



Sustainable management and restoration of the Dry Forest of the Northern Coast of Peru

Part I: Project Information

GEF ID

10541

Project Type

FSP

Type of Trust Fund

GET

CBIT/NGI

☐ CBIT

☐ NGI

Project Title

Sustainable management and restoration of the Dry Forest of the Northern Coast of Peru

Countries

Peru

Agency(ies)

FAO, IUCN

Other Executing Partner(s)

Executing Partner Type

Other Executing Partner(s)

Ministry of Environment

Executing Partner Type

Government

GEF Focal Area

Multi Focal Area

Taxonomy

Sustainable Forest, Sustainable Land Management, Land Degradation, Focal Areas, Land Degradation Neutrality, REDD - REDD+, Forest and Landscape Restoration, Forest, Tropical Dry Forests, Biomes, Biodiversity, Forestry - Including HCVF and REDD+, Mainstreaming, Agriculture and agrobiodiversity, Tourism, Community Based Natural Resource Mngt, Protected Areas and Landscapes, Terrestrial Protected Areas, Productive Landscapes, Payment for Ecosystem Services, Financial and Accounting, Natural Capital Assessment and Accounting, Conservation Finance, Nationally Determined Contribution, United Nations Framework Convention on Climate Change, Climate Change, Agriculture, Forestry, and Other Land Use, Climate Change Mitigation, Influencing models, Demonstrate innovative approach, Deploy innovative financial instruments, Convene multi-stakeholder alliances, Transform policy and regulatory environments, Strengthen institutional capacity and decision-making, Local Communities, Stakeholders, Capital providers, Private Sector, SMEs, Large corporations, Individuals/Entrepreneurs, Financial intermediaries and market facilitators, Type of Engagement, Partnership, Information Dissemination, Participation, Consultation, Beneficiaries, Indigenous Peoples, Community Based Organization, Civil Society, Non-Governmental Organization, Academia, Education, Communications, Awareness Raising, Behavior change, Gender Mainstreaming, Gender Equality, Women groups, Gender-sensitive indicators, Sex-disaggregated indicators, Gender results areas, Access to benefits and services, Access and control over natural resources, Capacity Development, Participation and leadership, Knowledge Generation and Exchange, Capacity, Knowledge and Research, Knowledge Exchange, Targeted Research, Innovation, Knowledge Generation, Learning, Adaptive management, Indicators to measure change, Theory of change

Rio Markers**Climate Change Mitigation**

Climate Change Mitigation 1

Climate Change Adaptation

Climate Change Adaptation 1

Duration

60 In Months

Agency Fee(\$)

714,861

Submission Date

3/23/2020

A. Indicative Focal/Non-Focal Area Elements

Programming Directions	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
BD-1-1	GET	4,000,000	28,000,000
BD-2-7	GET	3,104,204	21,729,428
LD-1-1	GET	200,000	1,400,000
LD-1-2	GET	362,287	2,536,009
Total Project Cost (\$)		7,666,491	53,665,437

B. Indicative Project description summary

Project Objective

To restore and sustainably manage the dry forests of the Northern Coast of Peru, facilitating the conservation of biodiversity and ecosystem services, increasing the resilience of communities and their livelihoods, and supporting the achievement of the Land Degradation Neutrality (LDN) target.

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Financing Amount(\$)
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Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Financing Amount(\$)
1. Promoting governance with multi-sectoral, multi-level and multi-stakeholder approach for the sustainable development of dry forests in Peru.	Technical Assistance	<p>1.1 National, regional and local stakeholders of public and private sectors have improved their coordination and harmonized policies, plans and investments related to the sustainable and inclusive management of dry forests.</p> <p><i>GEF Core Indicator 11: Number of women and men direct beneficiaries of project actions that improve their skills for the conservation and sustainable use of dry forests: 8,252 men and 8,548 women. Total: 16,800</i></p> <p>1.2 Capacities of institutional and local stakeholders strengthened for decision-making on land-use, territorial planning, and monitoring of deforestation, degradation and biodiversity.</p> <p><i>Project Indicator 1:</i></p> <p><i>- Level of improvement of local stakeholders' capacities for monitoring and surveillance measured (At least 30% women): Baseline and target to be established and validated in the PPG.</i></p>	<p>1.1.1 Multi-sectoral and multi-level platforms strengthened with capacity-building for the conservation and sustainable use of dry forests (with 30% participation of women)</p> <p>1.1.2. Eight (8) planning instruments that incorporate the landscape approach and mainstream sustainable management and dry forest restoration.</p> <p>1.1.3 Regional strategic tourism plans</p> <p>1.1.4 Watershed management plans that mainstream sustainable management and dry forest restoration.</p> <p>1.1.5 Two (2) compatible guidelines to promote the conservation of dry forest in a comprehensive manner.</p> <p>1.1.6. Platform with systematized information for decision-making, available for all stakeholders[1]</p> <p>1.1.7. Proposal of regulatory framework to encourage the conservation of dry forests through an ecosystem-based approach</p> <p>1.2.1 Gender sensitive capacity development program to strengthen local stakeholders' capacities for monitoring and surveillance of forests and biodiversity.</p>	GET	1,700,000	11,900,000

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Financing Amount(\$)
2. Ecological connectivity of dry forests and restoration through effective management and financial sustainability of conservation areas and buffer zones	Technical Assistance	2.1 Increased management effectiveness of protected areas.	2.1.1. PA master plans and local development plans are compatible with regional, local and community development plans.	GET	2,971,446	20,800,120
		<i>GEF Core Indicator BD 1.2:</i> 250,250 hectares of PAs with improved management, as measured by <u>a 10% increase in the GEF METT score over the baseline[1]</u> :	2.1.2 Capacity development program to improve the management capacities of protected areas and OECD[1].			
		· National Reserve of Tumbes: Baseline: 38; Target: 42.	2.1.3 Financial sustainability model for PA and other effective area-based conservation measures (OECMs) with prioritized innovative instruments, and fundraising strategy with private sector's participation			
		· Cerros de Amotape National Park: Baseline: 43; Target: 47.	2.2.1 Regional Conservation Systems with a watershed and landscape approach, ensuring ecological connectivity.			
		· El Angolo Hunting Preserve: Baseline: 62; Target: 68.	2.3.1 Financial instruments generated to leverage investments in forest recovery (to be implemented under 2.3.3).			
		· Bosque de Pomac Sanctuary: Baseline: 56; Target: 62.				
		· Laquipampa Wildlife Refuge: Baseline: 49; Target: 54.				
		2.2 Connected corridors and functional dry forest areas are preserved using management models based on landscape approach.	2.3.2 Strategy to guide, promote and give effectiveness to restoration actions for recovering the resilience of dry forests			
		<i>Project Indicator 2:</i> Area of corridors preserved with management models based on landscape approach: 367,633 hectares.	2.3.3 Best practices on dry forest restoration implemented with communities			
		2.3 Dry forests recovered through landscape restoration mechanisms.	[1] Other Effective Area-Based Conservation Measures			
		<i>GEF Core Indicator LD 3.2:</i>				

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Financing Amount(\$)
3. Sustainable production practices for the conservation of the natural heritage of dry forests in the Peruvian Northern Coast.	Investment	<p>3.1 Sustainably preserved and managed dry forests of the Peruvian Northern Coast are more resilient to anthropogenic threats, mainly agriculture and livestock, and have a better response capacity to climate change effects.</p> <p><i>GEF Core Indicator BD 4.1: Area of landscapes under improved practices : 8,000 hectares</i></p> <p><i>GEF Core Indicator 4.3: Area of landscapes under sustainable land management in production systems: 2,000 hectares.</i></p> <p><i>GEF Core Indicator 4.4: Area of High Conservation Value Forest loss avoided (through conservation agreements with producers): 107,383 hectares.</i></p> <p><i>Project Indicator 3: 10,000 producers (women and men) that implement sustainable biodiversity management practices and sustainable land management (at least 40% women)</i></p> <p>3.2 Value chains strengthened with the increase of deforestation-free dry forest products and by-products, with greater value and access to markets, fostering the collaboration of managers and users of resources and the private sector.</p> <p><i>Project Indicator 4</i></p> <p><i>Number and type of start-ups with access to the market under schemes of sustainable production and biodiversity conservation efforts and sustainable land management (of</i></p>	<p>3.1.1 Farmer Field Schools established in the territories for the dissemination of sustainable biodiversity management, sustainable production practices and dry forest restoration (restoration under Output 2.3.2).</p> <p>3.1.2 Conservation agreements established with producers and communities in High Conservation Value Forest (HCVF) areas.</p> <p>3.2.1 Diagnoses and commercial strategies to access sustainable markets developed for dry forest products and tourism.</p> <p>3.2.2 Timely information on markets and access using new technologies.</p> <p>3.2.3 Partnerships among producers, and public and private sector to leverage sustainable investments.</p> <p>3.2.4 Demonstrations to improve local stakeholders' capacities in sustainable production and enhancement of the biodiversity value for implementing deforestation-free value chains</p>	GET	1,781,341	12,469,38

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Financing Amount(\$)
4. Knowledge management, Monitoring and Evaluation (M&E) based on adaptive management principles, and the delivery of measurable and objectively verifiable outcomes.	Technical Assistance	<p>4.1 Project Knowledge Management articulated with national information systems and with the GEF and contributing to scaling-up and replicating best practices and lessons learned.</p> <p><i>Project Indicator 7:</i></p> <p><i>A strengthened national system (SINIA^[1]) for dry forests, including good practices and lessons learned published and disseminated (including the gender approach).</i></p> <p>4.2 M&E system supporting project implementation, based on measurable and verifiable outcomes and adaptive management principles</p> <p>^[1] National System of Environmental Information.</p>	<p>4.1.1. Mechanism for dissemination and exchange of best practices and lessons for the replication and scaling-up of outcomes.</p> <p>4.1.2 One (1) gender sensitive communications and information strategy</p> <p>4.1.3 Three (3) exchanges of regional experiences in the management of dry forests</p> <p>4.1.4 Lessons learned systematized and disseminated with public and private stakeholders (including gender mainstreaming and successful stories by women)</p> <p>4.1.5 National platform with project information with public access.</p> <p>4.2.1 M&E strategy developed with relevant stakeholders, clearly defining expected outcomes, the expected time periods of implementation, and confirmation through objectively verifiable indicators and means of verification.</p> <p>4.2.2 Mid-Term Review and Final Evaluation to inform and guide the project implementation</p>	GET	848,633	5,940,430

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Financing Amount(\$)
				Sub Total (\$)	7,301,420	51,109,940
Project Management Cost (PMC)						
				GET	365,071	2,555,497
				Sub Total(\$)	365,071	2,555,497
				Total Project Cost(\$)	7,666,491	53,665,437

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

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount(\$)
Government	Ministry of Environment	In-kind	Recurrent expenditures	15,000,000
Government	Ministry of Agriculture and Irrigation	In-kind	Recurrent expenditures	17,000,000
Government	Regional Governments (Tumbes, Piura, Lambayeque and La Libertad)	In-kind	Recurrent expenditures	17,000,000
Private Sector	Private Sector	In-kind	Recurrent expenditures	3,000,000
Donor Agency	International Technical Cooperation (JICA, USAID, GIZ, EII	Grant	Investment mobilized	1,000,000
GEF Agency	FAO	In-kind	Recurrent expenditures	365,437
GEF Agency	IUCN	In-kind	Recurrent expenditures	300,000
Total Project Cost(\$)				53,665,437

Describe how any "Investment Mobilized" was identified

Both GIZ and EII are very interested in working in some of the same areas where the GEF project aims to be executed. Also, the Regional Governments of Perú will mobilize resources to support the GEF grant so as to integrate development objectives, maximize outcomes and carry out replication and scaling-up actions. The investment have been identified in Annex 02.

