in Mt. Elgon Forest Ecosystem**

Common English Name	Scientific Name	IUCN Status
Mt Elgon Forest Gecko	<i>Cnemaspis elgonensis</i>	Vulnerable
Mount Elgon Grass Bush-cricket	<i>Horatosphaga elgonis</i>	Vulnerable

#### **ANNEX D –Tentative list of stakeholders to be involved**

No	Stakeholder	Interest	Capacities/limitations
	<b>County partners</b>		
1.	Producer groups (farmers)	Food security and increased income from agriculture	-Land owners -limited technical knowledge in sustainable land management
2.	Community Forest Associations	Access to forest resources	-limited incentives
3.	Western Kenya Tree Planters Association (WETPA)	Commercial tree growing on farms	-barriers in timber trade, limited incentives

4.	Mt. Elgon Coffee Cooperative	Increased coffee production and value addition	-large membership, limited technical capacity to serve members
5.	County Government (Bungoma and Trans Nzoia	Increased food security and agricultural production	-Strategies for county integrated development plans, limited technical and budget
	<b>National partners</b>		
6.	Ministry of Agriculture, Livestock and Fisheries	National mandate on food security and agricultural production	-National strategies developed and coordination framework developed
7.	Ministry of Environment and Forestry	Sustainable natural resource management, GEF focal point	-Policy guidance
8.	Ministry of Trade and Industry	Increased industrial crop production	-Support to value addition and Market linkages
9.	Kenya Agricultural and Livestock Research Organization (KALRO)	Linking research findings to producer groups	Under Coffee Research Institute(CRI) provides quality coffee seedlings to framers and supportive extension service
10.	National Environment Management Authority (NEMA)	Compliance with national environmental standards	-Enforcement of environmental by laws
11.	Kenya Forest Service (KFS)	Forest conservation and management	-Operational and technical capacity to manage forest resources -limited budget
12.	Kenya Water Towers Agency (KWTa)	Conservation of Mt. Elgon water tower	-Developed management plan for Mt. Elgon watershed
13.	Kenya Wildlife Authority	Wildlife conservation and management	-Operational and technical capacity to manage wildlife -limited budget
	<b>NGOs</b>		
14.	Vi Agroforestry	Livelihood support and sustainable natural resource management	-Knowledge, reputation and networks established over decades
15.	Solaridad	Livelihood support	-Community mobilization and training
16.	Community Research in Environment and Development (CREADIS)	Promotion of Asset Based Community Development, (ABCD)	-Community training and gender awareness

	<b>Private Sector</b>		
17.	Kenya Coffee Platform	Supporting the increase of clean coffee production through Collaboration, Partnership and Networking,	-Knowledge Sharing along the Value Chain, Policy Dialogue and Engagement , Stakeholder Capacity Building
18.	Nestle	Quality coffee production supply	-Secure market
19.	Maize millers	Quality maize production supply	-Secure market
20.	Agrochemical vendors	Increased sales	-Supply of quality inputs Provision of responsible use of agrochemicals



**GEF-7 CHILD PROJECT CONCEPT**  
**CHILD PROJECT TYPE: Full-sized Child Project**  
**PROGRAM: IP FOLU**

**NICARAGUA**

<b>Child Project Title:</b>	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
<b>Country:</b>	Nicaragua
<b>Lead Agency</b>	FAO
<b>GEF Agency(ies):</b>	FAO

**INDICATIVE FOCAL/NON-FOCAL AREA ELEMENTS AND FINANCING**

Programming Directions	Trust Fund	(In \$)	
		GEF Project Financing	Co-financing
BD-1-1	GEFTF	1,784,862	14,000,000
LD-1-1	GEFTF	892,431	7,000,000
CC-1	GEFTF	892,431	7,000,000
FOLUR	GEFTF	1,784,863	20,000,000
<b>Total Project Cost</b>		<b>5,354,587</b>	<b>48,000,000</b>

**PROJECT COMPONENTS AND FINANCING**

<b>Program Objective:</b> To promote sustainable, integrated landscapes and efficient food systems (cocoa, beef/ dairy cattle) for key value chains in the landscapes surrounding the protected areas and biological corridors of the South Caribbean Coast Autonomous Region (RACCS, in Spanish) and the San Juan River.						
Project Components	Comp Type	Project Outcomes	Project Outputs	Trust Fund	(In \$)	
					GEF Program Financing	Co-financing
1.Development of Integrated Landscape Management Systems	TA	<p>1.1 Participatory, inclusive and gender sensitive planning and mapping for improved land use &amp; management at landscape level promoted</p> <p><i>Indicators:</i>  - Number of landscapes or jurisdictions with improved planning &amp; management practices, with inclusive participation of indigenous peoples and women, to foster sustainable food systems, with a target of 7 municipalities</p> <p>1.2 Governance systems strengthened and capacity built across landscape and land use</p>	<p>1.1.1 Capacity development program on participatory landscape planning for national, regional and local government partners developed and implemented .</p> <p>1.1.2 Participatory planning in Project target areas to restore landscapes, conserve forests, and to support climate resilient production systems</p> <p>1.2.1 Support provided to dialogue platforms between the public and private sectors in order to define</p>	GEFTF	894,668	7,000,000

		<p>management institutions and at national level</p> <p><u>Indicators:</u></p> <p><i>-Number of landscapes or jurisdictions with environmental / sustainability and inclusive standards in place, enforced, with a target of 7 municipalities</i></p> <p><i>-Number of national multi-stakeholder dialogue mechanisms/platforms effectively operated with the participation of women and indigenous peoples operated for integrated landscape management, with a target of 2.</i></p>	<p>strategies both in and outside farms to restore biodiversity and safeguard protected areas</p>			
<p>2. Promotion of sustainable food production practices &amp; responsible commodity value chains</p>	Inv.	<p>2.1 Improved land use practices and restoration activities in major production landscapes adopted and scaled up</p> <p><u>Indicators:</u></p> <p><i>- Area on which producers apply improved agricultural practices including indigenous and traditional knowledge as measured by SDG 2.4.1 (area under sustainable agriculture) with a target of 21,935 ha in the San Juan River region and 13,958 ha in the buffer zone of the RBIM. (contributes to the Core Indicator 4)</i></p> <p><i>Production area with investment in sustainable, responsible practices in target commodity &amp; food production systems increased with targets for cattle and Cocoa to be defined in the PPG stage.</i></p>	<p>2.1.1 Capacity-building program with a gender and ethnic focus implemented to support technological reconversion to more intensive, low-emissions livestock and agroforestry (cocoa) systems for increased resilience.</p> <p>2.1.2 Detailed investments plans developed by project beneficiaries to ensure sustainable management of production landscapes</p> <p>2.1.3 Nearly 35,893 hectares of Production landscapes (prioritise under 2.1.2) put under sustainable land management through silvopastoral and agroforestry systems in buffer zones of the San Juan River and the Indio Maiz Biological Reserve (RBIM).</p> <p>2.1.4 Plan to upscale best practices at the regional and</p>	GEFTF	1,694,668	7,000,000

		<p>2.2 Policies &amp; incentives improved for innovation and scale up of climate-smart, sustainable production practices and gender sensitive value chains at national level</p> <p><u>Indicators:</u></p> <p><i>-Number of Companies / Value chain organizations committed to sustainable, responsible sourcing of commodities increased with the following targets:</i></p> <ul style="list-style-type: none"> <li>○ <i>Cattle Value Chain: 4 dairy processing companies, 2 industrial slaughterhouses, 20 cattle (beef and dairy) cooperatives and 7 municipalities.</i></li> <li>○ <i>Cocoa Value Chain: 3 international companies to which Nicaragua Exports Cocoa and 5 Cocoa Cooperatives.</i></li> <li>○ <i>Number of mechanisms implemented for the economic empowerment of women in value chains</i></li> <li>○ <i>Number of women's organizations that are integrated in value chains</i></li> <li>○ <i>Number of specific indigenous organizations that are integrated in value chains</i></li> </ul> <p><i>-Public and private investments leveraged in support of sustainable commodity value chains through PPP or adoption of sustainability standards and practices with the targets of 2 PPP in the Cattle Chain and 1 PPP in the Cocoa Chain.</i></p>	<p>national level (including financing identified)</p> <p>2.2.1. Private-public arrangements designed for the development of financing models (Trusts, Capitalization of the National Environment Fund, Nature-Based Economic Solutions, Ecotourism, Soft Credit, Incentives, NAMA, among others).</p> <p>2.2.2 Facilitated implementation of financing models (under 2.2.1).</p> <p>2.2.3 Partners, value chain actors, financiers and investors regularly convened, motivated and influenced to promote innovation, replication &amp; scale up</p>			
3. Restoration of natural habitats	Inv.	3.1 Sustainable land use practices and restoration	3.1.1 Detailed investment plans (building on 1.1.1 and	GEFTF	1,789,336	20,000,000

(FUERA DE LAS FINCAS)		<p>activities scaled up in target landscapes and beyond</p> <p><u>Indicators</u></p> <p><i>-Area of degraded agricultural land restored for conservation and environmental services with a target of 13,027.</i></p> <p><i>-Area of landscapes with clarified boundaries and allowable land uses in production systems with a target of 683,549 ha of High Conservation Value (HCV) forest loss avoided. (contributes to the Core Indicator 4)</i></p> <p><i>-Tons of GHG emissions avoided/sequestered, with target of 4.89 MtCO<sub>2</sub>-e sequestered or avoided in the AFOLU sector (contributes to the Core Indicator 6)</i></p> <p>3.2 Governance strengthened and institutional capacity built for landscape restoration</p> <p><u>Indicator:</u> <i>Number of jurisdictions with improved and participatory approaches for restoration adopted with a target of 7 municipalities under improved management to benefit biodiversity</i></p>	<p>1.1.2) developed by project beneficiaries to restore natural habitats and productive landscapes in the biological corridors of the RACCS and the department of Río San Juan</p> <p>3.1.2 Nearly 13,027 hectares of degraded agricultural land prioritized under 3.1.1 restored (contributes to the Core 3 Indicator)</p> <p>3.1.3 Nearly 683,549 ha of landscapes prioritized under 3.1.1 under improved management to avoid deforestation and reduce degradation in HCV forests (outside of protected areas).</p> <p>3.2.1 Capacity building program with a gender and ethnic focus to support the conversion of towards (i) low-emissions, technologically intensive livestock system; and (ii) intensive cocoa agroforestry systems, which will contribute to the restoration of landscape and biological corridors</p> <p>3.2.2 Partners, value chain actors, financiers and investors regularly convened, motivated and influenced to encourage responsible &amp; sustainable production, sourcing &amp; marketing</p>			
4. Program Coordination, Collaboration,	TA	4.1 Management, coordination & M&E effectively implemented	4.1 M&E System in place, monitoring and assessing GEBs and reporting in the	GEFTF	720,935	11,900,000

and Capacity Building		<p><u>Indicators</u>  <i>-Integrated, efficient and effective child projects working toward common global FOLUR goals with targets to be defined in the PPG stage.</i></p> <p><i>-Number of global, regional, national commodity platforms strengthened through adoption of sustainability standards, traceability mechanisms, or increased stakeholder representation with targets to be defined in the PPG stage.</i></p> <p>4.2 Strategic Knowledge Management &amp; Communications effectively implemented</p> <p><u>Indicators</u>  <i>-Number of events &amp; documents disseminated to share knowledge beyond FOLUR countries through S-S exchanges, conferences, and global events, including community of practice with targets to be defined in the PPG stage.</i></p>	<p>context of the global coordination program</p> <p>4.2 Mid Term and Final Evaluations conducted</p> <p>4.2.1 Knowledge management and communication program 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.</p> <p>4.2.2 Exchange program through national and global communities of practice</p>			
Subtotal				GEFTF	5,099,607	45,900,000
Program Management Cost (PMC)				GEFTF	254,980	2,100,000
<b>Total Program Cost</b>					<b>5,354,587</b>	<b>48,000,000</b>

For multi-trust fund projects, provide the total amount of PMC in Table B, and indicate the split of PMC among the different trust funds here: (       )

**INDICATIVE SOURCES OF CO-FINANCING FOR THE PROJECT BY NAME AND BY TYPE, IF AVAILABLE**

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount (\$)
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Recipient Country Government	Ministry of Environment and Natural Resources (MARENA) and Ministry of Family, Community, Cooperative and Associative Economy (MEFCCA)	Public Investment	Investment Mobilized	2,500,000
Recipient Country Government	Ministry of Environment and Natural Resources (MARENA)	In-kind	Recurrent Expenditures	1,400,000
Private Sector	Cocoa Producers Cooperatives Cattle Raising Producers	In-kind	Recurrent Expenditures	4,000,000
Donor Agency	BCIE / GCF	Loan	Investment Mobilized	25,000,000
Donor Agency	BCIE/GCF	Grant	Investment Mobilized	15,000,000
GEF Agency	FAO	In-kind	Recurrent Expenditures	100,000
<b>Total Co-financing</b>				<b>48,000,000</b>

Describe how any “Investment Mobilized” was identified.

Investment mobilized from MARENA and MEFCCA corresponds to a mix of public investment expenditures related to projects that will be executed in the geographic area of interest (i.e. PAISAN, NICADAPTA and BOVINOS). These Projects are Coordinated by MEFCCA with collaboration from other institutions from the Production, Consumption and Trade System (SPCC) Including MARENA, Nicaraguan Agricultural Technology Institute (INTA) and Agricultural Health and Protection Institute (IPSA).

The Nicaraguan government has offered to mobilize resources in support of the GEF grant through the following project: “Integrated climate action to reduce deforestation and strengthen resilience in the Bosawás and Río San Juan Biospheres” (BioClima). This project will be presented for approval by the board of the Green Climate Fund (GCF) in late 2020 through the Central American Bank for Economic Integration (BCIE) as an accredited agency. The co-financing from BCIE/GCF consists of a combination of a grant and a loan and considers multiple activities. The project will support the implementation of land use planning and management for landscape restoration, forest conservation and climate-resistant production; Landscape restoration through sustainable silvopastoral systems; bio-diverse cocoa agroforestry systems; and finance community forest management and community forest restoration subprojects in indigenous territories outside protected areas. Co-financing amounts from BCIE/GCF represent an estimate based on available information. This estimate will need to be validated during the Project Preparation Phase, as they are part of a larger fund for Nicaragua.

#### TRUST FUND RESOURCES REQUESTED BY AGENCY(IES), COUNTRY(IES), FOCAL AREA AND THE PROGRAMMING OF FUNDS

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	(In \$)		
					GEF Project Financing (a)	Agency Fee (b)	Total (c)=a+b

FAO	GEFTF	Nicaragua	BD	STAR Allocation	1,784,862	160,638	1,945,500
FAO	GEFTF	Nicaragua	LD	STAR Allocation	892,431	80,319	972,750
FAO	GEFTF	Nicaragua	CC	STAR Allocation	892,431	80,319	972,750
FAO	GEFTF	Nicaragua	IP FOLUR		1,784,863	160,637	1,945,500
<b>Total GEF Resources</b>					5,354,587	481,913	5,836,500

#### PROJECT PREPARATION GRANT (PPG)

Is Project Preparation Grant requested?

Yes ☐ If yes, PPG funds **have to be requested via the Portal** once the PFD is approved

No ☐ If no, skip this item.

#### PPG AMOUNT REQUESTED BY AGENCY(IES), TRUST FUND, COUNTRY(IES) AND THE PROGRAMMING OF FUNDS

GEF Agency	Trust Fund	Country/ Regional/Global	Focal Area	Programming of Funds	(In \$)		
					PPG (a)	Agency Fee (b)	Total c = a + b
FAO	GEFTF	Nicaragua	BD	STAR Allocation	50,000	4,500	54,500
FAO	GEFTF	Nicaragua	LD	STAR Allocation	25,000	2,250	27,250
FAO	GEFTF	Nicaragua	CC	STAR Allocation	25,000	2,250	27,250
FAO	GEFTF	Nicaragua	IP FOLUR		50,000	4,500	54,500
<b>Total PPG Amount</b>					150,000	13,500	163,500

#### PROJECT'S TARGET CONTRIBUTIONS TO GEF 7 CORE INDICATORS

Provide the relevant sub-indicator values for this project using the methodologies indicated in the Core Indicator Worksheet provided in Annex B and aggregating them in the table below. Progress in programming against these targets is updated at the time of CEO endorsement, at midterm evaluation, and at terminal evaluation. Achieved targets will be aggregated and reported at anytime during the replenishment period. There is no need to complete this table for climate adaptation projects financed solely through LDCF and SCCF.

Project Core Indicators		Expected at PIF
1	<b>Terrestrial protected areas</b> created or under improved management for conservation and sustainable use (Hectares)	
2	<b>Marine protected areas</b> created or under improved management for conservation and sustainable use (Hectares)	
3	Area of <b>land restored</b> (Hectares)	13,027
4	Area of <b>landscapes under improved practices</b> (excluding protected areas) (Hectares)	719,442
5	Area of <b>marine habitat under improved practices</b> (excluding protected areas) (Hectares)	
6	<b>Greenhouse Gas Emissions Mitigated</b> (metric tons of CO <sub>2</sub> e)	4.89 MtCO <sub>2</sub> -e
7	<b>Number of shared water ecosystems</b> (fresh or marine) under new or improved cooperative management	
8	Globally over-exploited <b>marine fisheries</b> moved to more sustainable levels (metric tons)	

9	<b>Reduction</b> , disposal/destruction, phase out, <b>elimination</b> and avoidance of <b>chemicals of global concern</b> and their waste in the environment and in processes, materials and products (metric tons of toxic chemicals reduced)	
10	Reduction, avoidance of emissions of <b>POPs to air</b> from point and non-point sources (grams of toxic equivalent gTEQ)	
11	Number of <b>direct beneficiaries disaggregated by gender</b> as co-benefit of GEF investment	10,000 (40% women)



## PROJECT DESCRIPTION

### 1. Country Context (maximum 500 words)

*Describe the country's relevant environmental challenges and strategic positioning relative to the systems transformation proposed for the program, including relevant existing policies, commitments, and investment frameworks. How are these aligned with the proposed approach to foster impactful outcomes with global environmental benefits?*

Nicaragua is both a biodiversity hotspot and a deforestation hotspot.<sup>7</sup> In the last 45 years, Nicaragua suffered from accelerated deforestation and degradation processes which led the country to lose approximately 60% of the forests it had in the late 1960s.<sup>8</sup> Unsustainable food systems characterized by sector wide approaches that are not fully integrated horizontally nor vertically, and limited planning capacity, have been a key driving force behind this degradation. In Nicaragua, the production of food and the sustainability of food systems are further limited by climate variability, climate change, natural disasters and the degradation of ecosystems.<sup>9</sup>

The agricultural sector is the largest employer in Nicaragua,<sup>10</sup> representing a key pillar for national development and a key source of livelihoods. At the same time, the expansion of the agricultural sector is driving forest loss with concomitant impacts to globally important biodiversity and declines in key ecosystem services, which ultimately impact the resilience of food systems.<sup>11</sup> The annual deforestation rate in Nicaragua for the period between 1983 and 2015 is estimated at 170,000 ha per year, though the highest levels of deforestation occurred in the 1990.<sup>12</sup> Most of the area deforested in the country consisted of mature forests. While deforestation and degradation rates have slowed at the national level and some regions are starting to show signs of recovery, regional variations are important—in particular, the region targeted by this program, currently has the highest deforestation rates.<sup>13</sup> Nearly 40% of the deforestation occurs in protected areas, and nearly 20% of the deforestation happens in indigenous territories.

The proposed project will focus on cocoa and livestock (beef and milk) value chains. International cocoa and livestock markets represent important components of the current context, and thereby drivers of land degradation and ecosystem fragmentation. According to the Emission Reduction Strategy, favorable market conditions created by free trade agreements with Central American countries, Venezuela and the United States have stimulated the expansion of livestock, and recent investments by international companies have stimulated the cocoa market. The cocoa and livestock sectors in Nicaragua can be described as follows:

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<sup>7</sup> Critical Ecosystems Partnership Fund (<https://www.cepf.net/our-work/biodiversity-hotspots/mesoamerica>)

<sup>8</sup> MARENA (2019). Causas de la deforestación en Nicaragua. ([Link](#))

<sup>9</sup> World Food Program (2019). Plan Estratégico para Nicaragua. ([link](#))

<sup>10</sup> Includes livestock

<sup>11</sup> Data for this paragraph come from MARENA (2019). Causas de la deforestación en Nicaragua. ([Link](#))

<sup>12</sup> Deforestation rates for the period 2000-2015 is estimated at 140,000 ha per year.

