



Part I: Project Information

GEF ID

10863

Project Type

FSP

Type of Trust Fund

GET

CBIT/NGI

CBIT No

NGI No

Project Title

Towards Land Degradation Neutrality for Improved Equity, Sustainability, and Resilience

Countries

Cabo Verde

Agency(ies)

FAO

Other Executing Partner(s)

Ministry of Agriculture and Environment (MAA)

Executing Partner Type

Government

GEF Focal Area

Land Degradation

Sector

AFOLU

Taxonomy

Focal Areas, Land Degradation, Sustainable Land Management, Improved Soil and Water Management Techniques, Sustainable Livelihoods, Restoration and Rehabilitation of Degraded Lands, Income Generating Activities, Drought Mitigation, Land Degradation Neutrality, Food Security, Influencing models, Transform policy and regulatory environments, Deploy innovative financial instruments, Strengthen institutional capacity and decision-making, Demonstrate innovative approach, Convene multi-stakeholder alliances, Stakeholders, Type of Engagement, Participation, Private Sector, SMEs, Financial intermediaries and market facilitators, Beneficiaries, Local Communities, Communications, Behavior change, Civil Society, Academia, Community Based Organization, Non-Governmental Organization, Gender Equality, Gender Mainstreaming, Women groups, Sex-disaggregated indicators, Gender-sensitive indicators, Gender results areas, Access to benefits and services, Participation and leadership, Capacity, Knowledge and Research, Capacity Development, Knowledge Exchange, Exhibit, South-South, Knowledge Generation, Training, Workshop

Rio Markers

Climate Change Mitigation

Significant Objective 1

Climate Change Adaptation

Significant Objective 1

Biodiversity

No Contribution 0

Land Degradation

Principal Objective 2

Submission Date

9/14/2021

Expected Implementation Start

6/1/2023

Expected Completion Date

5/31/2027

Duration

48In Months

Agency Fee(\$)

207,395.00

A. FOCAL/NON-FOCAL AREA ELEMENTS

Objectives/Programs	Focal Area Outcomes	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
LD-1-1	Maintain or improve flow of agro-ecosystem services to sustain food production and livelihoods through SLM	GET	1,883,105.00	6,328,482.00
LD-2-5	Create enabling environments to support scaling up and mainstreaming of SLM and LDN	GET	300,000.00	1,200,000.00
Total Project Cost(\$)			2,183,105.00	7,528,482.00

B. Project description summary

Project Objective

Enhance climate-resilient food production and nutrition in productive landscapes through nature-based solutions in support of Cabo Verde's voluntary LDN targets

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
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Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
Strengthening the enabling environment to achieve LDN in Cabo Verde	Technical Assistance	<p>1.1 LDN mainstreamed into national policies and planning processes at multiple levels to support SLM in production landscapes</p> <p>Targets:</p> <p>LDN integrated into at least 3 strategic planning processes</p> <p>LDN DSS integrated, tested and used to support intersectoral and gender sensitive governance of land and water resources in Cabo Verde</p> <p>Action Plan for achieving LDN targets in watersheds of Santiago Island (Ribeira Seca) and Santo Antao Island (Vale de Garça and Ribeira das Patas) (1 in each watershed, 3 in total)</p> <p>National LDN targets updated with national data/verified/agreed by the LDN coordination mechanism</p> <p>1.2. Enhanced capacity at</p>	<p>1.1.1 Review of strategic regulatory frameworks and territorial planning instruments to enhance local stakeholder participation and mainstreaming of LDN</p> <p>1.1.2 LDN Decision Support System (LDN DSS) for planning and implementation in place</p> <p>1.1.3. LDN Action Plan with voluntary targets defined for each target landscape</p> <p>1.1.4. Interdisciplinary and multi-institutional LDN working group at national level is strengthened</p> <p>1.2.1. Capacity development program in place for LDN implementation and monitoring targeting national and local government staff</p> <p>1.2.2. Capacity building programme on SLM to achieve LDN at local level for farmers in the target landscapes</p>	GET	191,350.00	754,890.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
Demonstrating the LDN approach and scaling out of SLM practices in target landscapes	Investment	<p>2.1. SLM technologies and approaches in the target landscapes upscaled to contribute to national LDN targets</p> <p>Targets:</p> <p>Land-use plans in the three water basins support achievement LDN targets</p> <p>5,500 ha of land degradation AVOIDED through improved land planning and policy framework supportive of the LDN</p> <p>4,000 ha of land with REDUCED and REVERSED degradation thanks to gender-sensitive SLM and restorative measures based on nature-based solutions that serve as demonstrations to stakeholders</p> <p>249,903 metric tons of CO₂eq of avoided emissions of carbon sequestration</p> <p>At least 3,000 family farmers applying SLM technologies</p>	<p>2.1.1. Existing land use plans in the target landscapes are revised and entry points for the principle of counterbalancing are identified</p> <p>2.1.2. Innovative SLM practices implemented to enhance productivity, restore degraded land and increase climate resilience</p> <p>2.2.1. Priority gender-sensitive and nutrition-sensitive value chains strengthened (involving suppliers, producers, support-advice, financiers, traders)</p> <p>2.2.2. Innovative and sustainable financial mechanisms for producers and their organizations along the priority value chains identified and developed</p>	GET	1,511,790.00	5,076,848.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
Land degradation data and information, project monitoring, evaluation and lessons learned	Technical Assistance	<p>3.1. Data and information on land degradation improved</p> <p>Targets:</p> <p>New data products in national level reporting, research efforts and decision-making made available</p> <p>National LDN linked to the SDG indicators to complement the 3 Global indicators are developed</p> <p>A national LDN guideline published</p> <p>LDN monitoring system operational, including a soil information system</p>	<p>3.1.1. Data and information on land degradation status and trends (such as LADA, Sustainable Soil Management Protocol, soil map, grazing map, soil organic carbon map, soil fertility map, land cover map, etc.) made available</p> <p>3.1.2. A national soil information system and remote sensing-based land degradation monitoring and knowledge sharing system are set up and operational (linked to the LDN DSS (1.1.2))</p> <p>3.1.3. M&E system in place to capture and develop knowledge. Global Environment Benefits, co-benefits and costs of SLM monitored, assessed and lessons analysed</p> <p>3.1.4. Knowledge sharing/dissemination plan implemented</p>	GET	282,265.00	766,744.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
				Sub Total (\$)	1,985,405.00	6,598,482.00

Project Management Cost (PMC)

	GET		197,700.00		930,000.00	
		Sub Total(\$)	197,700.00		930,000.00	
		Total Project Cost(\$)	2,183,105.00		7,528,482.00	

Please provide justification

A greater than usual PMC is requested for this project. The project budget is very limited, and some costs cannot be reduced, as they are not relative to the project budget, but standardised. This is the case for the cost of audits and spotchecks. The co-financing for PMC (12% of co-financing) covers a number of costs related to project management, including the availability of the carpool and drivers, PMU office spaces, and cost sharing of a number of PMU members, including the gender expert, communications expert, MEAL expert, and administrative and operational manager. Remaining PMC costs are budgeted in the GEF grant budget.

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

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount(\$)
Recipient Country Government	DGASP (Cabo Verde Treasury - MAA)	Public Investment	Investment mobilized	2,491,732.00
Recipient Country Government	Cabo Verde Environment Fund (MAA)	Public Investment	Investment mobilized	1,206,750.00
Recipient Country Government	DGASP (MAA)	In-kind	Recurrent expenditures	230,000.00
GEF Agency	FAO	Grant	Investment mobilized	3,400,000.00
GEF Agency	FAO	In-kind	Recurrent expenditures	200,000.00
Total Co-Financing(\$)				7,528,482.00

Describe how any "Investment Mobilized" was identified

Investment mobilized comprises all thematically linked investments by development partners in the project geography that are not recurrent investments. In particular, the following investments have been considered: Cabo Verde Treasury Water Mobilization, Stormwater Correction and Agroforestry Development: US\$1,014,054 Reforestation and Maintenance of Forest Perimeters US\$1,477,678 Cabo Verde Environment Fund (MAA) Elaboration and Implementation of management plans for forest areas: US\$554,890 Recovery of the forest perimeter of the Eastern Plateau - Santo Ant?o: US\$341,471 Recovery of degraded forest areas and institutional capacity building: US\$266,744 Conservation and sustainable use of forest resources: US\$43,645 FAO Support of agricultural production systems to enhance food security and nutrition in the Republic of Cabo Verde: US\$400,000 Increasing the resilience of local communities to climate change through improved watershed management and land restoration - funded by the Adaptation Fund and the Government of Cabo Verde with FAO being the implemented agency: US\$2,500,000 Global Transformation of Forests for People and Climate: a focus on West Africa: US\$500,000 Because of the definition of "mobilized investment", the following co-financing is to be considered recurrent investment: The Ministry of Agriculture and Environment's in-kind contribution of an estimated US\$230,000 FAO's in-kind contribution (staff time, car park in Praia) to the tune of US\$200,000

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

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)	Total(\$)
FAO	GET	Cabo Verde	Land Degradation	LD STAR Allocation	2,183,105	207,395	2,390,500.00
Total Grant Resources(\$)					2,183,105.00	207,395.00	2,390,500.00

E. Non Grant Instrument

NON-GRANT INSTRUMENT at CEO Endorsement

Includes Non grant instruments? **No**

Includes reflow to GEF? **No**

F. Project Preparation Grant (PPG)

PPG Required **true**

PPG Amount (\$)

100,000

PPG Agency Fee (\$)

9,500

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)	Total(\$)
FAO	GET	Cabo Verde	Land Degradation	LD STAR Allocation	100,000	9,500	109,500.00
Total Project Costs(\$)					100,000.00	9,500.00	109,500.00

Core Indicators

Indicator 3 Area of land and ecosystems under restoration

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
4000.00	4000.00	0.00	0.00

Indicator 3.1 Area of degraded agricultural lands under restoration

Disaggregation Type	Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
Cropland	3,000.00	2,400.00		

Indicator 3.2 Area of forest and forest land under restoration

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
500.00	500.00		

Indicator 3.3 Area of natural grass and woodland under restoration

Disaggregation Type	Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
Natural grass	500.00	1,100.00		

Indicator 3.4 Area of wetlands (including estuaries, mangroves) under restoration

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

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

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
5500.00	5500.00	0.00	0.00

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

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
Indicator 4.2 Area of landscapes under third-party certification incorporating biodiversity considerations			

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
Indicator 4.3 Area of landscapes under sustainable land management in production systems			

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)
5,500.00	5,500.00		

Indicator 4.4 Area of High Conservation Value or other forest loss avoided

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

Indicator 4.5 Terrestrial OECMs supported

Name of the OECMs	WDPA-ID	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)

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

Title	Submitted

Indicator 6 Greenhouse Gas Emissions Mitigated

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO ₂ e (direct)	249456	249903	0	0
Expected metric tons of CO ₂ e (indirect)	0	1312836	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)	249,456	249,903		
Expected metric tons of CO ₂ e (indirect)		1,312,836		
Anticipated start year of accounting	2023	2023		
Duration of accounting	20	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 People benefiting from GEF-financed investments

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female	10,550	11,700		
Male	10,550	11,700		
Total	21100	23400	0	0

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

Part II. Project Justification

1a. Project Description

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

Small Islands Developing States (SIDS) are among the most vulnerable countries in the world, at the forefront of the intertwined challenges of climate change and land degradation. They face a unique set of issues relating to their small size, remoteness, narrow resource and export base, and exposure to external economic shocks and global environmental challenges, including the impacts of climate change. SIDS have a combined population of around 65 million people, contributing less than 1% of global greenhouse gas (GHG) emissions, yet they disproportionately face the devastating impacts of climate change and are among the most vulnerable countries to land degradation due to their physical nature, small size and fragile soils. The economic cost of climate change for SIDS is projected at 15% or more of their gross domestic product (GDP)[1]¹.

It has been recognized that countries most vulnerable to the impacts of climate change and land degradation, in particular SIDS, deserve special attention to achieve the Sustainable Development Goals (SDGs) by 2030[2]². Land Degradation Neutrality (LDN) is an overarching approach with strong linkages with the SIDS Accelerated Modalities of Action (SAMOA) Pathway and the prospect of creating multiple benefits to upscale common efforts for sustainable development. LDN complements the strategic objectives of the SAMOA Pathway and the SDGs and acts as an accelerator to achieve climate change mitigation and adaptation.

Cabo Verde is an island archipelago comprising ten small islands, nine of which are habited with a total population of approximately 563,198 people (INE), located 570 km from the West African coast. It is one of the 38 UN members that belong to the Small Islands Developing States (SIDS), and as such, its small size and geographic isolation from neighbouring markets underpin its extreme vulnerability to environmental and economic shocks. Cabo Verde is currently facing unprecedented levels of land degradation and food insecurity. Persistent droughts during the last years have led to significant drops in food production and intensified degradation processes, which combined with the COVID-19 pandemic and the recent crisis in Ukraine, have severely impacted the economy of the country, disrupted food supply chains and sparked food price rises. These changes have affected the most vulnerable and between June and August 2022 more than 46,000 women, men and children (almost 10

¹

percent of the population) faced an acute deterioration in food security. As for all SIDS, building resilience is crucial for Cabo Verde, a country with scarce land and water resources for agriculture but with a resilient and educated population and a strong democracy. To increase the resilience of the land and the population dependent on it, the government of Cabo Verde is committed to work towards achieving Land Degradation Neutrality (LDN).

LDN provides a framework for a balanced approach, which considers trade-offs and anticipates new degradation in order to maintain or enhance the stocks of natural capital associated with land resources and the ecosystem services that flow from them. Working towards LDN in Cabo Verde offers an holistic approach to strategically improve the country's equity, sustainability and resilience, with direct impacts on the wellbeing of the most vulnerable population, accelerating several SDGs, especially SDG-1 (No poverty), SDG-2 (zero hunger), SDG-5 (gender equality), SDG-13 (climate action) and SDG-15 (Life on Land). Therefore, the proposed project aims to enhance climate-resilient food production and nutrition in productive landscapes through nature-based solutions in support of Cabo Verde's voluntary LDN targets.

Country context

Geographic and socio-economic context

The Republic of Cabo Verde comprises the southernmost islands of Macaronesia (i.e., Azores, Madeira, Savage Islands, Canary Islands, and Cabo Verde) and it is located in the Sahelian arid and semiarid regions in close proximity to the western African coast. Cabo Verde consists of ten islands, nine of which are inhabited and can be grouped in Northern Islands (S?o Nicolau, S?o Vicente and Santo Ant?o), Eastern Islands (Sal, Boavista and Maio) and Southern Islands (Santiago, Fogo and Brava). Its territory consists of 4,033 km² of land area which is divided into 22 municipalities. It is situated approximately 600 km off the western coast of the African continent, near Senegal, The Gambia, and Mauritania. Cabo Verde has a population of 498,063 inhabitants of whom 26.1% live in rural areas. The total population has decreased in -0.2 since the Census 2010.