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

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)	Total(\$)
FAO	GET	Peru	Biodiversity	BD STAR Allocation	4,614,556	438,383	5,052,939
IUCN	GET	Peru	Biodiversity	BD STAR Allocation	2,489,648	224,068	2,713,716
FAO	GET	Peru	Land Degradation	LD STAR Allocation	360,787	34,275	395,062
IUCN	GET	Peru	Land Degradation	LD STAR Allocation	201,500	18,135	219,635
Total GEF Resources(\$)					7,666,491	714,861	8,381,352

E. Project Preparation Grant (PPG)

PPG Required

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PPG Amount (\$)

200,000

PPG Agency Fee (\$)

18,648

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)	Total(\$)
FAO	GET	Peru	Biodiversity	BD STAR Allocation	121,128	11,508	132,636
IUCN	GET	Peru	Biodiversity	BD STAR Allocation	64,872	5,838	70,710
FAO	GET	Peru	Land Degradation	LD STAR Allocation	8,551	812	9,363
IUCN	GET	Peru	Land Degradation	LD STAR Allocation	5,449	490	5,939
Total Project Costs(\$)					200,000	18,648	218,648

Core Indicators

Indicator 1 Terrestrial protected areas created or under improved management for conservation and sustainable use

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
250,250.00	0.00	0.00	0.00

Indicator 1.1 Terrestrial Protected Areas Newly created

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

Name of the Protected Area	WDPA ID	IUCN Category	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
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Indicator 1.2 Terrestrial Protected Areas Under improved Management effectiveness

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
250,250.00	0.00	0.00	0.00

Name of the Protected Area	WDPA ID	IUCN Category	Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)	METT score (Baseline at CEO Endorsement)	METT score (Achieved at MTR)	METT score (Achieved at TE)
Akula National Park Bosque de Pómac	125689303319	SelectOthers	5,887.00						<input type="checkbox"/>

Name of the Protected Area	WDPA ID	IUCN Category	Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)	METT score (Baseline at CEO Endorsement)	METT score (Achieved at MTR)	METT score (Achieved at TE)
Akula National Park Cerros de Amotape	125689 259	SelectNational Park	151,767.00						<input type="checkbox"/>
Akula National Park El Angolo	125689 30061	SelectOthers	65,000.00						<input type="checkbox"/>
Akula National Park Laquipampa	125689 83286	SelectWilderness Area	8,329.00						<input type="checkbox"/>
Akula National Park Reserva Nacional de Tumbes	125689 98158	SelectStrict Nature Reserve	19,267.00						<input type="checkbox"/>

Indicator 3 Area of land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
2278.00	0.00	0.00	0.00

Indicator 3.1 Area of degraded agricultural land restored

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

Indicator 3.2 Area of Forest and Forest Land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
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2,278.00			
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Indicator 3.3 Area of natural grass and shrublands restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
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Indicator 3.4 Area of wetlands (incl. estuaries, mangroves) restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
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Indicator 4 Area of landscapes under improved practices (hectares; excluding protected areas)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
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117383.00			
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	0.00		
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Indicator 4.1 Area of landscapes under improved management to benefit biodiversity (hectares, qualitative assessment, non-certified)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
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8,000.00			
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Indicator 4.2 Area of landscapes that meets national or international third party certification that incorporates biodiversity considerations (hectares)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
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Type/Name of Third Party Certification

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

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
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2,000.00			
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Indicator 4.4 Area of High Conservation Value Forest (HCVF) loss avoided

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
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Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
107,383.00			

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

Title	Submitted			
Indicator 6 Greenhouse Gas Emissions Mitigated				
Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO ₂ e (direct)	2052667	0	0	0
Expected metric tons of CO ₂ e (indirect)	0	0	0	0

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

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO ₂ e (direct)	2,052,667			
Expected metric tons of CO ₂ e (indirect)				
Anticipated start year of accounting	2040			
Duration of accounting	20			

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

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO ₂ e (direct)				
Expected metric tons of CO ₂ e (indirect)				
Anticipated start year of accounting				
Duration of accounting				

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

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

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

Technology	Capacity (MW) (Expected at PIF)	Capacity (MW) (Expected at CEO Endorsement)	Capacity (MW) (Achieved at MTR)	Capacity (MW) (Achieved at TE)
Indicator 11 Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment				
	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female	8,548			
Male	8,252			
Total	16800	0	0	0

Part II. Project Justification

1a. Project Description

1. Global environmental and/or adaptation problems, root causes, and barriers to be addressed (systems description)

1. Global Environmental Context: After Argentina and Brazil, Peru ranks third among the countries with the largest extent of drylands in South America, accounting for 40.2% of the Peruvian national territory (516,000 km).^{2,[1]} This area only receive 2% of the total rainfall of the country (with an annual rainfall between 100 and 500 mm, which increases up to 20 times with the El Niño phenomenon), and 80% of the population lives there.

2. The dry forest region of the Northern Coast, also known as equatorial dry forests, is a region worth mentioning among the dry areas of Peru. Dry forests occupy an area of 3,402,212 hectares, accounting for 3% of the Peruvian surface, and are concentrated mainly in the departments of Tumbes, Piura, Lambayeque and La Libertad, also extending through Ecuador.

3. Dry forests are home to three types of ecosystems: i) seasonally dry hill and mountain forest; ii) seasonally dry plains forest, and iii) seasonally dry riparian forest. The seasonally dry hill and mountain forest accounts for 55.7% of the total area, and is located towards the upper areas of the Andean mountain range, characterized by its greater diversity of flora species, the most representative being: hualtaco (*Loxopterygium huasango*), palo santo tree (*Bursera graveolens*), pasallo (*Eriotheca ruizii*), frejolillo or huayrul (*Erythrina velutina*), higuerón (*Ficus spp.*), among others. To the North of Piura and Tumbes, in the mountain ranges to the East (known as the *Amotapes* and *Cochas* mountain ranges) dry forests are dominated by the ceibo (*Ceiba trichistandra*), pretino (*Cavanillesia platanifolia*), and guayacán (*Tabebuia chrysantha*). The seasonally dry plains forest accounts for 42.6% of the total area, it is a deciduous sub-arid ecosystem, dominated by algarrobo (carob) trees (*Prosopis pallida*) and accompanied by the sapote (*Capparis scabrida*) and faique (*Acacia macracantha*); in addition to other species between trees and shrubs, among which the vichayo (*Capparis avecinifolia*) and the overo (*Cordia lutea*) stand out. Finally, the seasonally dry riparian forest, which accounts for 1.7% of the total, is dominated by carob trees, *Prosopis pallida* and *P. limensis*. This dry forest also contains faique (*Vachellia macracantha*), aromo (*Vachellia aroma*) and anona and inga, *Annona spp.* and *Inga spp.*, and its physiognomy corresponds to a canopy forest from 8 to 14 meters with bushes and reeds. The following table detail the existing ecosystems, their surfaces and the departments they cover.

Table N.º 1: Surface of dry forests in the Northern Coast of Peru

ECOSYSTEMS	SURFACE (hectares)	DEPARTAMENTOS
Seasonally dry hill and mountain forest	1,897,483	Tumbes, Piura, Lambayeque and La Libertad.
Seasonally dry plains forest	1,452,576	Tumbes, Piura, Lambayeque, La Libertad and Ica.
Seasonally dry riparian forest (carob tree)	52,153	Tumbes, Piura, Lambayeque, La Libertad, Lima, Ica and maybe Ancash and Arequipa.

TOTAL	3,402,212
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Source: National Map of Peruvian Ecosystems, approved by RM 440-2018-MINAM.

4. Dry forests of the Northern Coast are included in the Global 200 List (WWF) standing out for their high endemism levels, both in flora and fauna, which do not exist elsewhere in the jungle or mountains of Peru. This is one of the most important regions in the world in terms of endemic bird species, since it houses around 55 species. Fifty-two out of these species exist only in Peru, standing out the White-winged Guan (*Penelope albipennis*), the White hawk (*Leucopternis albicollis*), the Grey-cheeked parakeet (*Brotogeris pyrrhoptera*), the Peruvian Plantcutter (*Phytotoma raimondii*), and the Rufous Flycatcher (*Myiarchus semiruf*). It should be noted that these birds are categorized as “Endangered” or “Critically Endangered” due to the small extent of these forests and the strong pressures and threats to which they are subject.
 5. Likewise, these forests are home to numerous species of mammals, such as the Guayaquil Squirrel (*Sciurus stramineus*), endemic to this forest; the Sechuran Fox (*Lycalopex sechurae*); the White-tailed Deer (*Odocoileus virginianus*); the mountain lion (*Puma concolor*); spectacled bear (*Tremarctos ornatus*); among others. Reptiles include the macanche or Orton’s Boa (*Boa constrictor ortonii*), a Coastal subspecies endemic to these forests, the sancarranca or Barnett’s Lancehead (*Bothrops barnetti*), the pacaso or Green Iguana (*Iguana iguana*), the cañan or Peru Desert Tegu (*Dicrodon guttulatum*), and the saltojo or Peters’ Leaf-toed Gecko (*Phyllodactylus reissi*). These forests are also known for being home to the only Peruvian populations of the American Crocodile (*Crocodylus acutus*) in the Tumbes and Zarumilla rivers.
 6. The seasonally dry tropical forests are also home to wild relatives of several cultivated species (tomatoes, cucurbitaceae, beans, chili, among others), which constitute genetic resources of hardiness for cultivated species, contributing to a better climate change adaptation.
 7. Recognizing the ecological significance of dry forests, Peru has been making great efforts to preserve its biodiversity, for which 357,632 hectares of protected areas have been established under various management modalities (natural protected areas of national, regional and private administration). A description of protected areas in the Northern dry forest region and their globally important biodiversity is detailed in Annex 02.
 8. Socio-economic context: Dry forests of Northern Peru are home to a population of 5 million people, out of which 20% are located in rural areas (1 million people). Poverty affects more than 20% of the rural population, with an average income of less than S/ 1,200 per month (US\$ 400). Around 350,000 of inhabitants in this rural area are farmers, whose livelihoods rely on natural resources. Peasant communities that are titled, recognized and with referential information include 3 communities in La Libertad, 32 in Lambayeque and 125 in Piura, amounting to about 3.1 million hectares.[2]² These landscapes have domestication processes since approximately 3,000 years B.C.
 9. Dry forests are very important for the livelihoods and basic needs of families and rural populations that, from ancient times have rely on the use of this ecosystem’s goods and services. For instance, they use the carob tree to produce charcoal and its fruit to produce carob and other income-generating products, as well as fodder for cattle and goats, and food from the flora and fauna.
 10. The Global Environmental Problem: Given that economic activities are highly dependent on the use of natural resources, dry forests are subject to strong anthropogenic pressures that cause the loss of biodiversity and land degradation due to deforestation, degradation and desertification of dry forests of the Northern Coast. These ecosystems are subject to pressures due to:
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- Land-use change caused by the expansion of the agricultural frontier. Whereas there are no official records on the loss of dry forests caused by land-use change, the “official” figure is 15,000 hectares per year.[3]³
- Unsustainable agricultural practices that contribute to degradation and increase desertification risks, including: a) intensive overgrazing by bovine and caprine livestock that promotes soil compaction[4]⁴, and b) poor agricultural practices that lead to the inappropriate or excessive use of soil with the consequent soil loss by erosion and of fertility, and the use of agrochemicals that increases soil and water pollution. Agriculture has been growing due to the high productivity and demand for agricultural products that grow in the area, such as mango, lemon, rice, and organic bananas. In Piura alone, the current agricultural area is 240,000 hectares.[5]⁵ The high production has led to a greater demand for water, which has limited the amount of water in the water table. The groundwater level is decreasing not only due to the reduction of forests, but also due to the great competition to open wells and pump water to irrigate all these crop fields that have replaced forests. The increase in agro-export products has led to the promotion of large irrigation projects such as the Olmos Project. Additionally, researches warn that the Huancabamba River waters will not be enough to supply both projects (also considering the Alto Piura Project). An additional element is that this river is partially fed by waters coming from the moors of Piura, which would be threatened by the presence of mining activities, as there are 483 concessions in that area.
- Unsustainable forestry practices, including selective and illegal logging for charcoal and wood. For instance, the carob tree (*Prosopis Pallida*), a predominant species in dry forests that, given a combination of moist vegetation and temperature, is a source of resources for the survival of animals and people.[6]⁶ In the 1949-1999 period, 17% of forests were lost due to the uncontrolled consumption and sale of firewood.[7]⁷ The firewood sold in Lima that comes from dry forests accounts for 60%.[8]⁸ Also, as a result of selective logging, trees such as the guayacán (*Tabebuia chrysantha*) and the hualtaco (*Loxopteriginum huasango*), which are in high demand for parquet floors, are almost extinct, followed by the palo santo (*Bursera graveolens*) that is currently under a lot of pressure due to its use as fragrant smoke in religious ceremonies (aromatic wood). In the 2010-2017 period, the illegal extraction of 26,699 m3 of round timber, mainly carob, was identified in the departments of Lambayeque, Piura, and Tumbes. Considering the level of the impact caused by unauthorized cubic meter extracted, around 1,815 hectares of forest cover are impacted by forest extraction without sustainability criteria.[9]⁹
- Hunting and illegal wildlife trade. Illegal trade is the greatest pressure on the fauna; the species that suffer the greatest pressure due to illegal trade include: the psittacids, such as the red-headed parrot (*Aratinga erythrogaena*), pacific parrotlet (*Forpus coelestis*), bronze-winged parrot (*Pionus chalcopterus*) and the macareño and other birds such as the white-edged oriole (*Icterus graceannae*), white-tailed jay (*Cyanocorax mystacalis*), cinereous finch (*Piezorhina cinerea*), and the crimson-breasted finch (*Rhodospingus cruentus*). It should be noted that while the trade of some of these species has been banned, they are often traded in animal markets in Piura, Chiclayo and Lima.
- Wildfires are also a threat that contributes to deforestation and forest degradation. In Piura alone, in the last two years, 12,000 hectares were lost. Land trafficking (usurpation, illegal appropriation and/or trade of lands due to migration), and invasions of state-owned lands and rural communities are also threats.[10]¹⁰

Table N.º 2: Area of degraded surfaces by type of forests and by region

Region	Type of forest ecosystem	Degraded area (ha)	
Piura	Seasonally dry hill forest	4,507.83	334,089.39
	Seasonally dry plain forest	327,424.24	
	Seasonally dry riparian forest	2,157.32	
Tumbes	Seasonally dry hill forest	6,182.17	6,670.52
	Seasonally dry plain forest	203.93	
	Seasonally dry riparian forest	284.42	
La Libertad	Seasonally dry hill forest	-	1,615.30
	Seasonally dry plain forest	847.90	
	Seasonally dry riparian forest	767.40	
Lambayeque	Seasonally dry hill forest	643.98	62,438.85
	Seasonally dry plain forest	58,719.88	
	Seasonally dry riparian forest	3,074.99	
TOTAL			404,814.06

Source: MINAM. 2017. Degraded areas – National Gap.