<sup>13</sup> As discussed below, the project will focus on the Southern Caribbean Coast Autonomous Region (RACCS) and the Rio San Juan Department.

**Cocoa** is a crop of great importance for the country. Nicaragua is the thirteenth largest producer of fine cocoa in the world.<sup>14</sup> Its main markets are Belgium, Germany, USA and Holland. During the 2019-2020 season, the Government of Nicaragua expects to harvest 12,300 hectares of land and produce 16,200 tons of cocoa, 5.9% higher than the previous cycle.<sup>15</sup> Of these, 10,480 tons were expected to be exported during 2019, generating USD 6.6 million in revenues. According to data from the Ministry of Agriculture and Livestock of Nicaragua, there are about 1.8 million hectares of land suitable for cocoa development in the Southern Caribbean Coast Autonomous Region (RACCS, in Spanish), the Northern Caribbean Coast Autonomous Region (NCCAR), and the Matagalpa and Rio San Juan Municipalities. The project targets 2 of these regions. The cocoa value chain is characterized by (i) low productivity exacerbated by inefficient production practices, (ii) limited processing facilities, reducing potential to provide value added and market access, (iii) limited access to financing.

Similarly, the **Livestock** sector produces significant economic benefits to Nicaragua. There are about 5.5 million heads of cattle in this country distributed among 164,039 farms, which generate 650,000 permanent jobs. Nicaragua's livestock industry is the leading exporter of beef in Central America. According to the Central American Economic Integration Secretariat (SICA), in 2018 the country's exports totaled US\$ 481 million, equivalent to 82% of the total in the region. Cattle is exported to the USA, Costa Rica, Puerto Rico, Mexico, El Salvador, Guatemala, Japan, Panama and Taiwan. There are about 710,000 heads of cattle on the Caribbean coast of Nicaragua, and of these 170,000 are milking cows. The main challenges faced by the livestock sector include (i) low production indices, (ii) inefficient practices leading to pasture and basin degradation, (iii) high use of veterinary products, (iv) limited, high interest rate financing, (v) weak input market for feedlots and low, (vi) limited transparency in the commercialization of, (v) decreasing international prices and increased competition from other exporting countries.<sup>16</sup>

Within this context, the project will take an integrated approach to address the underlying drivers of unsustainable food systems and land use change by (i) supporting stakeholders in Nicaragua to take a more holistic and system wide approach, (ii) by building capacity and ensuring participatory planning processes across the target landscape support a transformational shift that takes into account competing demands for production of coffee and livestock while restoring degraded landscapes and protect the natural environment. In particular, the project will support national effort to transform food systems at a landscape level by improving production practices, promoting incentives for ecosystem services, internalizing environmental "global public goods" into commodity production and value chains, and reducing deforestation through support to comprehensive SLM practices - including restoration of degraded landscapes and securing the long term resilience of High Conservation Value Forests (HCVF).

#### Relevant policies and commitments

This project is aligned with Nicaragua's 2018-2021 National Human Development Program, which aims to ensure territorial ordering, improve the social welfare of indigenous communities and afro-descendants, strengthen the agricultural sector and protect the environment. Moreover, specifically, the following strategies will ensure the success of the project:

- **National Strategy for the Promotion of Family Agriculture for Food Security (2019-2021)**, where agriculture represents an important component in food and nutritional security due to its significant contribution for self-consumption and income generation. The main lines of action are aimed at strengthening family farming by diversifying production with nutritious food and

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<sup>14</sup> International Cocoa Organization- ICCO

<sup>15</sup> Cocoa Production, Consumption and Trade Plan (PCTP)

<sup>16</sup> Siuna (2016). Produccion bovina en Nicaragua: retos, oportunidades y estrategias.

promoting the consumption of healthy and nutritious food. These actions are part of the National Plan for Human Development.

- **National Strategy for the Development of Bovine Livestock:** the main lines of action are aimed at boosting genetic improvement to increase productivity in livestock farms, strengthening the epidemiological surveillance system and certification of zoo sanitary laboratories for the diagnosis of common diseases and quarantine of cattle, epidemiological surveillance system, detection of chemical residues and contaminants in milk and meat at the level of processing plants and slaughterhouses; developing farms with efficient feeding and nutrition systems, through the rehabilitation and improvement of pastures, grazing systems, the use of cutting pastures and other forage species, as well as the use of grains and stubble; promote the establishment of semi-stable production systems for raising animals for meat and milk production in order to demonstrate the efficiency and increased productivity of these systems; and establishment of silvopastoral systems and the promotion of reforestation as an alternative for livestock feeding and protection of biodiversity against climatic variability, as well as protection of the forest and water sources.
- **National Strategy for the Development of Dairy Production and Processing (2020-2023):** the main lines of action are aimed at applying good practices of transformation, added value, infrastructure, equipment and technical capabilities in order to make technologies available; application of good manufacturing practices in artisan cheese factories, processing plants and collection centers to reduce contamination by bacteria and impurities in milk quality; and cleaner production that incorporates practices in waste management, production and added value in milk, as well as technologies that promote practices in the health and well-being of the cattle herd.
- **National Strategy for the Development of Nicaraguan Cocoa:** The main lines of action are aimed at strengthening the cocoa fermentation and drying processes by making technical tools available to producer families according to the agro climatic conditions of each of the producing regions; technification of the harvest and post-harvest processes using technical guides ensuring the quality of fine and aroma cocoa; assisted pollination, use of high-quality clones, polyclonal arrangements, fertilization and nutrition, pruning and sanitation techniques in order to increase productivity on cocoa farms; and sustainable management of pests, diseases and nutrition of cocoa plants to cope with market trends and mitigate the effects of climate change through bio-factories and the production and use of bio-inputs.

## **2. Project Overview and Approach (maximum 1250 words)**

*a) Provide a brief description of the geographical target(s), including details of systemic challenges, and the specific environmental threats and associated drivers that must be addressed;*

The Mesoamerican Biological Corridor (MBC) represents an ambitious program of integrated conservation with sustainable development along the Central American isthmus from southern Mexico to eastern Panama. The target landscapes in Nicaragua represent critically important areas of remaining forest both within Nicaragua and at a regional level within the MBC. The project targets productive areas and connectivity zones of the MBC and the San Juan Biosphere Reserve, where the largest remnants of broadleaf forest ecosystems in the country are being degraded by the unsustainable food system. This landscape is the habitat of endemic and endangered species; an area of high carbon stocks; and the highest priority for the avoidance of GHG emissions in Nicaragua. Indigenous peoples (Rama, Kriol, Creole) and

afro-descendants live and depend on these forests for their survival. The target area is also part of the subnational program to reduce emissions (11m tons of CO<sub>2</sub> in 5 years).<sup>17</sup>

The selected landscape covers approximately 1,720,164 ha distributed among the RACCS and the Río San Juan department (please refer to map in Annex 1).<sup>18</sup> Nearly 40% of the target area is part of the National System of Protected Areas, as well as the globally significant Mesoamerican Biological Corridor.<sup>19</sup> While the project will support participatory planning and governance activities throughout the landscape, project interventions will be implemented in buffer zones and ecological corridors.<sup>20</sup> In 2015, standing forests covered 1.13 million ha in the RACCS, mostly in indigenous and afro-descendant territories.

The causes of environmental degradation in the target area are detailed in a recent study by the Ministry of Environment and Natural Resources of Nicaragua (MARENA, in Spanish).<sup>21</sup> Between 2005 and 2015, the RACCS lost approximately 72,000 ha of forest per year, driven mostly by the expansion of the agriculture frontier and extensive livestock farming.<sup>22</sup> Deforestation in this target landscape accounts to 70% of the national total and is rapidly advancing towards the Indio Maíz Nature Reserve (IMNR), especially towards its northern and western limits. Between 2000 and 2015, the IMNR lost 4,967 hectares of forest in its nucleus as well as 7,144 ha per year in its buffer zone.

Nearly 4.3 million ha are used for **livestock** in Nicaragua, contributing to roughly 10% of the national GDP.<sup>23</sup> While most of the conversion of forests into pastures happened in the 1980s and 1990s,<sup>24</sup> between 2010 and 2015, nearly 122,000 hectares were deforested per year and used for livestock. Most of the livestock in Nicaragua is concentrated in the Caribbean Coast and the Northern-Central part of the country. Currently, cattle production in Nicaragua is characterized as an extensive activity with low productivity levels. During the dry season, residents of rural areas of humid climates (i.e. Caribbean coast) lease grazing areas (i.e. soils than before were natural forests) as feedlots. These cattle are usually transported from other parts of the country searching for food.<sup>25</sup>

In 2015, approximately 738,820 ha were used for agriculture in Nicaragua. Between 2005 and 2015, approximately 17,988 hectares per year were deforested and turned into agricultural lands. In the same period, the area under cocoa production more than quadrupled.<sup>26</sup> While most of the agriculture production in Nicaragua is concentrated in the North and central parts of the country, there are almost 200,000 ha of land dedicated to agriculture in the Caribbean Coast region. The cocoa sector is expected to grow as new agreements are developed with international partners such as Ritter Sport, which

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<sup>17</sup> Nicaragua ENDE-REDD

<sup>18</sup> See Map in Annex 1.

<sup>19</sup> The following protected areas are part of the proposed landscape: Los Guatuzos Wildlife Refuge (44,248 ha); Immaculate Conception of Mary Historic Fortress Monument (3,671 ha); Indio Maíz Biological Reserve (316,721 ha), Punta Gorda Nature Reserve (9,110 ha), Cerro Silva Nature Reserve (292,452 ha); Serranía de Yolaina Nature Reserve (17,347 ha).

<sup>20</sup> The government of Nicaragua will use its remaining GEF-7 STAR allocation (i.e. USD 3.34 million) to strengthen management activities inside protected areas in the RACCS, particularly in the Indio Maíz Nature Reserve.

<sup>21</sup> [http://www.marena.gob.ni/Enderedd/wp-content/uploads/2019/11/Documento-causas-de-la-deforestacio%CC%81n-26\\_07\\_2019\\_VF.pdf](http://www.marena.gob.ni/Enderedd/wp-content/uploads/2019/11/Documento-causas-de-la-deforestacio%CC%81n-26_07_2019_VF.pdf)

<sup>22</sup> This is equivalent to a 1.8% annual rate of deforestation. The deforestation rate between 2005-2015 was lower than for the period 2000-2010, which was approximately 2.3% per year.

<sup>23</sup> Central Bank of Nicaragua, 2017.

<sup>24</sup> Between 1983 and 2015, 2.3 million hectares were deforested for livestock purposes.

<sup>25</sup> INAFOR 2004

<sup>26</sup> FAOSTAT, Crops data. Accessed April 13, 2020.

committed to establish 1,500 ha of cocoa production by 2020, and Bean and Company, which has chosen Nicaragua as one of the 18 countries where it will plant 40,000 ha of cocoa across the world.

The main challenges remaining to address degradation and deforestation, which prevent integrated approaches from supporting sustainable production practices and resilient agro-ecological systems, are:

- i. **Low value or opportunity cost of the forests, which stems from traditional land tenure and agriculture systems.**
- ii. **Lack of a market mechanism that recognizes the economic and non-economic values of environmental services provided by forests and other intact ecosystems.**
- iii. **Limited institutional capacity to monitor and control informal expansion of production areas.**
- iv. **Insufficient livelihood diversification outside of farms to reduce pressures on forests.**
- v. **Limited financing and packages of public and private incentives to support sustainable practices.**

*b) Describe the existing or planned baseline investments, including current institutional framework and processes for stakeholder engagement and gender integration;*

The government of Nicaragua is making significant efforts to reduce and reverse deforestation and forest degradation. These include national processes on forests and Climate Change and significant efforts to increase forest cover via the National Reforestation Crusade. The government committed to the ecological restoration of 2.8 million of hectares by 2020 (Bonn Challenge) and partnered in the “Declaration for Restoration” (UNFCCC COP25). Participating Regional Governments ratified their commitment to implement the Caribbean Coast Development Plan, and the private sector (through their unions) has joined forest restoration efforts.

#### Baseline investments

In order to comply with the 2018-2021 National Human Development Program in issues related to Environmental Policies and Protection of Natural Resources, MARENA has a portfolio of twenty projects with different multilateral and bilateral funds for an amount of USD 482,051,500, to be executed from 2020 to 2028.<sup>27</sup> The government of Nicaragua expects to mobilize around \$48 million in co-financing from the following projects<sup>28</sup>:

- **NICADAPTA Program (\$37 million, IFAD/BCIE-funded), which is supporting agricultural activities (investment plans, nurseries, strengthening of cocoa organizations, improving resilience of local farmers) for the cocoa sector. This program will also provide co-financing for the proposed GEF project.**
- **BOVINOS Program (EU-funded), which will support the development of a more sustainable livestock sector, including activities in the target area. This program will also provide co-financing for the proposed GEF project.**
- **Bio-CLIMA Project (\$110 million, GCF/BCIE-funded), which will support (i) governance efforts to reduce deforestation, (ii) productive restoration of land (including establishment of cocoa agroforestry systems, (iii) sustainable intensification of livestock production, and (iv) build local capacity to sustainably manage forests**
- **Emissions Reduction Program (\$57 million, FCPF-funded), which aims to reduce emissions**

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<sup>27</sup> Funds provided from the World Bank, Green Climate Fund (GCF), Green Development Fund, and the Central American Bank for Economic Integration (CABEI), among others.

<sup>28</sup> Please refer to Annex 3 for detailed description of these baseline projects.

**from deforestation and forest degradation by 2040. The proposed project will build on efforts to develop a National Monitoring, Reporting and Verification System (SNMRV, in Spanish)**

In addition, during project preparation, the project is expected to mobilize co-financing resources from local communities and the private sector (i.e. private companies and cocoa and livestock associations). Finally, the proposed project will build on lessons learned and baseline activities from the following projects, though no cofinancing is expected from them:

- **PAIPSAN program, which supported the preparation of Innovative Development Plans (IDP) and Good Agricultural Practices in indigenous territories. The proposed project will support the implementation of these IDPs.**
- **ENDE/REDD program, which supported the design and implementation of the SNMRV.**

During the formulation of the Expression of Interest for this project, the government of Nicaragua carried out numerous consultations with a wide range of stakeholders including government bodies, local communities, and private institutions. Annex 4 provides a list of relevant stakeholders, their mandate and expected role during project preparation and implementation. Key stakeholders include national government institutions<sup>29</sup>, the Regional Autonomous Government for the RACCS, local municipalities, indigenous and afro-descendant communities, and the private sector. National government institutions will lead project design and ensure the project is aligned with national priorities.

Indigenous and local communities (including afro-descendants and mixed-race individuals) in the 7 target municipalities will be the main beneficiaries.<sup>30</sup> During the PPG phase, a free prior and informed consent (FPIC) process will be carried out with indigenous peoples and an action plan with specific indicators that will be integrated into the logical framework to ensure their effective participation in project implementation.

Regarding the private sector, organizations and unions from both the Cocoa and livestock sectors have expressed interest in partnering with the proposed project and will have a key role during the design of project activities. Cocoa cooperatives represent more than 2,000 households in the target landscape.<sup>31</sup> The National Cocoa Chair, whose efforts have allowed the entrance of the country as a member of the International Cocoa Organization (ICCO), will also participate in the project. Regarding livestock, the Nicaraguan Chamber of Bovine Meat Exporting Plants (CANICARNE) and the Nicaraguan Chamber for the Dairy Sector (CANISLAC) will also be part of the project. These chambers work with national and international companies.

### Gender integration

This program will take the necessary measures to ensure the participation and equal access of women and youth in all of its activities, and to guarantee that women-specific needs are met following the GEF's Action Plan for Gender Equality, FAO's Gender Equality Strategy, and the Equal Rights and Opportunities

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<sup>29</sup> MARENA, MEFCCA, INAFOR, IPSA, INTA

<sup>30</sup> Four municipalities are in the Southern Caribbean Coast Autonomous Region (El Rama, Kukrahill, Nueva Guinea, and Bluefields). Three municipalities are in the Rio San Juan Department: San Carlos, El Castillo, and San Juan de Nicaragua.

<sup>31</sup> COSEMUCRIM, CODEPROSA, COOPROCAFUC, ASHERCA y COMULCAOGAT

Law from Nicaragua (Law No.648). Although the number of Project beneficiaries will be defined in the PPG, it is estimated that there will be 10,000 out of which 40% will be women (contributes to the Core 11 Indicator). During the PPG stage, an evaluation of gender gaps will be developed in order to understand the situation of women and men in the area of influence of the project. An Action Plan will be determined with 3 priority action paths: (a) increase women and youth participation in decision-making processes, (b) include women and youth as beneficiaries of the program, and (c) to determine investments in the capacity building for women.

To guarantee the correct implementation of the gender perspective during project preparation, a gender expert will be hired to develop a social analysis, a gender assessment and a gender action plan with the aim of mainstreaming gender equality and the empowerment of women in all components of the project. In turn, the project's monitoring and evaluation system will measure the progress of gender-sensitive indicators and will report in a gender-disaggregated manner in order to measure the reduction of gender gaps from the implementation of this project.

*c) Describe how the integrated approach proposed for the child project responds to and reflects the Program's Theory of Change, and as such is an appropriate and suitable option for tackling the systemic challenges, and to achieve the desired transformation with multiple global environmental benefits; and*

The proposed project will target the promotion of sustainable food systems to meet growing demand. In particular, it will promote deforestation-free agricultural commodities (livestock and cocoa) through production and value chain interventions that will contribute to slowing the loss of tropical forests and to improve the resilience of agro-ecological production practices. In order to achieve these goals, the project will:

- **Formulate and implement comprehensive land planning** by building capacity and convening multi-stakeholder dialogue, and ensuring stakeholder involvement in the land planning process. The project will build on recent FAO experience on the integration of different land-use planning tools to support LDN implementation and biodiversity conservation. The experience on integrating these tools has been successfully applied in GEF-funded projects in Turkey and the Drylands Impact Program, among others. These efforts are aligned with STAP guidelines,<sup>32</sup> and include the collection of biophysical (eg. LADA, WOCAT) and socio-economic (eg. SHARP, PRAGA, GLEAM/LEAP) baseline data, supported by strong GIS tools (Collect Earth Online or SEPAL).
- **Promote good governance** by increasing efforts to involve multiple stakeholders at national and international level in production and value chains to eliminate deforestation. The project will build on government efforts to strengthen inter-agency coordination and collaboration. It will take advantage of FAO's extensive work in productive landscapes across the world<sup>33</sup> and will bring this knowledge to local stakeholders in order to build their capacity and ensure meaningful participation in decisions related to land use.
- **Scale-up innovations** by supporting public-private partnerships in order to enhance the

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<sup>32</sup> for the application of the "Scientific Framework for LDN"

<sup>33</sup> For instance Climate Smart Agriculture, landscape restoration, Farmer Field Schools, Integrated Pest Management, agroforestry, market assessments, drought management and climate resilience, and early warning systems)

adoption sustainable agricultural intensification methods, restoring the productivity of idle lands, and reduce emissions from livestock. It will support the restoration of degraded landscapes and habitats to maintain ecosystem services that are essential for sustainable production. Biological corridors will be restored to increase carbon-sink recovery and promote biodiversity integration and reduce land degradation and to contribute to compliance with the country's international REDD commitments. The restoration of degraded lands will improve the provision of ecosystem services for 301,161 inhabitants of the target landscape. Protection and restoration measures will contribute to habitat conservation and high value biodiversity protection including 2 species considered in critical danger by the national authority<sup>34</sup> and the International Union for the Conservation of Nature (IUCN). The project will work on agriculture traceability as a tool to manage sanitary risk, avoid deforestation and quality of the product according to market standards and access.