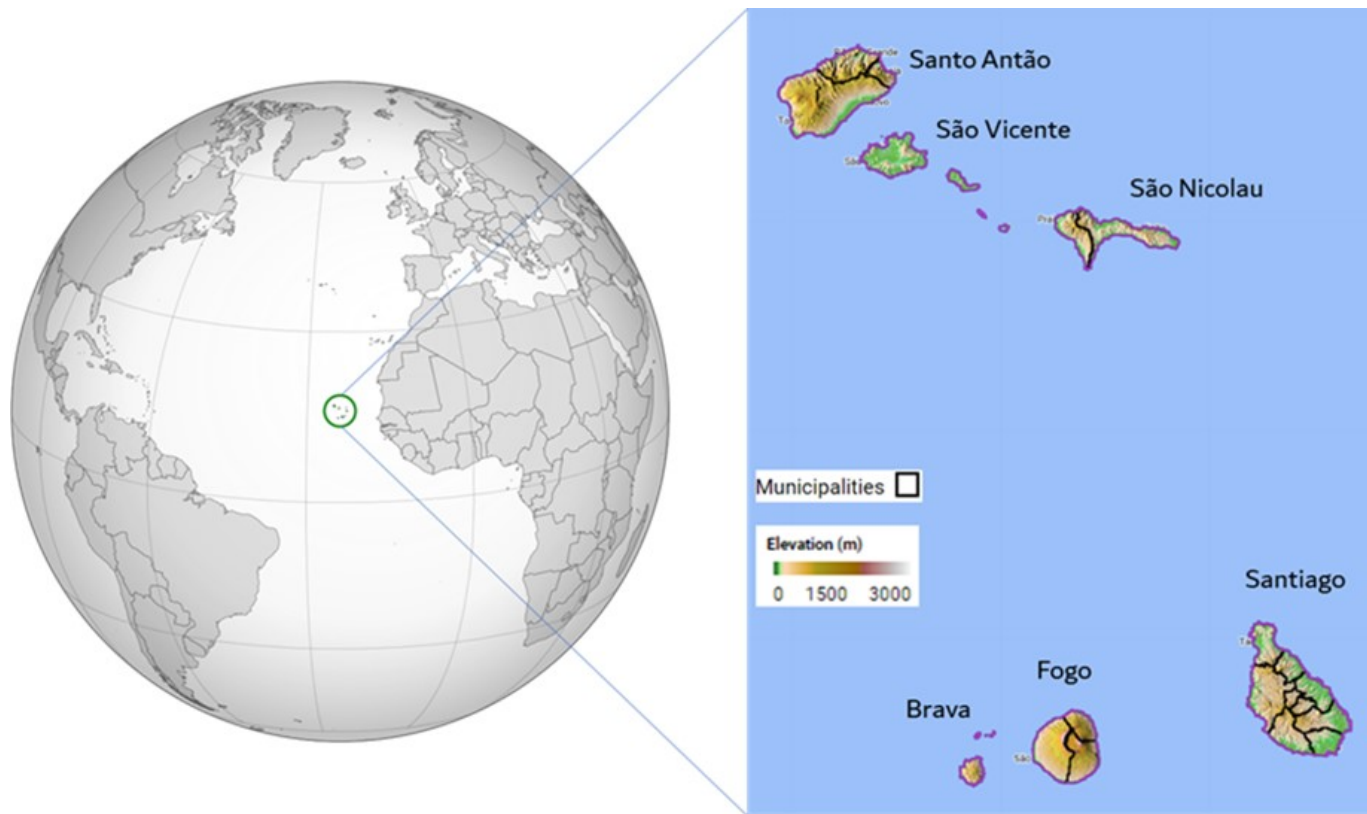


Figure 1: Location of Cabo Verde at 600 km from the West African coast (left). Topography and municipality borders of the country.

Cabo Verde is a Lower Middle-Income Economy with a GDP of USD 1.936 billion, occupying the 182nd place in the world[3]³. Prior to the COVID-19 global economic crisis, Cabo Verde experienced robust economic growth driven by a thriving tourism sector and strong structural reforms, but the crisis brought the economy to a standstill in 2020. The COVID shock negatively impacted the country through the tourism sector, which represents 25 % of GDP and drives around 40% of overall economic activity. As a result, the economy contracted 14.8 % in 2020. Although the GDP is estimated to have increased by 7% in 2021, reflecting a gradual recovery of the tourism sector, the outlook remains uncertain due to the COVID-19 pandemic, prolonged drought, and the Russia-Ukraine conflict, given that Cabo Verde imports an estimated 11% of its oil and 8.6% of its cereals from Russia[4]⁴.

Despite the significant role of tourism in the national economy, its relative employment capacity is below that of the agriculture sector. Although agriculture's share is less than 5% of the GDP, it is a strategic sector for poverty alleviation, employment, green growth, economic shock absorption, and eventually for long-term resilience. Santiago island has the largest area used for agriculture (52.5%), followed by Santo Antão (16%) and Fogo (15.8%)[5]⁵. These islands are more suitable for agriculture

because they have a complex variety of microclimates, ranging from more humid zones in mountain regions of Santiago (Pico da Ant?nia) and Santo Ant?o (e.g., Ribeira do Pa?l), to volcanic areas in Fogo, which reach almost 3000 m, or to lowland arid areas that experience the scourge of long-lasting droughts. During the 20th century, anthropogenic activities caused enormous damage and, particularly in humid and sub-humid areas on the North and Northeast slopes above 400 m, natural vegetation was gradually cut and destroyed and replaced by crop species[6]⁶.

Cabo Verde is within the Tropical and Subtropical Dry Broadleaf Forests and the Cabo Verde Islands Dry Forests Ecoregion[7]⁷ and 63,000 ha (15% of land area) correspond to Key Biodiversity Areas[8]⁸. The country is home to a number of endemic plant and vertebrate species, particularly birds and reptiles including the critically endangered Raso lark (*Alauda razae*), Cabo Verde shearwater (*Calonectris edwardsii*), and the endangered giant wall Gecko (*Tarentola gigas*). The islands' beaches are also globally important nesting areas for loggerhead turtles (*Caretta caretta*). Out of 180 native plant species, 92 are endemic[9]⁹. The other 441 flora species occurring on these islands were introduced by humans. In a recent conservation assessment based on the International Union for Conservation of Nature (IUCN) Red list criteria, ca. 78% of the endemic plant species were considered threatened, mostly as a consequence of the growing habitat degradation, human disturbance (e.g., intentional use for agriculture or traditional uses) and introduction of exotic species. In the 500 years since humans first colonised the islands, the loss of natural habitats has been severe. Remaining areas of natural habitat are confined to steep rocky areas and ravines in the mountainous islands and to patches in the flatter islands. There are 7 protected areas including three natural parks: Monte Gordo on S?o Nicolau, Serra de Malagueta on Santiago and Bordeira, and Ch? das Caldeiras e Pico Novo on Fogo; as well as 4 Ramsar Sites: Lagoa de Pedra Badejo on Santiago, Curral Velho and Lagoa de Rabil on Boa Vista, and Salinas of the English Port on Maio. However, only 35% of the KBA is protected.

Climate and water resources

Cape Verde's climate is Sahelian, characterised by very low precipitation and occasional erratic rainfalls. Due to its northern position relative to the oscillation zone of the ITCZ (Intertropical Convergence Zone), Cabo Verde has a dry tropical climate with two well-marked seasons (humid and dry) conditioning the distribution of its flora and vegetation. However, the island topography contributes to significant spatial variations with altitude and exposure to prevailing winds, leading to contrasting weather conditions[10]¹⁰. Annual rainfall ranges from less than 100 mm in the arid areas of the coast as in the Deserto de Viana (67 mm) to more than 1,000 mm in the humid mountain. Because of the infrequent occurrence of rainfall, where it is not mountainous, the landscape is so arid that less than two per cent of it is arable. Sal, Boa Vista, and Maio islands have a flat landscape and arid climate, whilst the other islands are generally rockier, more humid and have more vegetation. Average temperatures range from 22?C in February to 27?C in September.

The country has no permanent surface freshwater stock, creating an almost total dependence on ground water for domestic and agricultural use. Ground and superficial water resources are scarce as they depend on the erratic rainfall, susceptible to be lost to the sea. Due to the rugged terrain of the nine inhabited islands, in an average rainfall year, about 20% (180 million m³) is lost through runoff; more than 50% is lost as evaporation; and only about 13%?17% recharges the aquifers. About 60,000 m³/day of groundwater is pumped for irrigation, representing a serious overexploitation of available groundwater resources that contributes to soil and water salinization. The utilisation of water resources is rather poor due to the lack of storage facilities. The recognition of the importance of increasing storage facilities has received a large support from the Government and attracted the development agencies. Since 2006, an increasing number of dams have been constructed. However, the country-level potential is yet to be exploited. Furthermore, more sophisticated technologies than concrete dams are required to overcome the dry season, when rainfall is completely absent. Decreased evaporation of dams, betterment of water allocation rules, accessibility of stored water, effective sediment management, minimised conveyance loss is required criteria to improve the functionality of the dams. In this adverse scenario, for the many intended water uses is not only a matter of improving water availability, but also system-wide water use-efficiency coupled with resilient production methods (due to the recurring drought). Agriculture accounts for almost 90% of total groundwater abstraction, thus being responsible for the sharply declining groundwater tables. The groundwater quickly moves downstream to areas at lower altitude and discharges wells, springs, tunnels and streams, thus remaining inaccessible in upstream parts. It, eventually, reaches the ocean as submarine discharge. Groundwater is economically available only in flat areas at coastal sides, where 80% of the population lives, where it becomes vulnerable to saltwater intrusion if upper lenses of freshwater are over-pumped. The lack of adequate aquifer recharge combined with low capacity of storage facilities is important to groundwater resources, as the human-induced pressure on groundwater is already a challenge.

As all SIDS, Cabo Verde is highly vulnerable to the impacts of climate change. Nearly 33% of the population lives in rural areas and droughts have a negative impact on food security in Cabo Verde. The country is in position 130 on the 2021 Global Climate Risk Index and erratic rainfall leads to \$2 million losses of income in agricultural crops annually^[11]. In September 2020, floods affected 150,000 people and damaged houses, land, and crops. Overall, Cabo Verde could lose between 0.1% and 0.27% of per capita GDP by 2030 and 2050 if the Paris Agreement is not met. The government is addressing climate change and building resilience through investments in blue economy, reforestation, and restoration of environmental ecosystems as well as promoting a just energy transition through renewable energy investments. In addition, the country's coastlines are very vulnerable to rising sea levels and erosion where approximately 80% of the population resides and where more than 70% of irrigated areas are located. The coastal areas are also important in promoting and supporting the local tourism industry which is a main driving force behind the country's service-oriented economy. Climatic models ran during the National Adaptation Programme of Action (NAPA) assessment for the period 2008-2012 have shown that Cabo Verde's natural vulnerabilities, along with their social and economic implications, are very likely to be exacerbated by climate-related disruptions in the next decades. These include more frequent extreme events like storms, floods and droughts, as well as shorter rainy seasons, with immediate impacts on livelihoods, infrastructure, sanitary conditions,

recharge of reservoirs, and crop productivity. Droughts will have an immediate and negative impact because of lower household yields in agriculture.

Food security and nutrition

Famines have played a major role in the population history of Cabo Verde since at least the 1580s. Droughts caused severe famines in 1901-04, 1920-21, 1941-43 and 1947-48, when lack of food and chronic malnutrition were a major cause of mortality[12]¹². Cabo Verde has witnessed significant economic progress since 1990, driven in large part by the rapid development of tourism, coupled with considerable social development due to strong social policies since the 1970s. The government of Cabo Verde has been committed to improve food security and until 2019, the country could be considered one of the champions among Sub-Saharan African countries in terms of poverty reduction. Poverty projections based on economic growth suggest that poverty rates, measured by the \$5.5 a day (2011 PPP) poverty line, declined by 6 percentage points between 2015 and 2019, from 41 % to 35 %. In 1979, with the World Food Programme (WFP) support, the National School Feeding Programme was launched to increase school enrolment, boost learning, combat hunger and meet the nutritional needs of students. In 2004 the National Food Security Sustainable Strategy was approved and implemented[13]¹³ and by 2010, the National School Feeding Programme became fully owned and run by the government, becoming the first nationally owned school feeding programme in West Africa.

However, the recent global events and sustained drought in the country for the last 5 years have undermined the measures taken by the government and the country is facing unprecedented levels of food insecurity. Since 2017, the country has been facing one of the worst drought crises since the 1990s. Rains continue to be rare, and production does not even cover 10% of the country's food needs. The 2021-2022 agro-pastoral campaign was characterised by a late start and an early end to the rains throughout the national territory[14]¹⁴. As a result, the Government of Cabo Verde declared, in February 2022, the situation of national drought emergency disaster. The country relies heavily on food imports, which account for over 80 percent of its food consumption needs and is facing challenges to cover the import requirements as its finance capacity has been negatively affected by the COVID 19 pandemic. Soaring international food prices, exacerbated by the war on Ukraine, have worsened this situation. In addition, global supply chain bottlenecks associated with the war may hinder import flows, particularly as 40 percent of the country's wheat imports originated from the Russian Federation and most of the 5 million litres of cooking oil imported yearly are sourced from Ukraine. In June 2022, the government declared a social and economic emergency and signed an agreement with the WFP to meet the food and nutrition needs of nearly 90,000 school children through the national school feeding programme[15]¹⁵. Currently, the programme covers 788 schools and supports 89,715 pre-school, primary and secondary school students.

Given the adverse conditions linked to the agro-pastoral agricultural campaign, some municipalities in the country are in a situation of acute food insecurity. According to the latest March 2022 Cadre Harmonisé (CH) analysis, about 46,000 people or 10 percent of the population were projected to face acute food insecurity (CH Phase 3 [Crisis] and above) between June and August 2022, including about 3,100 people in CH Phase 4 (Emergency), mainly on the island of Santiago and Santo Antao (Figure 2). This is the highest number since the first CH analysis was carried out in 2014 and it shows a fourfold increase compared to the same period in 2020. The number of food insecure people in 2022 could increase above the current projections as the high levels of international prices of energy, fuel and food, exacerbated by the war in Ukraine, may further constrain access to food. These factors are also likely to widen the fiscal deficits and raise concerns about the country's capacity to respond to additional shocks.

mars-mai 2022 / Current Situation

juin-août 2022 / Projected Situation

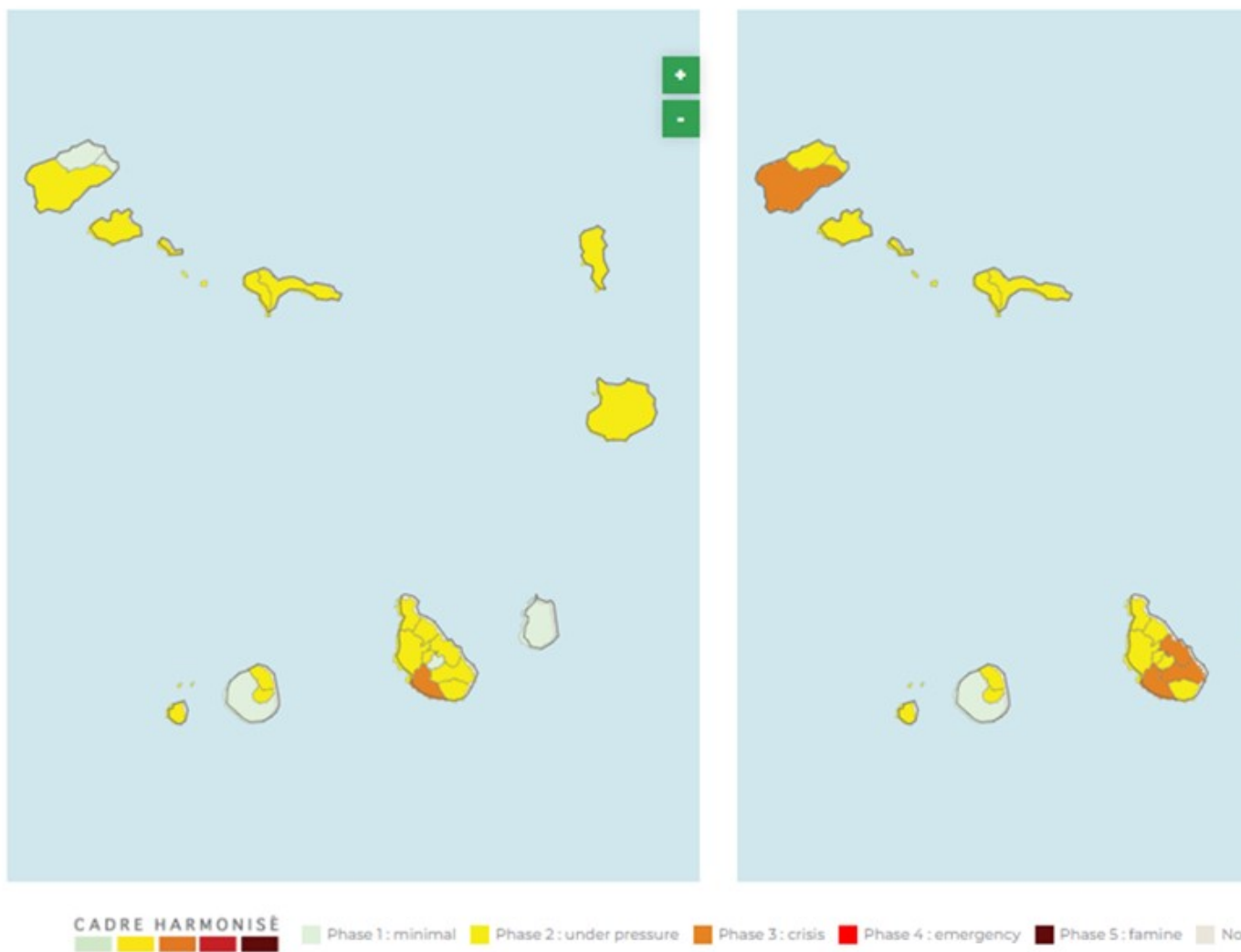


Figure 2: Results of the March 2022 Cadre Harmonisé (CH) analysis on food security by municipality.