12. Dry forests are vulnerable to climate-change effects, as they are a semi-arid ecosystem with a monsoon climate. These forests regenerate at a low rate and slow growth due to the extreme aridity conditions and, therefore, they do not recover quickly and are exposed to desertification conditions. Main risks include floods and droughts in the lower areas, together with the presence of periodic El Niño events. It should be noted that El Niño event produces changes in the phenology of some plants at unusual seasons, loss of habitats and biodiversity, and flooding of crop areas, among others.[12]¹² [13]¹³ This causes negative impacts on the communities, specifically in the areas of health and food production, affecting the income of the population that directly rely on natural resources. Other effects of climate change include the alteration in the phenology of species, affecting the flowering and production of carob and honey; the emergence of new pests and diseases; droughts that reduce the flowering and production of carob and honey and encourage a greater extraction of firewood, coal and wood for family income-generating activities; and an increased overgrazing due to a shortage of fodder for cattle.[14]¹⁴

13. Efforts to face anthropogenic pressures on dry forests are restricted by several barriers, which have been identified as follows:

14. **Barrier 1: Weaknesses of the governance framework for adequate collaboration, coordination and harmonization of policies, plans, actions and investments for the sustainable development of dry forests in Northern Peru:** The weak governance of dry forests is related to an insufficient inter-institutional and intersectoral coordination and

articulation of planning instruments. Peru has made progress in its legal and public policy framework for sustainable development with the creation of the Ministry of Environment and the incorporation of environmental management in all State sectors and levels. There is still, however, the significant challenge of reconciling institutional policies and dynamics among different government sectors and levels, mainly in the environmental dimension. The coordination capacity to implement policies and regulatory compliance is very uneven among different organizations, sectors and State levels, mainly in the case of local governments. The capacity to coordinate between public institutions and citizens, especially between rural communities and the private sector, remains weak. Entities that share roles in the use of land and natural resources (Ministry of Agriculture and Irrigation and Regional Agricultural Offices) do not develop the necessary synergies in a timely manner for decision-making or policy planning. Policy planning and decision-making processes remain mainly sectoral and do not consider the impacts of one sector over the others. Because of the dry forest problems, this is managed in a fragmented manner, both at the sector level and at the different government levels, which in turn causes information gaps for decision-making and the implementation of effective and sustainable policies.

15. The integration between sectoral and spatial planning is weak. Land-use tools such as Ecological-economic zoning and forest zoning (EEZ) are not part of the regional and local planning documents. Only Piura and Lambayeque have EEZ and in the case of forest zoning, Lambayeque and Piura have started this process, but still without results. Planning tools focus on the agronomic potential of lands and lack an ecosystem approach to consider the forest-soil-water system in dry forest areas in a comprehensive manner.

16. **Barrier 2: Insufficient institutional, management, monitoring and financial frameworks for protected areas and for the rehabilitation of forests for ecological connectivity:** Although the country has protected areas (PAs) within the dry forest ecosystem, most of them are not well integrated into their buffer and influence areas. Also, they have financial and management capabilities limitations that affect control and surveillance activities. Master plans for the management of protected natural areas are not up to date and are not part of the regional and local development plans, lacking integration among these management instruments. Likewise, OMECs do not have tools to measure their management effectiveness, being, in some cases, spaces with little value and vulnerable to land-use change. PAs are located in areas where they coexist with community territories in a fragmented landscape, with loss of biodiversity and land degradation. Although these degraded areas have been identified, direct interventions are currently missing due to technical and financial limitations.

17. **Barrier 3: The lack of appropriate technologies for sustainable production limits the possibilities of conservation and sustainable use of dry forests, and the improvement of livelihoods:** Biological resources directly extracted from dry forests are unsustainably exploited and traded with little or no added value, for instance the case of carob. In the case of protected areas where the sustainable use of renewable resources is allowed –i.e., in most of them– the low profitability of value chains generates few economic incentives for conservation. Markets for sustainable products are underdeveloped in the country and there is little connection with international markets of eco-friendly products. Investment and support, for the development of commercial proposals based on sustainable production, are also very limited. The prevalent commercial paradigm only assigns raw material prices to forest products or confuses them with agricultural products, demanding anti-ecological volumes and little added value. Consequently, wild ecosystems and traditional knowledge receive little existence value, and perverse incentives are generated to attack them.

18. Producers (women and men) and their organizations have limited capacities in financial management, negotiation, health aspects of value chains, timely access to market information and promotion of strategic partnerships. In addition, there are currently no adequate mechanisms to ensure the equitable benefit sharing among the different stakeholders involved in the value chains.

19. **Barrier 4: Knowledge gaps:** Finally, in all the aspects above, there are knowledge gaps and many lessons that have not been shared or transferred. There is no documentation basis for the different projects developed in relation to dry forests, and even though there is a macro-regional platform for forests in Northern Peru, it should allow information exchange and act as a repository articulated to the SINIA of MINAM.

2. The baseline scenario and any associated baseline projects

20. Peru has made progress in its legal and public policy framework for sustainable development during the last decades. The country has the General Law of the Environment, the Framework Act of the National Environmental Management System and the Decentralization Bases Law, which establish national environmental objectives and priorities. The *Ministry of Environment (MINAM)* is responsible for ensuring the sustainable use and conservation of natural resources and environmental quality for the benefit of people and the environment in a regulatory, effective and decentralized manner, and articulated with public and private organizations and the civil society. MINAM is also responsible for the National Environmental Policy and the instruments (regulations, plans, and strategies) for the sustainable use of natural resources, water resources, forests, climate change mitigation and adaptation, the fight against desertification and drought, environmental planning, ecological and economic zoning, among others.

21. The Government of Peru has been promoting actions to reverse land degradation, avoiding and reducing the factors that cause desertification. MINAM, as the national focal point to the United Nations Convention to Combat Desertification (UNCCD), recognizes the concept of Land Degradation Neutrality (LDN) as part of its environmental approach and promotes the mainstreaming of sustainable land management (SLM) in planning and public policies. MINAM is also fostering more integration between the National Strategy (ies) to Combat Desertification and Drought, Climate Change and Biological Diversity. Its approach is to achieve LDN goals in full synergy with the Sustainable Development Goals / 2030 Agenda and the national commitments to the Paris Agreement. In this context, MINAM is working on LDN goal-setting articulated to the Nationally Determined Contributions (NDC). This integrated approach is the basis of Peru's environmental efforts and commitments on climate change, biodiversity conservation, fight against desertification and sustainable landscape management.

22. The *National Service of Natural Protected Areas (SERNANP)* is responsible for the management of protected natural areas (PNA), through the Protected Natural Areas Act, and has a Master Plan for Protected Natural Areas and Master Plans of PNAs, in addition to regulations for the Monitoring of Biodiversity and Ecosystems in the PNAs. Also, The *National Forest and Wildlife Service (SERFOR)* is the national forestry authority with powers and functions at the national, regional and local levels to manage and promote the sustainable use, conservation and protection of forest resources and wildlife, including dry forest resources. SERFOR has decentralized offices in the project areas, which are called Forestry and Wildlife Technical Offices.

23. The government also comprises the following ministries: The *Ministry of Agriculture and Irrigation (MINAGRI)* is responsible for designing, implementing and supervising the National Agrarian Policy, the Agrarian Planning System, the Integrated System of Agrarian Statistics, the national policies for innovation, health, food safety, clearing of the property, as well as for the sustainable use of water and forestry resources, flora and fauna, in accordance with the National Environmental Policy. The *Ministry of Production (PRODUCE)* is responsible for the national development policies and plans of the fishery and industry subsectors, including, among others, the promotion of small and medium-sized enterprises and cooperatives. The *Ministry of Foreign Trade and Tourism (MINCETUR)* is responsible for the foreign trade and tourism policy, and among others, promotes the development of tourism and artisanal activities, as well as bio-trade.

24. At the regional level, the regional (GORE) and local governments of Piura, Tumbes, Lambayeque and La Libertad are responsible for promoting local economic and social development, capacity-building and equity in their corresponding regions. For this purpose, they have their corresponding Concerted Development Plans. Likewise, through their Natural Resources Management Offices, they perform roles in environmental and territorial planning activities. They are also responsible for implementing their regional environmental management systems, and managing Regional Conservation Areas, taking into account the master plans of those areas. Local governments are responsible for the formulation, approval, implementation and monitoring of local environmental plans and policies, in accordance with regional, sectoral and national policies, standards and plans, as well as approving and implementing the local environmental policy, in an articulated manner with local development policy and plans.

25. The Various institutions listed above implement budget programs, public investment projects and programs that determine a robust baseline with interventions in prioritized regions. For the 2021-2025 period, the implementation of nine budget programs with an estimated total budget of US\$ 69,671,635 is planned. These are being implemented by MINAM (0057: conservation of biological diversity and sustainable use of natural resources in protected areas, 0144: conservation and sustainable use of ecosystems for the provision of ecosystem services); by PRODUCE (0093: productive development of companies); by MINCETUR (0127: improving the competitiveness of tourist destinations); and by MINAGRI (0040: improvement and maintenance of plant health, 0042: use of water resources for agricultural use, 0068: reduction of vulnerability and emergency response to disasters, 0089: reduction of agricultural land degradation, 0130: competitiveness and sustainable use of forest and wildlife resources). The articulation with budgetary programs and the projection for the 2021-2025 period is detailed in Annex 03.

26. At national level, in the 2021-2025 period, MINAM will implement investment projects for prioritized regions, for the recovery of ecosystem services of water regulation, erosion control and landscape beauty, the recovery of degraded areas and wildlife species, with an estimated budget of US\$ 11,014,062. MINAGRI will implement investment projects linked to the recovery of degraded soils, the improvement of the official land register service and the implementation of a wild bird information and surveillance system, with an estimated budget of US\$ 14,235,242. At regional level, for the 2021-2025 period, a total investment of US\$ 37,588,538 in public investment projects is estimated. In the region of La Libertad, an investment of US\$ 9,237,044 is planned to control soil erosion, flora and fauna conservation, and the sustainable use of forest biodiversity. In Lambayeque, an investment of US\$ 9,369,328 is available for the promotion of tourism, surveillance and control of conservation areas, the competitive development of dry forest value chains and the recovery of ecosystem services. In Piura, an investment of US\$ 11,230,978 is planned for the recovery of the water ecosystem service and restoration of dry forest conservation areas. In the region of Tumbes, investments for US\$ 7,751,188 are planned for the valuation of culture, surveillance and control of conservation areas, and restoration of degraded areas.

27. In turn, within the framework of the Reconstruction Plan, “*Comprehensive Plans against floods and landslides*” are being prepared, for which 18 basins were prioritized, 11 out of which are delegated to the MINAGRI-PSI (sub-sectoral irrigation program), and the others to the GORES or Special Projects. Each plan with an approximate cost of US\$ 3,2 million, which was awarded to 11 consortiums in December 2018. The 11 plans with sub-sectoral irrigation program include the following rivers: Rímac, Huaura, Mala and Cañete (Lima), Matagente (Ica), Casma, Huarmey and Lacramarca (Áncash), Olmos, La Leche and Motupe (Lambayeque); these last three within the scope of the project, which is expected to be implemented during the project implementation period.

28. Likewise, the project will take into account and complement international cooperation projects that have been developed, as follows:

- The Japan International Cooperation Agency (JICA), through the *PRO Bosques project (Capacity Building Project for Forest Conservation and REDD + Mechanisms)* is developing a methodology for mapping and monitoring the dry forest in Lambayeque, Piura and Tumbes. The project seeks to achieve three results, one of them is to have a key policy in REDD + and sustainable forest management, which includes the development of the construction process of the National Forest Plan and Wildlife, among others. This project will be executed through the Ministry of Agriculture and Irrigation, MINAM and regional governments.

- The Governors Working Group on Climate and Forests (GCF Task Force) is a sub-national collaboration of 38 states and provinces working to protect tropical forests, reduce emissions from deforestation and forest degradation, and promote realistic pathways for maintaining rural development. In Peru, it is supported by NORAD (Norway) and works to strengthen the Macroeconomic Platform of the Northern Forests.

- International Tropical Timber Organization (ITTO) supports the Project *Strengthening capacities for the Sustainable Forest Management of the Dry Tropical Forest of the North Coast of Peru*. This project seeks to strengthen the capacities of stakeholders to address the problems of degradation in tropical dry forests on the north coast of Peru, covering three regions that share this ecosystem: Tumbes, Piura and Lambayeque. This project has an approximate budget of USD 1 million.

- United States Agency for International Development[15]¹⁵ (USAID) and the Government of Canada co-fund the *Natural Infrastructure for Water Security (NIWS)* project which aims to enable the Government of Peru to improve natural resources management, increase water security and provide a sustainable economic alternatives, while reducing migration and the risk of internal conflicts. It aims to scale up investments in natural infrastructure to safeguard water supplies and increase climate resilience. The NIWS will demonstrate how well-managed natural infrastructure projects in Peru can deliver water security benefits and are sustainable, cost-effective, and scalable in covering the Chira-Piura Basin of the Piura region.

- The UN-REDD Peru National Program, is a collaborative United Nations initiative launched in 2008 to support developing nations with forests in their national process of building the Reduction of Emissions from Deforestation and Forest Degradation (REDD +) scheme, including promoting informed involvement of all key stakeholders, especially indigenous peoples and forest dependent communities. The National Program aims to strengthen the enabling conditions for an adequate implementation of the national forest and climate change strategy and the preparation of the Forest Reference (Emission) Levels that incorporates forest degradation with an investment of USD 4,065,780[16]¹⁶, allocating in governance including community pilots and intervention in dry forests an amount of USD 1,829,450. The program provides technical assistance to develop the Institutional Plan of the Northern Forest Macroregional Platform 2019-2022.