- The proposed project will support national efforts to increase the availability and absorption of financing to transition to more sustainable food and land use systems.<sup>35</sup> This includes the use of participatory tools like FAO's RuralInvest to deliver bankable projects that will ensure that target communities and small community-led projects receive funding needed. The conservation and restoration of biodiversity will focus on the implementation of diversified, comprehensive agroforestry and agro-silvopastoral systems, which will be promoted through the establishment of packages of economic incentives such as trust funds and improved access to markets and green investment funds, which will contribute to landscape restoration. These economic incentives will be complemented with a capacity building program to guarantee the implementation of sustainable practices. This will be accomplished through conversion to more intensive and sustainable production systems, genetic improvements, and management for low-emission livestock and increased resilience of productive systems, which will reduce impacts to biodiversity, and the reduce greenhouse gas emissions

Governance strengthening, public-private partnerships strengthening, the gender equality approach, the implementation of safeguards for indigenous communities and knowledge management will be integrated to improve private sector responsibility and the reflection of these key elements within commodity value chains. It will help the country advance towards its national goals of reaching neutrality in land degradation by avoiding and reducing land degradation, and by restoring degraded lands. The promotion of agro-ecological systems and conservation practices aligned with sustainable land management principles, markets and financial incentives will increase carbon sinks, reduce GHG and avoid climate change losses.

A diagram for the Theory of Change under this project is provided in Annex 2.

*d) Describe the project's incremental reasoning for GEF financing under the program, including the results framework and components.*

This impact program proposes multiple outcomes to support the national efforts to transform existing food systems. Below, the proposed outcomes are presented including explanation of the current base line investments and co-financing support together with the proposed actions under this impact program.

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<sup>34</sup> MARENA

<sup>35</sup> As discussed in section 2b, there are significant resources available to support this transition.



**Component 1. Development of Integrated Landscape Management Systems**, including improved land use governance. Includes participatory planning of the management strategy for (i) landscape restoration, (ii) forest conservation and (iii) climate resilient production systems; support dialogue platforms between public and private sectors and define strategies inside and outside farms to restore biodiversity and safeguard protected areas.

Baseline and co-financing: budget available to MARENA, MEFCCA, INAFOR, INTA, IPSA and the Regional Government of the RACCS, which includes the contribution of personnel and operating expenses of these institutions in support of the existing governance mechanisms in the area of the project intervention. The estimated co-financing is the in-kind contribution and public investment that MARENA has. During the detailed formulation stage (PPG) the contribution of other participating public institutions (MEFCCA, INTA, INAFOR and IPSA) will be identified and together with the CABEI and GCF grant and loan will support the operation and development of governance mechanisms for land use, adding a total amount of expected contributions from all program partners in US \$ 7,000,000.

GEF Support and Funding: The GEF project will provide support to develop collaborative planning for landscape restoration, forest conservation, and sustainable food systems. Likewise, it will support the operation of dialogue platforms between the public and private sectors and defining strategies inside and outside the farms to restore biodiversity and safeguard protected areas. The GEF grant proposed for this component is US \$ 894,668.

**Component 2. Promotion of sustainable food production practices & responsible commodity value chains**, including (i) providing tools to reorient stakeholder practices toward sustainable productive use and restoration productive investments in landscape restoration, (ii) provide incentives for innovation and scaling up of climate-smart, sustainable production practices and gender sensitives value chains, and convene key stakeholders to promote innovation, replication and scale up.

Baseline and co-financing: The baseline is the budget that MEFCCA, INTA, IPSA and INAFOR have, which includes the contribution of personnel, operating expenses and contribution of projects that these institutions have executed in the geographic area of influence of the program, For example, PAISAN, NICADAPTA and BOVINOS projects as indicated in Table 1. Co-financing is the in-kind contribution and public available to these institutions. During the detailed formulation stage (PPG) the contribution of these participating public institutions (MEFCCA, INTA, INAFOR and IPSA) and mobilized investment from the private sector in the agricultural and forestry sectors will be identified and confirmed. In addition, the BCIE and GCF loan and grant will support the establishment of silvopastoral systems and the establishment of multifunctional forest plantations adding a total amount of expected contributions from all program partners valued in US \$ 7,000,000.

GEF Support and Funding: The GEF project will support the restoration of degraded agricultural lands through gender-inclusive practices in the biological corridors of RACCS and the department of Río San Juan. Likewise, activities will be supported to improve production landscapes under sustainable land management through agroforestry (cocoa)<sup>36</sup> and silvopastoral systems to benefit biodiversity in the buffer

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<sup>36</sup> Cocoa is a crop that should be promoted within agroforestry systems. The trees most used to provide shade in cacao groves are either fruit species (especially citrus) or timber species (mainly laurels, *Cordia alliodora*). The latter is widely used by producers for its versatility to be combined with other crops, in addition to the various uses

zone of the Indio Maíz Biological Reserve. Silvopastoral systems in combination with improved forages increase the availability of high-quality food, allow soil restoration, increase resistance to extreme weather events (drought, excess rain), provide fuelwood and contribute to household food security. In addition to providing shade and food for animals, trees provide additional income through the sale of wood and fruit. Due to the importance of livestock production, mass adoption can have a profound impact. The GEF grant proposed for this component is US \$1,694,668

**Component 3. Restoration of natural habitats**, including upscaling restoration activities beyond target sites and landscapes, strengthening governance and capacity building for landscape restoration, and building capacity of stakeholders participating in selected valued chains. Capacity building programs on environmental restoration, supply chain management and biological corridor management in productive areas.

Baseline and co-financing: The budget that MARENA, MEFCCA, INAFOR, INTA, IPSA and the Regional Government of the GRACCS have, which includes the contribution of personnel and operating expenses of these institutions in support of the capacity development actions implemented in the project intervention area. The co-financing is the in-kind contribution that MARENA has. During the detailed formulation stage (PPG) the contribution of other participating public institutions (MEFCCA, INTA, INAFOR and IPSA) will be identified and added to the grant and loan from BCIE and Green Climate Fund that will support the development of capacities, adding a total amount of expected contributions from all program partners in US \$ 20,000,000.

GEF Support and Funding: The GEF project will provide support to ensure 719,442 hectares are under improved management to support biodiversity. The project will develop a capacity-building program for the conversion of livestock and cocoa activity to intensive agroforestry-forest systems, which will contribute to landscape restoration (including biological corridors). Support will also be given to capacity building for technological conversion to more intensive, improved breeding and management for low-emission livestock and increased resilience. In addition, the GEF project will provide support for the development of private public arrangements for financing models (Trusts, Capitalization of the Environment Fund, Nature-Based Economic Solutions, Ecotourism, Soft Credit, Incentives, among others). The GEF grant for this component amounts to US \$ 1,789,336.

#### **Component 4. Program Coordination, Collaboration, and Knowledge management:**

Baseline and co-financing: The budget that MEFCCA, INAFOR, INTA and IPSA have, which includes the contribution of personnel and operating expenses of these institutions in support of the market development actions that they implement in the area of project intervention. Co-financing is the contribution that during the detailed formulation stage (PPG) will be identified with these participating public institutions (MEFCCA, INTA, INAFOR and IPSA). This contribution, together with the grant and loan from CABIE and the GCF that support the development of market products, add up to a total of expected contributions from all program partners in US \$ 11,900,000.

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of its wood on the farm and eventually for sale in local shops. In addition to laurels, other timber species such as mahogany (*Swietenia macrophylla*), cedar (*Cedrela odorata*), eucalyptus (*Eucaliptus* spp.), Guamo (*Inga* spp.), and poró (*Erithryna poeppigiana*) can be used.

GEF Support and Funding: The project will develop capacities and knowledge management around the experiences of promoting deforestation-free products, inclusive and sustainable food crops and landscape restoration. These knowledge products can contribute to other FOLUR child projects. There will be exchanges with other FOLUR child projects, particularly with similar situations, such as the same products in Mesoamerica. Project teams will actively participate in the FOLUR community of practice and, together with government partners, represent the project in global forums. This will also include bringing lessons to the Global Platform and its efforts both through FOLUR and directly to the broader community of food products and systems.

The project will promote and provide information to strengthen dialogue platforms for cocoa and livestock products at the local, regional, national and global levels, which in turn will provide the architecture to support knowledge sharing, learning and synthesis of experiences. These products will carry the learning in gender incorporation and cultural relevance. GEF Support and Financing: The GEF grant for this component is US \$ 720,935.

### **3. Engagement with the Global / Regional Framework (maximum 500 words)**

*Describe how the project will align with the global / regional framework for the program to foster knowledge sharing, learning, and synthesis of experiences. How will the proposed approach scale-up from the local and national level to maximize engagement by all relevant stakeholders and/or actors?*

Well known agro-ecological practices can be scaled up to a greater number of cocoa and cattle producers and can be directed towards sustainable production and impact the entire agricultural boundary in the Caribbean Coast. The approach for the promotion of low emission economic development could be used as a replicable model for the sustainable production in the Bosawas and Río San Juan Biosphere Reserves, as well as in collaboration with neighboring countries and at the regional level within the Mesoamerican Biological corridor.

Political opportunities at the national level are available through the Production, Consumption and Trade System (SPCC) implemented by the Government of Nicaragua, through which a production cycle plan is prepared each year and the productive sector strategies are articulated with the main policies, actions, results and productive goals agreed to with producers under the model of dialogue, alliances and consensus between the government, workers and the private sector. During the full preparation of the project, the mechanisms that facilitate the integration of measures to promote sustainable food systems in the annual and sectoral plans of the SPCC will be identified.

At the regional level, both in Central America and Mesoamerica, Nicaragua will have the opportunity to present the results of its policies and experiences to promote sustainable food systems. During the complete preparation of the project, we will define the mechanisms that facilitate the definition of proposals that Nicaragua can present at the level of Central American Integration organizations such as the Central American Commission for Environment and Development (CCAD) and the Central American Agricultural Council (CAC); as well as at the Mesoamerican level, work through the Mesoamerican Integration and Development Project (PM), which is a Mesoamerican integration and development program that enhances cooperation among countries in order to expand and improve their capacities and make effective the implementation of projects that result in concrete benefits for societies in terms of infrastructure, interconnectivity and social development.

This project represents the following innovations:

- **Developing actions that make this territory an investment zone with climate-smart livestock management.**
- **Projecting improvements in the productivity and incomes of producers and their value chains, while lowering greenhouse gas emissions from livestock and associated land use, improving the management of ecosystem services and increasing resilience of the productive systems.**
- **Increasing production while maintaining the same or even lower quantities of inputs per unit, improving the environmental impact and creating resilience to climate change and other production threats.**
- **Use of improved agricultural practices: improved grazing management, reducing population levels, and rotational grazing; the use of improved pastures and agroforestry species, and the use of nutritious dietary supplements, particularly during periods of scarcity, by-products, hay or silage. Similarly, interventions aimed at improving animal health, such as proper disease management, vaccination programs, and the use of more disease resistant animals, will also improve animal productivity and resilience.**
- **Appropriate practices for water storage, and efficient use including superficial and underground water.**

Through the use of all of the above innovations, the livestock sector can make important contributions to the food supply, reducing GHG emissions and avoiding or reducing the expansion of the agricultural frontier towards natural habitat reserves in the Indio Maíz Biological Reserve and other forested areas in protected areas of the Río San Juan Biosphere Reserve.

During full project preparation, the FAO Principles for Assessing Livestock Impacts on Biodiversity will be applied to further assess the baseline scenario and focus specific actions for the project intervention areas.

Finally, the project will link with the FOLUR Global Platform (GP) at different levels: First, at the global level, the project will engage the GP by ensuring the participation of relevant government staff and project stakeholders in global meetings of FOLUR partners and country projects. Second, the project will engage regionally in commodity platforms and regional training events by ensuring the participation of relevant stakeholders (including project beneficiaries) in regional commodity platform gatherings and regional training workshops, as well as in discussions with private and public sector representatives. The project will ensure that any best practices will be shared with regional communities of practice. This includes the development of briefs and other documents to disseminate lessons learned, outcome stories or policy briefs, as required. Third, the project will support the preparation of annual progress and achievement reports, including the dissemination of such reports and media within country. Finally, the project will regularly follow up the implementation of its M&E plan, including the collection of data, in order to report to the GEF Secretariat. The GP will aggregate and report for all projects.

## GEF 7 Core Indicator Worksheet

Use this Worksheet to compute those indicator values as required in Part I, item F to the extent applicable to your proposed project. Progress in programming against these targets for the project will be aggregated and reported at anytime during the replenishment period. There is no need to complete this table for climate adaptation projects financed solely through LDCF and SCCF.

Core Indicator 1	Terrestrial protected areas created or under improved management for conservation and sustainable use					(Hectares)
		Hectares (1.1+1.2)				
		Expected		Achieved		
		PIF stage	Endorsement	MTR	TE	
Indicator 1.1	Terrestrial protected areas newly created					
Name of Protected Area	WDPA ID	IUCN category	Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 1.2	Terrestrial protected areas under improved management effectiveness					
Name of Protected Area	WDPA ID	IUCN category	Hectares	METT Score		
				Baseline		Achieved
					Endorsement	MTR TE
Core Indicator 2	Marine protected areas created or under improved management for conservation and sustainable use					(Hectares)
		Hectares (2.1+2.2)				
		Expected		Achieved		
		PIF stage	Endorsement	MTR	TE	
		N/A				
Indicator 2.1	Marine protected areas newly created					
Name of Protected Area	WDPA ID	IUCN category	Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
		(select)				
		(select)				
		Sum				
Indicator 2.2	Marine protected areas under improved management effectiveness					
	WDPA ID	IUCN category	Hectares	METT Score		
				Baseline		Achieved

Name of Protected Area				PIF stage	Endorsement	MTR	TE
		(select)					
		(select)					
		Sum					
<b>Core Indicator 3</b>	<b>Area of land restored</b>						<b>(Hectares)</b>
			Hectares (3.1+3.2+3.3+3.4)				
			Expected			Achieved	
			PIF stage	Endorsement	MTR	TE	
Indicator 3.1	Area of degraded agricultural land restored						
			Hectares				
			Expected			Achieved	
			PIF stage	Endorsement	MTR	TE	
		Ecological restoration of agricultural lands	13,027				
Indicator 3.2	Area of forest and forest land restored						
			Hectares				
			Expected			Achieved	
			PIF stage	Endorsement	MTR	TE	
Indicator 3.3	Area of natural grass and shrublands restored						
			Hectares				
			Expected			Achieved	
			PIF stage	Endorsement	MTR	TE	
			0				
Indicator 3.4	Area of wetlands (including estuaries, mangroves) restored						
			Hectares				
			Expected			Achieved	
			PIF stage	Endorsement	MTR	TE	
<b>Core Indicator 4</b>	<b>Area of landscapes under improved practices (hectares; excluding protected areas)</b>						<b>(Hectares)</b>
			Hectares (4.1+4.2+4.3+4.4)				
			Expected			Expected	
			PIF stage	Endorsement	MTR	TE	
Indicator 4.1	Area of landscapes under improved management to benefit biodiversity						
			Hectares				
			Expected			Achieved	
			PIF stage	Endorsement	MTR	TE	

	Rio San Juan silvopastoral systems	21,935			
	Buffer zone of the RBIM, agroforestry and silvopastoral systems	13,958			
Indicator 4.2	Area of landscapes that meet national or international third-party certification that incorporates biodiversity considerations				
Third party certification(s):		Hectares			
		Expected		Achieved	
		PIF stage	Endorsement	MTR	TE
Indicator 4.3	Area of landscapes under sustainable land management in production systems				
			Hectares		
			Expected		Achieved
			PIF stage	Endorsement	MTR TE
Indicator 4.4	Area of High Conservation Value Forest (HCVF) loss avoided				
Include documentation that justifies HCVF <i>Buffer zones of the RBIM and RSJ</i>		Hectares			
		Expected		Achieved	
		PIF stage	Endorsement	MTR	TE
		683,549			
Core Indicator 5	Area of marine habitat under improved practices to benefit biodiversity				(Hectares)
Indicator 5.1	Number of fisheries that meet national or international third-party certification that incorporates biodiversity considerations				
Third party certification(s):		Number			
		Expected		Achieved	
		PIF stage	Endorsement	MTR	TE
Indicator 5.2	Number of large marine ecosystems (LMEs) with reduced pollution and hypoxial				
			Number		
			Expected		Achieved
			PIF stage	Endorsement	MTR TE
Indicator 5.3	Amount of Marine Litter Avoided				
			Metric Tons		
			Expected		Achieved
			PIF stage	Endorsement	MTR TE
Core Indicator 6	Greenhouse gas emission mitigated				(Tons)

		Expected metric tons of CO <sub>2</sub> e (6.1+6.2) 860,000			
		PIF stage	Endorsement	MTR	TE
	Expected CO <sub>2</sub> e (direct)				
	Expected CO <sub>2</sub> e (indirect)				
Indicator 6.1	Carbon sequestered or emissions avoided in the AFOLU sector				
		Expected metric tons of CO <sub>2</sub> e			
		PIF stage	Endorsement	MTR	TE
	Expected CO <sub>2</sub> e (direct)	4.89 million tons CO <sub>2</sub> e (avoided and sequestered over 5 years)			
	Expected CO <sub>2</sub> e (indirect)				
	Anticipated start year of accounting				
	Duration of accounting				
Indicator 6.2	Emissions avoided Outside AFOLU				
		Expected metric tons of CO <sub>2</sub> e			
		Expected		Achieved	
		PIF stage	Endorsement	MTR	TE
	Expected CO <sub>2</sub> e (direct)				
	Expected CO <sub>2</sub> e (indirect)				
	Anticipated start year of accounting				
	Duration of accounting				
Indicator 6.3	Energy saved				
		MJ			
		Expected		Achieved	
		PIF stage	Endorsement	MTR	TE
Indicator 6.4	Increase in installed renewable energy capacity per technology				
		Capacity (MW)			
	Technology	Expected		Achieved	
		PIF stage	Endorsement	MTR	TE
	(select)				
	(select)				
Core Indicator 7	Number of shared water ecosystems (fresh or marine) under new or improved cooperative management			(Number)	
Indicator 7.1	Level of Transboundary Diagnostic Analysis and Strategic Action Program (TDA/SAP) formulation and implementation				
		Shared water ecosystem	Rating (scale 1-4)		
			PIF stage	Endorsement	MTR TE
Indicator 7.2	Level of Regional Legal Agreements and Regional Management Institutions to support its implementation				
		Shared water ecosystem	Rating (scale 1-4)		
			PIF stage	Endorsement	MTR TE