Left map shows the current situation of municipalities and the right map shows the projections for June-August 2022, indicating that Santiago and Santo Antão Islands are the most affected. Source: <https://www.food-security.net/en/datas/cabo-verde/>

The main rainfed crops of Cabo Verde are maize (*Zea mays*) and several bean species (i.e., *Cajanus cajan*, *Lablab purpureus*, *Phaseolus vulgaris*, *Phaseolus lunatus* and *Vigna unguiculata*)[16]¹⁶. These species are still the basis of the country's diet, with the most emblematic dish of Cabo Verde being

?cachupa?, which is cooked with different varieties of beans and maize. These crops are produced through rainfed subsistence farming, whereas irrigated crops, such as sugarcane, manioc and tomatoes, are mostly grown for commercial purposes. At national level the dietary intakes of vegetables, legumes, nuts and whole grains are below the recommended intake but in are in general better than the regional estimates[17]¹⁷ (Figure 3). Even though progress towards reducing anaemia has been made, 24.3% of women aged 15 to 49 years are still affected[18]¹⁸. Cape Verde is 'off course' to meet all targets for maternal, infant and young child nutrition (MIYCN). The latest prevalence data shows that 59.6% of infants aged 0 to 5 months are exclusively breastfed but there is lack of adequate data to assess progress and project estimates towards meeting these targets by 2025, including under five stunting, wasting and overweight[19]¹⁹.

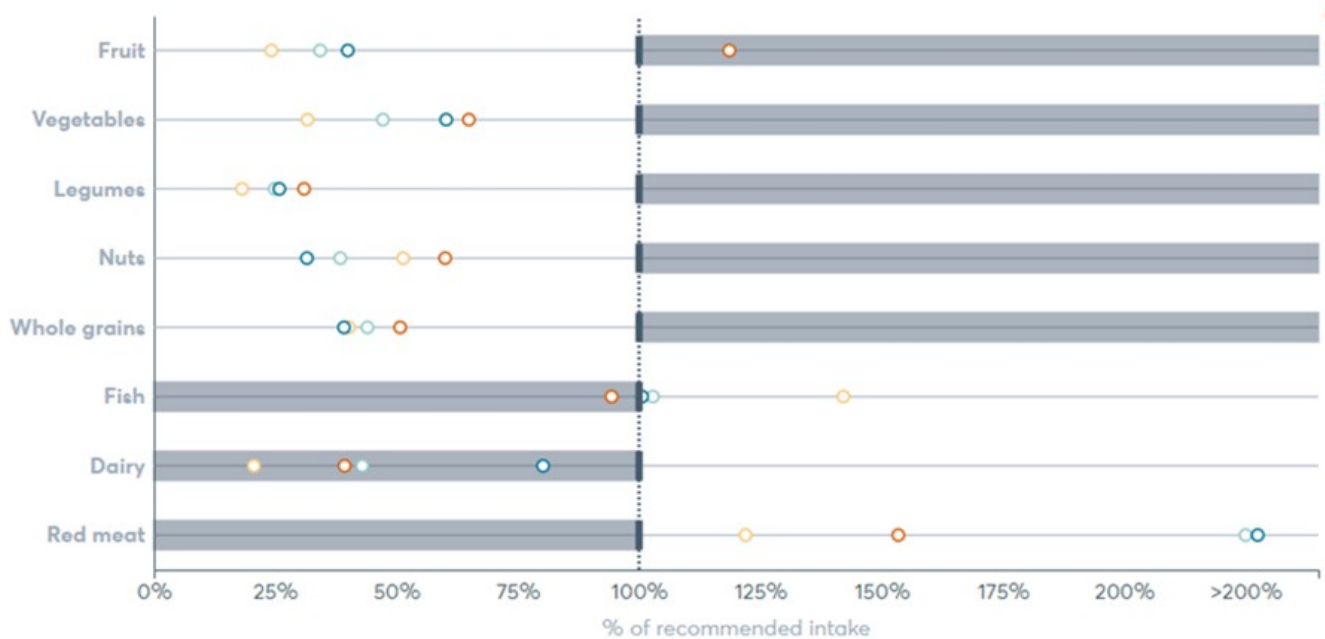


Figure 3: Dietary intakes of key foods and nutrients in adults aged 20 years and over compared against minimum and maximum targets. Source: <https://globalnutritionreport.org/resources/nutrition-profiles/africa/western-africa/cabo-verde/>.

Land and water tenure and governance

Secure tenure increases the positive impacts of LDN initiatives[20]²⁰ and the importance of responsible governance of tenure in addressing desertification, land degradation and drought has been widely recognized by UNCCD, as stated in Decisions 26/COP14 and 27/COP15. Good governance was a key

factor for removing Cabo Verde from the group of Least Developed Countries. The country has undertaken an ambitious intervention on the clarifications on the boundaries and property rights and several legal and institutional reforms in the area of land management and land transactions have taken place. After Cabo Verde's Law 05/VII/2007 on Land Tenure, that authorises the Government to rule on land legal order and to review the basic legislation on public expropriation provided by Law No. 2030 of 1948[21]²¹, a reform started in 2009 with the new Cadastral Law, calling for the integration of land related information and databases, followed by the approval of the new Registry Code in 2010, making registration mandatory following the implementation of the cadastre (conclusion of rights and boundaries clarification) in a given area. Recognizing that these initial reforms were not sufficient to operationalize the legal foundations for an efficient and clear land sector, since mid-2012, legal studies were conducted and more than 25 reforms were drafted, approved and are under implementation. The country has also worked towards the creation of a single reliable and more easily accessible system for Land Management Information and Transaction System (LMITS), in order to strengthen Cabo Verde's land rights information through the different institutions for a reduction of the land rights registration and transaction time and cost for all users[22]²². These advances have improved the clarification of legal rights and spatial boundaries and the sharing of this information among the institutions that perform land related functions and provide land related services to the public.

However, this work has not yet finalized nor is available for the whole country and there still remain two different types of records systems, one judicial and one municipal where each one contains partial information about only a limited share of the country's land parcels. Additional records systems hold information about state-owned land and no source contains complete map-based information indicating actual location of a parcel. This is aggravated by the fact that the various institutions that maintain land records don't share information among them. The absence of a credible, effective and rigorous system for rights registration and land management has generated conflicts, burdensome land management procedures, and legal uncertainty in land transactions and indiscipline in use of the territory. These situations are found at all levels: in land owned by the State, by municipalities, and by private parties. Many parcels in the existing land registration systems are uncertain with ambiguous information. Most land and property is not registered and the existing information is not updated.

Inequalities in land and water distribution and control are widespread in Cabo Verde. Women are disadvantaged in decisions on land use and management and they own proportionally less land than men. Women's land rights are more likely to be violated, where the benefits of investments into land management are appropriated by others. Women are also disadvantaged by unequal access to water and have limited meaningful participation in decision-making. Despite the government's efforts, insecure and unequal tenure is still hampering land users and right holders to invest in sustainable land management and engage in large-scale investments in LDN and restoration.

Land degradation and its direct and indirect drivers in Cabo Verde

Land degradation is widespread in Cabo Verde, resulting from a combination of climate, human and topographic factors. Centuries of land alteration to expand agricultural production have created a highly modified, complex mosaic of land use in Cabo Verde. A few early records describe the original vegetation of the islands. Grasses and shrubs likely constituted the vegetative communities of the arid lowlands. The more humid highlands probably consisted of woody shrubs interspersed with herbaceous species, and a handful of tree species colonised the most favourable waterways. Closed-canopy forests likely never existed. After the Portuguese colonisation, the land underwent vast land use changes. Livestock (primarily goats), intensive agricultural practices, and other introduced species greatly altered the native vegetation and decimated the native tree populations. The reduction of natural vegetation in many areas also contributed to soil erosion. By the early 20th century many parts of the islands were heavily degraded. According to the analysis of one of the main LDN indicators, (land productivity dynamics-LPD) for the period 2001-2021, there are 140,000 ha in the country (26%) presenting declining or stressed productivity (Figure 4).

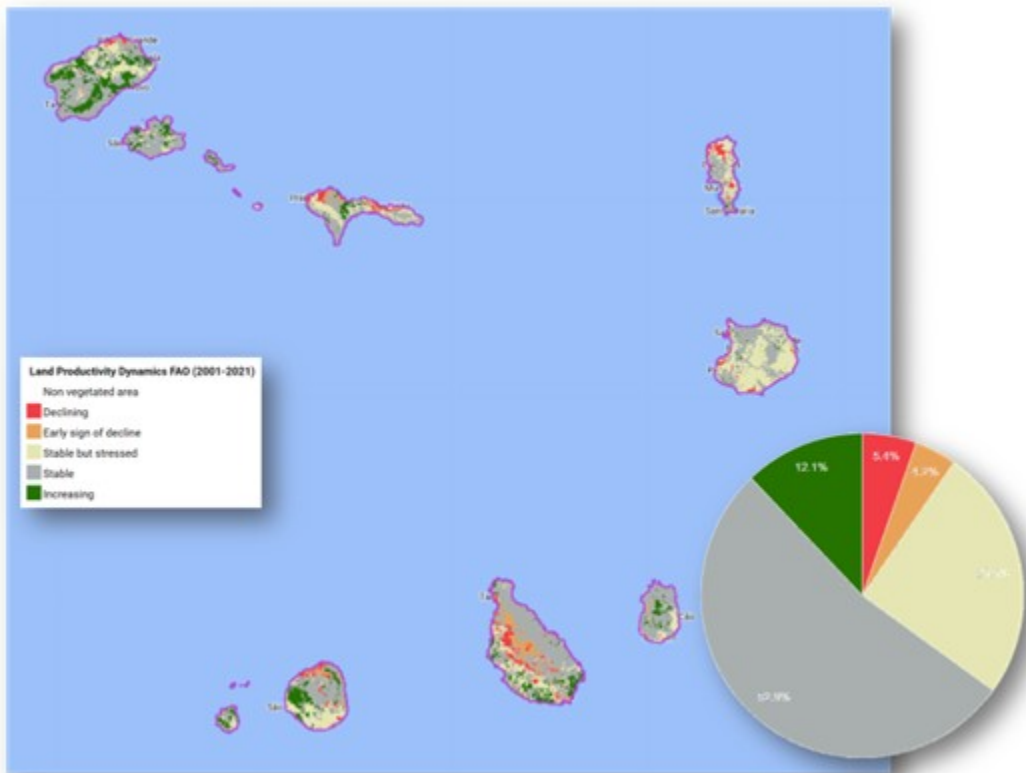


Figure 4: Land Productivity Dynamics in Cabo Verde for the period 2001-2021. Red, orange and yellow areas correspond to sites where vegetation productivity is declining or stressed and represent potential degradation.

Unsustainable dryland farming practices, such as weeding, and burning accelerate land degradation in Cabo Verde. The irrigated lands are mainly found in the beds of streams on the main agricultural island

of Santiago. These lands are regularly eroded and washed away by floods during exceptional rains, such as Hurricane Fred's rains in 2015 - 2016 on the island of Santo Ant?o. Deforestation to use raw wood or produce coal to satisfy a basic energy need is also a driver of degradation. Figure 5 shows the number and percentage of people that use wood as an energy source, with Santiago Island ? one of the proposed project sites ? being the most affected.

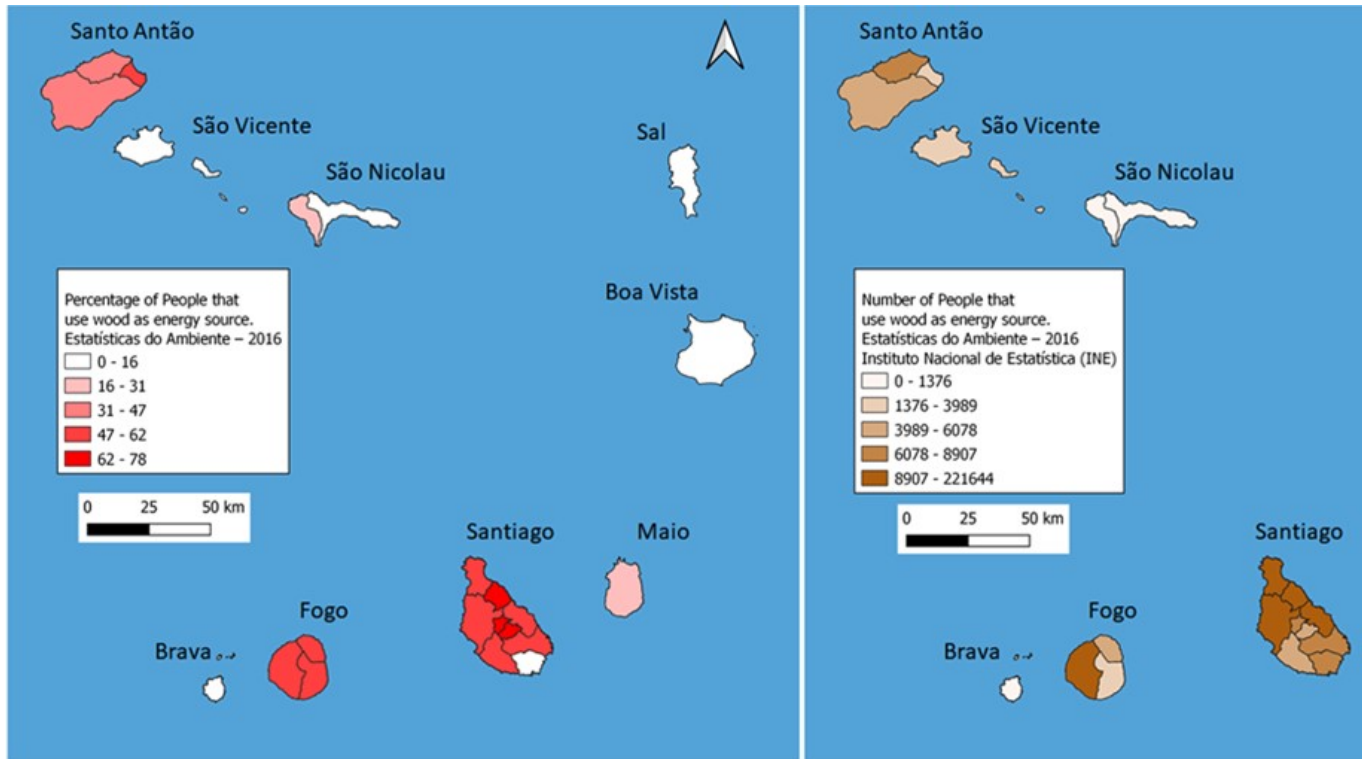


Figure 5. Percentage (left) and number (right) of people that use wood as an energy source in each municipality.

Climatic factors, such as extended droughts have also contributed to the reduced vegetation cover, exposing bare land to erosion, while heavy rainfall events during the wet season generate high rates of runoff transporting enormous quantities of soil. Strong climate variability ? three months of rain following nine months of drought ? causes severe water erosion. The National LDN baseline report indicates the loss of more than 4,000 t/km²/year of soil by water erosion in agricultural basins in Cabo Verde. During the passage of hurricane Fred in 2015, observations and surveys indicate soil erosion at 20 times higher on the island of Santiago. Climate change effects will result in more intense land degradation and desertification trends, increasing the uncertainty of water availability, reducing the area available for agriculture, and shrinking native vegetation to micro-refugia sites. Events ranging from acute water scarcity to extreme weather conditions such as storms, floods and droughts, also have immediate impacts on recharge of aquifers, crop productivity, environmental quality, and livelihoods. Overall, these changes are expected to have a significant negative impact on water resource availability and agricultural productivity on the islands, especially for the vulnerable farmers. Extreme land

degradation coupled with climate change impacts and increased pressure on the land due to the current economic conditions impose a challenge to achieve Cabo Verde National voluntary LDN targets, while at the same time it becomes even more vital to progress towards LDN for a more resilient, sustainable and equitable Cabo Verde.