29. Finally, the LDN Fund[17]¹⁷ is an impact investment fund blending resources from the public, private and philanthropic sectors to support achieving LDN through sustainable land management and land restoration projects implemented by the private sector. In total, investors have announced commitments of more than USD 100 million out of a goal of USD 300 million. In Latin America the fund has selected the *Urapí Sustainable Land Use*[18]¹⁸ program which aims to generate significant social and environmental impacts through investments in sustainable agroforestry projects in rural areas of Latin America. The fund aims to raise US\$50 million from various institutional and private investors and foundations. In Peru it is implemented through the *Café Selva del Norte* initiative (Cajamarca and Amazonas), which is an alliance between a group of coffee export cooperatives to strengthen the credit management of the program.

30. The baseline projects will be further described by CEO Endorsement.

3. The proposed alternative scenario with a brief description of the expected outcomes and project components

31. Intervention strategy. The Government of Peru is requesting support from the Global Environment Facility (GEF) to develop and strengthen an enabling environment for the sustainable use of ecosystem services and forest biodiversity of dry forests in the Northern Coast, thus reversing the current processes of loss of biodiversity and land degradation, and at the same time generating global environmental benefits, as well as food security and improved livelihoods for local populations.

32. The objective of the proposed project is: *to restore and sustainably manage the dry forests of the Northern Coast of Peru, facilitating the conservation of biodiversity and ecosystem services, increasing the resilience of communities and their livelihoods, and supporting the achievement of the Land Degradation Neutrality (LDN) target*. This will be done through two approaches and levels. The first approach will be aimed at strengthening the planning and management capacities of national, regional and local stakeholders for the sustainable management of dry forests, contributing to their better conservation and restoration, and the adoption and scaling-up of biodiversity-friendly practices and sustainable land management. The second approach, at field level, aims at strengthening local stakeholders for the sustainable management of forests and soils to contribute to the

conservation and sustainable use of biodiversity and key ecosystem services for sustainable agricultural production, and the access to markets for sustainable products of dry forests, increasing the population's income and improving their livelihoods.

33. This will generate global environmental benefits in terms of reducing pressures on dry forests and threats to ecosystem services resulting from unsustainable land uses and practices, with the additional benefit of making them more resilient to the expected impacts of climate change. Inhabitants in intervention areas and their families are in vulnerability conditions and, therefore, the project will contribute to poverty alleviation, food security, cultural identity and the preservation of traditional and local knowledge, as well as the valuation of the natural heritage. The Theory of Change of the Project is summarized in Sub-section 4 *Incremental Reasoning* below.

Components and expected outcomes

34. Component 1: Governance with a multisectoral, multi-level and multi-stakeholder approach for the sustainable development of dry forests in Peru

Outcome 1.1: National, regional and local stakeholders of public and private sectors collaborate, coordinate and harmonize policies, plans, actions and investments related to the sustainable and inclusive management of dry forests.

GEF Core Indicator 11: Number of women and men direct beneficiaries of project actions that improve their skills for the conservation and sustainable use of dry forests: 8,252 men and 8,548 women. Total: 16,800

Outcome 1.2: Capacities of institutional and local stakeholders strengthened for decision-making on land-use, territorial planning, and monitoring of deforestation, degradation and biodiversity.

35. *Project Indicator 1: Level of improvement of local stakeholders' capacities for monitoring and surveillance measured (at least 30% women) (baseline and target to be established and validated in the PPG)* The project will support existing multi-sectoral and multi-level platforms,^{[19]¹⁹} strengthening them in their institutional planning and management instruments, while fostering the involvement of different stakeholders for the preservation and sustainable use of dry forests. Planning instruments for land-use will be improved (Ecological-Economic Zoning-EEZ^{[20]²⁰} and forest zoning at regional level and concerted provincial scale), regional strategic tourism plans, basin water resources management plans, master plans of protected areas and community plans articulated and compatible with development plans (regional and local) that incorporate dry forest restoration and sustainable management. The project will assist in the improvement of information for decision-making processes and will make it available to all stakeholders, using information from previous projects. The project information will be systematized to be incorporated into a platform that has continuity (for example, the National Environmental Information System (SINIA) and made available as reference for decision-makers, researchers, private sector, and the civil society.

36. The project proposes the articulation of the Watershed Management Plans of the Basin Water Resources Councils with the Regional Conservation Systems, to avoid duplication of water management actions. This articulation will allow to implement public and private investment projects linked to multi-sectoral uses of water resources, identify the availability of water resources and the distribution required to reach end users and meet water demands for multi-sectoral uses in the dry forest, mainly in the dry season to reduce aquifer depletion and salinization. The Basin Water Resources Management Plans are managed by the basin water resources councils, which are made up, among others, by regional and local governments, the national water authority, universities, communities, and board of users.

37. The alignment of rules will be proposed to take into account the forest-soil-water ecosystem of dry forests in a comprehensive manner and to avoid land-use change (for example, the Land Classification Rules for their Capacity for Greater Use Law, land-use change permits in forests, forest clearance permits, among others).

38. The project will launch a capacity-building program for local stakeholders for the monitoring and surveillance of forests and biodiversity, involving local governments, entities in charge of monitoring (SERNANP, SERFOR, and the National Forest Conservation Program) and articulating these stakeholders with communities and organized civil society groups. It will seek to strengthen internal monitoring instruments, patrolling plans, intervention protocols, coordination with the institutions in charge of monitoring, training in the use of monitoring equipment, and the revaluation of the ancient knowledge of communities. Likewise, the monitoring systems of dry forests will be strengthened with new technologies (such as Open Foris, Collect Earth, Ex Act), which in turn will enhance the work carried out by the National Forest Conservation Program, which has the forest cover monitoring platform.

39. Component 2: Ecological connectivity of dry forests and rehabilitation through effective management and financial sustainability of conservation areas and buffer zones

Outcome 2.1 Increased management effectiveness of protected areas.

GEF Core Indicator BD 1.2: 250,250 hectares of PAs with improved management, as measured by the GEF METT:

- Tumbes National Reserve: Baseline: 38; Target: 42
- Cerros de Amotape National Park: Baseline: 43; Target: 47
- El Angolo Hunting Preserve: Baseline: 62; Target: 68
- Bosque de Pomac Sanctuary: Baseline: 56; Target: 62
- Laquipampa Wildlife Refuge: Baseline: 49; Target: 54

Outcome 2.2 Connected (corridors) and functional dry forest areas are preserved using management models based on landscape approach

Project Indicator 2: Area of corridors preserved with management models based on landscape approach: 367,633 hectares.

Outcome 2.3 Dry forests recovered through landscape restoration mechanisms

GEF Core Indicator LD 3.2: Area of (dry) forests restored: 2,278 hectares

40. The project will support protected areas and OECM[21]²¹ (Table N° 3) for a more effective management. This will include several approaches: i) improvement of master plans and their articulation with regional, local and community development plans; ii) development of financial sustainability models for the landscape (protected areas), and a fundraising strategy with the participation of the private sector, through works for taxes schemes, corporate social responsibility, or other mechanisms; iii) development of a capacity-building program for PA and OECM administrators for the effective management of forests and biodiversity of protected areas and OECM. This program will cover training in financial mechanisms for the management, monitoring and identification of opportunities to enhance the value of forest ecosystem services.

Table N.º 3: Protected Areas of the Peruvian Northern Coast

Location	Modality of Conservation (*)	Name	Surface (ha)
Tumbes	PNA	Tumbes National Reserve	19,267
Tumbes - Piura	PNA	Cerros de Amotape National Park	151,767
Piura	PNA	El Angolo Hunting Preserve	65,000
Lambayeque	PNA	Bosque de Pómac Sanctuary	5,887
Lambayeque	PNA	Laquipampa Wildlife Refuge	8,329
Total			250,250

Source: Based on information from SERNANP. (*) PNA: Protected Natural Area.

Table N° 4: Other modalities of conservation in the Northern Coast of Peru

Location	Modality of Conservation(*)	Name	Surface (ha)
Tumbes	RCA	Angostura Faical	8,795
Piura	RCA	Dry forests of Salitral – Huarmaca	28,812
	PCA	Forests of Dotor	9,945
		Mangamanguilla of the Manga de Salitral Agrarian Association	1,738
		Dry Forest of the Cesar Vallejo Peasant Community of Palo Blanco	200
		Dry forest of Chililique Alto	200
		Forests of Overal and Palo Blanco	3,522
		Dry forest of Colina Juan Velasco Alvarado	2,413
		Dry forest of San Juan de los Guayaquiles	305
Lambayeque	RCA	Forest of Huacrupe – La Calera	7,272
Lambayeque	RCA	Forest of Moyan Palacio	8,458
Lambayeque	PCA	Chaparrí	34,412
La Libertad	PCA	El Cañoncillo	1,311
Total			107,383

Source: GORE Lambayeque, GORE Piura and GORE Tumbes. (*) RCA: Regional Conservation Area; PCA: Private Conservation Area.

41. Restoration approach: The dry forests of the north coast face various problems that result in habitat fragmentation and modifications in landscape structures, endangering biodiversity, landscape functioning and progressive isolation of habitat fragments. The project will support the ecological connectivity of dry forests through corridors that take into account protected[22]²² areas and OECMs (Tables 3 and 4). To this end, the watershed-oriented Regional Conservation Systems will be strengthened with the participation of the basin water resource councils of Tumbes, Chira-Piura, Chancay-Lambayeque and Jequetepeque-Zaña, ensuring the ecological connectivity of the landscape. This will be achieved through the identification of areas to be connected, which should include characteristics of high biodiversity, areas that harbor threatened or endangered species[23]²³, and those that provide important ecosystem services to the population. Therefore, to help protect biodiversity and promote landscape connectivity, the restoration should be aimed at **protecting the remaining native vegetation areas**, and be complemented by actions aimed at **increasing sustainable agricultural and forestry production** for ensure the livelihoods of the population, avoiding land degradation, and contributing the conservation of biodiversity, as well as the mitigation and adaptation to climate change. It should be note that these actions will be collected through the Regional Conservation Systems.[24]²⁴

42. Furthermore, it is key to consider that, in a context of climate change, for the planning of forest restoration at a landscape level, methods[25]²⁵ that restore their resilience to maintain key ecological functions must be considered and ensure the provision of ecosystem services to the population. The landscape restoration will be implemented in two levels. The first level will be aimed at reducing the impacts on fragmented dry forest ecosystems improving the connectivity of the landscape and the restoration of ecosystem services through techniques such as: protection of native vegetation areas, installation of ecological and / or conservation corridors, maintaining mature forest remnants in the upper areas for the restoration of dry forest. A second level seeks to restore dry forest productive areas through agroecological and ancestral practices (closure systems, *amunas*[26]²⁶) agroforestry and silvopastoral systems, linked to biodiversity outputs prioritized in Component 3. Farmer Field Schools established in Component 3 will be responsible for the dissemination of restoration practices in dry forests.

43. A restoration strategy for the dry forest will be established based on the establishment of clear goals and objectives and in accordance with the restoration guidelines established by MINAM[27]²⁷ and SERFOR[28]²⁸. A baseline (reference ecosystem) will be established to assess the degradation of ecosystem services. Land Degradation Neutrality mechanisms will be established and elements necessary to achieve neutrality (planning and implementation) and subsequent monitoring will be incorporated[29]²⁹.

Cost per hectare: According to Biodiversity and World Agroforestry (ICRAF)[30]³⁰, the cost per hectare restored in the dry forests of the north of Peru mostly exceeds USD 1,000. The project will promote financing mechanisms and articulation of public and private investment to achieve the field implementation of the areas to be restored. The project aims to restore 2,278 degraded areas, as follows: a) 90% correspond to degraded agricultural lands where participatory restoration practices will be applied to improving soil and

water conservation, erosion control, groundwater recharge and vegetation cover; and b) the remaining 10% are degraded forest and forest lands where ecological restoration practices will be applied. The restoration target will be further validated during PPG.

44. In other hand, the financial instruments for leveraging restoration investments will be generated, through public investment (public investment projects, budget programs: 130, 144, 057, 068) and corporate social responsibility. With the support of the financial instruments developed, restoration best practices will be implemented.

45. **Component 3: Sustainable production practices for the conservation of the natural heritage of dry forests in Peru**

Outcome 3.1 Sustainably preserved and managed dry forests of the Peruvian Northern Coast are more resilient to anthropogenic threats, mainly agriculture and livestock, and have a better response capacity to climate change effects.

- *GEF Core Indicator BD 4.1: Area of landscapes under improved practices : 8,000 hectares.*
- *GEF Core Indicator 4.3: Area of landscapes under sustainable land management in production systems: 2,000 hectares.*
- *GEF Core Indicator 4.4: Area of High Conservation Value Forest loss avoided (through conservation agreements with producers): 107,383 hectares.*
- *Project Indicator 3: 10,000 producers (women and men) that implement sustainable biodiversity management practices and sustainable land management (at least 40% women)*

Outcome 3.2 Value chains strengthened with the increase of deforestation-free dry forest products and by-products, with greater value and access to markets, fostering the collaboration of administrators and users of resources and the private sector.

- *Project Indicator 4: Number and type of start-ups with access to the market under schemes of sustainable production and biodiversity conservation efforts and sustainable land management (of which 50% are led by women)*
- *Project Indicator 5: Number of beneficiaries (men and women) participating in biodiversity-friendly value chains (at least 50% are women)*
- *Project Indicator 6: Diversified number of livelihoods of small-scale producers and female entrepreneurs linked to BD-friendly practices, and level of market access (baseline and target to be defined by the socioeconomic and gender analysis at PPG stage)*

46. The project will support the conservation and sustainable management of dry forests, as well as the generation of goods and services from their sustainable use, contributing to the development of value chains of standing forests (non-timber products, agroforestry, tourism), through strategies that facilitate the rural economy transformation and contribute to improving the livelihoods of the population.