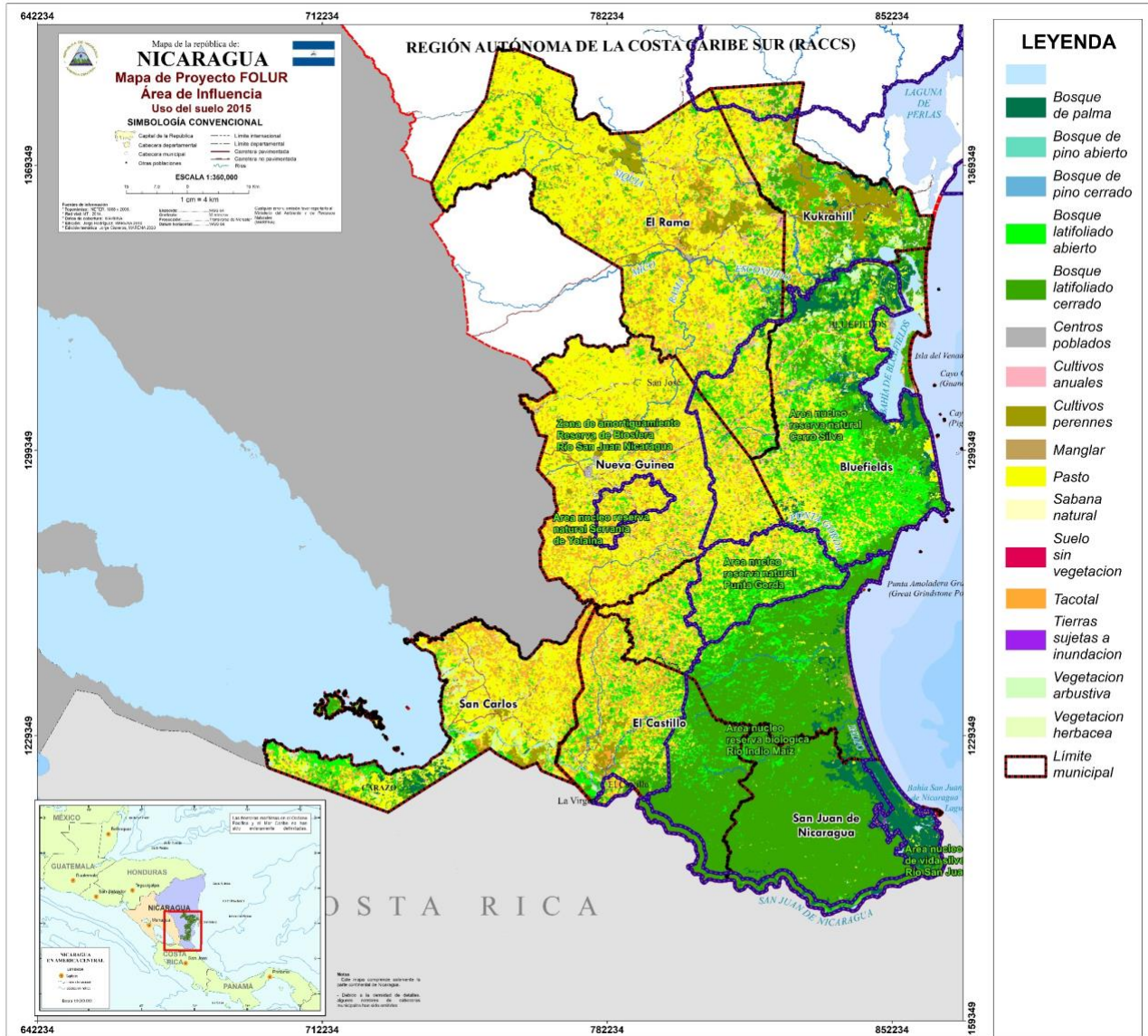
Indicator 7.3	Level of National/Local reforms and active participation of Inter-Ministerial Committees					
		Shared water ecosystem	Rating (scale 1-4)			
			PIF stage	Endorsement	MTR	TE
Indicator 7.4	Level of engagement in IWLEARN through participation and delivery of key products					
		Shared water ecosystem	Rating (scale 1-4)			
			Rating		Rating	
			PIF stage	Endorsement	MTR	TE
Core Indicator 8	Globally over-exploited fisheries Moved to more sustainable levels					(Tons)
Fishery Details			Metric Tons			
			PIF stage	Endorsement	MTR	TE
Core Indicator 9	Reduction, disposal/destruction, phase out, elimination and avoidance of chemicals of global concern and their waste in the environment and in processes, materials and products					(Tons)
			Metric Tons (9.1+9.2+9.3)			
			Expected		Achieved	
			PIF stage	PIF stage	MTR	TE
Indicator 9.1	Solid and liquid Persistent Organic Pollutants (POPs) removed or disposed (POPs type)					
POPs type			Metric Tons			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
(select)	(select)	(select)				
(select)	(select)	(select)				
(select)	(select)	(select)				
Indicator 9.2	Quantity of mercury reduced					
			Metric Tons			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 9.3	Hydrochlorofluorocarbons (HCFC) Reduced/Phased out					
			Metric Tons			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 9.4	Number of countries with legislation and policy implemented to control chemicals and waste					
			Number of Countries			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE

Indicator 9.5	Number of low-chemical/non-chemical systems implemented particularly in food production, manufacturing and cities					
		Technology	Number			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 9.6	Quantity of POPs/Mercury containing materials and products directly avoided					
			Metric Tons			
			Expected		Achieved	
			PIF stage	Endorsement	PIF stage	Endorsement
Core Indicator 10	Reduction, avoidance of emissions of POPs to air from point and non-point sources					(Grams)
Indicator 10.1	Number of countries with legislation and policy implemented to control emissions of POPs to air					
			Number of Countries			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 10.2	Number of emission control technologies/practices implemented					
			Number			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Core Indicator 11	Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment					(Number)
			Number			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
		Female	4,000			
		Male	6,000			
		Total	10,000			

## Annexes

### Annex 1. Maps

#### Land Cover Map in Target Municipalities – FOLUR



Mapa de la república de  
**NICARAGUA**  
**Mapa de Proyecto FOLUR**  
**Propuesta de Intervenciones**  
**Uso del suelo 2015**  
**SIMBOLOGÍA CONVENCIONAL**

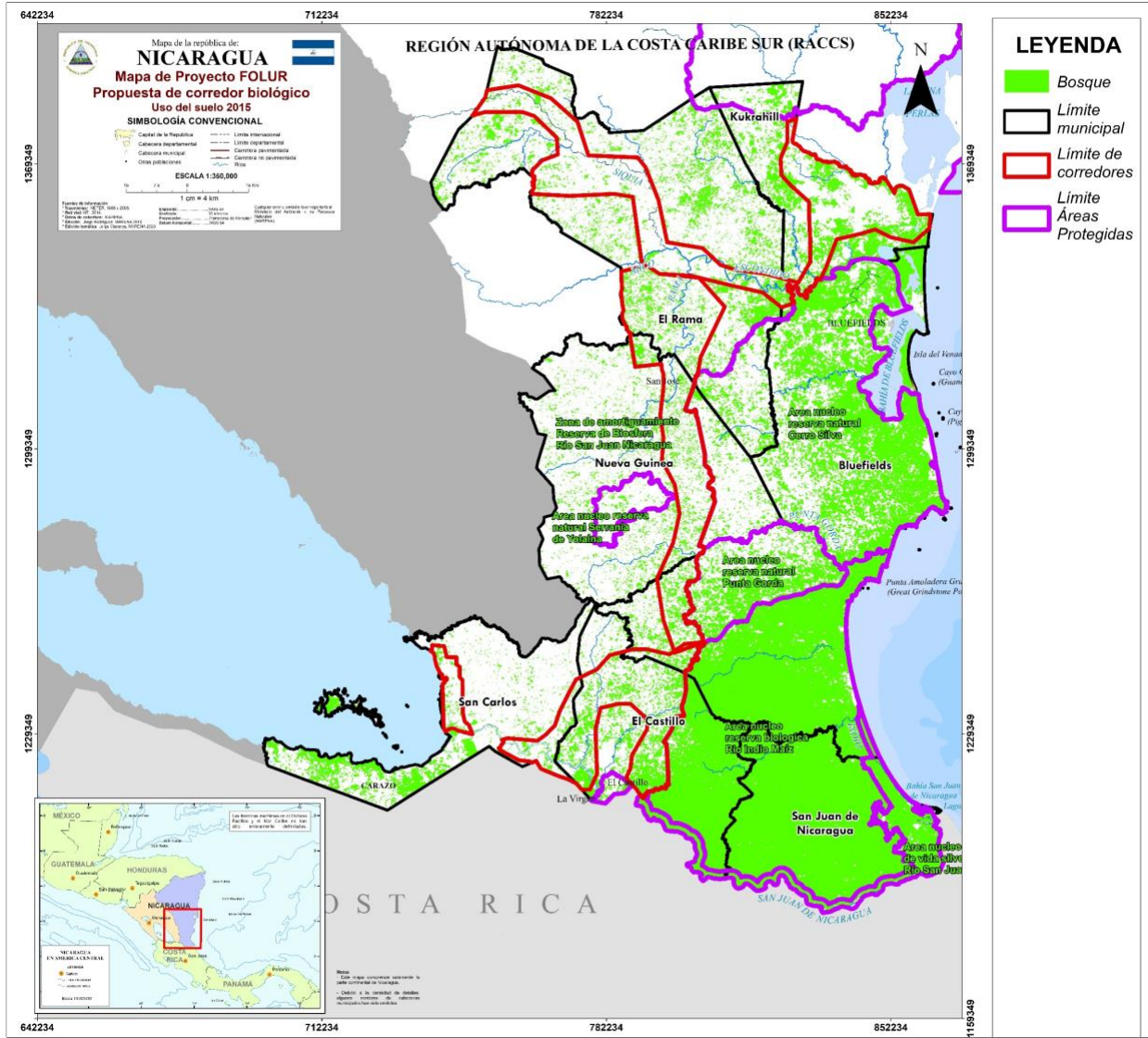
Escala 1:395,000  
1 CM = 4 KM

LEYENDA

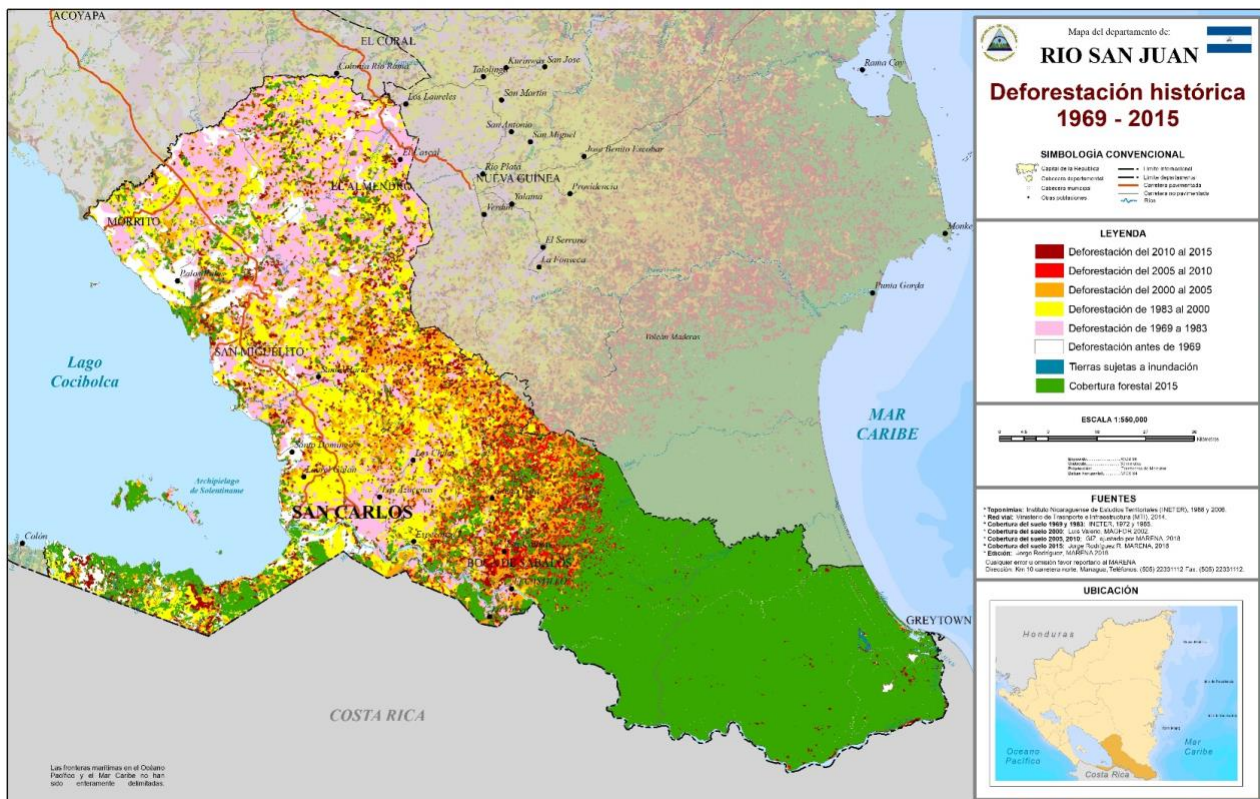
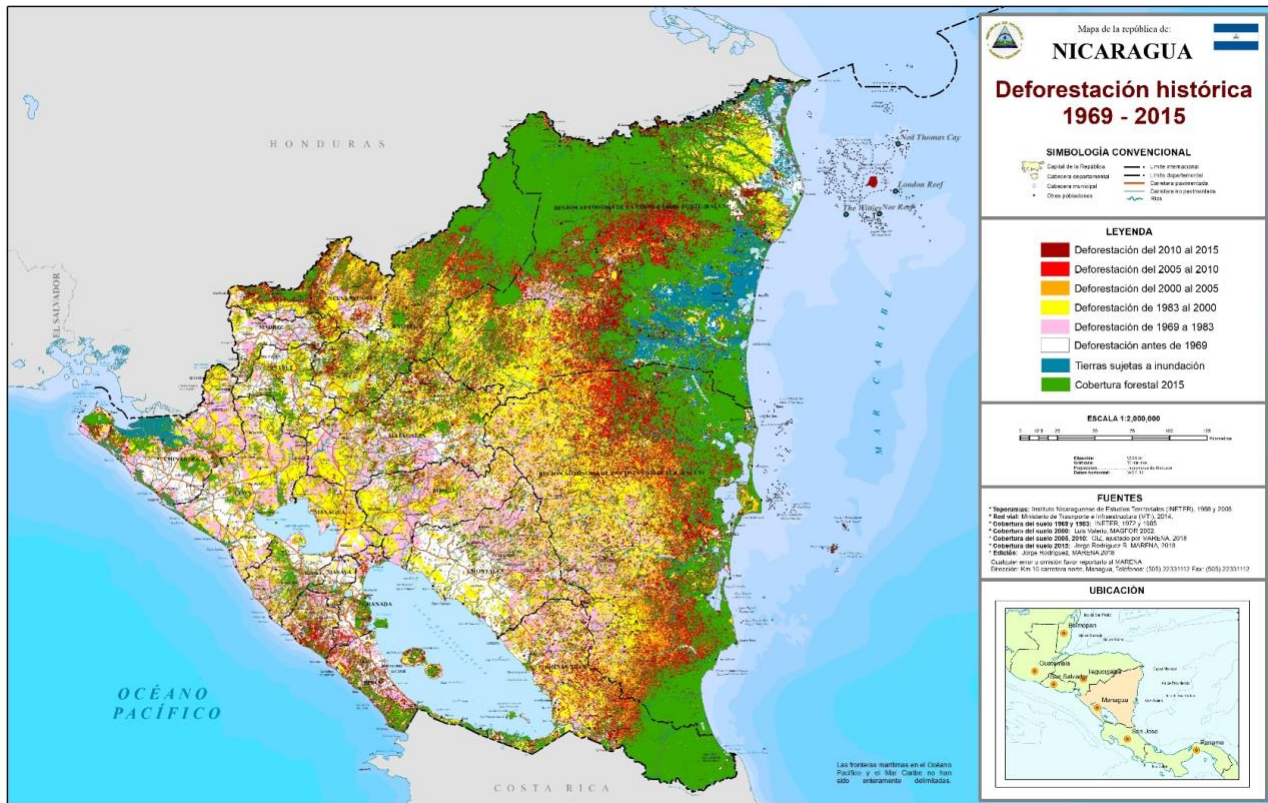
- Conservación forestal
- Cultivos anuales
- Gestión sostenible en producción
- Paisaje bajo manejo
- Límite municipal
- Límite de corredores
- Límite Áreas Protegidas



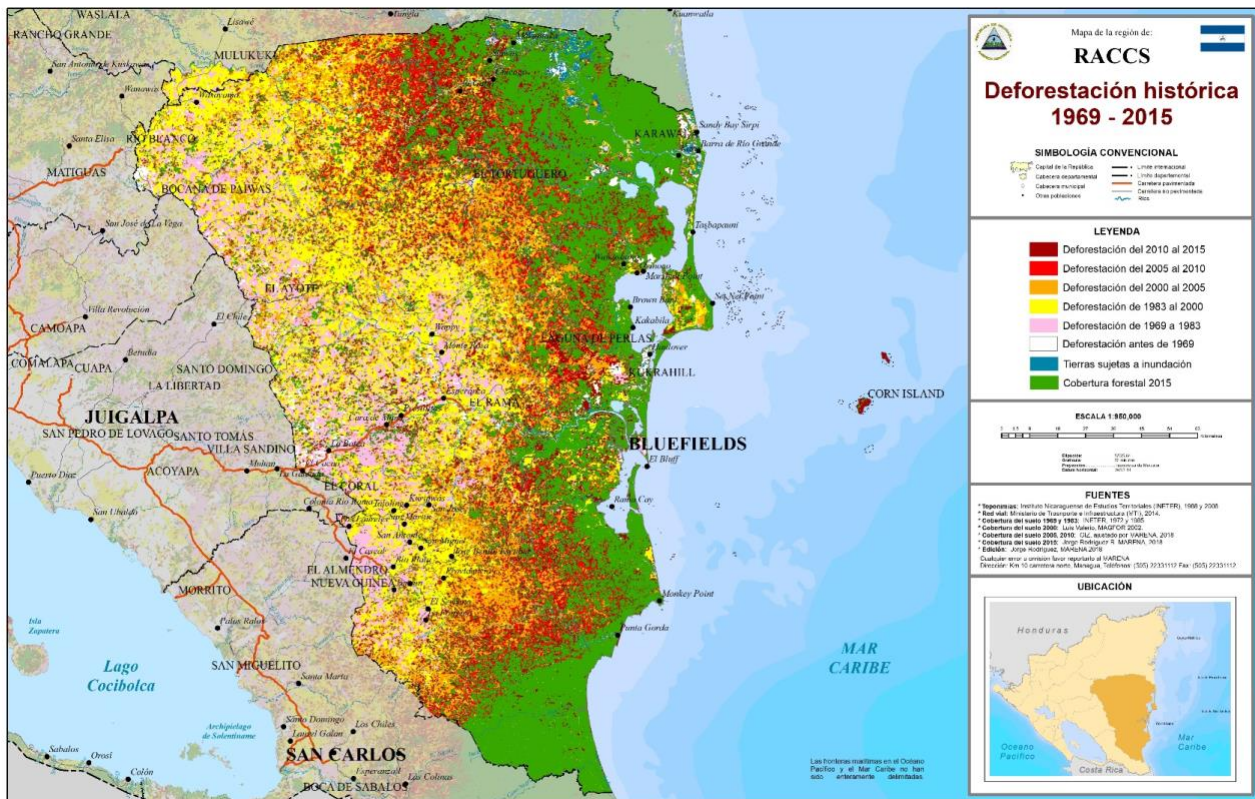
## Proposal of Biological Corridors to be restored



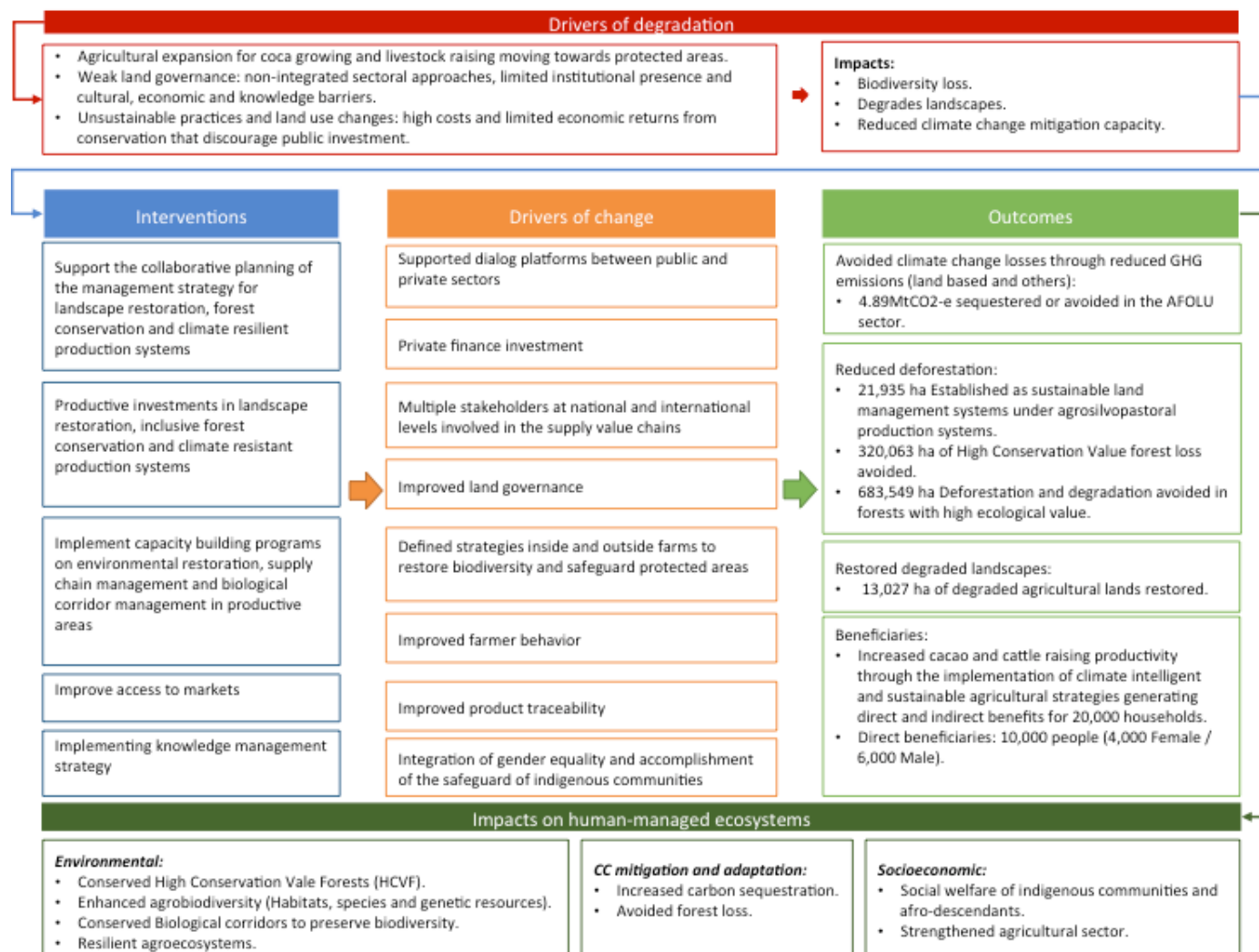
## Historical deforestation Maps in Target Geographic Region