Project area and target landscapes

The project will follow a landscape approach in line with GEF's vision to foster sustainable integrated landscapes to achieve LDN. Working at landscape level allows issues to be addressed in a multifaceted way, integrating sectors, involving stakeholders and working at different scales ? tackling the underlying causes of land degradation and challenges related to food security and nutrition. Watersheds in Cabo Verde represent landscape units with ecological unity that are used for water-resource, land and environment conservation and management planning and investment, in particular by the Ministry of Agriculture and Environment. From the total number of watersheds in Cabo Verde, three watersheds on two islands (Santo Ant?o and Santiago) were selected for project demonstration work.

The selection of the target landscapes was based on a participatory assessment that considered biophysical and socio-economic criteria as well as alignment with national priorities and initiatives. Their representativeness of the country's land degradation processes, economic importance and diversity of land uses and stages of land degradation were considered. The two selected islands correspond to those with highest agricultural potential, intensity of land degradation and food insecurity: Santiago and Santo Ant?o. In Santiago Island, the Ribeira Seca watershed (7,116 ha) was selected due to its intense level of degradation and agricultural importance. It is situated near the capital city of Praia and given the number of previous initiatives and studies conducted there, it represents an opportunity to further strengthen capacities and capitalize on previous investments, enhancing sustainability of interventions. In Santo Ant?o island, two watersheds were selected: Vale de Gar?a (2,077 ha) and Ribeira das Patas (4,937 ha). Vale de Gar?a is located in the North of Santo Ant?o and it's the most remote and isolated of the three watersheds, with a high proportion of key biodiversity areas and very steep slopes. Ribeira das Patas is more populated and connected to the city of Mindelo with a high level of agricultural intensification. A detailed description of each watershed is included below.

During the PPG phase a socio economic and biophysical assessment was conducted for each target landscape and based on the results and consultations a set of communities within each watershed was prioritised. The process involved meetings with the main actors involved, including NGOs, Local Farmer Associations (LFA), the MAA Ministry. Field work, data collection and meetings in situ with the main actors of the three different watersheds were held to discuss targeted objectives and identify those communities with more potential to engage and achieve the project targets.

Santiago Island. Santiago is the largest island, both in size and population. It is the main agricultural island of the country. Due to the relief of the island with its steep mountains, the islands can have

orographically induced precipitation, allowing rich woods and luxuriant vegetation to grow where the humid air condenses soaking the plants, rocks, soil, logs, and moss. The wetter climate of the interior and the eastern coast contrasts with the drier one in the south/southwest coast. This island is one of the most impacted by the last decade's drought and by the flood in 2020. The island hosts the nation's capital, Praia, the principal urban agglomeration in the archipelago. It has nine municipalities and hosts 150 Farmers Associations (2011). Over 90% of the farmers are smallholders, 54% of whom are women. The island has the largest youth population in the country.

The proposed project's target landscape on Santiago Island is represented by **one** watershed:

Target landscape #1: Ribeira Seca watershed

Ribeira Seca watershed, located on the east-central side of Santiago island, is the largest watershed of the island. It has a maximum altitude of 1,394 m covering a total area of **7,116 ha**, divided into three Municipalities: S^o Domingos (South), Santa Cruz (East), and S^o Louren^o dos ^org^os (West) (Figure 6).

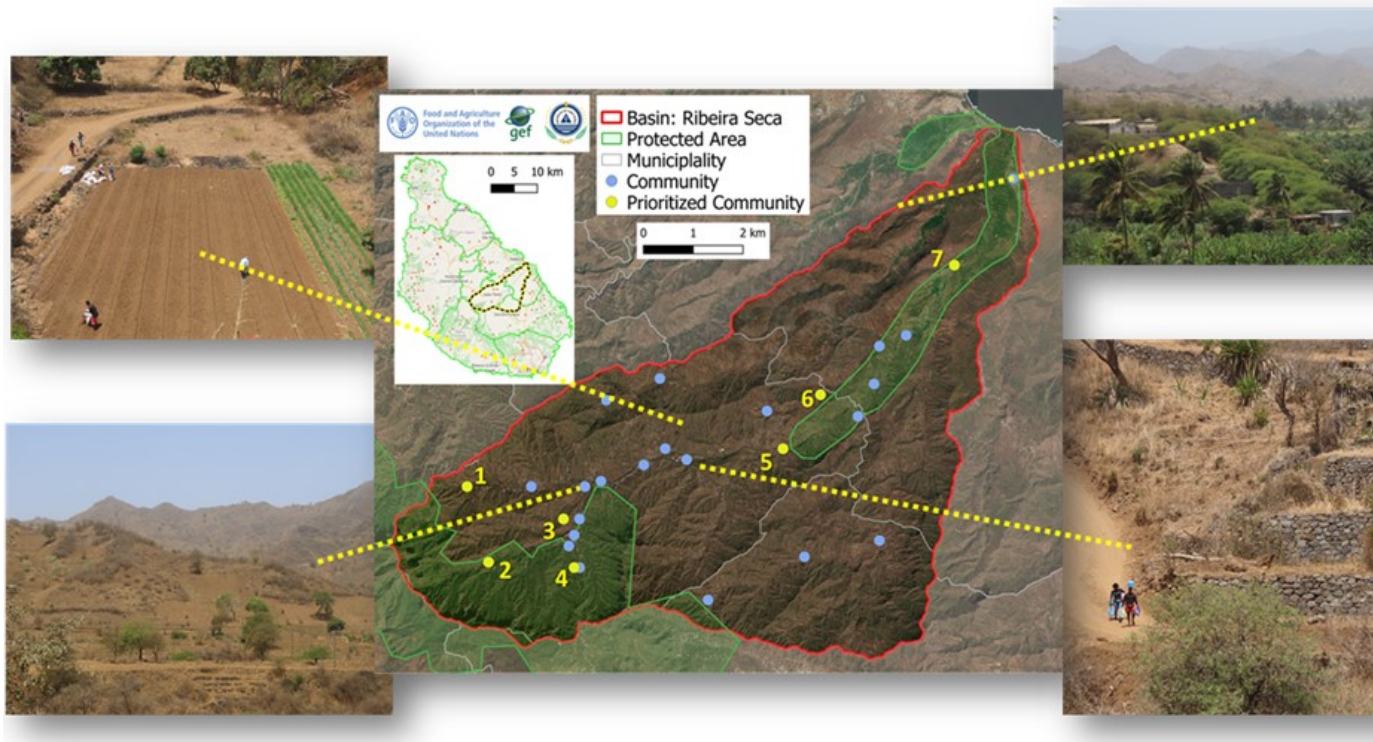


Figure 6: Images and map of Ribeira Seca in Santiago Island and location of communities (blue) and prioritised communities (yellow: 1- Pico de Antonia; 2- Longueira; 3- Covada; 4- Ribeir^o Galinha; 5- Levada; 6- Ribeir^o Moura; 7- Macati). Greener areas correspond to protected areas.

Climate: The climate is characterized by a dry season that lasts 8?9 months (November to June) and a short, humid season of 3?4 months (July to October), with the humid period coinciding with high temperatures. Rainfall is extremely heterogeneous and its spatial-temporal distribution irregular.). Annual precipitation that varies from >650 mm (upstream) to <200 mm (downstream).

Land use: Ribeira Seca watershed is essentially an agricultural region, in which the main economic activity of the largest part of the population is agriculture. Livestock keeping is an important activity in the watershed as most family farmers own animals, such as cows, goats, pigs, and chickens that often graze freely. According to an analysis performed during PPG phase using the European Space Agency WorldCover map for 2020 at 10m resolution[23]²³, 83.5% of the basin is covered by grasslands, 6.2% by croplands, 2.5% by tree covered areas and the remaining areas by artificial and other land. Almost 16% of the basin is part of Key Biodiversity Areas[24]²⁴ (Figure 7).

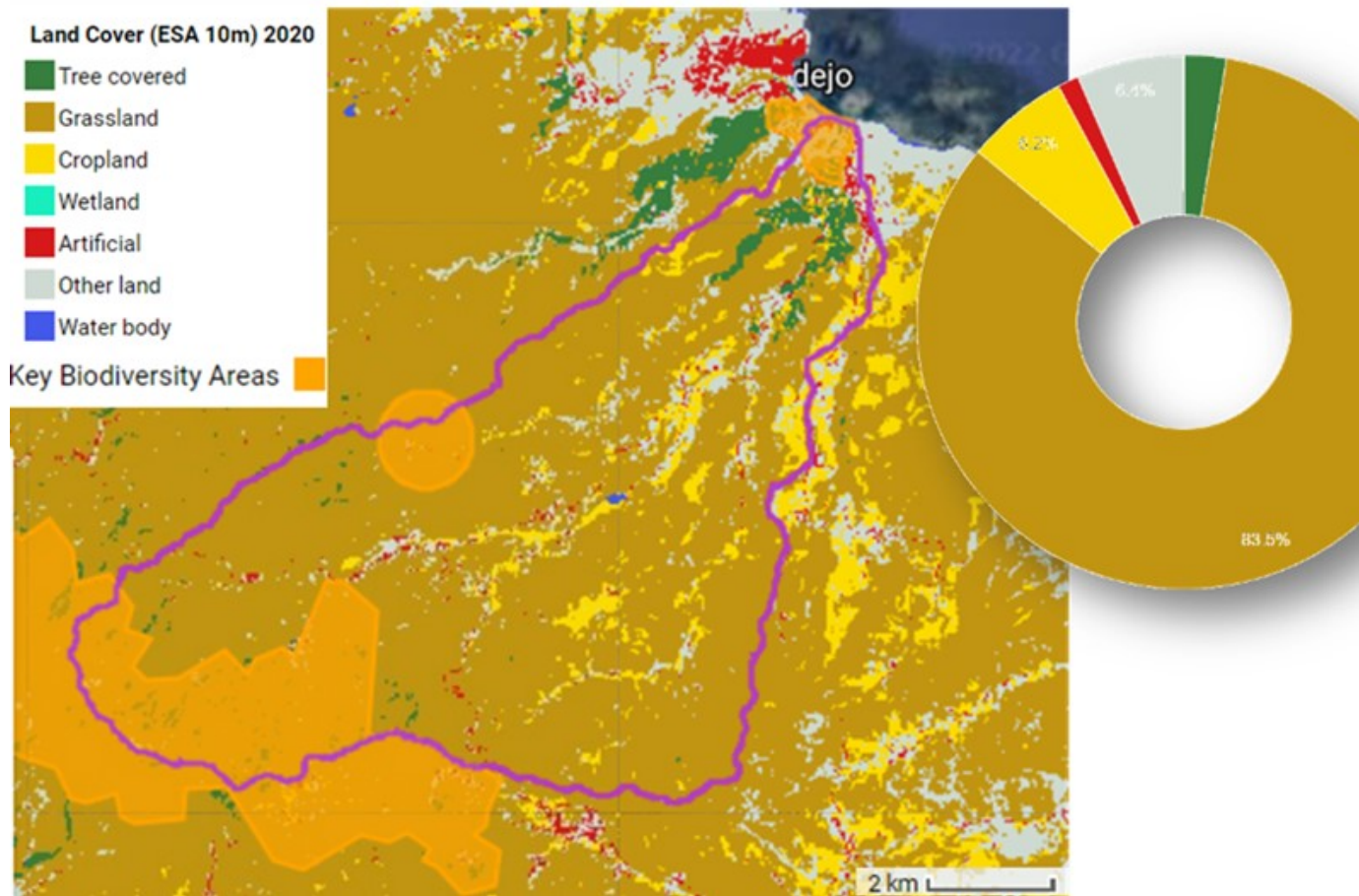


Figure 7: Land cover map of Ribeira Seca in Santiago Island for 2020 and Key Biodiversity areas (orange). The proportion of each land cover class is presented in a pie chart.

Soil and water resources: The soils, mainly Regosols and Cambisols developed on basaltic substrate, are shallow and low in organic matter (OM), generally with low to medium fertility and medium to coarse texture. Mean SOC is estimated as 76 tn/ha, and the total SOC stock of the basin is 538,600 tn[25]²⁵. Deeper soils, i.e., Kastanozems with higher OM content and Vertisols, can be found on the

plateaus (achadas) of less steep slopes. In the valley bottoms or ribeiras, Fluvisols are predominant and used for irrigated agriculture. Groundwater resources are extracted by 220 functioning wells (180 stone water wells and 40 units of bore holes). The gross potential of technically exploitable groundwater resources is estimated at 7.0 hm³/year. The average annual exploitable volume is about 6.0 hm³/yr, being 2.0 hm³/yr from the holes and 3.0 hm³/yr from springs.

Land degradation and SLM: Land degradation is widespread in Ribera Seca, with decreasing trends of land productivity and soils exhibiting marked symptoms of degradation (i.e., rills and gullies). During PPG phase, an analysis following UNCCD analytical methods for calculating SDG Indicator 15.3.1 (proportion of land degraded), which is used to monitor and report progress towards LDN, was undertaken for the baseline period (20001-2015) and the new reporting period (2015-2019)[26]²⁶. According to this analysis, 79% of Ribera Seca was degraded in the last reporting period, in contrast with a much lower estimation for the baseline period, indicating an alarming rate of loss of natural capital (Figure 8). Main drivers of land degradation in the basin are:

- ? Unsustainable land management practices, such as intensive cultivation of steep slopes without adequate conservation measures and excessive weeding by hoe;
 - ? Irregularity of the precipitation and intensive exploitation of groundwater, which has caused overexploitation of the aquifers, resulting in sea water intrusion in coastal zones and salinization of soil and water in the valley bottom.
 - ? Rural poverty, leading to deforestation due to tree cuttings for domestic use as energy for cooking; and excessive grazing by animals.
 - ? Low soil cover results in flash floods and water erosion symptom formation (rills, gullies, sedimentation).
-

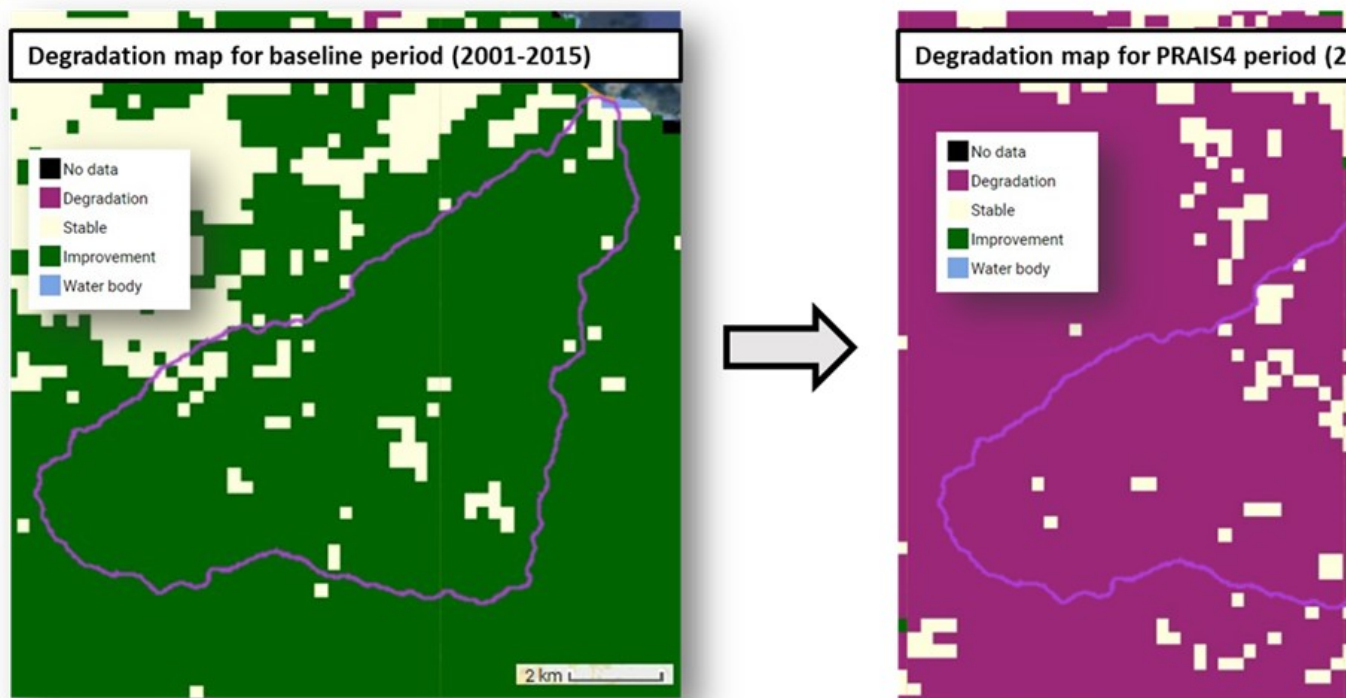


Figure 8: Degradation maps for the LDN baseline and reporting period following UNCCD Good Practice Guidance to estimate proportion of land degraded (SDG indicator 15.3.1).