47. For landscape-scale restoration planning, the mosaic of land uses and the diversity of needs of local stakeholders will be taken into account. To this end, the project will support the establishment of Farmer Field Schools[31]³¹ in the territories for the dissemination of sustainable biodiversity and land management practices to reduce anthropic threats to dry forests, sustainably increasing agricultural production, as well as the sustainable use of forests. The practices that will be promoted include: (i) assisted natural regeneration, (ii) techniques for the protection of soils against erosion (plantations, slow-forming terraces, control of gullies) (iii) silvopastoral systems with perennial forage species adapted to the desert, with semi-confinement of goats; (iv) agroforestry systems with species adapted to aridity such as: *carob*, *leucaena*, among others, and edible

perennial crops like the “frijol de palo” (pigeon peas) (*Cajanus*); (v) pressurized irrigation systems (drip irrigation) with water from wells (“*noques*”). Likewise, promote conservation agreements with producers for the conservation of dry forests in private properties.

48. Diagnoses and commercial strategies will be developed to promote deforestation-free value chains and have access to sustainable markets of tourism, carob, sapote, and *palo santo*. Based on these diagnoses and commercial strategies, the project will design and launch demonstration projects to strengthen the capacities of local stakeholders, mainly small-scale producers and female entrepreneurs in agribusiness (carob, honey, and others) for the sustainable production and enhancement of the value of biodiversity. To this end, several components of the value chains will be strengthened: financial management, negotiation, health; strengthening of producer organizations to develop negotiation capacity; strengthening of the market information system; promotion of public-private partnerships. The gender-sensitive value chain analysis will be applied to eliminate barriers to women’s participation, access and control over resources and productive benefits, and to address them systematically in all the chain nodes. Local capacities will be built to produce dryland products in a sustainable manner, effectively inserting them into value chains by addressing aspects of post-harvest handling, processing, packaging, marketing, and business management. Thus, the development of the product line is considered a reliable source of supplies by applying certification, verification, and traceability systems, as appropriate. Within the framework of the on-the-ground interventions, the participation of the financial sector (savings banks, banks, funds, others) will be encouraged to increase sustainable investments through innovative tools that are articulated to a business plan.

49. Component 4: Knowledge Management and Monitoring and Evaluation (M&E) based on the principles of adaptive management, and the delivery of measurable and objectively verifiable outcomes

Outcome 4.1. .1 Project Knowledge Management articulated with national information systems and with the GEF and contributing to scaling-up and replicating best practices and lessons learned.

Project Indicator 7: A strengthened national system (SINIA[32]³²) for dry forests, including good practices and lessons learned published and disseminated (including the gender approach).

Outcome 4.2. M&E system supporting project implementation, based on measurable and verifiable outcomes and adaptive management principles

50. The knowledge management is aimed at sharing information with stakeholders to ensure that the intervention and the outcomes achieved can be replicated in other conservation initiatives and in the improvement of public policies for dry forest management. The project will develop a mechanism for dissemination and exchange of best practices and lessons for the replication and scaling-up of outcomes, including: a) a communications and information strategy addressed to stakeholders (regional and local governments, producers, communities, and the education sector), which will include the preparation of information materials, activities and outcomes, systematization of lessons learned and best practices, and dissemination using different communications means; b) visits and tours to exchange regional experiences in the management of dry forests addressed to the MINAM technical staff, regional and local governments, owners and producers; c) actions to feed the GEOBOSQUES platform website with project information, together with a repository (website) of the project to share experiences on a permanent basis, disseminate information, policy-making and integration, highlight the outcomes and progress, and facilitate the replication of the processes for the duration of the project. In addition, the project information will be articulated in an information platform of national scope, with continuity and public access.

51. The implementation of the project will be supported by a M&E strategy based on measurable and verifiable outcomes and adaptive management principles and knowledge management. Such M&E strategy will clearly define the expected outcomes, the expected time frames for their achievement, and their confirmation using objective indicators and

means of verification. Annual working plans and their corresponding budgets will also be developed based on the expected results and their progress, including the gradual steps and milestones required for measurable achievements. To this end, annual working plans will be articulated with annual progress indicators in a participatory manner for each outcome. Mid-term evaluations will be carried out at the end of the period at strategic intervals, in order to inform and guide the project implementation in a constructive manner, paying attention to sustainability considerations, articulating a coherent exit strategy, and applying adaptive measures, if necessary.

4. Alignment with the GEF focal area and/or Impact Program. Incremental / additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCE, SCCF and cofinancing.

52. Anthropogenic activities exert pressure on the dry forests of the Northern Coast of Peru through mainly land use change and unsustainable forest, agriculture and livestock production practices that result in degradation, desertification and loss of globally significant biodiversity. Important baseline investments are directed towards conservation and restoration efforts as described in sub-section 2 above. These baseline actions will also enable some level of institutional strengthening to address the identified threats. However, the scale and pace of action under the baseline scenario is not expected to lead to the kind of systemic changes that are required to significantly strengthen the sustainable management of dry forest landscapes nor have substantial impacts to reduce the ongoing negative impacts on biodiversity and forests, ecosystem services, soil and water quality.

53. Without the GEF project, the dry forest ecosystem will continue to be degraded. Efforts to address the identified problems will remain ineffective, as government agencies will continue to lack sufficient tools and approaches to integrate conservation and sustainable use in the productive sectors and to effectively manage protected areas, as well as technical capacities and resources, planning and regulatory frameworks, and coordinating mechanisms between different government agencies and between government and civil society at national, regional and local levels to sustainably manage the dry forests. Producers and local communities will continue with a low level of knowledge and access to information and tools to enable them to adopt sustainable and environmentally friendly production practices and value chains, participate in the sustainable management of dry forests and improve their livelihoods.

54. Under the alternative scenario, the project will lead to significant strengthening of the planning and regulatory framework, including financial instruments that can increase the resources available for sustainable land management and forest restoration. GEF incremental financing will lead to greatly enhanced capacity for inter-institutional and inter-sectoral collaboration and planning, enhanced PA management, improved biophysical data collection, and enhanced monitoring of deforestation and land degradation. The project will include field training to promote the adoption and upscale of locally-adapted restoration and sustainable production practices, while demonstrating and tracking co-benefits (Component 3). Component 1 will support evidence-based policy design and enforcement in the wider landscape, in order to promote project sustainability after closure (see more details below).

55. The project's Theory of Change is detailed in Graph 1 below:

Barriers	Problem	Components	Objective	Global Impacts
1: Weaknesses of the governance framework for adequate collaboration, coordination and harmonization of policies, plans, actions and investments for the sustainable development of dry forests in Northern Peru	Loss of biodiversity, deforestation and degradation of the dry forests of the Peruvian Northern coast	1. Governance with a multisectoral, multi-level and multi-stakeholder approach for the sustainable development of dry forests in Peru	To restore and sustainably manage the dry forests of the Northern Coast of Peru facilitating the conservation of biodiversity and ecosystem services, increasing the resilience of communities and their livelihoods, and supporting the achievement of the Land Degradation Neutrality (LDN) target	BD: Conserve globally significant biodiversity in key landscapes, including trees outside forests, agro-biodiversity and wild crops LD: Sustainable management of drylands and production systems; best land uses and management for agricultural and livestock production Co-benefits: GHG land-based mitigation and in value chains (sequestration and avoidance) / reduction of vulnerability to crises of communities in drylands
2: Insufficient institutional, management, monitoring and financial frameworks for protected areas and for the rehabilitation of forests for ecological connectivity		2. Ecological connectivity of dry forests and rehabilitation through effective management and financial sustainability of conservation areas and buffer zones.		
3: Lack of appropriate technologies for sustainable production limits the possibilities of conservation and sustainable use of dry forests, and the improvement of livelihoods		3. Sustainable production practices for the conservation of the natural heritage of dry forests in the Peruvian		
4: Knowledge		4. Knowledge Management and Monitoring and Evaluation (M&E) based on the principles of adaptive management, and the delivery of measurable and		

56. Under Component 1, GEF resources (USD 1,700,000) will contribute to removing barriers 1 and 4 by strengthening the governance framework for the sustainable development of dry forests. This will include a technical assistance to strengthen the capacities of national, regional and local stakeholders for inter-institutional and intersectoral collaboration and cooperation, including the strengthening of multi-level and multi-stakeholder platforms. The harmonization of territorial planning instruments and the development of information systems for effective monitoring of forests and for the generation and availability of information for the decision-making of all the stakeholders involved. Component 1 is aligned with the focal area of Biodiversity and its objective and entry point: a) Objective 1: *Mainstream biodiversity across sectors as well as terrestrial and marine landscapes*; BD-1-1 *Mainstream biodiversity across sectors as well as landscapes and seascapes through biodiversity mainstreaming in priority sectors*. Likewise, with the Land Degradation focal area and its Objective 1: *Support on the ground implementation of SLM to achieve LDN* and entry point, LD-1-1 *Maintain or improve flow of agro-ecosystem services to sustain food production and livelihoods through Sustainable Land Management (SLM)* and LD-1-2 *Maintain or improve flow of ecosystem services, including sustaining livelihoods of forest-dependent people through Sustainable Forest Management (SFM)*.

52. In Component 2, the resources of the GEF (USD 2,971,446) will address barriers 2 and 4 through the improvement of capacities for a more effective management of protected areas that conserve representative samples of dry forest forests. North coast and for the rehabilitation of forests for ecological connectivity. This will be done through technical assistance to strengthen protected areas by supporting spatial planning instruments, capacity building for governance and regional prioritization of conservation needs, as well as their articulation with the broader territorial dynamics based on conservation corridors; and restoration actions both productive and ecological. Component 2 is aligned with the focal area of Biodiversity, Objective 2: *Address direct drivers to protect habitats and species*, BD-2-7 *Address direct drivers to protect habitats and species and Improve financial sustainability, effective management, and ecosystem coverage of the global protected area estate*; and with Land Degradation focal area, Objective 1, LD-1-1 and LD-1-2.

53. In Component 3, GEF resources (USD 1,781,341) will address barriers 3 and 4 through the reduction of anthropic pressures on dry forests and the improvement of the livelihoods of rural people who depend on agricultural production and the use of biodiversity. The technical assistance of the project will support the dissemination and adoption of BD-friendly and SLM-friendly practices for sustainable agricultural production, the strengthening of deforestation-free value chains for dry forest products and by-products, the increase in market access of sustainable products and the improvement of family income through the sustainable use of natural resources. Sustainable production practices to be disseminated will also contribute to adaptation to the effects of climate change. Component 3 is aligned with Objective 1 of the Biodiversity focal area and its BD-1-1 entry point, as well as with Objective 1 of the Land Degradation focal area and its entry points LD-1-1 and LD-1-2.

54. Finally, Component 4 will have an incremental financing of the GEF (USD 765,689), which will be responsible for monitoring and evaluation. With the financing of the activities to monitor the progress of the project and compliance with indicators, external mid-term evaluations and final, and knowledge management for replication and scaling through the systematization of experiences and lessons learned, preparation of communication and information materials, and dissemination of results, partial and final, and project products.

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

55. The project will generate the following GEBs: i) Increased management effectiveness of 5 PA (GEF Core Indicator 2.2) totaling 250,250 hectares, with a 10% increase in the GEF /METT score with respect to the baseline (see Table B for details).

METT target rationale: Under current exposure conditions and adaptive capacity, 15% of the national PAs will have a high vulnerability to climate change, and 62% of PAs will have a medium vulnerability, by 2030 (MENA et al. 2014). These changes may be accentuated by a framework of social, economic and environmental uncertainty generated by anthropic activities. The METT project targets are set in accordance with the commitments of the Government of Peru embodied in the NDC and LDN goals, as follows:

The NDC of Peru sets a target by 2030 of 25% of the improvement of METT score[33]³³ (see pages 181-182 of the NDC)

The same target is ratified by the Government in the LDN report[34]³⁴. (see page 10 of the LDN report)

In addition, the project will generate the following GEBs: ii) 2,278 hectares of forest and forestland restored (GEF Core Indicator 3.2); iii) 8,000 hectares with improved BD practices (GEF Core Indicator 4.1); iv) 2,000 hectares under SLM in production systems (GEF Core Indicator 4.3); v) 107,383 hectares of forests conserved through conservation agreements with producers (GEF Core Indicator 4.4); vi) Enhanced connectivity in 367,333 hectares of corridors through mainstreaming of landscape approach in the Regional Conservation System; vii) 16,000 people (8,252 men and 8,548 women) directly benefited by the project activities aimed at the conservation and sustainable use of dry forests (GEF Core Indicator 11).

56. These benefits will translate into direct benefits for dry forest biodiversity species, such as algarrobo (*Prosopis pallida*), palo santo tree (*Bursera graveolens*) and sapote (*Colicodendron scabridum*). In addition, there are endemic species such as Guayaquil squirrel (*Sciurus stramineus*), White-winged Guan (*Penelope albipennis*), White Hawk (*Leucopternis albicollis*), Grey-cheeked parakeet (*Brotogeris pyrrhoptera*), Peruvian plantcutter (*Phytotoma raimondii*), Roufous Flycatcher (*Myiarchus semirufus*), American crocodile (*Crocodylus acutus*), and others that have been classified in different threat states. The reduction of deforestation, forest conservation, land and forest restoration, and sustainable land management practices will generate additional benefits in mitigation and adaptation to climate change, increasing the resilience of ecosystems and communities, and reducing their climate and social vulnerability. Mitigation of emissions in the order of 2,052,667 MtCO_{2e} is estimated (see Annex 07).