## Annex 2. Theory of Change





### Annex 3. Baseline programs

Project	Description	Relevant actions for FOLUR Program
NICADAPTA	<p>Title: Support for climate change adaptation of coffee and cocoa production by small producers in suitable agroclimatic zones - NICADAPTA.</p> <p>Objective: Sustainably improve the living conditions of rural families that produce coffee and cocoa, in four geographical areas, incorporating them into markets and reducing their vulnerability to climate change.</p> <p>Duration: 6 years</p> <p>Funding Source: IFAD / CABI</p> <p>Executor: MEFCCA</p> <p>Financing Amount: US \$37.05 million dollars.</p>	<p>Rio San Juan Department: 5 Investment Plans for collective or community nurseries for coffee and cocoa established in priority areas.</p> <p>4 established cocoa organizations in the municipality of <i>El Castillo</i>: ASHERCA and COOPROCAFUC in the community of Buena Vista, COOSEMUCRIM in <i>Boca de Sábalo</i>s and COODEPROSA in <i>El Castillo</i>. The cocoa producing families are diversifying the farms and establishing new cocoa plantations, motivated by different programs and prices internationally.</p> <p>4 Investment Plans by the RACCS Delegation.</p> <p>Establishment of a diversified agricultural system with gender equity and adaptation to climate change to improve the production and living condition of families in 8 communities in the Rama and Kriol Territory in the Municipality of Bluefields and the RACCS.</p>
BOVINOS	<p>Livestock Value Chain Support Program in Nicaragua (BOVINOS).</p> <p>Funding Source: European Union – AECID funding</p>	<p>Contribute to the development of a more productive livestock sector, with a better and more ecological use of resources, in a competitive, sustainable and inclusive way. This will allow higher incomes, food and nutritional security and the well-being of small and medium ranchers in 11 municipalities in the departments of <i>Chontales (Santo Domingo, La Libertad, Santo Tomás, El Coral, Acoyapa and Villa Sandino)</i>, Río San Juan (<i>El Almendro</i>) and the Autonomous Region of the South Caribbean (<i>El Ayote, Muelle de los Bueyes, Nueva Guinea and El Rama</i>).</p>
PAIPSAN	<p>Title: Support Project to increase productivity, food and nutritional security on the Nicaraguan Caribbean coast (PAIPSAN CCN)</p> <p>Funding Source: Global Agriculture and Food Security Program-Canada</p> <p>Financing Amount: US \$ 33,900,000.00</p>	<p>Innovative Development Plans (IDP): investment plans to support agricultural production and improve food security, availability and consumption, through capitalization with goods, materials and supplies to communities of the Caribbean Coast. IDPs can be agricultural, artisanal fisheries and aquaculture, agribusiness, small businesses, or non-agriculture businesses.</p>

Project	Description	Relevant actions for FOLUR Program
	<p>Duration: November 2015- December 2019</p> <p>Institutions involved: MEFCCA, IPSA, MAG, INTA, INPESCA and Regional Governments.</p> <p>Executor: MEFCCA</p>	<p>Within the framework of the PAIPSAN project, the IPSA executed everything related to phytosanitary surveillance, epidemiological surveillance, implementation of Good Agricultural Practices, inspection of safety processes of fishery products necessary for the implementation of the PAIPSAN IDPs. Support in this area was given through intervention in 3 Subprojects or IDPs executed in communities of the Rama and Criol indigenous peoples.</p> <p>It was possible to register 102 production units for the implementation of the Good Agricultural Practices (GAP) system of protagonists in the territory of Bluefields, Rama and Creol, of which 62 are men and 40 women.</p>
Project ENDE-REDD + / FCPF/ TF 099264 / Proyecto No. P120657 / BM	<p>Title: Support for the Preparation of the Strategy for Reducing Emissions from Deforestation and Forest Degradation (ENDE-REDD +)</p> <p>Objective: Prepare a proposal to Support the Implementation of the National Strategy for Avoided Deforestation ENDE-REDD +.</p> <p>Duration: 2018-2020</p> <p>Funding Source: Forest Carbon Partnership Facility. FCPF / TF 099264 / Project No. P120657 / BM</p> <p>Executor: MARENA in coordination with INAFOR, INETER, MHCP, SDCC-GRCC.</p> <p>Financing Amount: US \$ 5,000,000</p>	<p>Preparation of the document of Reference Levels of emissions from deforestation and forest degradation of Nicaragua already presented to the UNFCCC.</p> <p>Evaluation of land uses, factors causing changes in land use, forest legislation, policies and institutional management.</p> <p>Design and implementation of the the National Forest Monitoring and verification System (MRV)</p> <p>Avifauna biodiversity monitoring system developed to provide information on priority non-carbon benefits in the framework of the ERPD design.</p>
Emission Reduction Program (ERPD)	<p>Title: Emission Reduction Program to combat climate change and poverty in the Caribbean Coast, BOSAWAS biosphere reserve and Indio Maíz biological reserve (ERPD).</p> <p>Objective: Reduce emissions from deforestation and forest degradation by 50% for 2040;</p>	<p>Nicaragua is implementing a National Monitoring, Reporting and Verification System (SNMRV).</p> <p>The Carbon Module will measure, monitor, report and verify (MRV) the state and condition of Nicaraguan forests, as well as deforestation and forest recovery. It will report on avoided emissions as well as</p>

Project	Description	Relevant actions for FOLUR Program
	<p>conserve and increase carbon stocks; and contribute to the protection of the Earth against climate change.</p> <p>Duration: 2020-2026 (2 preparatory years and 5 years of intervention)</p> <p>Funding Source: Forest Carbon Partnership Facility. FCPF / Carbon Fund.</p> <p>Executor: MARENA in coordination with MHCP, MEFFCA, INETER, INAFOR, MAG, SDCC and regional and territorial governments.</p> <p>Financing Amount: US \$ 57,300,000 (investment to guarantee the payment of results from the FCPF Carbon Fund)</p>	<p>those that occur due to changes in national carbon stocks.</p> <p>Avifauna biodiversity monitoring system developed to provide information on priority non-carbon benefits in the framework of the ERPD design.</p>
Bio-Clima Project	<p>Title: Comprehensive climate action to reduce deforestation and increase resilience in the BOSAWAS and Río San Juan Biosphere Reserves.</p> <p>Objective: Bio-CLIMA has the objective of transforming extensive livestock, agriculture and forest exploitation causing deforestation and forest degradation in the buffer zones of the BOSAWAS and Río San Juan Biosphere Reserves, in more sustainable forms of production, free from deforestation, integrating the conservation of ecosystems and their services with the production of goods and services.</p> <p>Duration: 2021-2028</p> <p>Financing Source: GCF (in the detailed formulation stage of the financing proposal with FAO Technical Assistance and will be presented by BCIE as an Accredited Entity of the GCF)</p> <p>Executor: MARENA</p> <p>Financing Amount: US \$ 110 Million</p>	<p>Component 1: Conserving and producing for life. Bio-CLIMA will offer producers financial incentives, technical assistance and market access for the sustainable intensification of livestock production, the cultivation of coffee and cocoa through Agroforestry Systems and the productive restoration of land, frequently degraded secondary vegetation covers ("tacotales"), as well as the sustainable management of natural forests.</p> <p>Component 2: Good governance. Relevant public institutions in charge of environmental protection, law enforcement, forest conservation, and climate-adapted sustainable agricultural production will be staffed with additional technical staff, logistics, vehicles, information technology, equipment and budget for operating expenses.</p> <p>Component 3: Capacity development. To advance from a fractional sectoral approach to land use towards an integrated and sustainable approach to the use and conservation of the farm, landscape and ecosystem that Bio-CLIMA promotes, a great effort of training and capacity building will be required: technical personnel and producers, will receive training in planning and integrated land use management, implementation and maintenance of the</p>

Project	Description	Relevant actions for FOLUR Program
		<p>"models", innovations in administrative processes, legislation and regulations, strengthening of local organizations, management of the quality and market access, among others.</p> <p>The intervention area for component 1 is the core and buffer zone of the BOSAWAS Natural Reserve (RNB), of the Cerro Saslaya National Park (PNCS), as well as within the Indio Maíz Biological Reserve (RBIM).</p> <p>The measures to create the enabling conditions for ENDE REDD +, as well as to strengthen the territorial management of the GTI will be applied by Bio-CLIMA in the entire accounting area of the ERPD in the 23 indigenous territories. This includes the Ram and Kriol Indigenous People.</p>

Source: Collaboration with Nicaragua's technical interinstitutional government team.

#### Annex 4. Stakeholders

Stakeholder Name	Mandate / Role in the project.	Role in the PPG stage.
Ministry of Environment and Natural Resources (MARENA)	<p>Management of natural resources and environment</p> <p>Coordinator of the Project and of the instances that are formed for the participative management of it. Will be in charge of project execution.</p> <p>Coordinates the Project Implementation Unit (UIP).</p> <p>Coordinates the Project Management Committee (CDP).</p>	Coordinator of the consultation, detailed formulation (PPG) and project implementation processes.
Ministry of Family, Community, Cooperative and Associative Economy (MEFCCA)	<p>Rural development, focused on the family, the community, collaborative actions (cooperatives and associations).</p> <p>Co-execution and co-financing</p> <p>Member of the Project Management Committee (CDP).</p>	Participate in workshops and meetings to ensure alignment of project design with baseline and co-financing activities.
National Forest Institute (INAFOR)	<p>Forestry</p> <p>Co-execution and co-financing</p> <p>Member of the Project Management Committee (CDP).</p>	Participate in workshops and meetings to ensure alignment of project design with baseline and co-financing activities.
Agricultural Health and Protection Institute (IPSA)	<p>Agricultural Protection and Health</p> <p>Consultation in aspects of health, especially in pest control.</p>	Participate in workshops and meetings to ensure alignment of project design with baseline and co-financing activities, particularly on issues related to pest control. Ensure project is aligned with national policy
Nicaraguan Agricultural Technology Institute	Research and transfer of agricultural technologies	Participate in workshops and meetings to ensure alignment of project design with baseline

<b>Stakeholder Name</b>	<b>Mandate / Role in the project.</b>	<b>Role in the PPG stage.</b>
(INTA)	Consultations on aspects of environmentally friendly technologies	and co-financing activities, particularly on issues related to agricultural technologies. Ensure project is aligned with national policy
Caribbean Coast Development Secretary	Coordination and communication with GRACCS and GTI Rama and Kriol  Member of the Project Management Committee (CDP).	Participate in workshops and meetings to ensure alignment of project design with needs of local communities. Support project design. Participate in field missions. Ensure process is aligned with FPIC principles.
Regional Autonomous Government for the South Caribbean Coast (RACCS)	Management of the Caribbean Coast Autonomous Region  Co-execution and co-financing  Member of the Project Management Committee (CDP).	Participate in workshops and meetings to ensure alignment of project design with needs of local communities. Support project design. Participate in field missions.
Municipalities /  Municipal Development Institute from Nicaragua (INIFOM)	Local authorities in charge of local development processes.  Co-execution and co-financing	Participate in workshops and meetings to ensure alignment of project design with needs of local communities and funding associated to local development (co-financing). Support project design. Participate in field missions and discussions with local communities.
Rama y Kriol Indigenous Community, Creole Territorial Government from Bluefields and Indigenous and	Management of entitled indigenous territory.  Consultation, Co-execution and co-financing  Member of the Project Management Committee (CDP).	Direct project beneficiaries. Lead design of activities in their territories in order to ensure project is aligned with the process of territorial consultations.

<b>Stakeholder Name</b>	<b>Mandate / Role in the project.</b>	<b>Role in the PPG stage.</b>
Afrodescendants Communities.		Provide co-financing.
Private sector	<p>Participants in Restoration and Protection of forests and biodiversity.</p> <p>Co-execution and co-financing</p>	<p>Direct project beneficiaries. Lead design of activities related to VC strengthening and capacity building needs.</p> <p>Provide their commitment and cofinancing to ensure project targets are met.</p>
BICU y URCCAN Caribbean Coast Universities.	<p>Specific studies, training.</p> <p>Consultation and co-execution in specific activities related to carrying out specific biodiversity studies.</p>	<p>Participate in workshops and meetings to prepare the PPG and implement the project. Potential partners to support project implementation.</p>
Women Organizations	<p>Consultation and Co-execution</p> <p>Member of the Project Management Committee (CDP).</p>	<p>Direct project beneficiaries. Lead design of activities related to VC strengthening and capacity building for women. Ensure women participate in the project.</p> <p>The project will make sure women's needs are taken care of to ensure their participation during project design</p>

# UZBEKISTAN

## GEF-7 CHILD PROJECT CONCEPT CHILD PROJECT TYPE: Full-sized Child Project PROGRAM: IP FOLU

<b>Child Project Title:</b>	Food System, Land Use and Restoration Impact Program in Uzbekistan
<b>Country:</b>	Uzbekistan
<b>Lead Agency</b>	FAO
<b>GEF Agency(ies):</b>	FAO

### INDICATIVE FOCAL/NON-FOCAL AREA ELEMENTS AND FINANCING

Programming Directions	Trust Fund	(in \$)	
		GEF Project Financing	Co-financing
BD-1-1 Mainstream biodiversity across sectors as well as landscapes and seascapes through biodiversity mainstreaming in priority sectors	GEFTF	443,901	19,000,000
CCM-2-6 Demonstrate mitigation options with systemic impacts for food systems, land use and restoration impact program	GEFTF	3,107,305	6,000,000
LD-1-1 Maintain or improve flow of agro-ecosystem services to sustain food production and livelihoods through Sustainable Land Management (SLM)	GEFTF	443,901	20,000,000
IP FOLU Promoting effective coordination and adaptive management for Food Systems, Land Use and Restoration	GEFTF	1,997,554	19,485,000
<b>Total Project Cost</b>		<b>5,992,661</b>	<b>64,485,000</b>

### PROJECT COMPONENTS AND FINANCING

Project Objective: To scaling up best practices and innovations for sustainable and inclusive wheat-based production landscapes and value chains						
Project Components	Component Type	Project Outcomes	Project Outputs	Trust Fund	(in \$)	
					GEF Project Financing	Co-financing
<b>Component 1.</b> Integrated Landscape Management (ILM) system	TA	<p><b>1.1.</b> National legal, regulatory, and institutional frameworks strengthened to support sustainable wheat landscapes and value chains to enhance delivery of global environmental benefits and sustainable livelihoods</p> <p><u>Indicators:</u></p> <ul style="list-style-type: none"> <li>Number of new legal/regulatory frameworks drafted under the framework of Land Code to support project objectives</li> <li>A functional platform to enable the Task Force at national and sub-national levels</li> <li>Number of men and women with enhanced</li> </ul>	<p><b>1.1.1:</b> Assessment of enabling conditions and regulatory framework for multi-agency and regional management of wheat landscapes and sustainable food systems carried out</p> <p><b>1.1.2</b> Inter-ministerial Task Force chaired by the State Environmental Committee established to oversee development and adoption/amendment of policies/regulations to enable implementation of ILM principles,</p>	GEFTF	300,000	3,000,000



		capacities to promote sustainable FOLUR	<p>including addressing perverse fiscal subsidies for wheat</p> <p><b>1.1.3</b> Capacity development program initiated based on needs assessment of stakeholders involved in wheat value chain, including use and implementation of the toolbox for ILM</p> <p><b>1.1.4</b> Policy briefs, advocacy and awareness-raising materials prepared and published to inform discussions and decision making on priority issues related to FOLUR and project objective</p>			
		<p><b>1.2</b> National financial incentives adopted to promote ILM in line with LDN principles and climate-smart, environmentally sound wheat production</p> <p><u>Indicators:</u></p> <ul style="list-style-type: none"> <li>• Number/amount of innovative government programs to support scale up of project actions at different parts of the country</li> <li>• Number of PPP investments in nature-based solutions including natural infrastructure and other soft-infrastructure investments in wheat landscapes to preserve farmer natural capital and provide cost-effective natural solutions</li> </ul>	<p><b>1.2.1:</b> Assessment of existing and potential incentive mechanisms for ILM from national and international experiences carried out, including identification of innovative business models to encourage public and private investments in sustainable wheat production</p> <p><b>1.2.2</b> Provision of incentives to the farmers who apply sustainable wheat production practices established</p> <p><b>1.2.3</b> PPPs on the ground for nature-based solutions in wheat-dominated landscapes</p> <p><b>1.2.4</b> Economic case for scaling-up at</p>	GEFTF	200,000	5,000,000

			national and regional levels for integrated management of sustainable wheat production landscapes and ILM developed, tested, and adopted by the Task Force			
		<p><b>1.3.</b> Land use planning approaches in the target regions of Karakalpakstan, Khoresm, and Kashkadarya transformed to ensure development of sustainable, multifunctional landscapes with agreed partnership, (impact-) and sustainable financing and methodology to enable vital ecosystem services, biodiversity conservation and multi-functional wheat production landscapes</p> <p><u>Indicators:</u></p> <ul style="list-style-type: none"> <li>Number of agreed landscape management plans that promote strategic land use planning/zoning for multiple use in participatory manner</li> <li>Number of people from the Local and National authorities and key groups of land users trained on implementation of principles and rules outlines in the land use plans of the target regions</li> </ul>	<p><b>1.3.1.</b> Integrated landscape and wheat VC life cycle assessments (e.g. EX-ACT VC tool or others) and wheat production suitability analysis conducted based on agro-climatic conditions to inform ILM, farm and value chain level interventions, including effective biodiversity, and climate-smart options developed, tested, and demonstrated</p> <p><b>1.3.2.</b> ILM plans using FAO Land Resources Planning Toolbox elaborated, consulted, and adopted by authorities in accordance with Land Code</p>	GEFTF	300,000	10,000,000
<b>Component 2.</b> Promotion of sustainable food production practices & responsible commodity	Inv	<p><b>2.1.</b> Sustainable food production demonstrated on an area of 350,000 ha on irrigated and rein-fed productive landscapes</p> <p><u>Indicators:</u></p> <ul style="list-style-type: none"> <li>Number of households and communities adopting sustainable</li> </ul>	<b>2.1.1</b> Formation of new and/or capacity building of existing producer organizations and Wheat Clusters to implement sustainable wheat production and diversification at farm and landscape	GEFTF	1,200,000	10,000,000

value chains		<p>production practices at landscape level with significantly reduced environmental impacts (GHG emissions, water use efficiency, biodiversity conservation) based on the agreed Standard and validated by impact indicators, whilst ensuring sustainable production</p> <ul style="list-style-type: none"> <li>• Number of communities adopting economically viable alternatives to wheat for increasing biodiversity, land restoration and reducing environmental pollution.</li> <li>• Number of Extension agents with capacity for supporting best on-farm practices, responding to gender-differentiated needs of producers</li> <li>• Number of stakeholders with capacity to promote effective wheat value chain and market-based solutions (including linkages to green value chains / commodity platforms and standards, consumer awareness and brand-building) that drive demand for sustainable climate-smart agri-food systems and products.</li> <li>• Hectares transformed with land use practices</li> </ul>	<p>levels (including Farmer Field Schools, FFS and Training of Trainers, ToT) to implement improved farming management practices and landscape management</p> <p><b>2.1.2.</b> Diversification approaches to maintain diversity of production systems (diversification, crop rotation and inter-cropping, improved wheat germplasm) demonstrated</p> <p><b>2.1.3.</b> Improved management of productive croplands to increase crop production (conservation agriculture, integrated soil nutrient management, improved wheat cultivars, subsurface drip irrigation system, integrated pest management, etc.) demonstrated</p>			
		<p><b>2.2.</b> Incentives for innovative, inclusive and sustainable value chains under implementation</p> <p><u>Indicators:</u></p> <ul style="list-style-type: none"> <li>• Number of scalable market-based instruments that</li> </ul>	<p><b>2.2.1.</b> Suits of “sustainable wheat contract” models with attributes that satisfy heterogeneous needs of different segments of the wheat value chain (producers, millers)</p>	GEFTF	500,000	3,000,000