Socio-economic profile: The Ribeira Seca Watershed has an estimated total population of about 15,000 people, with an even gender distribution. The population is young, with 77% below 35 years old (of which 48% are below the age 15) and features an 83% literacy rate. Poverty affects >60% of the population. According to the socio economic and gender assessment conducted during the PPG phase, it was identified that a significant number of families in Ribeira Seca are headed by women. Women and girls are the main responsible for collecting water and firewood from the forests and their main income is rain fed agriculture and small animal production (pigs, chicken and goats). Drought has affected the majority of their income with severe impacts on food security, especially for the most vulnerable families. There are gender inequalities in land and water governance, particularly regarding access to water for irrigation. Water management for irrigation has been a source of conflict between men and women landowners, with men having more and better access to water and no women are involved in water management and irrigation systems.

Institutions: Several stakeholders operate within the watershed - land users, municipality decision makers, agricultural NGOs and researchers - each with different interests and approaches. Important agriculture entities function within the watershed, such as the National Agrarian Research and Development (INIDA), the School of Environmental Sciences and Agriculture (ECAA) of the University of Cabo Verde (Uni-CV), the Centre of Livestock Development, a Unity of Agriculture Transformation and the Delegation of the Ministry of Agriculture and Environment.

Prioritised communities: The communities prioritised in this basin include Pico de Antonia, Longueira, Covada, Ribeirão Galinha, Levada, Ribeirão Moura and Macati. However, additional communities can be prioritised during implementation of the project.

Santo Antão Island. Santo Antão is the Northernmost Island. It is higher and wetter, allowing the climate to be suitable for the development of dry monsoon forests and laurel forests. Santo Antão Island has undergone the most impactful irrigation development of the country. It is the most endowed with forestlands. However, the previous development efforts of afforestation could be drastically compromised by the climate change impacts. The integrated development of forest and water resources has the potential to considerably improve agriculture and contribute to the country's food security and self-sufficiency. The island had been affected by the centipede; an embargo on fresh agricultural products that followed limited the inter-island exports only to the islands of São Vicente, Sal, and Boa Vista. The island has three municipalities and hosts 19 Farmers Associations (2011). Over 90% of the farmers are small-holders, 33% of whom are women.

The proposed project target landscape on Santo Antão Island is represented by **two** watersheds:

Target landscape #2: Ribeira das Patas watershed

Ribera das Patas watershed is located in the Municipality of Porto Novo and is one of the biggest watersheds in Santo Antão Island. It has a drainage area of **5,878 ha**, with a maximum altitude of 1790 m asl (Figure 9).

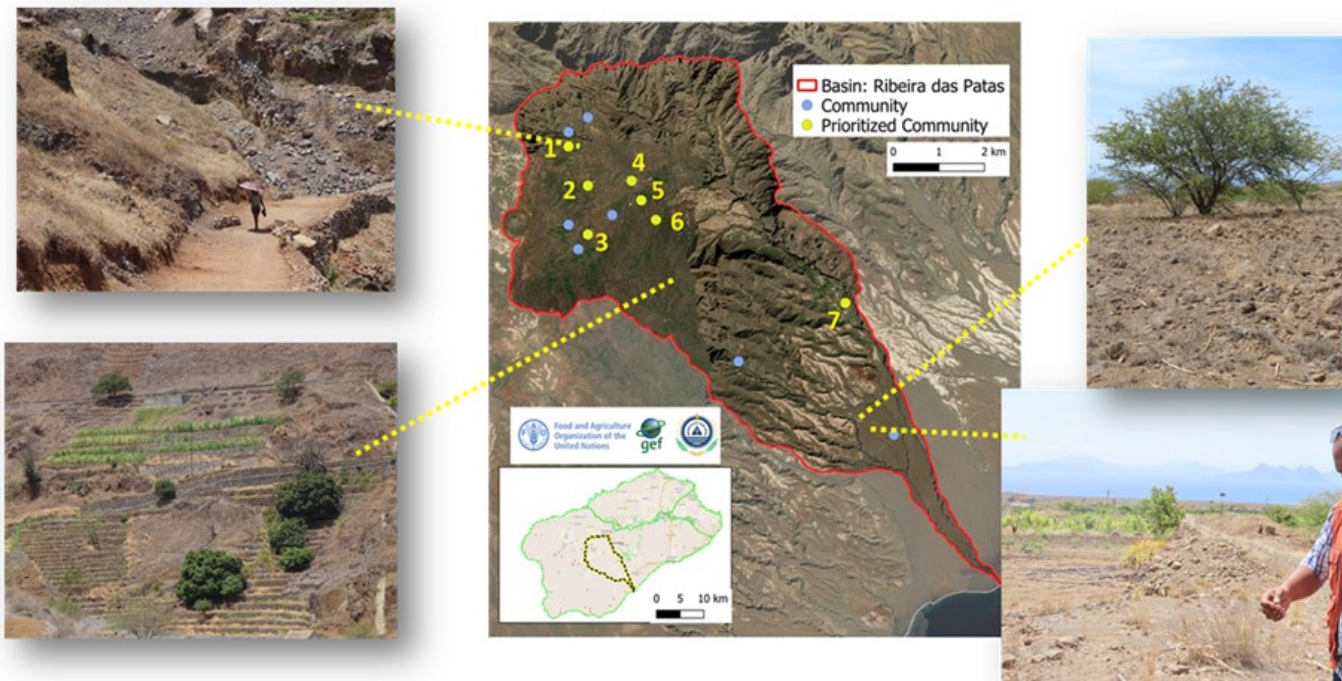


Figure 9: Images and map of *Ribeira das Patas in Santo Ant?o* Island and location of communities (blue) and prioritised communities (yellow: 1- Cruzinha?; 2- Ch? De Igreja?; 3- Manta Velha?; 4- Lomba Amaro - Gar?a?; 5- Cabe?ada).

Climate: The mean annual rainfall in the watershed is 225 mm/year, with erratic rainfall during the rainy season (August to October) and recurrent drought. During the rainy season intense rainfall causes severe erosion.

Land use: Ribeira das patas has a rough topography with 87% of its territory classified as mountain[27]²⁷. According to the PPG land cover analysis[28]²⁸, the basin is mostly covered by grasslands (55.1%) and other land (including bare soils and rocky outcrops, 43.5%). Only 42 ha (less than 1%) belong to Key Biodiversity Areas[29]²⁹ (Figure 10).

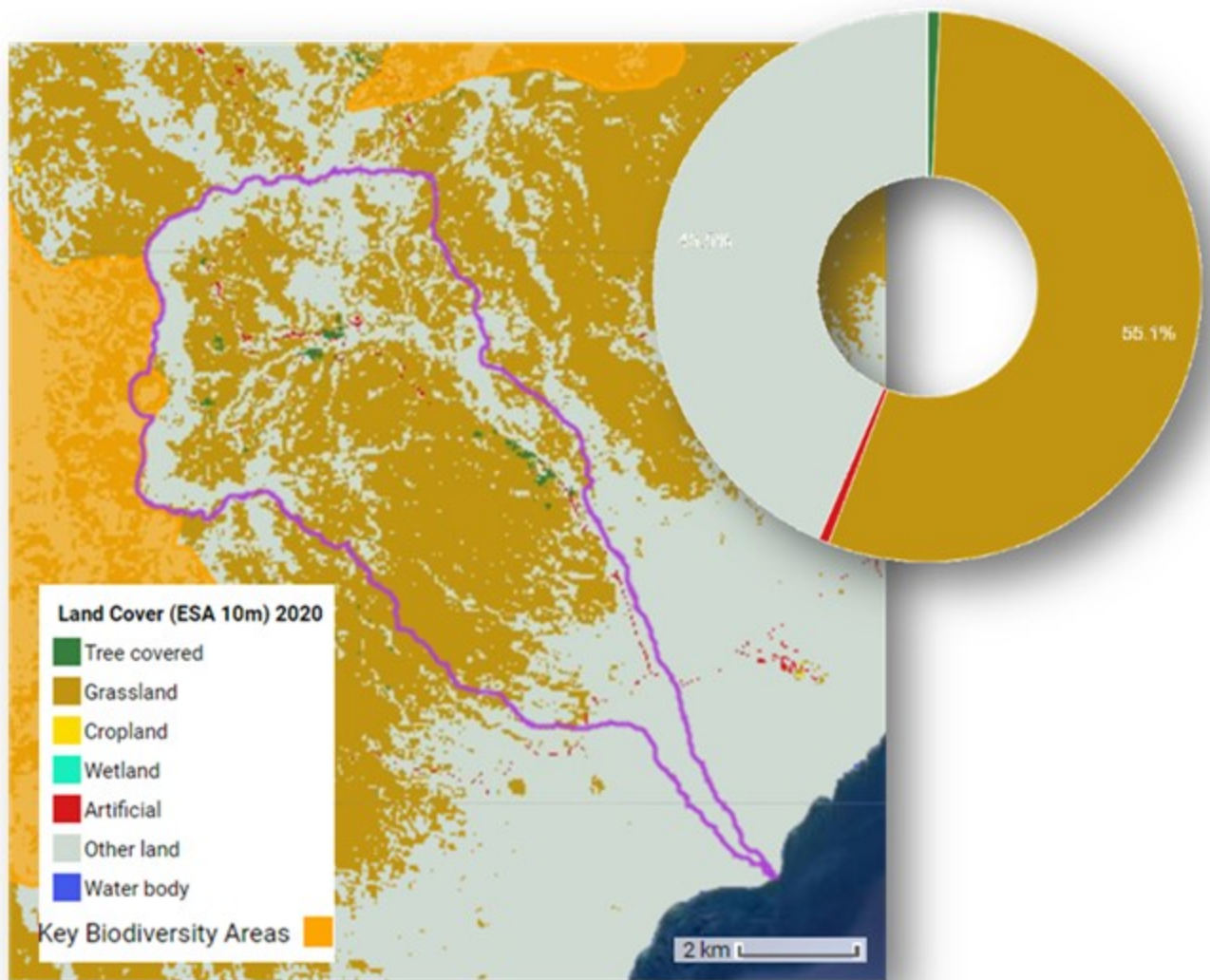


Figure 10: Land cover map of Ribeira das Patas in Santo Ant?o Island for 2020 and Key Biodiversity areas (orange). The proportion of each land cover class is presented in a pie chart.

Soil and water resources: With a mean SOC of 78.51 t/ha the basin SOC stock is estimated as 385,500 tonnes[30]³⁰. Eight soil classes are found in the watershed: Fluvisols, Regosols, Leptosols, Andosols, Vertisols, Cambisols, Phaeozems, and Antrosols. The high rainfall gradient and the steep slopes are producing higher runoff in the upland areas of the watershed that can be stored in reservoirs in the lowland areas. The potential of the surface water resources that can be exploited in the watershed is

4,152 000 m³/year. The underground renewable water resources are 876,000 m³/year taking into account an infiltration rate of 13%.

Land degradation and SLM: Land degradation intensity in Ribeira das Patas is high, with vast areas where soil is exposed and subject to water erosion producing deep gullies. According to the PPG phase analysis, SDG Indicator 15.3.1 (proportion of land degraded) in Ribeira das Patas, increased 16% from baseline (2001-2015) to the reporting period (2015-2019) (Figure 11). Despite the existing few technology-based solutions (terraces and stone walls), soil loss due to water erosion is particularly serious in the upper part of the basin.

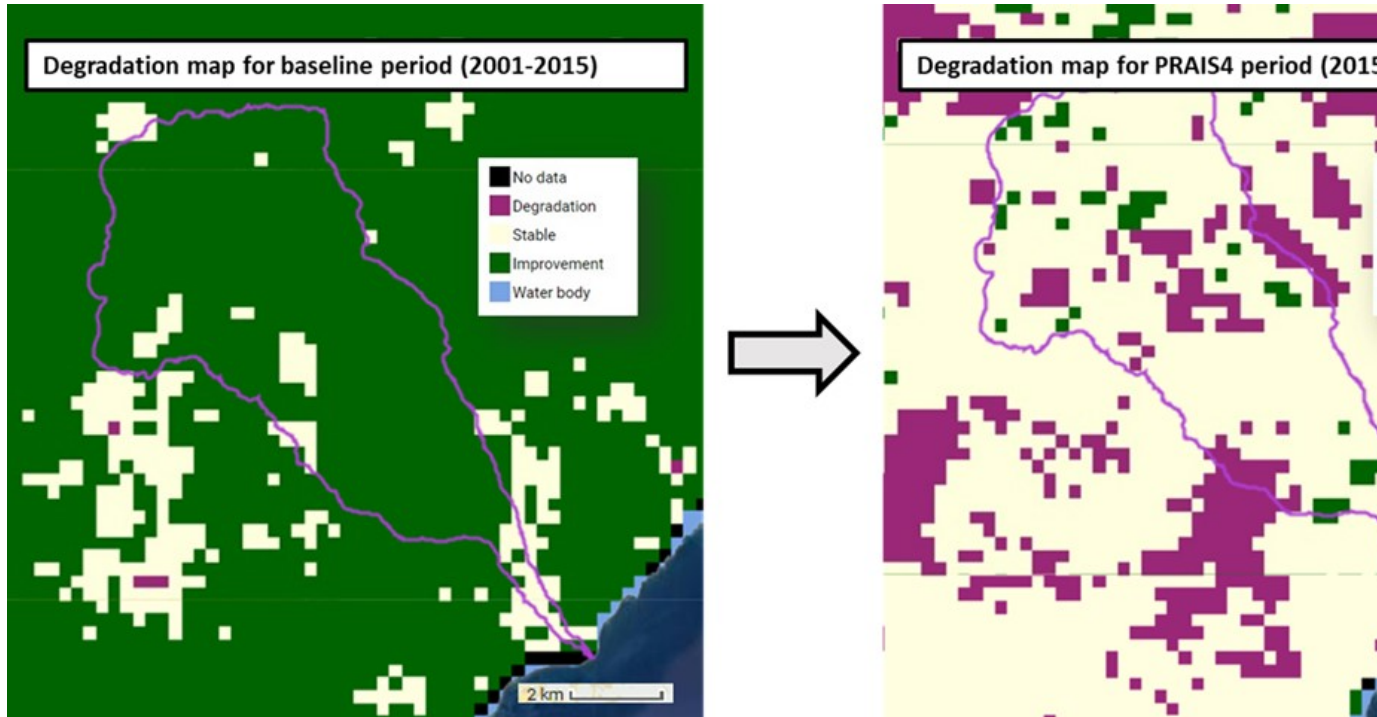


Figure 11: Degradation maps for the LDN baseline and reporting period in Ribeira das Patas following UNCCD Good Practice Guidance to estimate proportion of land degraded (SDG indicator 15.3.1)

Socio-economic profile: The Ribeira das Patas watershed has an estimated total population of 2,564 people, 80 % of whom are smallholder farmers. More than 90% of the population are rural. Similarly, to the Vale de Garça watershed, reduced financial capacity, lack of innovative technologies, and market limitation lead to outmigration. Likewise, outmigration affects mostly the age group of 20 to 50 years old, the majority of whom are women. In Ribeira das Patas, the majority of the families have both parents. A significant group of women are dedicated to agricultural food transformation and they work in a transformation Centre named CVC, in particular fruits (juice, jams and liquors) they buy the fruits from the local farmers. Several women have been trained in food transformation, in particular fruit, and are members of Cooperativa Pares, providing an opportunity to build on existing capacities and previous experiences.

Institutions: The City Hall of Porto Novo, the Ministry of Agriculture and the Regional Delegation of Porto Novo, The Ministry of Education, the Ministry of Infrastructure, The Church, CARITAS NGO, Cooperativa Pares and Local Association of Farmers all operate within the watershed.