59. The proposed project will contribute, through the generation of global, national and local benefits, to the following Aichi objectives and goals: Strategic Goal A, Target 2; Strategic Goal B, Targets 7 and 14; and Strategic Goal E, Target 18. The project will also contribute to the following Sustainable Development Goals (SDG): Goal 1, Target 1.4; Goal 2, Target 2.4; Goal 5, Targets 5.5 and 5.a; Goal 13 Target 13.1; Goal 15 and its Targets 15.1, 15.2, 15.3, 15.5: and 15.9.

6. Innovation, sustainability and expansion potential

60. Innovation: The project will be innovative in terms of the use of technologies and applications for production, access to markets and monitoring of natural resources. Access to communication technologies and relevant applications, the use of the Open Foris Tools / Collect Earth application for degradation analysis will contribute to greater access and dissemination of information. In addition, the project will be supported by the global WOCAT platform, which will help provide information, tools and network of experts that improve approaches to sustainable land management. On the other hand, by 2021, the GEOBOSQUES platform, under the coordination of MINAM, will cover dry forest areas through early warning. The project aims to integrate national, regional and local stakeholders for the conservation and sustainable use of dry forests, and empower local stakeholders for the integration of BD and MST in territorial planning processes. The project will strengthen capacities for the effective and appropriate use of planning methodologies and decision support that contribute to the targeting of interventions, to identify and understand the main causes / drivers of degradation, to the selection and design of instruments that optimize net social and environmental results and / or understand the circumstances in which the maintenance of ecosystems and their services can generate a

greater economic benefit than the promotion of economic processes that degrade and deplete ecosystems. The promotion of alliances to catalyze innovations in technology, policies, financing and business models for the more sustainable development of productive activities is another innovative aspect of the project.

61. *Sustainability*: The project is in line with the national development objectives regarding biodiversity conservation and the reduction of land degradation. The proposed actions are based on a baseline of actions that the Government has been implementing for the conservation and sustainable use of dry forests. The project will build on the interventions prioritized by the “Macroregional Platform Forests of Northern Peru” created since 2015 as part of the efforts generated by the authorities of the four regions that make up the project. The purpose of the Platform is to unite the capacities of the regions, public sector, cooperation, academics to build policies and projects that allow the sustainable development of dry forests.

62. The project will promote capacity building at the national, regional and local levels to create a facilitating environment that will lead to the sustainable development of dry forests in the long term. Participatory mechanisms for inter-institutional and intersectoral coordination and for integrated decision-making will contribute to the appropriation of the project. The use of dissemination and transfer methodologies already tested, as in the case of Farmer Field Schools, will contribute to the adoption of sustainable productive practices. Partnerships with the private sector to develop sustainable value chains will contribute to access to markets for biodiversity products and by-products, improved income and livelihoods of communities. The development of financial instruments for forest restoration and for sustainable value chains will ensure long-term financing for the continuity of the actions undertaken by the project.

63. *Potential for replication*: The complementarity of the project with national policies and plans determines a high potential for replication. The communication and information strategy will help demonstrate the effectiveness of project interventions (e.g. biodiversity conservation and sustainable use, reduction of anthropic pressures, improvement of agricultural production, access to markets, income and livelihoods), facilitating the replication of experiences and lessons. Alliances with the private sector will allow replicating experiences with sustainable value chains. Alliances with the academic sector will contribute to disseminate knowledge. The socialization of results and the exchange of experiences will contribute to the dissemination of the results obtained. The best coordination and articulation between the institutions will allow to disseminate the actions and results of the project to other areas where the results can be implemented and replicated. The systematization of experiences and lessons learned will help to scale up the results of the project at national and international level.

[1] National Strategy to Combat Desertification and Drought 2016-2030.

[2] COFOPRI, 2014.

[3] Albán, 2011.

[4] Sabogal, A. Agricultura de ladera en el bosque seco ecuatorial de la costa norte del Perú. Geografía y Medio Ambiente. Pontificia Universidad Católica del Perú.

[5] Mongabay, 2017.

[6] Lamadrid, U. A. (2014). La tala ilegal del bosque seco en la región Lambayeque-Perú: problemas y soluciones. En: Revista Científica Monfrague. Desarrollo Resiliente; vol. III, N° 1.

[7] Ektvedt, T. (2012)

[8] Ministry of Environment. National Strategy on Forests and Climate Change 2016-2030.

[9] <https://www.osinfor.gob.pe/wp-content/uploads/2018/12/APROVECHAMIENTO-FORESTAL-EN-BOSQUES-SECOS-final.pdf>

[10] MINAM. 2019. Guía de Evaluación del Estado de los Ecosistemas de Bosque Seco.

- [11] Ministry of Environment. 2017. Report on degraded areas – National gap. Available in: <https://www.datosabiertos.gob.pe/dataset/%C3%A1reas-degradadas-brecha-nacional-ministerio-del-ambiente>
- [12] INDECI (2017). Compendio Estadístico del INDECI 2017. Gestión Reactiva. Recuperado de <https://www.indeci.gob.pe/wp-content/uploads/2019/01/201802271714541.pdf>
- [13] El Niño Costero 2017 afectó a 16.591 hectárea de cultivos en La Libertad, 4.009 hectáreas en Lambayeque, 15.342 hectáreas en Piura y 10.842 hectáreas en Tumbes.
- [14] Ministry of Environment. 2016-2030 National Strategy on Forests and Climate Change.
- [15] <https://www.forest-trends.org/infraestructura-natural-en-peru/>
- [16] Natural Infrastructure Project for Water Security. <https://www.serfor.gob.pe/wp-content/uploads/2018/12/SPDA-JEAN-PIERRE-ARAUJO.pdf>
- [17] <https://www.unccd.int/actions/impact-investment-fund-land-degradation-neutrality>
- [18] <https://initiative20x20.org/partners/urapi-sustainable-land-use> (Urapi Program)
- [19] Opportunities for consensus such as the Macroeconomic Platform of Northern Forests, Regional Bureau of Forest and Wildlife Control and Surveillance, among others.
- [20] Technical instrument and guidance for the sustainable use of a territory and its natural resources, very useful for decision-making and territory management <http://www.minam.gob.pe/ordenamientoterritorial/zonificacion-ecologica-y-economica/>
- [21] Other Effective Area-Based Conservation Measures (*) PNA: Regional conservation areas and private conservation areas.
- [22] Cuentas, M. 2015. Revaluing the Algarrobo Dry Forest. PUCP thesis.
- [23] Peru has a National Plan for the Conservation of the Andean Bear (*Tremarctos ornatus*) that responds to the need to conserve and recover populations of this emblematic species of the country distributed in the dry forests of the Piura, Lambayeque and La Libertad regions.
- [24] The management document that guides development within Regional Conservation Systems is the Regional Biological Diversity Strategies
- [25] Is recommended that for the planning of the restoration include: a reference model on the “desired state”, a current diagnosis that includes the causal agents of degradation and / or fragmentation and identification of good practices and / or more successful restoration techniques and efficient for dry forests.
- [26] Pre-Columbian water harvesting system used in mountainous parts of Peru
- [27] MINAM. Dry Forest Ecosystem Status Assessment Guide: Seasonally Dry Plain Forest and Seasonally Dry Hill and Mountain Forest. November 2019. <https://sinia.minam.gob.pe/documentos/guia-evaluacion-estado-ecosistemas-bosque-seco-bosque-estacionalmente>
- [28] SERFOR. 2018 Guidelines for the restoration of forest ecosystems and other ecosystems of wild vegetation. R.D.E N° 083-2018-MINAGRI-SERFOR-DE, Lima, Peru. <https://www.serfor.gob.pe/wp-content/uploads/2018/05/Lineamientos%20restauracion.pdf>
- [29] Based on Cowie, A. Guidelines for the application of the “Scientific Conceptual Framework for Land Degradation Neutrality”. A report prepared for the Scientific and Technical Advisory Panel of the GEF. October 2019.

[30] Cerrón, J. Fremout, T. Atkinson, R. Thomas, E. Cornelius, T. Restoration experiences and seed sources in tropical dry forest of northern Peru. July 2019. https://www.biodiversityinternational.org/fileadmin/user_upload/Experiencias_Cerron_2019.pdf

[31] Farmer Field Schools, created by FAO in the early 1990s (INTA and FAO, 2011; and Groeneweg *et al.*, 2006), are learning opportunities based on “learning by doing” (Khisra, 2004), where participants integrate and value local knowledge that is compared with existing technical information under the guidance of a facilitator (FAO, 2016).

[32] National System of Environmental Information.

[33] http://www.minam.gob.pe/cambioclimatico/wp-content/uploads/sites/127/2018/12/Informe-final-GTM-NDC_v17dic18.pdf.

[34] See document “Neutrality in Land Degradation Working Document in the framework of the United Nations Convention to Combat Desertification” (MINAM, 2019).

1b. Project Map and Coordinates

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

64. The intervention area was selected based on the following criteria: i) Ecosystems to conserve; For this criterion, the location of the Seasonally dry hill, plain and riparian forests was evaluated, considering that they cover five regions from north to south: Tumbes, Piura, Lambayeque, La Libertad and Cajamarca; ii) Protected areas within the ecosystems to be conserved; where the 5 protected areas located in the dry forests in Tumbes, Piura, Lambayeque and La Libertad were considered, which represent a total area of 250,250 ha (Table No. 3). In addition, it was determined that there is cross-border connectivity due to the location of the bi-national landscape “*Bosques de Paz Transboundary Biosphere Reserve*” (1,616,988 hectares), which includes the Dry Forest Biosphere Reserve of Ecuador and the Northwest Biosphere Reserve of Peru, of which around 70% (1,115,948 ha) belong to Peruvian territory. It should be noted that other conservation modalities (ACR, ACP) are also considered, which allow the identification of a biological corridor in accordance with the objectives of the project; iii) Basin approach, considers the hydrographic basins located in the prioritized ecosystems, establishing the presence of thirteen basins, starting in the north of the Zarumilla and Tumbes basins to the Jequetepeque river basin (La Libertad). This approach has served to prioritize the intervention in the middle and upper areas of the basins and served as an aid to delimit the landscape with the limits of the Zarumilla basin in the south and the Zarumilla River basin in the north; and iv) Communal territories, identifying the farmer communities that exist within the prioritized landscapes. This approach served to determine that the Northwest Dry Forest Landscape is a highly conserved landscape, however, the southern part of the Dry Forest landscape between Piura, Lambayeque and La Libertad is surrounded by and several farmer communities live within it. These populations depend on agricultural and forestry activities and have a direct interaction with the forest, so a productive conservation approach should be taken.

65. Thus, the priority intervention area (see map in Annex A) totals 4,937,928 hectares, where PA (national, regional and private level), enabling titles (forest concessions, authorizations for forest use) come together, as well as other private initiatives, implemented mainly by peasant communities and individual owners, some framed in the sustainable use of forests and in other cases linked to agricultural activities that take place within forest ecosystems. Therefore, the obstacles to project intervention are representative of the complex situations faced by dry forests (deforestation and the presence of endemic and threatened species), in addition to the ecological and cultural values that coexist with the overexploitation and degradation of dry forests. However, this landscape has great potential to implement actions focused on promoting the conservation and recovery of dry forests, helping to strengthen ecological connectivity in prioritized areas, as well as promoting sustainable production practices for the conservation of dry forests of Peru.

2. Stakeholders

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

Indigenous Peoples and Local Communities Yes

Civil Society Organizations Yes

Private Sector Entities Yes

If none of the above, please explain why:

In addition, provide indicative information on how stakeholders, including civil society and indigenous peoples, will be engaged in the project preparation, and their respective roles and means of engagement.

66. PIF Validation process:

In October and December 2019, in Lima, work meetings were held and information was collected from public and research entities: SERNANP, the National Forest Conservation Program, the National Forest and Wildlife Service, the Ministry of Agriculture and Irrigation, the Ministry of the Environment, the National Agrarian University of La Molina, NGOs AIDER, among others.

On December 5-7, 2019, in the Lambayeque region, the PIF was also validated during the "III Macroeconomic Forestry Congress 2019". The event had a short session with the members of the "Macroeconomic Platform of Northern Forests" where the main elements of the PIF were discussed and there was feedback from public, private and cooperation actors, including national NGOs (AIDER, MDA), Earth Innovation Institute and the Pedro Ruiz Gallo National University.

On February 4, 2020, the Macroeconomic Workshop on PIF validation was held in the Piura region with the participation of 100 actors from the public and private sectors, civil society organizations, academia and producer organizations, including: the 4 Regional Governments and their programs, Municipalities, SERNANP, producer organizations from the Regional Conservation areas, the Ministry of Environment, Ministry of Agriculture and Irrigation, the Ministry of Production, Technological Institute of Peru, Empresa Arena Verde, National University of Piura, CIFOR, HELVETAS. Civil society organizations included: ASPROBOS, CECOBOSQUE, Mangrove Consortium of Northwestern Peru, MUCHIK Santa Catalina peasant community, among others.