		<p>support innovative, sustainable and inclusive value chains</p> <ul style="list-style-type: none"> <li>• Number of public-private sector partnerships and small holder to access credit and de-risking of investments and financial services which maximize integrity and sustainability wheat value chains</li> <li>• Number of value chains and markets favoring and rewarding wheat from inclusive and sustainably managed landscapes</li> </ul>	<p>and farmers introduced, responsive to needs and capacities of men and women producers</p> <p><b>2.2.2.</b> Locally appropriate and equitable agro-environmental incentives adopted to link small holder outputs to local and potentially regional markets for sustainably sourced commodities from sustainably managed landscapes by leveraging wide stakeholder involvement, including the private sector</p> <p><b>2.2.3.</b> Cooperative platform for wheat value chain actors developed focusing on sustainable wheat production, marketing, and sale</p>			
<p><b>Component 3.</b> Conservation &amp; restoration of natural habitat</p>	Inv	<p><b>3.1.</b> Enhanced conservation and restoration of habitats/ ecosystems in production landscapes for GEB and enhanced ecosystem services to support agriculture in an equitable manner</p> <p><u>Indicators:</u></p> <ul style="list-style-type: none"> <li>• Hectares of land under effective management and restoration of habitats such as riparian zones for enhanced biodiversity conservation, ecosystem connectivity and species conservation</li> </ul>	<p><b>3.1.1.</b> Capacity building and resource mobilization carried out for implementation of ILM plans through local producers, government and other stakeholders – including the private sector for conservation of existing high biodiversity areas or restoration of degraded areas</p> <p><b>3.1.2</b> Models of benefit sharing from ILM between communities and other stakeholders for conservation and restoration of</p>	GEFTF	2,807,296	31,285,000

			<p>habitats/ ecosystems in production landscapes developed</p> <p><b>3.1.3</b> Alternative livelihoods demonstrated for community members involved in activities that threaten global environmental values for conservation and restoration of habitats/ ecosystems in production landscapes</p> <p><b>3.1.4.</b> Degraded ecosystems/habitats of high nature value in target areas in production landscapes put under sustainable management and restored</p>			
<p><b>Component 4.</b> Knowledge Management and M&amp;E</p>	TA	<p><b>4.1:</b> Project implementation based on RBM and lessons learned/good practices documented and disseminated</p> <p><u>Indicators:</u></p> <ul style="list-style-type: none"> <li>• MRV system for agriculture sector established</li> <li>• National outreach campaign</li> <li>• Increased national awareness on sustainable food systems and landscape restoration practices</li> <li>• A gender-sensitive monitoring and evaluation systems</li> </ul>	<p><b>4.1.1:</b> Standardized indicators introduced linking to the FOLUR IP (calculation, testing, integration SDG indicators, extrapolation from local to national scale)</p> <p><b>4.1.2:</b> A national experience exchange network on sustainable food production established at the Ministry of Agriculture and linked to the Kazakhstan FOLUR IP exchange network</p> <p><b>4.1.3:</b> RBM Gender-Sensitive system of the project promoted adaptive management through capturing key results of the</p>	GEFTF	400,000	2,000,000

			project activities and peer-to-peer training  <b>4.1.4:</b> Communication Strategy and KM strategy are developed and implemented  <b>4.1.5:</b> Project Mid-term review and Final Evaluation are conducted  <b>4.1.6:</b> Global IP platform engagement & coordination			
Subtotal			(select)	5,707,296	64,285,000	
Project Management Cost (PMC)			(select)	285,365	200,000	
<b>Total Project Cost</b>				<b>5,992,661</b>	<b>64,485,000</b>	

**INDICATIVE SOURCES OF CO-FINANCING FOR THE PROJECT BY NAME AND BY TYPE, IF AVAILABLE**

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount (\$)
Recipient Country Government	State Committee on Ecology and Environmental Protection	In-kind	Recurrent expenditures	18,000,000
Recipient Country Government	Ministry of Agriculture	In-kind	Recurrent expenditures	10,000,000
Recipient Country Government	Local Government Authority of the Autonomous Republic of Karakalpakstan	In-kind	Recurrent expenditures	4,000,000
Recipient Country Government	Local Government authority of the Khoresm Region	In-kind	Recurrent expenditures	3,000,000
Recipient Country Government	Local Government authority of the Kashkadarya Region	In-kind	Recurrent expenditures	2,000,000
Private Sector	Wheat Clusters in the Autonomous Republic of Karakalpakstan	Grant	Investment Mobilized	13,000,000
Private Sector	Wheat Clusters in the Khoresm Region	Grant	Investment Mobilized	7,500,000
Private Sector	Wheat Clusters in the Kashkadarya Region	Grant	Investment Mobilized	2,000,000
Private Sector	Council of Farmers, Dehkan Farms, and Landowners	Grant	Investment Mobilized	2,000,000
Private Sector	Koson Flour Milling Plant	In-kind	Recurrent expenditures	885,000
Private Sector	Tortkol Flour Milling Plant	In-kind	Recurrent expenditures	1,100,000
GEF Agency	IUCN	Grant	Investment Mobilized	1,000,000
<b>Total Co-financing</b>				<b>64,485,000</b>

Describe how any "Investment Mobilized" was identified.

**Wheat Clusters** will be key investors for the wheat farmers' support. Wheat Clusters in **Khoresm**: Umidli chorva, Gurlan agroklaster LLS, Koshkopir parranda LLS, Ibragim Farida farm, Gulomboy Ikromboy farm, Khonka kapital LLS, Juryonli Joshkin, Azizbek Reyimbayev farm, Khiva Korrakul, Khorazm vakhri farm; in **Kashkadarya**: Guzor oq tulpori farm, Mol hosil sifat farm, Suvchi cho'lda farm, Dolobov Islom Kamolovich farm, Farovon farm, Zafar Abdimurodovich farm, Amir bobo farm, Sanjarbek Nadjim ogli farm, Bekzod kamol chorva rivoji farm, Bogobod Qorabayir farm, Kitob ip yigiruv Invest Product LLS, Chamanzor oltin dalalari farm, Nayzor farm, Tabiiy toza LLS, Saidislombek farm, Navbokhor farm, Arslonbek Asadbek Dilshodbek farm, Boqiev Toshpolat Xushovich farm, Oripov Orom Oripovich farm, Khazaratov Khayrullo bobo farm, Gudal bobo farm, Rakhim farm, Dukchi jahon quvonchi farm, Jo'rayev Yashin farm, Ulash hoji Jalil ogli farm, Ulugvor meros farm; in **Karakalpakstan**: Absalyut Jemchug LLS, Tortkol non LLS, Eko agro Kapital LLS, El obod makhalla farm, Nurimmat Kurbonov farm, QQB EKSPORT LLS, Rich Harvest LLS, Nursultan Baurjan farm, Asadbek Bekblatov farm, Habibulla rajabboy farm, Bekhro'z Jahongir farm, Juldyz farm, Adbi Esen farm

**Council of Farmers, Dehkan Farms, and Landowners** will provide investments to support the wheat farmers and smallholders.

**IUCN**: regional project "Building capacity to implement IPBES Global Assessment in Asia". Uzbekistan is one of the outreach countries with the budget allocation of US\$1 million over five years (2021-2024)

Efforts will be made to establish collaboration and bring in additional co-financing from external private sector stakeholders (potentially EU and ME) during the PPG.

#### TRUST FUND RESOURCES REQUESTED BY AGENCY(IES), COUNTRY(IES), FOCAL AREA AND THE PROGRAMMING OF FUNDS

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	(in \$)		
					GEF Project Financing (a)	Agency Fee (b)	Total (c)=a+b
FAO	GEFTF	Uzbekistan	Climate Change	CC STAR	3,107,305	279,657	3,386,962
FAO	GEFTF	Uzbekistan	Land Degradation	LD STAR	443,901	39,951	483,852
FAO	GEFTF	Uzbekistan	Biodiversity	BD STAR	443,901	39,951	483,852
FAO	GEFTF	Uzbekistan	MFA	IP FOLU	1,997,554	179,780	2,177,334
<b>Total GEF Resources</b>					<b>5,992,661</b>	<b>539,339</b>	<b>6,532,000</b>

#### PROJECT PREPARATION GRANT (PPG)

Is Project Preparation Grant requested?

Yes ☐ If yes, PPG funds **have to be requested via the Portal** once the PFD is approved

No ☐ If no, skip this item.

#### PPG AMOUNT REQUESTED BY AGENCY(IES), TRUST FUND, COUNTRY(IES) AND THE PROGRAMMING OF FUNDS

GEF Agency	Trust Fund	Country/ Regional/Global	Focal Area	Programming of Funds	(in \$)		
					PPG (a)	Agency Fee (b)	Total c = a + b
FAO	GEFTF	Uzbekistan	Climate Change	CC STAR	103,704	9,333	113,037
FAO	GEFTF	Uzbekistan	Land Degradation	LD STAR	14,815	1,333	16,148
FAO	GEFTF	Uzbekistan	Biodiversity	BD STAR	14,815	1,333	16,148
FAO	GEFTF	Uzbekistan	MFA	IP FOLU	66,667	6,000	72,667
<b>Total PPG Amount</b>					<b>200,000</b>	<b>18,000</b>	<b>218,000</b>

#### PROJECT'S TARGET CONTRIBUTIONS TO GEF 7 CORE INDICATORS

Project Core Indicators		Expected at PIF
3	Area of <b>land restored</b> (Hectares)	50,000 ha
4	Area of <b>landscapes under improved practices</b> (excluding protected areas) (Hectares)	350,000 ha
6	<b>Greenhouse Gas Emissions Mitigated</b> (metric tons of CO2e)	1 million tons of CO2-e
11	Number of <b>direct beneficiaries disaggregated by gender</b> as co-benefit of GEF investment	5,000 (50% women)

The figures come from Annex A with the detailed estimates on the core indicators. GHG estimates (indicator 6) are based on FAO EX-ACT tool. The indicator values will be confirmed during the PPG.



## PROJECT DESCRIPTION

### Country Context

**Describe the country's relevant environmental challenges and strategic positioning relative to the systems transformation proposed for the program, including relevant existing policies, commitments, and investment frameworks. How are these aligned with the proposed approach to foster impactful outcomes with global environmental benefits?**

Agriculture is the third most important sector in the national economy (17.2% of GDP), employing nearly a third of the population and is also a main source of income and livelihoods for nearly 60 per cent of people living in rural areas. Agricultural land makes 45% of the territory, where most of the farmland has been allocated by the State for production of cotton and wheat (74% in 2015, dropping to 69% in 2018<sup>37</sup>). As the land under cotton and wheat decreased in recent years, the area under horticulture production increased. This trend is expected to accelerate in the future based on the targets set under the updated Agricultural Strategy. Irrigated agriculture (mainly cotton and wheat) consumes 90% of annual total actual renewable water resources, making it directly responsible for a tremendous stress on water resources<sup>38</sup>. The average national wheat yield of 4.5 t/ha is below optimal.

Central Asia is foreseen to maintain its position as the world's second-largest wheat producer<sup>39</sup>. Uzbekistan is the second producer of wheat after Kazakhstan in the region, while concomitantly being the biggest importer of wheat grain in Central Asia. While imports (mainly from Kazakhstan) of wheat grain have registered a tenfold increase over the last years (from 211,000 tonnes in 2010/11 to 2.2 million tonnes in 2018/19), imports of wheat flour have been decreasing over the same period (from an estimated 1.3 million tonnes in 2010/11 to 641,000 tonnes in 2018/19) due to increased domestic milling capacities. This allows the country to satisfy its domestic needs of wheat flour and export additional supplies. As wheat is crucial for national food security and local livelihoods<sup>40</sup>, its national production volume has increased by almost 600% over the past three decades<sup>41</sup>. While rapidly growing demand for wheat for food and feed continues to drive expansions in production, the restructuring of the wheat sector could potentially push the agricultural frontier at the cost of environmental externalities, but also creates opportunities for transformational change in this sector.

Uzbekistan ranks the 6th in the world in wheat consumption<sup>42</sup>. Domestic production satisfies around 70% of consumption, and the rest is imported from Kazakhstan. To satisfy the rapidly increasing demand for wheat, the Government of Uzbekistan has emphasized wheat value chain restructuring<sup>43</sup>. The Government is in the process of replacing the State production targets and procurement prices with public grain stocks and stronger role of private sector linking the producers to markets<sup>44</sup>. Until now, nationally produced wheat was collected by the State and separated based on gluten content before being stored in large silos<sup>45</sup>. Under the reform, new private sector entities "Wheat Clusters" have been formed to serve large and small wheat producers as the main investors, input and extension providers. They are present in most regions of the country, with around 40 of them present in the three target regions.

Current wheat production systems have a substantial environmental footprint – such as severe groundwater depletion, watershed degradation, leaching of salts and salinization of soils when water demand is at its highest, and reduction of other ecosystem services. These services can be significant particularly for the rural communities. Thus, the government set a strategic priority to promote innovative models for public-private partnerships for sustainable wheat systems while addressing social and environmental externalities.

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<sup>37</sup> State Statistics Committee of Uzbekistan (2018).

<sup>38</sup> <http://www.fao.org/3/a-bs204e.pdf>

<sup>39</sup> Regional overview of Food Security and Nutrition in Europe and Central Asia. FAO. 2018.

<sup>40</sup> Qadir et al., 2006

<sup>41</sup> Official data from the Ministry of Agriculture. In 1991, Uzbekistan produced 0.9 mln tonnes of wheat, while in 2018 wheat production was 5.3 mln tonnes (increase almost 600%).

<sup>42</sup> FAOSTAT, extracted on March 3, 2020. Only surpassed by Tunisia, Azerbaijan, Algeria, Turkmenistan and Morocco.

<sup>43</sup> Resolution of the Cabinet of Ministers of the Republic of Uzbekistan about Additional Measures to Ensure High Yield While Growing Grain Crops Step-by-step Implementation of the Cluster System. September 24, 2019, No. 806.

<sup>44</sup> Public Grain Stocks in Uzbekistan: How Should They Look Like? World Bank. January 21, 2020

<sup>45</sup> Miller Magazine. 2018. Grain and Flour Market in Uzbekistan.

<http://www.millermagazine.com/english/grain-and-flour-market-in-uzbekistan/>

The Government set out its Agriculture Strategy<sup>46</sup> in October 2019 to redefine the State's role and a shift to market-oriented, inclusive, and private sector-led agriculture. At its heart are reforms to: (i) strengthen the transparency of land allocation and land tenure security; (ii) eliminate the state production system for cotton and wheat, while attracting private investments in agriculture; (iii) shift agricultural public expenditures from subsidies to public goods; (iv) invest in the agricultural knowledge and innovation system; (v) enhance the management of soils and water; and (iv) collect and disseminate better data and information. It recognizes the structural and policy weaknesses of Uzbekistan's agriculture and prioritizes public investments in quality, reliability, safety, and logistics, while creating space for the private sector to benefit from public investments and generate profits and jobs.

The Land Code stipulates the policies and directions for the management of land resources and lists the guiding principles for the need of maximum efficiency and ownership in land use, comprehensive land protection and planning and rational utilization of land resources in all sectors of the economy. Meanwhile, the Government set out the agriculture production distribution based on regions' climatic and soil conditions<sup>47</sup> and highlights integrated land use planning as a priority for environmental protection in the Republic<sup>48</sup>.

Uzbekistan's agriculture sector is undergoing a major transformation, with big investments going into wheat value chains. At the same time, there is recognition by the Government that this needs to happen in a sustainable, inclusive, responsible way, to protect the environment and improve livelihoods, and ensure the long term resilience of production systems. The project aims to trigger wide-scale adoption of efficient land management technologies and conservation approaches and promote green value chains to change the trajectory from ecosystem degradation to sustainable management for multiple benefits. There are important opportunities for cooperation with Kazakhstan, and the project can help trigger change in neighboring countries and similar transitioning economies towards sustainable production and green value chains.

Uzbekistan proposes to transform the management of critical and highly degraded landscapes where globally important biodiversity coexists with production systems, under threat from overexploitation and agriculture intensification. Uzbekistan's participation presents a strategic opportunity for this IP to harness the Government's interest to transform the agricultural commodity systems, given the country's changing State order-driven system towards a market-oriented system for wheat value chains, together with the strategic engagement with the Kazakhstan FOLUR project on wheat.

#### Commitments under the relevant Conventions:

**Bonn Challenge:** Restoration of 0.5 million hectares of deforested and degraded land by 2030. Astana Resolution: restoring additional 0.5 million ha depending on the availability of international financing.

**UNCCD:** A national LDN strategy will be prepared in the scope of GEF-7 LDN (FAO).

**UNFCCC:** *Adaptation of agriculture and water management sector* (Climate resilience of agriculture through diversification of food crop production patterns; Improvement of irrigated lands affected by desertification, soil degradation and drought, increase in soil fertility of irrigated and rain-fed lands; Improvement of water management). *Mitigation of the Aral Sea disaster impacts* (Conservation of the ecological balance in Priaralie, combating desertification, improvement of management system, efficient and rational water resources use). *Adaptation of ecosystems* (Restoration of forests in mountain and piedmont areas, conservation of indigenous plant species in semi-deserts and deserts; Improvement of sustainability in management of fragile desert ecosystems).

**CBD:** Uzbekistan's NBSAP emphasizes the control of negative externalities in unsustainable agricultural production. National Targets to 2025: (5) a set of measures to reduce the rate of degradation and fragmentation of the most vulnerable natural ecosystems; (8) the state programme for conservation and sustainable use of agricultural biodiversity; (10) the activities on conservation and sustainable use of

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<sup>46</sup> <https://lex.uz/docs/4567334?query=%D1%81%D1%82%D1%80%D0%B0%D1%82%D0%B5%D0%B3%D0%B8%D1%8F>

<sup>47</sup> Resolution of the President of the Republic of Uzbekistan on Measures for the Rational Placement of Agricultural Crops and Forecasted volumes of Production of Agricultural Products in 2018.

<sup>48</sup> The President Decree "Concept of Environmental Protection of Uzbekistan by 2030"

biodiversity and maintenance ecosystem services are financed from state, private and international financial resources.