Prioritised communities: The communities prioritised in Ribeira das Patas basin include Cruzinha; Ch? De Igreja; Manta Velha; Lomba Amaro - Gar?a and Cabe?ada. Most of these communities are in the upper basin, where land degradation is more intense.

Target landscape #3: Vale de Gar?a watershed

Vale da Gar?a watershed is located north of Santo Ant?o Island in the Municipality of Ribeira Grande. It has a drainage area of **2,340 ha** and a maximum altitude of 1553 m asl (Figure 12). From the three target landscapes, Vale da Gar?a is the watershed that is less connected and more isolated from the main cities of the country.

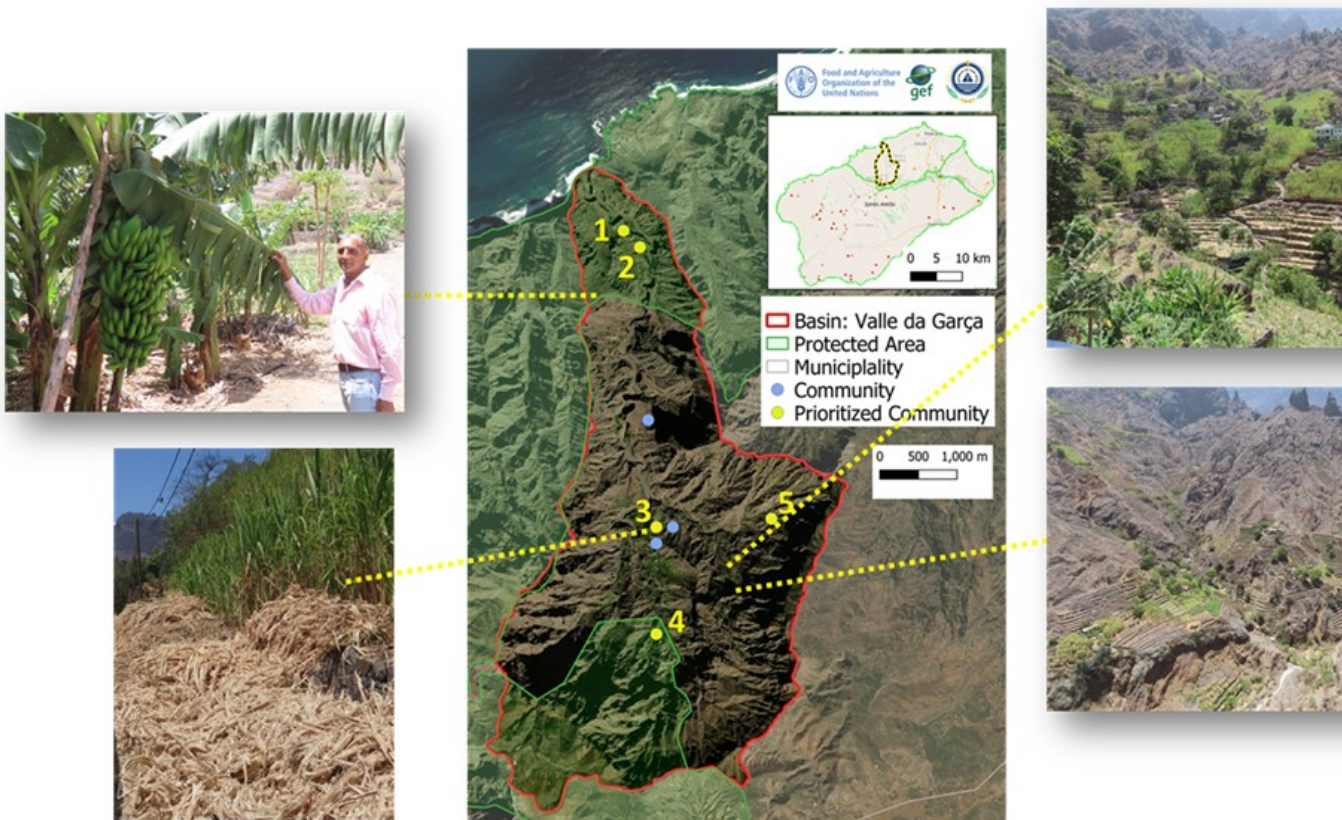


Figure 12: Images and map of *Vale da Gar?a* in *Santo Ant?o* Island and location of communities (blue) and prioritised communities (yellow: 1- Cruzinha?; 2- Ch? De Igreja?; 3- Manta Velha?; 4- Lomba Amaro - Gar?a?; 5- Cabe?ada).

Climate: The climate is characterised by erratic rainfall during the rainy season with low amounts and few rainy days, a recurrent drought, high rainstorm, with high intensity leading to crop and infrastructure damage. The mean annual rainfall in the watershed is 300 mm/year.

Land use: Most of the territory in the basin is mountainous (78%). According to the PPG land cover analysis[31]¹, the basin is mostly covered by grasslands (77%), followed by other land (17%) and tree covered areas (5%). The watershed has the largest percent of Key Biodiversity Areas among the three target watersheds (40%)[32]² (Figure 13).

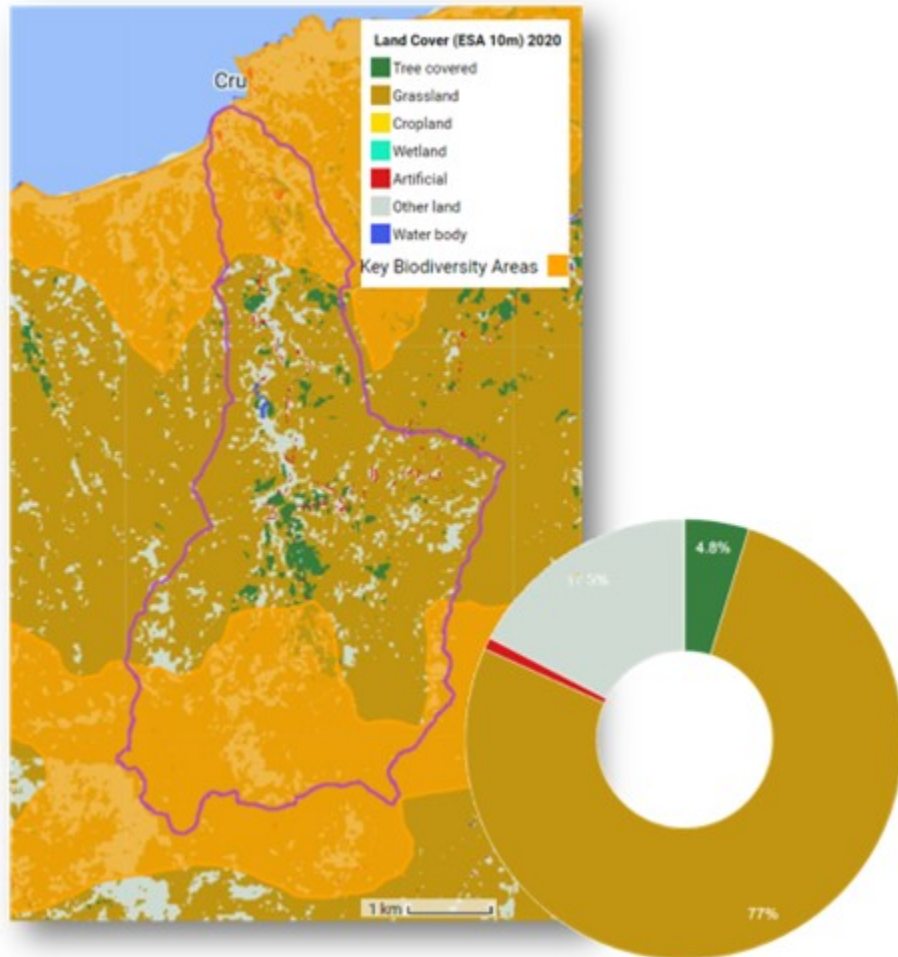


Figure 13: Land cover map of Vale da Garça in Santo Antão Island for 2020 and Key Biodiversity areas (orange). The proportion of each land cover class is presented in a pie chart.

Soil and water resources: From the three basins, Vale da Garça is the watershed with the highest average of SOC per hectare, with a value of 94.02 t/ha, which considering the basin area amounts to

190,400 tonnes of SOC. Underground water resources are estimated to be 1,642,500 m³/yr and the surface water resources is about 1,684,000 m³/yr.

Land degradation and SLM: While during the LDN baseline period (2001-2015) there was a positive trend in Vale da Garça, in the reporting period (2015-2019) these trends reversed and the proportion of degraded land (SDG indicator 15.3.1) increased to 25% (Figure 14). Despite the existing few technology-based solutions (terraces, stone walls), almost **19% of the surface area of the watershed present a soil loss higher than 20 tons/ha/year**, exerting additional pressure on the remaining agricultural land.

. The main anthropic activities that contribute to land degradation are:

- ? **Deforestation** for wood energy
- ? **Intensive cultivation of steep slopes** without adequate conservation measures regardless of land suitability or vegetation productive potential.
- ? **Low soil cover results in flash floods** and water erosion symptoms formation (rills, gullies, sedimentation)

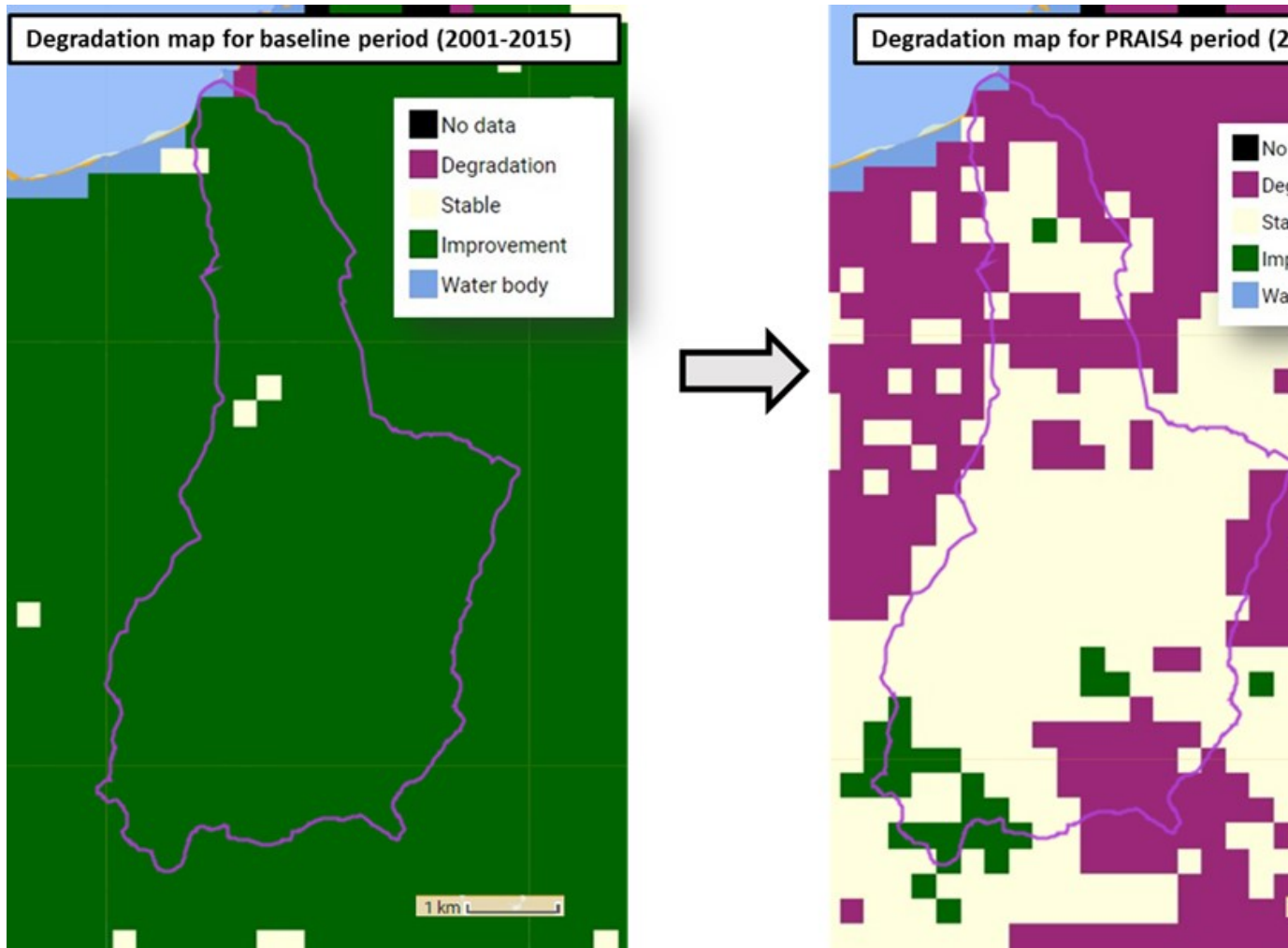


Figure 14: Degradation maps for the LDN baseline and reporting period in Vale da Garça following UNCCD Good Practice Guidance to estimate proportion of land degraded (SDG indicator 15.3.1)

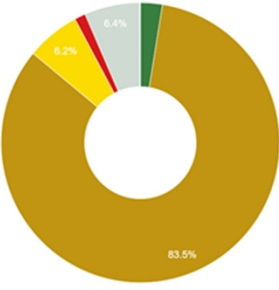
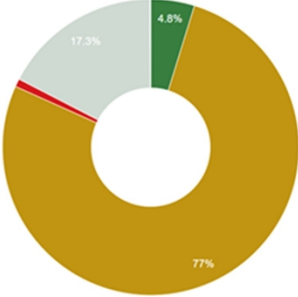
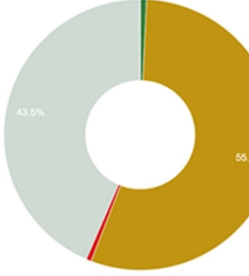
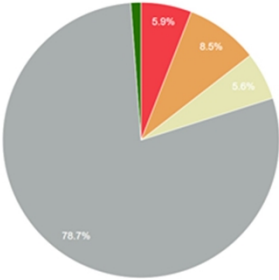
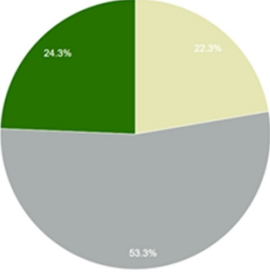
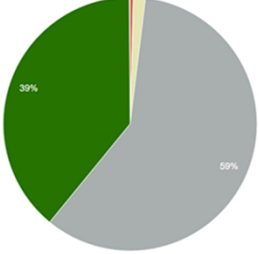
Socio-economic profile: The watershed has an estimated total population of 1,810 people, and more than 85% are smallholder farmers. The entire population of the watershed is rural. Outmigration is widespread, affecting mostly the age group of 20 to 50 years old and the majority of migrants are women. Under the business-as-usual scenario, the population will reduce by 13.75% by 2,035 (from 2017 level baseline, INE estimation). In Vale da Garça, the majority of the families have both parents and most women are housewives. One of their income sources is food transformation, in particular fruits (juice, jams and liquors) but they also have small animal's production (pigs, chicken and goats). Few women explore agricultural lands and are farmers, and the ones that assumed this role are mainly after they became a widow or divorced. Women farmers in Vale da Garça prioritise different types of crops than men, who mostly produce sugar cane crops, whereas women prioritise fruit trees, cassava, yam, maize and horticles. Drought affected the majority of their income, severely impacting food security, especially in most vulnerable families.

Institutions: The City Hall of Ribeira Grande, the Ministry of Agriculture and the Regional Delegation of Ribeira Grande, The Ministry of Education, the Ministry of Infrastructure, the CSO Vale da Garca and Women Association of Vale da Garca and Local Association of Farmers operate within the watershed.

Prioritised communities: The communities prioritised in Vale da Gar?a include Cruzinha; Ch? De Igreja; Manta Velha; Lomba Amaro - Gar?a and Cabe?ada. These communities are located in the areas where land degradation is increasing.

In table 1 a summary of the main characteristics of the three target landscapes is presented.

Table 1: Summary of main characteristics of the three target landscapes.