Quechua peasant and indigenous communities are located within the project boundaries, and they have been consulted about their problems and interests through the above-mentioned macro-regional workshops. In Peru, participatory conservation principle is applied where the involvement of local populations has been decisive in achieving the sustainable management objectives of the natural protected areas (NPAs) and areas of conservation (ACR). In this context, the consultation process has been incorporated not only in the workshops but in the Multi-year Co-management Plans of the NPAs and ACRs. During PIF formulation, meetings were held with the communities to assess their expectations, problems and interests. As part of the Macro-regional event and in coordination with MINAM and regional governments, the main leaders have been engaged for the process of dissemination of the project proposal and validation, namely: ASPROBOS, CECOBOSQUE, Manglares Del Noroeste Del Perú Consortium, rural community MUCHIK Santa Catalina, among others. During the PPG, the full Free, Prior and Informed Consent (FPIC) process will be carried out.

The stakeholders will participate in the full design of the project. Government institutions will participate in the design of project preparation activities and local stakeholders in the intervention areas will be consulted. In accordance with FAO procedures, capacity assessments are developed jointly with the Office of Capacity Development. The capacity assessments are developed by the stakeholders selected through selection mechanisms. In case of using FAO tools during the project preparation process (Collect Earth, SHARP tool), this will be done through training to a national institution (usually at the local level with a national counterpart) so that the work is carried out by them with the technical

support of FAO. During the design, the FAO Environmental and Social Management Guidelines and the FAO Guide to the Project Cycle will be applied. The following table identifies the key stakeholders that will participate in the design and their respective role:

Table N° 4: National, regional and local stakeholders that will participate in the design of the project

Stakeholders	Interest / Role in the preparation and design of the project
Ministry of Environment	It ensures the sustainable use, conservation of natural resources and environmental quality for the benefit of people and the environment in a normative, effective, decentralized manner and articulated with public, private organizations and civil society. Role in the design phase: Call for institutions to participate in the design processes (meetings, consultation and validation workshops), leadership in the design of the project components, identification of activities under the technical components of the project, co-financing allocation.
Ministry of Agriculture and Irrigation	Responsible for designing, executing and supervising the National Agrarian Policy, the Agrarian Planning System, the Integrated Agricultural Statistics System, the national innovation, health, food safety, physical-legal sanitation, use and development of natural resources in accordance with the National Environment Policy. Role in the design phase: Participate in the consultation and information collection processes. It will support the identification of activities related to strengthening value chains, environmentally friendly practices and sustainable land management, extension and transfer.
Ministry of Production	Responsible for formulating, approving, directing, coordinating, executing, supervising and evaluating the national development policies and plans of the fishery and industry subsectors. Role in the design phase: Participate in the consultation and information collection processes. Support the identification of activities related to strengthening value chains.
Ministry of Foreign Trade and Tourism	Responsible for defining, directing, executing, coordinating and supervising the foreign trade and tourism policy in the country Role in the design phase: Participate in the consultation and information collection processes. Support the identification of activities related to strengthening value chains.
Regional and local governments of Piura, Tumbes, Lambayeque and La Libertad	Local governments promote integral development, to enable economic growth, social justice and environmental sustainability. Role in the design phase: They will participate in the consultation processes, information gathering at regional and local level, design of activities in the project components at regional and local level.
National University Pedro Ruiz Gallo, University of Piura, Artisanal and Tourism CITE in Lambayeque and Piura, Chavimochic Agro-industry CITE in la Libertad, Agro-industry CITE in Piura, Aquaculture/ fisheries CITEs in Tumbes and Piura.	Universities provide knowledge support through research. Technological Innovation Centers (CITE) promote innovation and promote the use of new technologies among producers, companies, associations, cooperatives Role in the design phase: Participate in the consultation processes, information gathering; will provide information for the design of technical activities (productive practices, value chains, restoration)

<p>Organizations: Women's Association San Antonio de Padua de Laquipampa, Association of ecological producers for the conservation of the Laquipampa wildlife refuge, Association for the protection of dry forests (ASPROBOS), Association of beekeepers "mis algarrobos", Association of beekeepers of the Peruvian Northern dry forests, Central of farmer communities of the Piura dry forests</p>	<p>They represent the collective interests of men and women located in the dry forest territories of the north coast. Role in the design phase: Identification of sustainable productive practices friendly to the BD and MST, provision of information related to traditional forest management practices, facilitate the development of the Prior, Free and Informed Consent (CPLI) process</p>
<p>Private sector: La Libertad Chamber of Commerce and Production, Macro-regional Association for Export Products – Lambayeque (AMPEX), Association of Beekeepers of Lambayeque (APAL), Lambayeque Chamber of Commerce and Production (CCPL)</p>	<p>They promote the use of biodiversity products and services. It is an important actor that will put into action different functions in the value chain (production, transformation and commercialization) of the biodiversity product based on green business actions to ensure sustainability. Role in the design phase: With the private sector, analysis and identification of market needs will be carried out, to design and define the offer of products and services with added value.</p>
<p>Technical Cooperation: JICA UNREDD Earth Innovation Institute Belgium Cooperation Association for Research and Development (AIDER)</p>	<p>They provide specialized technical assistance for the development of policies, instruments, information and capacities for the conservation and sustainable use of dry forests. Role in the design phase: Identification of synergies with the projects to achieve greater impacts and scaling.</p>

3. Gender Equality and Women's Empowerment

Briefly include below any gender dimensions relevant to the project, and any plans to address gender in project design (e.g. gender analysis).

67. The role of women in communities that inhabit dry forests is mainly related to being transmitters of traditional knowledge, collection of forest seeds, community leaders, artisans, and small producers. In the departments of Tumbes, Piura, Lambayeque and La Libertad, women represent 28% of the workforce oriented to agricultural activity (36,728 women). Of these, only 3% have accessed technical assistance for production and associativity. They also have very limited access to credit to finance their processing activities. Women play an important role in the home, but develop a low level of leadership in this, since it only assumes the role

of head of household in 32% of households. At the educational level, women have significant gaps to close, of the total population of people over 15 who cannot read and write, women represent 70% in the four departments.

68. The project design will take into account the different roles that men and women have, and how their unique and individual contributions can be maximized within the context of the project's strategy and implementation. The design phase will include the identification and active participation of women and their organizations (through consultative workshops and during the selection of intervention areas and communities) and will ensure a balanced participation of women in planning and design activities. Likewise, a participatory gender analysis will be carried out that will identify the baseline in terms of gender equity as well as opportunities for action, including the review of the background on the situation of people in the areas of intervention (access to resources, services, organizations, characteristics, gaps, achievements), the gender approach that already exists at the level of the government and other institutions and other relevant data, as well as the gaps on which the project can act to contribute to gender equality .

69. Based on this analysis, a gender action plan will be prepared that will be part of the project design, which will include practical activities to ensure equal access of men and women to all aspects of project development and implementation. Some specific actions to take into account are: i) active participation in the assemblies and coordination meetings, taking into account their contributions in the management of natural resources and those that contribute to the fulfillment of their domestic work in particular; ii) capacity building to empower women in productive activities through family businesses, considering the work they can do at home; iii) promote and support the participation of women in proposals of good practices, enterprises and value chains by selecting them as executors of activities; iv) measures to contribute to the improvement of income received by women; v) ensure equal representation of men and women in training and awareness events; vi) development of specific training for women to promote equality in the management, use and conservation of the BD, and to ensure that the needs of both women and men are reflected throughout the project interventions; and vii) involve women organized in the M&E of activities at intervention sites and in the dissemination of good practices. In addition, the M&E strategy will consider specific indicators to measure the impact of the project by gender, and which will be included in the Project Results Framework.

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

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

improving women's participation and decision-making; and/or Yes

generating socio-economic benefits or services for women. Yes

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

Yes

4. Private sector engagement

Will there be private sector engagement in the project?

Yes

Please briefly explain the rationale behind your answer.

70. The participation of the private sector and access to financing is essential for the sustainability of the intervention, as well as for linking small producers with markets, introducing sustainable value chains and creating stable income with forest products and services. In the country, recognition of the role of the private sector is increasing, and the project design will take advantage of this advantage. Thus, the project will promote the development of strategic alliances with the private sector, in the search for innovation and technology for the more sustainable development of productive activities. The private sector is a key player in the value chain in the different links (production, transformation and commercialization). With the private sector, the market study will be carried out, to design and define the offer of biodiversity products and services with added value. The involvement with companies and productive associations will allow to articulate the native communities and their products or services of biodiversity with markets, promoting a business model for the bio-commerce. This will involve working together to extend production on a larger scale under sustainable management protocols and further transformation of high quality and high value products to take them to the final markets.

71. In the areas of intervention of the project, the following companies and associations have been identified: Ecoandino (algarrobo flour), Organic Algarrobos of Peru (algarrobo flour), Living Association of Caserío de Chutuque (algarrobo flour), Santa María de Locuto communal company (algarrobo, algarrobo coffee, algarrobo powder and organic honey), Bosque Seco SRL ECOBOSQUE (honey, fine algarrobin flour, algarrobo coffee substitute), Association for the Protection of the Dry Forests of the Caserío de Choloque - ASPROBOS (organic honey), Peruvian Association of Small Ecological Producers - APEPROECO, La Española EIRL (algarrobina jam). The project will also work with private financial institutions to facilitate the opening of the portfolio of credit options available to producers through an analysis of credit needs, financial viability and the development of credits and / or insurance at favorable rates, subject to application of environmental sustainability criteria. The Agricultural Bank - AGROBANCO has been developing the design of green tools which the potential articulation will be analyzed.

5. Risks

Indicate risks, including climate change, potential social and environmental risks that might prevent the Project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the Project design (table format acceptable)

72. The project presents a “moderate” level of risk since the intervention is within the framework of national, regional and local policy priorities, civil society, and the private sector. During full project preparation, a socio-environmental risk analysis, including climate risks, will be developed.

Table N°5: Risk matrix and mitigation actions

Risk	Level	Mitigation Actions
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Political changes at different levels of government (staff changes that modify the execution deadlines, as well as the adequate escalation of experiences and lessons)	Low	<p>The signing of commitments with the national, regional and local government will be promoted to ensure continuity of actions in the event of possible changes.</p> <p>The project will strengthen national, regional and local governance structures, especially the platforms that are constituted and that have the backing of civil society. Improving inter-institutional and inter-sectoral coordination and stakeholder participation at all levels will strengthen collaboration and support the continuity of actions in case of changes. Strengthening the capacities of key stakeholders and interest groups will be promoted, as well as increasing knowledge and awareness of the need to reduce threats and remove barriers to the conservation and sustainable use of dry forests.</p>
Insufficient inter-institutional coordination at national, regional and local levels and weaknesses of cooperation mechanisms with the private sector and local organizations delays implementation	Moderate	<p>The strengthening of coordination platforms, the harmonization of development plans and the management and information exchange systems for decision-making will contribute to the improvement of collaboration and coordination between public institutions, private sector and local organizations at national levels, Regional and local. These actions will contribute to improving the current levels of participation and coordination. The capacity building of key stakeholders will contribute to the dissemination of information among them and to improve coordination.</p>
Demographic, migration and cultural changes	Moderate	<p>The feasibility analyses of the production and management models that will be promoted will include considerations on the implications of reductions in labor availability due to migration. The project's support for governance mechanisms will include the development of capacities to adapt its operation to social and cultural conditions and threats. The project will actively support the systematization, exchange and valuation of traditional knowledge and will develop local capacities to know how to adapt them to changing conditions.</p>
Economic pressures make it difficult to adopt measures that reduce pressures on dry forests and generate resistance by producers and communities for the sustainable use of the BD and the MST	Moderate	<p>The capacity of local producers and stakeholders to proactively interact with value chains and respond to changing market conditions will be strengthened. The promotion of the sustainable value chain will respond to feasibility analyzes, including consideration of the implications of alternative economic scenarios. Awareness raising and training of beneficiaries through field schools will contribute to improving understanding of the importance of ecosystem services, the need to adopt sustainable uses and practices and how this can improve their livelihoods will contribute to ownership, allowing them to adapt to economic changes. Platforms with the participation of beneficiaries will contribute to raising awareness of the need for sustainable interventions in dry forests.</p>

<p>Risks of climatic contingencies (floods, droughts, fires) and climate change. Occurrence of extreme events during project implementation that mean changes in the implementation conditions in the intervention areas</p>	<p>Moderate</p>	<p>A Climate Risk Screening has been undertaken at PIF stage. According to the Köppen climate classification scale, the north coast of Peru has mild desert conditions, with monthly mean temperatures varying from 13-26 °C and a total annual precipitation below 150 mm[1]. Under normal oceanic-atmospheric conditions, the northern coast of Peru is characterized for having cold oceanic temperatures (Humboldt current) on the East Pacific, resulting in severe drought conditions along the project's location. However, every 5 to 7 years, warming than usual oceanic temperatures of the northern coast of Peru (ENSO event) can bring heavy rainfall, causing overflowing of rivers, mudslides and flooding[2].</p> <p>Desertification is a major issue in coastal areas of Peru, as the area falling in hyper arid and/or arid areas is approximately 20% of the country's total surface area[3]. On top of that, 99% of the soils in Peru are experiencing severe erosion, 27% desertification, and 0.24% are suffering problems related with salinization.</p> <p>Peru has a moderate vulnerability to climate related hazards[4]. Peru's exposure to hydrological disasters related with cyclical "El Niño-ENSO" events is high. ENSO affects primary sectors such as agriculture, fisheries, natural and social systems, just like infrastructures.</p> <p>While the hazards, exposure and vulnerability in the project area is moderate, the project integrates multiple measures that aim to reduce GHG emissions, diminish soil erosion and improve soil fertility in areas at high risk of desertification. The previous will be achieved through sustainable management and restoration practices. Resilience to climate change will be a key criterion for the selection of resource management and production models that will be promoted in the field.</p> <p>A more in-depth climate-analysis will be undertaken at the PPG stage to support the further identification and proposal of climate-smart activities and measures. An environmental and climate risk specialist will be hired for this purpose. The analysis will include, among others, assessing activities proposed by the Governance of Forests Initiative (GFI) that could be included in the project; data sharing and co-production of agroclimatic services and forest related information between governmental institutions, private sector and civil society; best practices for the sustainable management of forests proposed by FAO; the use of tools such as Restoration Ecosystem Service Tool Selector (RESTS) and Forest Restoration Prioritization Tool (ROOT).</p>
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Environmental and Social Safeguards – Risk screening at PIF stage:

In line with the FAO Environmental and Social Management Guidelines (ESMG), the implementing agency has conducted an Environmental and Social Safeguards (ESS) screening at PIF stage. A full environmental, social and climate risk analysis will be conducted during PPG.