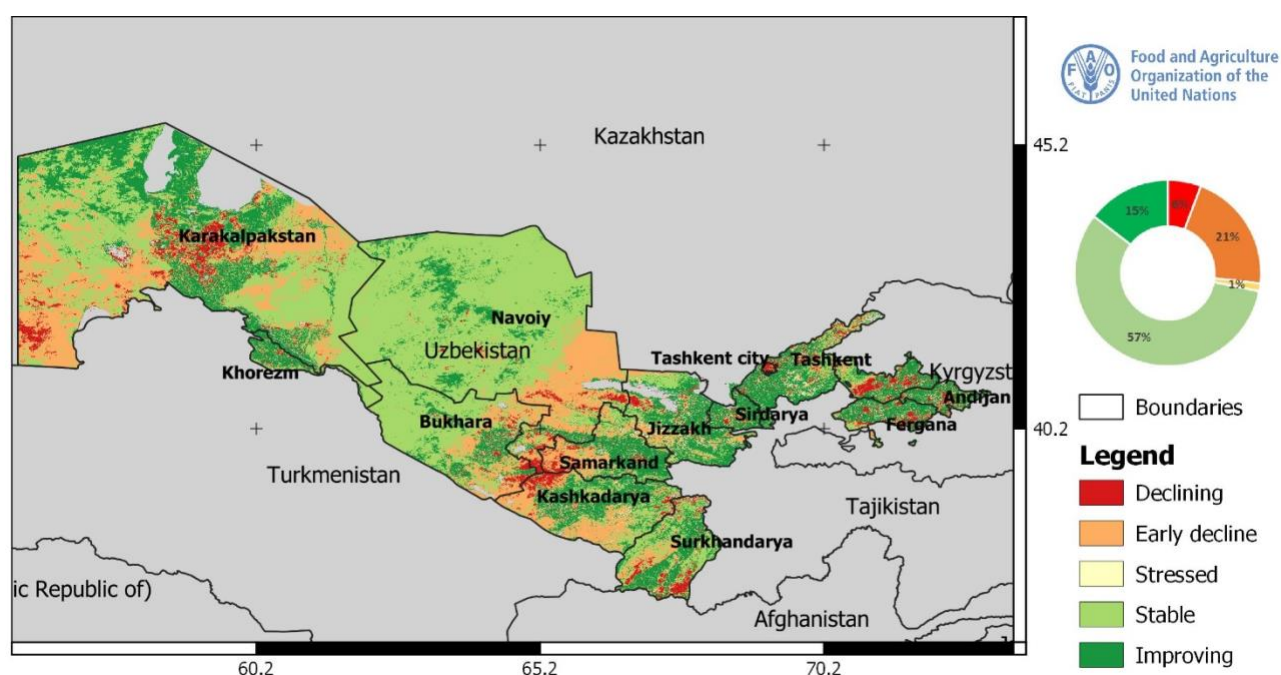
**Ramsar:** Uzbekistan currently has two Ramsar Sites, one of which is located in the project target region.

## Project Overview and Approach

- **Provide a brief description of the geographical target(s), including details of systemic challenges, and the specific environmental threats and associated drivers that must be addressed;**

**Brief description of the geographical targets – Karakalpakstan, Khorezm, Kashkadarya**

Figure 1. Land productivity in the target regions of Karakalpakstan, Khorezm, and Kashkadarya.



In Uzbekistan, desertification is observed on more than 70 percent of the land. About 60 percent of the country's irrigated land is saline land, including 18 percent with high salinity. The highest salinity of the soil is in Karakalpakstan (90%-95%), Bukhara (96%) and the Khorezm oasis (95%-100%). Due to the increasing salinity of the soil, the regions lose around US\$2 billion every year, or 5 percent of the regions' GDP. The causes behind land degradation are numerous and complex. They include a variety of socio-economic, institutional and policy-driven factors and have been summarized in the PIF.

Numerous studies point at lack of access to markets and credit, lack of extension, monoculture-cropping, implicit subsidies for irrigation water use and insecure land tenure to be the major drivers of land degradation in the country. More specifically, in irrigated areas of Uzbekistan, the main causes of soil salinization are excessive use of irrigation water and poor maintenance of irrigation and drainage infrastructure. Continued and often implicit subsidies for irrigation water and under-valuation of water, in general, create disincentives to save water. Input and output market institutions are often underdeveloped or lacking. The main land degradation problems in rainfed lands of Uzbekistan are soil erosion and soil fertility depletion.

After the collapse of the Soviet Union (1991) land degradation in the region is worsened because of disorganized land management systems. Often mono-cropping and a production strategy aiming at increasing

production of agricultural commodities without considering environmental consequences have been listed as major causes of past and on-going land degradation<sup>49</sup>.

FAO is currently preparing a project document that targets development of the LDN targets for Uzbekistan, where the issues and solutions will be carefully described and crafted.

The Autonomous Republic of Karakalpakstan – bordering Kazakhstan to the North and Turkmenistan to the South - largely consists of vast lowlands of Kyzyl Kum desert and around 1 million hectares of forests (30% of total forest area in Uzbekistan). Khorezm region represents an oasis on the lower reaches of the Amu Darya River. The irrigation water flowing into the desert has made the once barren landscape into irrigated fields. Karakalpakstan and Khoresm – comprising the Aral Sea region – created an ecological disaster as a result. The main crops grown in these regions are cotton, wheat, rice, sorghum, corn, and millet.

Kashkadarya – bordering Turkmenistan and Tajikistan - is located in the Kashkadarya River Basin and on the western edges of the Pamir-Alai Mountain Range. It enjoys the diversity of continental, partly subtropical and dry climate. Cotton, wheat, corn, and alfalfa are the main agricultural crops in the region. In 2017 the total wheat production in the target area was 1.6 million ha with an average yield of 3.6 t/ha<sup>50</sup>. Karakalpakstan and Khoresm regions grow mainly irrigated wheat in rotation with cotton, while Kashkadarya also grows rain-fed wheat as monoculture in the mountainous areas. Horticulture plays an important role in the three target regions.

The target area accounts for 43% of the total area of the country, 27% of the total area under wheat, and 80% of the total area under wheat in the three target regions. While being considered a priority for the environmental conservation, irrigated wheat production in Karakalpakstan and Khoresm regions has increased by around 38 times since 1991. The Kashkadarya region has been historically the main producer of wheat, both rain-fed and irrigated.

The winter wheat production has become the dominant component of farming systems in the Amudarya and Syrdarya basins. The farmers grow the crops on saline and waterlogged soil. Current wheat production practices involve growing of the crop in the fall/winter, while by the summer bare fallow results in the deposition of salts on the surface due to capillary rise from a saline shallow water table. Consequently, leaching of salts is undertaken in December-March, when water for irrigation is at its highest demand in the production of the summer cotton. Similar problems are observed on the rice producing areas and integrated landscapes.

Karakalpakstan and Khoresm regions have become a major sources of wind erosion, affecting 56% of the irrigated area of the whole country. In Karakalpakstan alone, the area of land with severe groundwater problems is now over 90% of the total territory. During the dust storms as much as 1.5-6.5 tonnes/ha of dust containing 0.3-1.0 tonnes/ha toxic salts are blown away and deposited on adjacent lands<sup>51</sup>. Khorezm and the neighboring Karakalpakstan are the largest populated area exposed to the wind-borne implications of Aral Sea disaster<sup>52</sup>.

Uzbekistan is home to multiple landraces of wheat distinguished in terms of their tolerance to droughts, heat, soil salinity and frosts. It also hosts unique natural habitats, including water-rich wetlands and numerous threatened species. The proposed area hosts three PAs and one Ramsar site. There are 15 KBAs located in direct proximity to the cropping systems of Karakalpakstan, Khorezm<sup>53</sup> and Kashkadarya<sup>54</sup>. The country's unique riparian ecosystems of tugai forests are mostly located in the Khorezm and Karakalpakstan regions alongside the Amudarya delta. In addition, Sarykamysh Lake and surrounding Ustyurt Plateau, Saiga Nature Sanctuary, Northern part of the Assake-Audan depression may be indirectly affected by unsustainable

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<sup>49</sup> Pender et al., 2010; Qushimov et al., 2007; Lal 2002

<sup>50</sup> Ministry of Agriculture of Uzbekistan Statistics

<sup>51</sup> UNEP and Glavgidromet, 1999

<sup>52</sup> Khamzina, 2006

<sup>53</sup> Sudochoye Lake, Mashankul and Khojakul lake complex, Zholdyrbas Lake, Akpetky Lakes and surrounding Aralkum Desert, Khorezm Fish Farm and adjacent lakes

<sup>54</sup> Karnabchul Steppe (77,156 ha), Achinskoe Lake (6,363 ha), Chimkurgan Reservoir (4,189 ha), Talimardzhan Reservoir (85,989 ha), Gissar State Nature Reserve (110,105 ha), South-West Gizzar foothills (19,928 ha) and Lake Dengizkul (49,658 ha). Lake Dengizkul is a Ramsar site as well (31,300 ha).

irrigation practices and reduced water inflows. The main threats to these areas are pressures due to agricultural expansion and intensification and climate change.

Risks from climate change are considered high for Uzbekistan, according to (IPCC AR5) estimates, and the selected landscapes are particularly at risk of climate change. The western part of the country, where the project is partially located, is likely to suffer frequent droughts that could increase the water demand for irrigation water, contribute to increased soil salinity and reduce native pasture productivity, with improper grazing management continuing to act as a driver of land degradation. Projected temperature increases and precipitation decreases are predicted to magnify current problems of water shortages and limit distribution throughout the ecological and socio-economic systems, with the country's water deficit of 2,000 m<sup>3</sup> in 2005 predicted to rise to 13,000 m<sup>3</sup> by 2050. As a result, rain-fed cropping areas and pastures will likely see reduction in productivity of biomass and product outputs, with overall yield reductions of 20-50%. During the PPG efforts will be put in place to link the advisory services to existing early warning models through FAO Global Information and Early Warning System (GIEWS) and Agriculture Stress Index System (ASIS).

Over the last two decades, Uzbekistan has faced several occurrences of extreme droughts, with crop yield losses of 50-75 % in the worst-affected areas. During the drought in 2000–01, it was reported that cereal production declined by 10%, cotton production by 17%, and rice production by 60%, resulting in about US\$130 million of losses<sup>55</sup>. The biggest losses occurred in the downstream areas in Uzbekistan, where about 600,000 people were in need of food aid to the value of US\$19 million<sup>56</sup>. The Government of Uzbekistan is undertaking several initiatives to mitigate climate change risks at policy, technology/science, and field levels.

**Systemic challenge 1: Limited capacity for sustainable development of the wheat sector to address the challenges of shifting agricultural dialogue from a centrally-controlled planned economic system to a market-based economy to maximize GEBs.**

Uzbekistan's wheat researchers, breeders, value chain actors, and decision-makers have accumulated several decades' worth of experience in implementing assigned government tasks under centrally planned economy. The shift from centrally planned mono-cropping of wheat to a market-oriented system for wheat production coupled with the appearance of new farm types (Wheat Clusters) will require transformation and modernization of inputs provision, R&D and extension support, diversification, and sustainable integrated approaches. However, existing policy and legal frameworks coupled with limited capacities of newly established Wheat Clusters and the lack of planning tools (e.g. suitability analysis for wheat production planning, agro-technological maps that reflect actual soil fertility, etc.) are inadequate to bring about effective ILM at scale to achieve socioeconomic and environmental benefits. There is also limited capacity amongst the members of rural communities to analyze changing economic circumstances and environmental needs and respond in an effective and innovative manner. Given transition from the planned economy, engaging the private sector will also be challenging, and the efforts will be made from the early stages of project development. This challenge, nevertheless, provides high learning potential for restoration in the region and other countries with in similar economic transition.

**Systemic challenge 2: Limited inter-sectoral approach to build on spatial plans to mitigate unsustainable practices in the integrated landscapes.**

There is currently limited inter-sectoral efforts to undertake spatial planning for mitigation of threats from unsustainable agricultural practices impacting the resilience of natural systems (and GEBs) on farm and in the wider landscape. The wheat production targets are set by Ministry of Agriculture and the grain is processed by the Uzbek Grain Association in accordance with the resolution on land use plan for agricultural crops<sup>57</sup> on an annual basis. Under this system, when a wheat farmer produces above the target level, s/he is able to keep or sell that amount on the open market which is a significant economic incentive for the farmer that can cause environmental impacts (externalities) on farm and in the wider landscape. The resolution was adopted on the basis of proposals from the Ministry of Agriculture, Ministry of Economy and Industry, Ministry of Water Resources, Ministry of Investment and Foreign Trade, State Committee for Land Resources, Geodesy, Cartography and State Cadastre, Council of Farmers, Dehkan Farms and Landowners, Ministers of the Republic

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<sup>55</sup> World drought management and mitigation assessment for Central Asia and the Caucasus. – Phase two. Country drought management and mitigation profile and strategy, Tashkent, Uzbekistan. – World Bank, 2006.

<sup>56</sup> Drought characteristics and management in Central Asia and Turkey: FAO Waters Report. 44. Rome, Italy: FAO, 2017.

<sup>57</sup> Resolution of CM RUZ on measures for the rational land use plan for agricultural crops and forecasted volumes of crop production for 2020, effective use of land and water resources. 20.12.2019, # 1025

of Karakalpakstan, and the decentralized departments of the provinces. However, there is limited coordination or integration between these involved stakeholders.

**Systemic challenge 3: Limited organization and incentivization along the wheat value chain to work effectively across landscape level.**

Wheat value chains are fragmented and poorly coordinated, making integrated approaches and whole of value-chain efforts to enhance sustainability difficult. There is inadequate policy support to the provision of agricultural inputs, financial services, and incentives for integrated, sustainable approaches to wheat production and management of its landscapes. Currently, the number of national private credit agencies is limited and their provision of affordable, secure, and inclusive collateral is inadequate. The most agricultural inputs in Uzbekistan remain severely underfunded, except for irrigation, which delivers free water to cotton and wheat production, and for select subsidized credit for specific inputs. About 80 percent of wheat is produced by the relatively large farms, with the average size of 50 ha per farm. These farms are subject to the State order (production and marketing) system. The remaining 20 percent of wheat is produced by small dehkan farms, with the average size of 0.5 ha per farm. Detailed studies with quantifiable data for Uzbekistan on the respective impacts on the environment posed by these two types of farms are not available. Large private farmers producing State-mandated wheat producers enjoy far greater access to the State delivered suite of agricultural inputs, financing resources, while small dehkan farms are restricted in choice and access to these resources. In Tashkent oblast alone, for example, in 2018 dehkan farms paid 125% more for nitrogen fertilizers, 17% more for fuel and 27% more for the leased machinery. Concurrently, the current State model for underwriting crop insurance for wheat producers is outdated and requires serious review. Likewise, financial resources and technical assistance to restore soil fertility on the lands that are either currently under mono-cropping wheat production or that are being converted to horticulture production are largely missing. Private sector and consumer involvement to incentivize sustainable wheat value chains under a new market-oriented paradigm are in early stages of development and are inadequate to have transformative impacts at the scale needed.

- **Describe the existing or planned baseline investments, including current institutional framework and processes for stakeholder engagement and gender integration;**

The State Committee on Ecology and Environmental Protection ensures the implementation of a unified state policy on environmental safety and natural resources protection. The Ministry of Agriculture is responsible for the continuous supply of food products at stable prices. Ministry of Water Resources implements a policy on water resource management including rational use and protection of water resources, and prevention and elimination of harmful impacts of water. The decisions of the key Government agencies will be implemented at sub-national level by local authorities who will partner with the project.

The project will leverage major baseline investments in the region targeting and scaling out sustainable wheat production and other agricultural commodities. The key baseline programs that have a potential to trigger support for green food production area:

- State Committee on Ecology and Environmental protection (18 million USD). It includes the state budget for the Karakalpakstan, Khorezm, and Kashkadarya regions for environmental protection with particular focus on biodiversity conservation;
- Ministry of Agriculture (10 million USD). It includes the budget for the target regions on agriculture activities including, research and extension;
- Local Government authority of the autonomic republic of Karakalpakstan (4 million USD). It includes the budget for rural development;
- Local Government authority of the Khorezm region (3 million USD), mainly for the rural development;
- Local Government authority of the Kashkadarya region in total (2 million USD).

Investment by private sector includes the following:

- Private Wheat Clusters in the Karakalpakstan in total (13 million USD);
- Private Wheat Clusters in the Khorazm region in total (7.5 million USD);
- Wheat Clusters in the Kashkadarya region in total (2 million USD);
- Council of Farmers, Dehkan Farms, and Landowners (2 million USD). It is mainly from the Fund for support the farmers and smallholders under the Farmers Council of Uzbekistan;
- Tortkol flour milling plant in the Autonomous Republic of Karakalpakstan (1.1 million USD);
- Koson flour milling plant in the Kashkadarya region (0.885 million USD).

Other:

- IUCN: regional project “Building capacity to implement IPBES Global Assessment in Asia”. Uzbekistan is one of the outreach countries with the budget allocation of US\$1 million over five years (2021-2024)

The project will establish technical linkages and coordination with the following projects:

- FAO project “Central Asian Desert Initiative” in the framework of the International Climate Initiative;
- FAO-GEF project “Integrated natural resources management in drought-prone and salt-affected agricultural production landscapes in Central Asia and Turkey. (CACILM-2);
- FAO-GEF project “Sustainable management of forests in mountain and valley areas in Uzbekistan”.
- FAO- Sustainable Forest and Rangelands Management in the Dryland Ecosystems of Uzbekistan which is focused on the Bukhara-Navoi Landscape lying between Karakalpakstan, Khorezm, and Kashkadarya. There is potential for synergies and scaling beyond the life of both projects.
- WB loan “Agriculture Modernization Project” in Uzbekistan;
- WB loan “Horticulture Development Project” in Uzbekistan;
- WB-GCF project “Climate adaptation and mitigation program for the Aral Sea Basin (CAMP4ASB)”;
- GIZ project on Ecosystem Based Land Use and Ecosystems Conservation along the Lower reaches of Amu Darya (IKI Amu Darya) in the framework of the International Climate Initiative;
- EBRD public and private investments in Uzbekistan: DFF - Kokand Fertilisers GET Capex; FIF - CA WiB Programme-DAVR Bank;
- IFAD Agriculture Diversification and Modernization Project;
- UNDP-GEF project “Sustainable natural resource use and forest management in key mountainous areas important for globally significant biodiversity”;
- UNDP-Adaptation Fund project “Developing climate resilience of farming communities in the drought prone parts of Uzbekistan;

- UNDP-GEF project “Reducing pressure on natural resources from competing land use in non-irrigated arid mountain, semi-desert and desert landscapes of Uzbekistan”;
- UNDP-GEF project “Conservation and sustainable management of lakes, wetlands, and riparian corridors as pillars of a resilient and land degradation NEUTRAL Aral basin landscapes supporting sustainable livelihoods”;
- stakeholders UNDP-GEF Conservation and sustainable management of lakes, wetlands, and riparian corridors as pillars of a resilient and land degradation neutral Aral basin landscape supporting sustainable livelihoods, which is aiming To enhance the resilience and sustainability of landscapes and livelihoods in the Aral basin, and progress toward Land Degradation Neutrality (LDN), through integrated management of land, lake, wetland, and riparian ecosystems, with engagement of private sector and local communities. This project is targeting all of the regions for the FOLUR IP and is very much linked to the irrigation challenge mentioned.

The table below depicts key project stakeholders. Given the unprecedented challenges posed by the ongoing global pandemic, the key partners’ project roles and the engagement mechanisms will be defined and conducted during the PPG. In addition, efforts will be made to establish linkages with the local financing institutions during the PPG.