	Ribera Seca	Vale de Garça	Ribera das Patas
Island	Santiago	Santo Antão	Santo Antão
Municipalities	São LD Órgãos, São Domingos and Santa Cruz	Ribeira Grande	Porto Novo
Area (ha)	7,116	2,077	4,937
Population	15,000	1,810	2,564
Poverty rate per sex	46.7 M / 53.3 W	49.9 M / 50.1 W	40.8 M / 52.2 W
Area (ha)	7,116	2,077	4,937
Maximum elevation	1394	1553	1790
Precipitation (mm/year)	300	300	225
Land Use			
Land Productivity Dynamics 2001-2021			
Protected Area	1,580 ha. (22%)	660.07 ha. (31.77%)	0
Key Biodiversity Area	1,100 ha. (16%)	826.42 ha. (39.77%)	42 ha. (0.86%)
Prioritized communities	1- Pico de Antonia 2- Lencóias	1- Cruzinha 2- Chã De Lencóias	1- Círio 2- Curral das Vacas

1.3 Barriers

There are many issues that hamper achieving LDN in Cabo Verde. The project will strategically address the three main barriers which relate to different processes and levels: (1) a weak enabling environment, (2) limited awareness and knowledge on how to revert, reduce and avoid land degradation and (3) lack of monitoring mechanisms in place for adaptive management of land resources. As a crosscutting issue, gender inequality is related to the three barriers, with women having low access and control of resources and knowledge, as well as reduced participation and effective authority in decision making processes in Cabo Verde. Therefore, women's input, knowledge and guidance are still not considered, and women are not empowered enough in the country's efforts to avoid, reduce and reverse degraded land.

Barrier 1: Limited enabling environment

Effective LDN implementation requires a number of conditions to be in place, starting with an improved enabling environment that ensures successful implementation of actions to achieve LDN and mitigate potential risks. Although Cabo Verde actively invests in environmental sustainability at the national and local level, there is still little consideration of the LDN framework. The main issues underlying the weak enabling environment for LDN in Cabo Verde are:

a) LDN policies and planning processes are inadequate and do not consider the neutrality mechanism

At policy level, Cabo Verde had several laws and legislations that in the last 40 years have confirmed the commitment to the environmental sector. The Constitution of the Republic of Cabo Verde (article 73) stipulates that all citizens have the right to a healthy and ecologically balanced environment and the duty to value and defend it, which is also highlighted in the Basic Law for Environmental Policy (Law n° 86/IV/93).

A set of strategic instruments guides the entire development process of the country, aiming to mainstream environmental issues into the planning process to eradicate poverty and to promote sustainable development. These include: The National Development Plans (PND); the Growth and Poverty Reduction Strategy (DECRP I: 2004-2007, II: 2008-2011, III: 2012-2016); the National Environment Action Plan (PANA II: 2004-2014); the National Program to Combat Poverty (PNLP 1996-2008); Strategy, Growth and Poverty Reduction Document I, II and III (DECRP); National Agricultural Investment Plan (PNIA); the National Adaptation Program of Action (NAPA 2008-2012); First National Communication; National Poverty Alleviation Plan (PNLP); the Agricultural Development Strategic Plan (PEDA: 2004-2015); Forest Action Plan (PAF); Strategic Plan for Agricultural Development (PEDA); Action Plan for the Integrated Management of Water Resources (PAGIRH); Cabo Verde 50% Renewable - A Pathway to 2020; Strategic Plan for Protected Areas; Integrated Financial Strategy (EFI); National Domestic Energy Plan (PNED); National Strategic Plan for Water and Sanitation (PLENAS); National Strategy for Food Security (ENSA); National Education Plan; National Biodiversity Strategy and Action Plan (EPANB); and the National Action Plan to Combat Desertification (NAP, 1998, being updated to align with the UNCCD 10-year strategic plan).

PANA II in particular promotes natural resources management, the use of efficient techniques, local participation in the sustainable use of natural resources, and sustainable management of biodiversity. It further defines policies for food security and incorporates the objectives of the UNCCD NAP.

The administrative land planning is done by the Ministry of Infrastructure, Territorial Development Planning, and Housing in collaboration with the Ministry of Agriculture and Environment that is in charge of the development of land use plans. Actions to combat desertification, drought, and soil degradation are implemented at the watershed level by the Ministry of Agriculture and Environment through Watershed Management Plans. Drought management is based on an Emergency Plan for Drought Mitigation coordinated by the Ministry of Agriculture and Environment (PEMSMAA). This Plan allowed the identification of areas and regions with greater socioeconomic and environmental fragility and several relevant data and information were collected for a better intervention in the rural sector where the problem of land degradation is more pronounced. While the country has a National Forestry Management Plan (PAFN), it is outdated and not in line with the National Forest Inventory. The participatory approach methodology needs to be evaluated and updated to align with the LDN.

There are thus different levels of planning, sometimes focusing on specific sectors or landscapes, and oftentimes led by different institutions. This array of planning processes in Cabo Verde needs to be better coordinated in order to support the LDN approach in which land degradation management is coupled with land use planning. The national institutions which are designing and implementing these plans should be better informed to ensure successful acceptance and integration of the LDN concept and approach for implementation at site level. As land degradation is a multi-sectoral issue, the priorities and needs arising from the adoption of a LDN approach have to be reflected in all of the above-mentioned planning and management processes and tools. In addition, the national LDN report states that there has been a lack of true land policy and management of land use in Cabo Verde, which limits impact at scale and LDN by 2030. Likewise, forestry and land use laws need updating and regularisation. Furthermore, grazing areas are not defined by any instrument, and thus are not managed under the business-as-usual scenario.

b) Limited capacity to mainstream and implement LDN

Capacity is limited at both the institutional (central and local government) and grassroots level (local communities and land users, NGOs, and Farmer Associations) to mainstream and implement LDN. Although recent developments in related sectors increased institutional knowledge with respect to land degradation management, the SLM concept is mostly understood as technology-based solutions for erosion control in production landscapes. Therefore, in order to achieve LDN mainstreaming at the national and sub-national levels, the capacity and awareness of these institutions need to be enhanced. The project will focus on building capacity of government institutions within the three target watersheds, but keeping in mind the underlying goal of the project to upscale its experience both at the island (other watersheds) and national levels (under similar biophysical and socio-economic contexts).

c) Insufficient and non-transparent knowledge management

There are difficulties regarding the access to maps and other information required for monitoring natural resources. The absence of mechanisms for knowledge sharing in the ministries contributes to

the inefficiency of some activities related to the implementation of SLM practices. Integration of expert knowledge through regular consultative and feedback processes to develop national validated assessments on land degradation are not present. Open access knowledge platforms and DSSs related to natural resources still need to be developed.

d) Land and water tenure insecurity

Land tenure and water tenure are gendered issues in Cabo Verde. And despite a well-conceived legal and regulatory framework on land tenure, women have less access to quality land and water. The skewed participation of women in land management and land use decision making is an important barrier.

Barrier 2: Lack of demonstration models to encourage adoption of sustainable land management best practices and resilience-enhancing approaches

Since most of the rainfed cropland is on steep slopes, the main concern has been to protect citizens from crop failure due to erosion. Following six famines in the 20th century that took more than 75,000 lives and outmigration, the authorities took famine eradication measures by stabilising the agricultural landscape. The landscape has been transformed and now such techniques can be found throughout the nine inhabited islands. The success of the Government measures is also attributed to the strategy involving the communities. While the hillsides were protected from runoff and erosion caused by heavy rain events, in-field agronomic measures, or nature-based solutions that led to sustainable productivity increase, such as soil cover and nutrient management were neglected. One of the foremost challenges in Cabo Verde is limited knowledge of local land users on SLM benefits in rain-fed and irrigated systems. The low input farming system, dominated by continuous maize and beans intercropping still faces severe climate conditions, inadequate crop and land management practices, and land degradation.

While there is some level of familiarity among technical specialists who are working with farmers and stakeholders in the field, their technical capacity is not adequate. Closely related is the general lack of technical knowledge on how to transition current agricultural systems to incorporate non-technology based (nature based) SLM and be more resilient to climate change. It is well known that climate change will likely mean degradation in quality of soils through salinization and erosion but there are no protocols, technical resources, methodologies that are designed to implement remediation and restorative measures for conditions, and optimally those incorporating nature-based solutions. Furthermore, tools in the form of guidelines and other forms of technical assistance packages are limited.

Limited marketing opportunities of agricultural commodities has long been a challenge in Cabo Verde. The agriculture sector is mainly subsistence-based except for sugar cane, pineapple, coffee and banana with a larger majority of smallholder farmers lacking knowledge and skills on aligning agricultural value chains to marketing and commercialization. Thinking of a value chain as a business and understanding how to minimise costs, improve efficiencies, differentiate products, and overcome challenges to achieve profitability is critical to achieving sustainable livelihoods and reaching LDN by 2030. Lessons learned from previous interventions indicate that to improve farmers' access to markets,

it is essential to provide capacity building to strengthen their ability to plan production. It is also necessary to promote the skills of farmer organisations in order to meet quality and quantity requirements in a sustainable manner.

Barrier 3: Limited data, knowledge and experience to support decision-making processes on LDN

Despite the enormous investment in technology-based solutions, a clear overview of their extent and combined benefits in terms of agriculture productivity, conservation effectiveness, sustainability, and rural people's well-being, is still poorly assessed and scientifically documented. The country lacks an integrated information management framework/monitoring system that is focused on assessment of land degradation status and trends and tracking of investments in sustainable land management across agricultural and rural landscapes in particular. Vital national maps, including land cover maps, soil maps, grazing maps, and soil organic carbon maps, are missing. This compromises the ability to invest in the process of establishing LDN that may inform spatial development trade-offs and decisions on land development. Planning for the agricultural sector is hampered by poor and/or inadequate agricultural statistics collection and data available to policy makers is limited and outdated, which compromises the government's ability to make informed policy decisions.

Monitoring and assessment of SLM measures in Cabo Verde are at an initial stage. Information on past interventions is scattered and of little influence for new SLM activities. There have been other initiatives in the country that have included environmental data management components that are of relevance, however most of these systems have been developed around project-based directives and as a result, long-term application is generally not sustained beyond the project periods as they tend not to be mainstreamed into national accounts.

There is limited capability on the ground to systematically collect data, particularly for monitoring how climate change is affecting hydrological relations and changes in soil condition that has important implications in the context of degradation of ecosystems and agricultural land productivity potential. Technical professionals do not have capacity in state-of-art research tools and methodologies that prevents them from employing them adequately in their work or maintaining them beyond initial investment when introduced under short-term initiatives. At a national scale, this also hampers the delivery of the SDG commitments, as the linkages between them are not sought/accounted for. Farmers, communities and other beneficiaries are often not engaged in the process of data collection, where there is recognized good potential to mobilise additional data collection support through citizen science approaches. There is only one soil laboratory available for 10 islands based out of Praia. Consequently, there is low buy-in and limited recognition of the importance of data application by stakeholders. The other important element under this barrier is the general lack of translation of knowledge gained from field data collection into public awareness products to drive behaviour.

- 2) Baseline scenario and any associated baseline projects

In the baseline scenario, since the country's independence in 1975, the stabilisation of the agricultural landscape with erosion control measures and the maintenance of sustainable yields became absolute priorities, not just for environmental protection, but also for survival. Since most of the rainfed cropland is on steep slopes, the main concern has been to protect the hillsides from runoff and erosion caused by heavy rain events, while neglecting in-field agronomic measures, or nature-based solutions that eventually lead to sustainable productivity increase, such as soil cover and nutrient management. Following the last big famines in the late 1940s, the GoCV focused its rural development policies on technology-based solutions to address desertification, water scarcity, and soil erosion, aiming to reconstruct the ecological potential and reduce poverty in rural areas[1]. This has completely changed the landscape to an extent where soil erosion control measures can be found everywhere, with the exception of rock outcrops.

Combating land degradation through technology-based measures constitutes the main pillar of the sustainable rural development strategy in Cabo Verde. Cabo Verde was the first African country and the second in the world to ratify UNCCD, demonstrating the commitment to tackling land degradation and desertification issues. An institutional framework has been set up, adapted and strengthened through the years, to support both the current activities of rural development and UNCCD implementation. The GoCV has a number of national strategies and legislative/regulatory frameworks addressing land-related issues (see *Barriers* section).

Through the LDN Target Setting Programme, the Global Mechanism (GM) and the secretariat of the UNCCD, in collaboration with multiple international partners, are supporting interested countries with their national LDN target setting process, including setting national baselines, targets and associated measures to achieve LDN. Sustainable Development Goal (SDG) 15.3 states: *By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world*. The country established the LDN Working Group (LDN WG) to develop national voluntary targets based on the global data shared by the UNCCD and specific national circumstances and development priorities (see *Consistency with National Priorities* section for further details). The country's vision is that the LDN will accelerate the achievement of SDGs linked to poverty reduction, food security and nutrition, environmental protection and sustainable use of natural resources (see section 6 on envisaged linkages to the SDGs and co-benefits). The main objectives for the creation of the LDN WG were to a) define LDN indicators, b) Elaborate the action plan for the implementation of the LDN targets, c) Select LDN hotspots, d) Elaborate the vision for a transformative project in accordance with the UNCCD guidelines.

The LDN target setting process was an integral part of the existing national coordination mechanisms. All relevant stakeholder groups were involved in the LDN target-setting process. The LDN WG is made up of the representatives from the following institutions:

- ? Representatives of the Ministry of Agriculture and Environment (MAA), presiding the committee;
- ? The National Representative of the UNCCD Science and Technology Committee;

- ? The National Focal Point of the United Nations for Combating Desertification (UNCCD);
- ? Representative of MAA's DGPOG;
- ? National NDT Consultant;
- ? Advisor of the Minister of MAA;
- ? Representative of the Ministry of Foreign Affairs and Communities (MNEC);
- ? Representative of the Ministry of Infrastructure, Territory Management and Housing (MIOTH);
- ? Representative of the Ministry of Finance.

The GoCV acknowledges the above-mentioned barriers to achieving LDN and is committed to providing an effective response across sectors and at various government levels. The LDN target setting process was an integral part of the existing national coordination mechanisms. All stakeholder groups including the private sector and financial institutions were involved in the process under the guidance of senior Government officials. However, following the submission of the LDN target-setting report, the LDN WG activities were discontinued. Given the importance of the LDN WG, the proposed project will serve as a key accelerator to revive the WG to support the LDN targets implementation.

National baseline initiatives

Cabo Verde Treasury:

1) Water Mobilization, Storm water Correction and Agroforestry Development (USD 1,014,054 co-financing, recurrent investment, national level): Consists in the promotion and implementation of water and soil conservation actions, having as a planning unit the watershed, focusing on water mobilisation for irrigation, flood prevention and mass landslides aiming at mitigating the effects of climate change, desertification and land degradation.

2) Reforestation and Maintenance of Forest Perimeters (USD 1,477,678 co-financing, recurrent investment, national level): Fits into the policy of modernization of the agrarian sector and rural development, through the implementation and development of agro-sylvo-pastoral systems. Specific outputs of this investment include for instance: (i) Ensure the maintenance and restoration of forest stands and CSA infrastructures; (ii) Ensure systematic surveillance/surveillance in forest perimeters; (iii) Contribute to soil and water conservation, restore ecosystems and recharge aquifers; (iv) Increase the availability/supply of woody and forage products; (v) Increase the production of firewood, fodder, and other agro-forestry and pasture products; and (vi) Contribute to the improvement of the living conditions of the beneficiary communities, by increasing family income and improving local environmental conditions.

Cabo Verde Environmental Fund:

1) *Elaboration and Implementation of management plans for forest areas* (USD 554,890 co-financing, through 2023, national level). It fits in the modernization policy of the agrarian and pastoral sectors and rural development and the durable management of the forests in order to assure a perennial forest cover in the country and a constant availability of forest products to the populations, through the elaboration and approval of the technical and legislative instruments foreseen in the Forestry Law.

2) *Recovery of the forest perimeter of the Eastern Plateau - Santo Ant?o* (USD 341,471 co-financing, through 2023, East Plateau Forest Perimeter - Santo Ant?o). The investment aims to restore the entire forest area, about 200 ha, burned during the 27 July 2018 fire (fogo Posto), in the areas of Morro de Concei??o, Morro de Vento and Cruz Jo?o Herodes of the East Santo Ant?o Plateau. The investment aims to restore the forest to its previous state within a period of five years. The continuity of this forest reserve will ensure that local populations and future generations have more balanced ecosystems.