As per the ESS checklist screening, the project has been classified as Moderate risk. The table below summarizes the Environmental and Social risks identified in relation to the proposed project:

Safeguard Triggered	Risk Identified	Answer	Risk Classification	Potential (negative) impacts	Mitigation measures (preliminary)
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<p>2. BIODIVERSITY, ECOSYSTEMS AND NATURAL HABITATS</p> <p>2.1. Would this project be implemented within a legally designated protected area or its buffer zone?</p> <p>YES</p>	<p>Moderate</p>	<p>Not foreseen. Activities around the protected area aim at protecting ecosystems. The very few eventual activities in the areas are already defined in the management plans of the protected area.</p> <p>The Project will be executed mainly around national protected areas, and has as principal objective the recuperation of dryland forests, for which reason it will not change the natural habitat, nor decrease biodiversity or affect the ecosystem functionality, on the contrary it will strengthen them all.</p> <p>An Environmental and Social Analysis (ESA) will be conducted during the PPG.</p>
<p>9. INDIGENOUS PEOPLES AND</p> <p>9.1. Do the project activities influence the Indigenous Peoples living outside the project area?</p> <p>YES</p>	<p>Moderate</p>	<p>Not foreseen. The project has a participatory approach and will support communities, including indigenous peoples, generating socio-economic co-benefits.</p> <p>Nevertheless, as per FAO ESS and international agreements, the project preparation team will conduct an FPIC process and elaborate an IPP (see next column).</p> <p>The rights of indigenous people will not be negatively affected, nor their territory, natural resources, livelihoods or knowledge. The Project will contribute to systematize, valorize and interchange traditional knowledge as well as to development of local capacities.</p> <p>A Free, Prior and Informed Consent Process will be conducted during the PPG</p> <p>Project activities will outline actions to address and mitigate any potential impact</p>

9. CULTURAL HERITAGE	9.4. Would this project be located in an area where cultural resources exist?	YES	Moderate	<p>The Project proposes an ecological corridor to preserve biodiversity and cultural resources associated with indigenous people.</p> <p>To preserve cultural resources (when existing in the project area) and to avoid their destruction or damage, due diligence will be undertaken to:</p> <p>a) <input type="checkbox"/> verify provisions of the normative framework; and b) collaborate and communicate with indigenous peoples' own governance institutions/leadership, verifying the probability of the existence of sites/intangible cultural heritage that are significant to indigenous peoples.</p>
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- [1] Köttek (2006). World Map of the Köppen-Geiger climate classification. Data accessed on: 18/03/2020. Available at: http://koeppen-geiger.vu-wien.ac.at/pdf/Paper_2006.pdf
- [2] SENAMHI (2020). Ministerio de Medio Ambiente: Peru, Clima. Data accessed on: 18/03/2020. Available at: <https://senamhi.gob.pe/?p=fenomeno-el-nino>
- [3] MINAM (2005). Peru: % of Drylands. Accessed on 20/03/2020. Available at: <https://www.as-coa.org/blogs/lima-2014-blog-perus-melting-glaciers-desertification-and-deforestation>
- [4] ND-GAIN (2017). Accessed on 20/03/2020. Available at: <https://gain.nd.edu/our-work/country-index/rankings/>

6. Coordination

Outline the institutional structure of the project including monitoring and evaluation coordination at the project level. Describe possible coordination with other relevant GEF-financed projects and other initiatives.

69. Project organizational structure: MINAM is the Project Executing Partner with the responsibility of ensuring overall coordination of project implementation, as well as coordination and collaboration with the institutions participating in the project, local organizations, private sector and others. Participating entities of the project. The organizational structure of the project will consist of: 1) National Project Steering Committee: composed of FAO, IUCN, MINAM, MINAGRI and Regional Governments with the main functions of guiding project implementation, verifying and approving the annual operational plan, approving financial and technical reports, and provide strategic guidance to the overall conduct of the project; 2) National Project Management; 3) Technical Advisory Committee that will support technical and administrative management, the M&E of the project, inter-institutional articulation, and the operation of the institutional organization; 3) Project Territorial Management Unit responsible for the day-to-day

management of the project and for ensuring the coordination and execution of the project through the effective implementation of the annual work plans. It will consist of a Project Coordinator, Administrative Analyst, Communications Specialist, Safeguards and gender Specialists and technical specialists responsible for the proposed components, as well as Regional Facilitators at the local level (Graph in Annex 05).

70. Coordination with other GEF projects: The project will coordinate with other GEF-financed projects with the objectives of identifying opportunities and facilitate mechanisms to achieve synergies. This collaboration will be undertaken through: i) informal communications between GEF Agencies and executing partners of other programs and projects; ii) annual coordination meetings; iii) specific meetings on technical matters; iv) meetings and activities to exchange experiences and lessons. The project will develop collaboration mechanisms with the following projects: GEF-UNDP #9387 *Sustainable Productive Landscapes in the Peruvian Amazon*; GEF-WWF #9374 *Securing the Future of Peru's Natural Protected Areas*; GEF-FAO #9092 *Sustainable Management of Agro-biodiversity and Vulnerable Ecosystems Recuperation in Peruvian Andean Regions through Globally Important Agricultural Heritage Systems Approach*; GEF-UNDP #5080 *Transforming Management of Protected Area/Landscape Complexes to Strengthen Ecosystem Resilience*; GEF-UNDP #5284 *Integrated Water Resources Management in the Puyango-Tumbes, Catamayo-Chira and Zarumilla Transboundary Aquifers and River Basins*; GEF- CAF #5384 *Project to adapt to the impacts of climate change on water resources in the Andes*; GEF -IFAD #4773: *Project Conservation and Sustainable Uses of the High Andean Ecosystems through compensation of Environmental Services for rural Poverty Alleviation of Peru*. Likewise, with the Impact Programs GEF 7: *Amazon Sustainable Landscapes Program* (ASL2) and *Food Systems, Land Use and Restoration* (FOLUR) in which FAO leads and participates respectively.

7. Consistency with National Priorities

Is the Project consistent with the National Strategies and plans or reports and assessments under relevant conventions

Yes

If yes, which ones and how: NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc

71. The *Political Constitution of Peru*, in its Article 66°, states that renewable and non-renewable natural resources are the patrimony of the nation; the State is sovereign in its use, and by organic law the conditions of its use and the granting to individuals are set. The *National Agreement* includes explicit commitments regarding: integrating national environmental policy with economic, social, cultural and territorial planning policies; institutionalize environmental management, public and private, to protect biological diversity and facilitate the sustainable use of natural resources - with explicit reference to forest resources; and boost the country's agricultural and rural development, which includes agriculture, livestock, aquaculture, agribusiness and sustainable forest use.

72. The project is aligned with the *Bicentennial Plan, Peru by 2021*, which establishes as a national objective: “conservation and sustainable use of natural resources and biodiversity with an integrated and ecosystem approach and an environment that allows a good quality of life for people and the existence of healthy, viable and functional ecosystems in the long term”. The project is aligned with the *National Environment Policy* which proposes the conservation and sustainable use of natural resources and biological diversity; and specific within its objectives, to achieve the implementation of evaluation, valuation and financing instruments for the conservation of natural resources, biological diversity and environmental services in the country. Likewise, with the *National Forest and Wildlife Policy*, which in its axis of sustainability policy, establishes as guidelines the conservation, protection, maintenance, improvement and sustainable use of the nation's forest and wildlife heritage within the framework of an ecosystem approach; and special management for the conservation and sustainable use of forest ecosystems and other types of wild vegetation that are subject to threats or degradation processes; and with the *National Agrarian Policy* that aims to achieve a sustained increase in income and livelihoods of agricultural producers and producers, prioritizing family farming, based on greater capacities and more productive assets, and with sustainable use of agricultural resources

73. In other hand, the project is aligned with the 2021 National Biodiversity Strategy and the 2014-2018 Action Plan, which aim to help Peru preserve and make rational use of its mega biodiversity, including the revaluation of its traditional knowledge to satisfy the basic needs and well-being of current and future generations. In particular with its strategic lines of conserving the biodiversity of Peru; integrate the sustainable use of biodiversity in the management of natural resources; establish measures for the conservation and restoration of biodiversity; promote the participation of society in the conservation of biodiversity; perfect the instruments for biodiversity management. The project is also aligned with the National Strategy for Combating Desertification and Drought 2016-2030, in particular with its specific objectives related to the development of plans, programs and projects that are synergistic, multisectoral, intra-sectoral, regional and local; the strengthening of the management capacity of interest groups; and the implementation of technological innovations that help sustainable land management. It is also aligned with the goals for Land Degradation Neutrality (LDN), currently in the process of approval and whose implementation will contribute to the goals established in the Bonn Challenge and its regional platform for LAC Initiative 20x20. Peru committed to a goal of restoring 3.2 million hectares of degraded land (see Annex 06 for details on the LDN).

74. Furthermore, the project is also aligned with the Nationally Determined Contributions (NDC) through which Peru is committed to reducing greenhouse gas emissions by 2030, and in which forests constitute one of the thematic areas prioritized. Also with the National Forestry and Climate Change Strategy, an instrument that coordinates the efforts of all sectors of the country to offer a comprehensive response to deforestation, reduce forest emissions and make our forests source and engine of sustainable development; and with the Master Plan for Protected Natural Areas - National Strategy, which defines the guidelines of policies and strategic planning, as well as the conceptual framework for effective management and the constitution and long-term operation of Protected Natural Areas and the National System of Protected Natural Areas of the State (SINANPE), formulating the measures to conserve and complement the required ecological coverage. The project is consistent with the National Biocommerce Strategy and its Action Plan by 2025, whose objective is to consolidate the institutional framework, the legal framework and the mechanisms necessary to promote and implement the Biocommerce in Peru.

75. At the regional level, the project is aligned with the development instruments of the regions where it will intervene: the Concerted Development Plan Tumbes 2017-2030 that seeks a sustainable use of resources in the territory; the Concerted Development Plan Piura 2016-2020 that aims to “make the department of Piura a safe and inclusive department that develops a competitive, diversified and innovative economy, thanks to the sustainable and responsible use of natural resources”; the Concerted Development Plan Lambayeque 2016 - 2021, whose objective is to achieve a “vision of Lambayeque as the articulating node of the Peruvian North East, with an orderly, competitive and sustainable territory, with a high level of institutionalism, within a framework of equity and social justice ”; and the Concerted Development Plan La Libertad 2016 - 2021 with the objective of achieving that “La Libertad is a sustainable territory, a reference for human, agro-industrial and tourism development, based on the identity and innovation culture of our ancestors: the Guamachuco, Mochica-Chimú and Inca”.

8. Knowledge Management

Outline the Knowledge management approach for the Project, including, if any, plans for the Project to learn from other relevant Projects and initiatives, to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.

76. Component 4, will be responsible for knowledge management to create institutional memory, promote continuous learning, generate documentation for project escalation, and visibility strategies for capacity building and political advocacy. The knowledge management strategy will be implemented as a collaborative initiative between the regions of the dry forest area and the knowledge management systems of the sectors at the level, within the themes of sustainable use of biodiversity and landscape restoration.

77. The objective of knowledge management is that information can reach the stakeholders to ensure that the intervention and the impacts achieved can be reproduced in other initiatives for the conservation of dry forest. To this end, actions such as the following are proposed: i) Raise awareness about the importance of dry forest conservation through the promotion of strategic communications and publications; ii) Systematize and share the experiences and knowledge resulting from the project. The lessons learned through the

projects will be transferred and codified, fed to national, regional and global knowledge centers to contribute to the global knowledge resource on best practices and disseminated to stakeholders; iii) Communicate and disseminate project activities, both locally and nationally and internationally. The activities include the participation and organization of fairs and other events where the importance of the dry forest, publications in magazines, making videos, reports of the project news through the Internet and social networks; iv) Rescue and value the ancestral knowledge (agricultural, livestock, use of biodiversity) of dry forest communities that contribute to forest conservation through technology; and vi) Disseminate the actions carried out through the existing systems and platforms aimed at the conservation of the dry forest of the north coast of Peru. Use will be made of web platforms of FAO, IUCN and Peruvian government partners for access to existing knowledge and dissemination of information.

Part III: Approval/Endorsement By GEF Operational Focal Point(S) And Gef Agency(ies)

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S): (Please attach the Operational Focal Point endorsement letter with this template).

Name	Position	Ministry	Date
Martha Cuba Villafuerte de Cronckleton	Operational Focal Point	Ministry of Environment	3/18/2020

ANNEX A: Project Map and Geographic Coordinates

Please provide geo-referenced information and map where the project intervention takes place

Map N°1: Prioritized landscapes



Map N°2: Map of Restoration Areas



Map N°3: Map of Watersheds