Organization	Organization’s mandate
State Committee on Ecology and Environmental Protection	<ul style="list-style-type: none"> <li>• Ensure realization of state policy in the field of environmental safety, environmental protection, use and reproduction of natural resources;</li> <li>• Ensure government oversight of the implementation of the Ministerial mandates in relation to environmental sustainability, state committees, departments, enterprises, institutions and organizations, as well as individual legal entities in the field of use and protection of land, mineral resources, waters, forests, flora and fauna, air;</li> <li>• Ensure implementation of cross-sectoral integrated environmental management;</li> <li>• Ensure organization and coordination of activities to ensure a favorable state of the environment and improvement of ecological situation.</li> </ul>
Ministry of Agriculture	<ul style="list-style-type: none"> <li>• Implement a unified policy on agriculture and food security aimed at comprehensive modernization of the sector, implement scientific and technical innovations, modern resource-saving technologies and intensive technologies and best agronomic practices;</li> <li>• Coordinate state bodies, agricultural enterprises, and other organizations dealing with food security in the Republic;</li> <li>• Ensure extended processing of agricultural products, improved mechanisms of the public-private partnership, as well as enhanced participation of business entities in socio-economic development of the territories;</li> </ul>
Council of Farmers, Dehkan Farms, and Landowners	<ul style="list-style-type: none"> <li>• Develop proposals on improving legislation in farming, strengthening material and financial base of farmers, ensuring reliable protection of their property.</li> <li>• Protect rights and interests of farmers, including in their relations with state bodies, vendors and services organizations, as well as courts.</li> <li>• Conduct public control over reorganization and creation of farms, and allocation of lands to them.</li> <li>• Assist in creating and expanding consulting centers, which will render legal, economic, financial and other assistance to farmers.</li> <li>• Monitoring and public control over the fulfillment of contractual obligations in agriculture.</li> </ul>
National Agricultural Research Institutes	<ul style="list-style-type: none"> <li>• Agricultural research institutions, their branches, and experimental stations in all regions of the country. Research and Production Center for Agriculture and Food Supply.</li> <li>• The Center is responsible for agricultural research and food systems including wheat production</li> </ul>



Local Government authorities of the Autonomic Republic of Karakalpakstan, Khoresm and Kashkadarya Regions	<ul style="list-style-type: none"> <li>• Responsible for meeting the direct needs of communities, and providing the regulatory guidance on resource management with the aim to maximize social and economic benefit of communities through the wheat growing in the target regions.</li> </ul>
Private Wheat Clusters in the Karakalpakstan, Khoresm and Kashkadarya	<ul style="list-style-type: none"> <li>• The main investors and extension advice providers for wheat growing and processing under the new Agriculture Policy (2019)</li> </ul>
Regional Milling plants in the Autonomic Republic of Karakalpakstan, Khoresm and Kashkadarya regions	<ul style="list-style-type: none"> <li>• To lobby for demand of Uzbek millers in domestic and foreign markets.</li> </ul>
Small-holder farmers in the Autonomic Republic of Karakalpakstan, Khoresm and Kashkadarya regions	<ul style="list-style-type: none"> <li>• To maximize social and economic benefit of wheat growing through optimum land use options</li> </ul>
ICARDA	<ul style="list-style-type: none"> <li>• To promote agricultural development in the dry areas of the developing countries. In cooperation with the Ministry of Agriculture and the NARS, it is implementing a number of projects on the improvement of farming systems in rain-fed lands by testing new varieties of wheat</li> </ul>
IWMI	<ul style="list-style-type: none"> <li>• To promote sustainable use of water and land resources in developing countries. IWMI works in partnership with governments, civil society and the private sector to develop scalable agricultural water management solutions that have a real impact on poverty reduction, food security and ecosystem health.</li> </ul>
IUCN	<ul style="list-style-type: none"> <li>• To work with national and local partners on the identification of nature-based solutions and landscape restoration. IUCN works in close partnership with international organizations, national and local authorities, research organizations, and civil society.</li> </ul>

#### Gender considerations

Women play an important role in agricultural growth in Uzbekistan, but face persistent obstacles and societal and economic constraints that limit their further inclusion in agriculture. Mostly women are unrepresented and “invisible” in the agricultural sector in Uzbekistan because of cultural norms and gender stereotypes that undervalue female labour. Majority of women often have no equal access to natural, financial resources/collateral and technology, and typically earn less. A detailed gender action plan will be developed at the PPG stage.

- **Describe how the integrated approach proposed for the child project responds to and reflects the Program’s Theory of Change, and as such is an appropriate and suitable option for tackling the systemic challenges, and to achieve the desired transformation with multiple global environmental benefits; and**

The project will follow the landscape approach<sup>58</sup>. The project will transform management of wheat-dominated landscapes in Uzbekistan by promoting inclusive, sustainable agricultural value chains that address underlying drivers of landscape degradation and enhance GEBs. Its components, outcomes and actions are aligned with the FOLUR TOC and address the proximate and underlying causes of key food and land-use challenges identified. The project will address weak and fragmented planning processes, conflicting land-use policies and poor participation/inclusion of stakeholders and land-users along the value chain for sustainable food systems and landscape-scale restoration by improving inter-sectoral collaboration through enhanced policy/regulatory frameworks for ILM and land-use/hydrology planning that facilitates integrated multi-agency and regional management of wheat production landscapes.

The project leverages local-national government and private stakeholders to address underlying drivers of unsustainable production systems and integrate across IP objectives by:

<sup>58</sup> <http://www.fao.org/3/i8324en/i8324en.pdf>

- Scaling-up green value chains, climate-smart, and eco-friendly farming production practices through practices, FFS and ToT in crop production and enabling industry stakeholders/actors to enhance sustainable value chains and products, with significantly reduced environmental impacts (**IP Objective 1**).
- Enabling smallholders to adopt alternatives to intensive wheat monoculture including diversification/crop-rotations, land restoration and reduced environmental pollution (**IP Objectives 1 and 3**).
- Facilitating restoration of degraded ecosystems and their services (linking to KBAs), managing the human-ecological relationship through promoting agro-ecological resilience, particularly in relation to improved water management, reduced pollution, and conservation of watersheds and key biodiversity areas in key production landscapes. This will be done based on landscape-level hydrology analysis, landscape-level integrated spatial planning, deploying packages of incentives for farmers to adopt agro-ecological practices, and use of nature-based infrastructure solutions (**IP Objective 3**).
- **Describe the project's incremental reasoning for GEF financing under the program, including the results framework and components.**

The project leverages local and national government, private sector stakeholders, and international organizations to address the underlying drivers of unsustainable wheat-dominated landscapes and value chains to address systemic challenges. The systemic challenges identified above will be dealt with through a coherent logic of interventions following STAP's recent theory of change primer<sup>59</sup>.

**Component 1** builds on the baseline in the area of land use planning relying on the partnership with the MoA and the State Environmental Committee. **GEF financing** will go towards strengthening national legal, regulatory, and institutional frameworks, incentives, and improved land use practices for ILM in line with LDN principles and climate-smart, environmentally sound wheat production and sustainable food systems that bring together multiple government, private sector and local stakeholders at landscape level to support planning for more balanced sustainable wheat landscapes and value chains to enhance delivery of global environmental benefits and sustainable livelihoods.

**Component 2** is relying on the partnership with the MoA, the State Environmental Committee, Authorities of the three target regions, the Wheat Clusters (key wheat investors in the country) and wheat millers to develop new modalities of financial assistance to stimulate consumer market/demand for the wheat that will be sustainably produced. **GEF financing** will go towards scaling-up sustainable food production on irrigated and rain-fed, wheat dominated productive landscapes (conservation agriculture, integrated soil nutrient management, improved wheat cultivars, subsurface drip irrigation system, integrated pest management, etc.). It will also go towards diversifying production systems (crop rotation and inter-cropping, improved wheat germplasm) through application of agreed local, national and international best practices via a mix of proven participatory approaches such as FFS and ToT and enabling wheat value chain actors to enhance sustainable value chains and products, with significantly reduced environmental impacts. GEF funding will also go towards enabling smallholder farmers, both women and men, to access incentives for sustainable wheat production practices and alternatives to intensive wheat monoculture including diversification with other crops for integrated systems to mainstream biodiversity, increase land restoration, and reduce environmental pollution. Cooperative platforms for wheat value chain actors focusing on sustainable wheat production, marketing, and sale will be developed to enhance the delivery of GEBs. The work under this component will be done following FAO experiences on sustainable wheat production "*Save and Grow in practice: maize, rice, wheat*"<sup>60</sup> and in line with the principles laid out in the "*Voluntary guidelines on sustainable soil management*"<sup>61</sup>, "*International Code of Conduct for the Sustainable Use and Management of Fertilizers*"<sup>62</sup>, and "*Principles for Responsible Investment in Agriculture and Food Systems*"<sup>63</sup>.

**Component 3** builds on the baseline investment in conservation relying on the partnership with the State Environmental Committee aiming to address problems stemming either from expanding wheat production

<sup>59</sup> <http://www.stapgef.org/theory-change-primer>

<sup>60</sup> <http://www.fao.org/publications/save-and-grow/maize-rice-wheat/en/>

<sup>61</sup> <http://www.fao.org/3/a-bl813e.pdf>

<sup>62</sup> <http://www.fao.org/global-soil-partnership/resources/highlights/detail/en/c/1200213/>

<sup>63</sup> <http://www.fao.org/3/a-au866e.pdf>

frontier into the adjacent ecosystems of high conservation value or to increase ecosystem services important to support agriculture in the productive landscapes. **GEF financing** will go towards supporting high nature value ecosystem/habitat restoration for GEB and enhanced ecosystem services to support agriculture in an equitable manner.

**Component 4** targets Knowledge Management and Outreach to other wheat landscapes, through improved monitoring framework, metrics/indicators and establishing a country-level online platform to monitor GEBs. Linkages with the Kazakhstan FOLUR child project will enhance the potential for lessons learned across different production systems and within global wheat value chains for the benefit of other FOLUR IP countries. **GEF financing** will go towards supporting standardized indicators introduced linking to the FOLUR IP; A national experience exchange network on sustainable food production established at the Ministry of Agriculture and linked to the Kazakhstan FOLUR IP exchange network; RBM Gender-Sensitive system of the project promoted adaptive management through capturing key results of the project activities and peer-to-peer training; Communication Strategy and KM strategy; Project Mid-term review and Final Evaluation; and finally Global IP platform engagement & coordination.

Given the transitional nature of the Uzbekistan's economy towards wheat value chains transformation, the PPG will follow STAP's guidance and pay special attention to reviewing the assumptions that need validation in the situation analysis and will consider the implications of the alternative future scenarios trajectories (e.g. low/high rates of climate change, levels of population change and demand, private sector restructuring, etc.) to develop possible project adaptation pathways in a participatory fashion, and then assess current plans against these to ensure the intervention is not inadvertently encouraging maladaptation.

- **Engagement with the Global / Regional Framework (*maximum 500 words*)**

Describe how the project will align with the global / regional framework for the program to foster knowledge sharing, learning, and synthesis of experiences. How will the proposed approach scale-up from the local and national level to maximize engagement by all relevant stakeholders and/or actors?

Learning and knowledge sharing is a key component to achieving the expected transformative impact of the project in Uzbekistan. Inter-ministerial Task Force that will be established under Component 1 and the Cooperative platform for wheat value chain actors that will be established under Component 2 will be used to convene leaders and public and private stakeholders of other key agricultural players and regions to exchange knowledge and lessons learned and inspire others. The newly established Wheat Clusters will be an important catalyst for scaling and technology transfer within Uzbekistan. In addition, by demonstrating to the local and national government in the target regions and to other regions and counties how to sustainably transform wheat landscapes and value chains, and by ensuring that knowledge from the project are transferred into the Government's action plans, such as land use plans, will ensure wider scale-up of the innovations to be implemented under the project.

Regionally, Uzbekistan plays an active role in transboundary water management, integrated land degradation, and energy issues. The key initiatives include CACILM-2; Astana Resolution on Forest Landscape Restoration and the Bonn Challenge in the Caucasus and Central Asia; Central Asian Desert Initiative (CADI); Aral Sea Commission; Central Asia Nexus Dialogue: Fostering Water, Energy and Food Security Nexus Dialogue and Multi-Sector Investment (Nexus), the Green Central Asia Initiative, and others. The project will connect and coordinate with these initiatives to ensure lessons learned reach the countries in the region. The project will make efforts to establish close linkages with the Kazakhstan FOLUR child project targeting wheat commodity.

The project will engage actively with the FOLUR global platform to share lessons learned outward and bring lessons, investment and good practice to Uzbekistan. This engagement will be highly collaborative with the global platform enabling catalytic engagement by the child projects to benefit from global level dialogue and action. Lessons learned across the FOLUR portfolio, and particularly in the Central Asian region, will leverage global coalitions and lessons learned of global relevance to pursue FOLUR objectives. The project will generate knowledge on sustainable restoration and wheat value chains management for the countries in the region and globally with shifting agricultural dialogues from a centrally-controlled planned economic system to a market-based economy that maximizes GEBs in the process.

Good practices and lessons learnt from the project will feed into the global FOLUR platform, while tools, methods, and expertise will be drawn from the global FOLUR platform to enhance project implementation. The global FOLUR platform will critically serve to leverage South-South cooperation with other FOLUR beneficiary countries, specifically Kazakhstan and potentially others. Coordination and engagement mechanisms with other FOLUR national child projects (potentially India) focused on wheat will be detailed at PPG stage following consultations with other FOLUR partners and beneficiary countries.

A number of tools and approaches will be used to foster learning, knowledge exchange and cooperation among practitioners. At landscape level, the project will use proven methods for participation and engagement of local stakeholders, such as the Restoration Opportunities Assessment Methodology (ROAM) to develop integrated landscape management plans. The project will also rely on participatory, people-centered methods for learning, e.g. Farmer Field Schools (FFS), and for disseminating information, e.g. Wheat Clusters. More classic approaches, like exchange visits, will be used to strengthen linkages with ongoing efforts (in particular baseline projects) and to highlight past successes. Lessons learnt from local implementation will be institutionalized in the departmental planning processes, and will feed into the national cross-sectoral platform for FOLUR and into the above mentioned regional and global online Communities of Practice, that will uptake and further disseminate within their own countries the fruits of those exchanges. Linkages and collaboration opportunities will be extended to private sector as well.

## Annex A. GEF-7 Core Indicator Worksheet

Use this Worksheet to compute those indicator values as required in Part I, item F to the extent applicable to your proposed project. Progress in programming against these targets for the project will be aggregated and reported at anytime during the replenishment period. There is no need to complete this table for climate adaptation projects financed solely through LDCF and SCCF.

Core Indicator 1		Terrestrial protected areas created or under improved management for conservation and sustainable use					
		Hectares (1.1+1.2)					
		Expected			Achieved		
		PIF stage	Endorsement	MTR	TE		
Indicator 1.1		Terrestrial protected areas newly created					
Name of Protected Area	WDPA ID	IUCN category	Hectares				
			Expected		Achieved		
			PIF stage	Endorsement	MTR	TE	
			(select)				
		(select)					
		Sum					
Indicator 1.2		Terrestrial protected areas under improved management effectiveness					
Name of Protected Area	WDPA ID	IUCN category	Hectares	METT Score			
				Baseline		Achieved	
					Endorsement	MTR	TE
				(select)			
		(select)					
		Sum					
Core Indicator 2		Marine protected areas created or under improved management for conservation and sustainable use				(Hectares)	
		Hectares (2.1+2.2)					
		Expected			Achieved		
		PIF stage	Endorsement	MTR	TE		
Indicator 2.1		Marine protected areas newly created					
Name of Protected Area	WDPA ID	IUCN category	Hectares				
			Expected		Achieved		
			PIF stage	Endorsement	MTR	TE	
			(select)				
		(select)					
		Sum					
Indicator 2.2		Marine protected areas under improved management effectiveness					
Name of Protected Area	WDPA ID	IUCN category	Hectares	METT Score (Scale 1-3)			
				Baseline		Achieved	
				PIF stage	Endorsement	MTR	TE
				(select)			
		(select)					
		Sum					
Core Indicator 3		Area of land restored				(Hectares)	
		Hectares (3.1+3.2+3.3+3.4)					
		Expected			Achieved		
		PIF stage	Endorsement	MTR	TE		
		50,000					
Indicator 3.1		Area of degraded agricultural land restored					
			Hectares				
			Expected		Achieved		
			PIF stage	Endorsement	MTR	TE	
			50,000				
Indicator 3.2		Area of forest and forest land restored					
			Hectares				
			Expected		Achieved		

			PIF stage	Endorsement	MTR	TE
Indicator 3.3	Area of natural grass and shrublands restored					
			Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 3.4	Area of wetlands (including estuaries, mangroves) restored					
			Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Core Indicator 4	Area of landscapes under improved practices (hectares; excluding protected areas)					(Hectares)
			Hectares (4.1+4.2+4.3+4.4)			
			Expected		Expected	
			PIF stage	Endorsement	MTR	TE
			350,000			
Indicator 4.1	Area of landscapes under improved management to benefit biodiversity					
			Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 4.2	Area of landscapes that meet national or international third-party certification that incorporates biodiversity considerations					
Third party certification(s):			Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 4.3	Area of landscapes under sustainable land management in production systems					
			Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
			350,000			
Indicator 4.4	Area of High Conservation Value Forest (HCVF) loss avoided					
			Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Core Indicator 5	Area of marine habitat under improved practices to benefit biodiversity					(Hectares)
Indicator 5.1	Number of fisheries that meet national or international third-party certification that incorporates biodiversity considerations					
Third party certification(s):			Number			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 5.2	Number of large marine ecosystems (LMEs) with reduced pollution and hypoxial					
			Number			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Core Indicator 6	Greenhouse gas emission mitigated					(Tons)

			Tons (6.1+6.2)			
			Entered		Entered	
			PIF stage	Endorsement	MTR	TE
		Expected CO2e (direct)	1,000,000			
		Expected CO2e (indirect)				
Indicator 6.1	Carbon sequestered or emissions avoided in the AFOLU sector					
			Tons			
			Entered		Entered	
			PIF stage	Endorsement	MTR	TE
		Expected CO2e (direct)	1,000,000			
		Expected CO2e (indirect)				
		Anticipated Year				
Indicator 6.2	Emissions avoided					
			Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
		Expected CO2e (direct)				
		Expected CO2e (indirect)				
		Anticipated Year				
Indicator 6.3	Energy saved					
			MJ			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 6.4	Increase in installed renewable energy capacity per technology					
		Technology	Capacity (MW)			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
		(select)				
		(select)				
Core Indicator 7	Number of shared water ecosystems (fresh or marine) under new or improved cooperative management					(Number)
Indicator 7.1	Level of Transboundary Diagnostic Analysis and Strategic Action Program (TDA/SAP) formulation and implementation					
		Shared water ecosystem	Rating (scale 1-4)			
			PIF stage	Endorsement	MTR	TE
Indicator 7.2	Level of Regional Legal Agreements and Regional Management Institutions to support its implementation					
		Shared water ecosystem	Rating (scale 1-4)			
			PIF stage	Endorsement	MTR	TE
Indicator 7.3	Level of National/Local reforms and active participation of Inter-Ministerial Committees					
		Shared water ecosystem	Rating (scale 1-4)			
			PIF stage	Endorsement	MTR	TE
Indicator 7.4	Level of engagement in IWLEARN through participation and delivery of key products					
		Shared water ecosystem	Rating (scale 1-4)			
			Rating		Rating	
			PIF stage	Endorsement	MTR	TE
Core Indicator 8	Globally over-exploited fisheries Moved to more sustainable levels					(Tons)
			Metric Tons			
			PIF stage	Endorsement	MTR	TE

<b>Core Indicator 9</b>	<b>Reduction, disposal/destruction, phase out, elimination and avoidance of chemicals of global concern and their waste in the environment and in processes, materials and products</b>					<b>(Tons)</b>
		Metric Tons (9.1+9.2+9.3)				
		Expected		Achieved		
		PIF stage	PIF stage	MTR	TE	
Indicator 9.1	Solid and liquid Persistent Organic Pollutants (POPs) and POPs containing materials and products removed or disposed					
	POPs type		Metric Tons			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
	(select)	(select)	(select)			
	(select)	(select)	(select)			
	(select)	(select)	(select)			
Indicator 9.2	Quantity of mercury reduced					
			Metric Tons			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 9.3	Number of countries with legislation and policy implemented to control chemicals and waste					
			Number of Countries			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 9.4	Number of low-chemical/non-chemical systems implemented particularly in food production, manufacturing and cities					
		Technology	Number			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
<b>Core Indicator 10</b>	<b>Reduction, avoidance of emissions of POPs to air from point and non-point sources</b>					<b>(Grams)</b>
Indicator 10.1	Number of countries with legislation and policy implemented to control emissions of POPs to air					
			Number of Countries			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 10.2	Number of emission control technologies/practices implemented					
			Number			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 10.3	Number of countries with legislation and policy implemented to control chemicals and waste					
			Number of Countries			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
<b>Core Indicator 11</b>	<b>Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment</b>					<b>(Number)</b>
			Number Achieved			
					MTR	TE
				Female		
				Male		



				<i>Total</i>		