3) *Recovery of degraded forest areas and institutional capacity building* (USD 266,744 co-financing, through 2025, S?o Nicolau, Sal, Maio e Santiago). The project is framed within the policy of modernization of the agricultural sector and rural development, contributing to the materialisation of some objectives of the National Forestry Action Plan. Due to the climatic and geomorphologic characteristics of Cabo Verde, as well as anthropic pressure, ecosystem degradation and consequently desertification processes are accelerated. To counteract this situation, it is necessary to continue the major effort to combat drought, through actions of reforestation and ecosystem restoration.

4) *Conservation and sustainable use of forest resources* (USD 43,645 co-financing, through 2023, Santiago, S?o Nicolau, Brava, Sal e Boa Vista). The project is framed within the policy of modernization of the agricultural sector and rural development, contributing to the materialisation of some objectives of the National Forestry Action Plan.

International baseline initiatives

The Adaptation Fund:

The Increasing the resilience of local communities to climate change through improved watershed management and land restoration (USD2,500,000 co-financing, 2023-2026, Santiago and Sao Ant?o islands) project is financed by the Adaptation Fund and executed by the Ministry of Agriculture and Environment. The project involves an integrated, two-fold intervention to build resilience. On one hand, it targets the expansion of the national water storage capacity through a suite of non-conventional water management structures; and on the other, it incorporates the development of the forestry sector through the exploitation of the forest ecosystem products and services. Such a two-fold intervention is anchored in the holistic approach of climate adapted watershed management. The overall objective of the project is to build adaptation resilience through improved water management and land restoration that would further facilitate climate-adaptive agricultural activities. In order to reach the overall objective, the project proposes three interlinked components in a 4-year implementation period, i.e.:
COMPONENT 1: Building an enabling environment for informed and integrated watershed management to support the planning of adaptive development. The expected outcome of this

component is climate-informed decision-making and planning in integrated watershed management through increased capacities on water storage potential; COMPONENT 2: Improving water storage capacities and promoting land restoration to build resilience of farming communities. The component aims at increasing water storage capacities through the sustainable development of non-conventional water resources and enhanced access of farmers to surface water resources. It combines structural and non-structural measures to improve climate resilience of communities. It will also improve land restoration through re-naturalization and afforestation of degraded lands; COMPONENT 3: Supporting agricultural supply chain to improve climate-smart production, food security and livelihood of vulnerable communities. Its outcomes are (i) Improved climate-smart production through the resilient agricultural practices; (ii) Enhanced livelihood of vulnerable communities through enhanced and digital access to food markets. The AF project's intervention areas include the islands of Santo Ant?o and Santiago. Technical solutions and financial instruments disseminated by the AF project will be capitalised upon under Components 1-3 of the proposed project in order to expand practices contributing to Land Degradation Neutrality.

SIDA:

Global Transformation of Forests for People and Climate: a focus on West Africa project is implemented by FAO with support from Sweden (USD 500,000 co-financing, 2019-2023, all Economic Community of West African States (ECOWAS) including Cabo Verde). Focusing on ECOWAS countries, the project aims to strengthen decision-making on forests and land management. In particular, the project targets (i) knowledge of the state of forest ecosystem dynamics; (ii) forest and land-related laws, policies and strategies at the sub-regional level; and (iii) demonstration and dissemination of sustainable forest and land use practices. The project investments will support outputs under component 1 and 2, and in particular respond to capacity needs in terms of landscape management and support the set-up of a conducive institutional environment for sustainable and resilient ecosystem management. In particular, the project will focus on 3 areas of work, including: knowledge of the state of forest ecosystem dynamics; forest and land related laws, policies and strategies at the subregional level; and demonstration and dissemination of sustainable forest and land use practices.

FAO:

Support of agricultural production systems to enhance food security and nutrition in the Republic of Cabo Verde (US\$400,000) (USD 400,000 co-financing, 2021-2024, Santo Ant?o and Santiago). The South-South Cooperation project is aimed at strengthening capacity development with the objective of supporting production systems to enhance food and nutrition security in the country, thanks to poverty alleviation, livelihood improvement, economic growth and increased employment especially of women and youth. Priority areas to be supported within this three-year project include agricultural production, pest control, livestock and seaweed aquaculture. More specifically, this project would focuses on : (i) Promotion of horticulture, through the technical assistance on soil, water and fertiliser management for horticulture; (ii) Promotion of plant protection by introducing methods and organising field trainings for the Integrated Pest Management of corn worms and the biological control methods on the soil pests in Cabo Verde; (iii) Realisation of a study on the seaweed eco-physiology and the potential of seaweed cultivation and value chain in Cabo Verde and development/implementation of pilot sites to introduce

and promote the culture of seaweed in the country; and (iv) Promotion of livestock smallholders, by improving the animal production and enhancement of animal genetics, strengthening epidemiologic surveillance and enhancing livestock products.

All of the above-mentioned projects are closely related to the proposed GEF project, in terms of policy, institutional and technical baseline, beneficiaries and landscapes. The current situation indicates that a tremendous effort is required to achieve SDG 15 as well as the set national LDN target, expected to be achieved by 2030. However, it is also clear that ongoing initiatives and the existing policy, institutional and legal framework will not allow GoCV to accomplish its international commitments to the 2030 Agenda. Cabo Verde therefore still needs support to all the steps involved in achieving LDN described under the Causal Pathways.

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

The project strategy is to position LDN as an accelerator to achieve several relevant SDG targets in Cabo Verde. Using a holistic, contextual framework on which decisions can be tested and actions prioritised, the LDN approach hierarchy of 'avoid, reduce, reverse' allows for perspective and attention of key stakeholders from various sectors on land degradation issues and beyond. It is also scalable, allowing for data and information to be captured and relevant to scales from individual farmers to larger administrative units under the supported watersheds. It provides a suite of cost-effective, immediate, and long-term benefits to communities, considering available resources and potential options and returns on investments. In the case of Cabo Verde, LDN is also clearly linked to several SDGs, especially SDG-2 (zero hunger) and SDG-13 (climate action). The project assumes several leverage points - areas to intervene in the system where an incremental change leads to a significant shift in behaviour - along the three proposed project causal pathways (see below). The project will use a landscape approach - with the landscape being a watershed - to integrate across sectors, scales, and stakeholders to increase the chance of maximising co-benefits and minimising trade-offs in a cost-effective way.

The challenges and barriers to LDN and the upscaling and mainstreaming of SLM practices within an integrated mosaic landscape context are complex. For this reason, a well-defined strategic approach that recognizes and outlines a country's capacities and resources and then allows for participatory identification of key priorities is needed within a context where funding and resources are limited. Thus, using incremental GEF resources, the project will improve the enabling environment, data and information for LDN decision-making and demonstrate the LDN approach in the three target watersheds Ribeira Seca, Ribeira das Patas, and Vale de Garça using nature-based solutions aiming for food and nutrition security, improved livelihoods, and resilience. As the country does not have a

dedicated fiscal recovery package for agriculture, the project will demonstrate an opportunity for green recovery and 'building back better' in the wake of the COVID-19 pandemic, while facing continued socio-economic-food security crisis as a result of spiking fossil fuel and food prices, particularly addressing the needs in islands of Santiago and Santo Antao where the already vulnerable family farmers are severely affected.

The project's Theory of Change (ToC) is reflective of the project's strategy. The ToC provides a reference point that ensures stakeholder engagement throughout the lifecycle of the project; helps define and analyse monitoring data that contribute to continuous learning through the intervention; constrains the flexibility boundaries in the project to genuine adaptability justified by thoughtful amendments to the ToC and consistent with agreed goals, rather than being a result of arbitrary deviations; frames ex-post evaluation; and aids learning that informs subsequent projects. The ToC follows the STAP guidelines on the scientific conceptual framework for LDN and takes a phased approach adapting the DPSIR framework to the project's causal pathways. These steps will be guided by taking into consideration the Land Degradation Neutrality Transformative Projects and Programmes (LDN TPP) Checklist and national priorities.

The ToC diagram outlines a set of key causal pathways arising from the project interventions and the assumptions underlying these causal connections. The causal pathways are prescribed to effectively address the key barriers to LDN that were described in section 1. Similarly, the project is framed against the backdrop of assumptions that have bearing on the anticipated outcomes to be realised through the proposed causal pathways. These causal pathways are described below along with the associated assumptions. Even after the COVID-19 pandemic, a crucial assumption is that the GoCV through its health care sector is able to mitigate and manage the impacts and that business continuity is maintained within mandated protocols.

Socio-economic-biophysical system under BAU – LD DRIVERS, PRESSURES, and ROOT CAUSES

The Republic of Cabo Verde is an archipelago of ten scattered volcanic islands with **challenging economies of scale**.

Cabo Verde - a country with a **rapidly growing population and limited natural resources** – relies on **substantial and increasing imports to meet its food security needs**.

Cabo Verde **soils are limited** in both quantity and quality.

Cabo Verde has **no permanent surface freshwater stock, creating an almost total dependence on ground water for domestic and agricultural use**.

Agriculture accounts for almost 90% of total groundwater abstraction, thus being **responsible for the sharply declining groundwater tables**.

Rainfall - the dominant climate factor influencing land degradation - is strongly influenced by elevation and topography and is **extremely variable, both in space and time**.

Cabo Verde witnessed **spectacular socio-economic progress** between 1990-2008, driven mainly by the rapid development of tourist resorts, with tourism being the main economic sector to date.

Although **agriculture's share is less than 5% of the GDP**, it is a **strategic sector for poverty alleviation, employment, green growth, economic shock absorption, and eventually for long-term resilience**.

Agriculture is predominantly based on **rain-fed subsistence family production**.

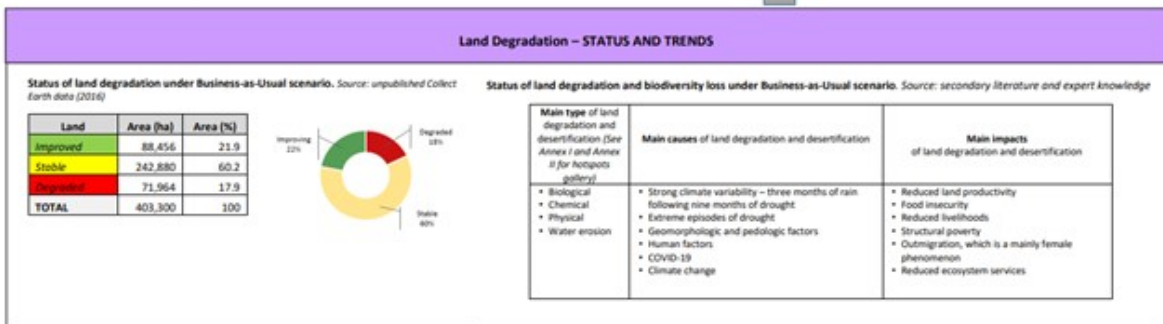
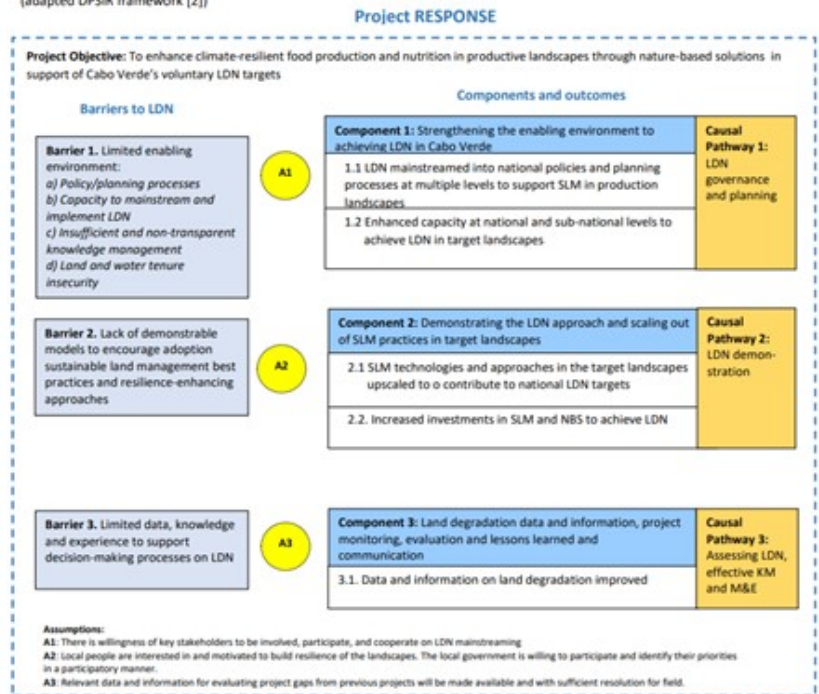
Conventional rain-fed maize cultivation – the dominant system and cultural basis of local people's diets - **has low productivity, low land cover, and leads to high soil erosion rates**.

The scarcity of natural resources and the weakness of the productive system make **poverty a structural occurrence in the country**, which is mainly a **female and rural phenomenon**.

High incidence of rural **poverty results in environmental degradation and migration**.

COVID-19 and the Russia-Ukraine conflict impacts in Cabo Verde - a country importing 80% of the essential food - are significantly **affecting trade, vital transport, price fluctuation, food security, and overall economy, slowing poverty reduction efforts**.

Theory of Change [1] for "Towards Land Degradation Neutrality for Improved Equity, Sustainability, and Resilience" GEF project (adapted DPSIR framework [2])



LDN monitoring
Global (GI) and National (NI)

1. Impact indicators

- Soil erosion rate (%)
- National SDG indicators to support
- 1.1 Land cover
- Land Cover Change (Collect Earth)
- 1.2 Land productivity dynamics
- Changes in Net primary productivity
- 1.3 Carbon stocks
- Soil organic carbon (metrics TBO)

2. Process indicators

2.2 Strengthened LDN monitoring framework

- Improved land governance (e.g. number of planning processes)
- Number of participatory land management

3. Stress-reduction indicators (see GEF)

Figure 15: The project's Theory of Change (ToC)

Causal Pathway 1: LDN governance and planning

Oftentimes, the most difficult causal pathway to influence and change, is where the most significant barriers to SLM are found. An improved enabling environment is vital to scaling SLM practices, especially under the requirements and ambition of the LDN framework. The policy reform for LDN coherence plays a key role in creating incentives for increased SLM and improved co-benefits for broader impacts. LDN Principles 13 and 14 on Participatory Integrated Land Planning and Good Governance are essential to this process. The Causal Pathway 1 directly addresses Barrier 1: Limited enabling environment.

Project Assumption 1 (A1):

There is willingness of key stakeholders to be involved, participate, and cooperate on LDN mainstreaming. A fundamental assumption is that the policy directive to enhance food security and nutrition, conserve ecosystems, and build resilience in its productive sectors, will remain at the top of the policy agenda, thereby maintaining strong political buy-in. Revival and strengthening of the LDN Working Group with its multi-stakeholder nature are vital to the success of the outcomes 1.1 and 1.2. Policies and instruments listed in the earlier sections have synergistic effects on the established project objective.

Causal Pathway 2: LDN demonstration

This causal pathway will target implementation of the LDN hierarchy of responses 'avoid, reduce, reverse' based on the land degradation status in target land use systems within the accepted land use planning processes. What LDN brings to the conversation is how these SLM approaches could work in unison to increase ecosystem services and achieve Cabo Verde's LDN targets by 2030 with co-benefits to other SDGs. While the social acceptance and cost considerations are required for applying individual SLM technologies, there is also a need for continued R&D on their role within a wider biophysical and social context, thus linking the work to Component 3. LDN Principles 6-9 on mechanisms for neutrality and 10-12 on achieving neutrality are essential to this process. The Causal Pathway 2 directly addresses Barrier 2: Lack of demonstrable models to encourage adoption of sustainable land management best practices and resilience-enhancing approaches.

Project Assumption 2 (A2):

Local people are interested in and motivated to build the resilience of the landscapes. The local government is willing to participate and identify their priorities in a participatory manner. Market-based instruments define the system's scope and boundaries and thus are key leverage points towards achieving LDN. Related, is the assumption that the private sector realises value (or a business opportunity) in building the value-chain linkages that integrate SLM and nature-positive and nutrition- and gender-sensitive approaches that mitigate degradation of terrestrial ecosystem services and increase overall resilience and equity in productive landscapes.

Causal Pathway 3: Assessing LDN, effective KM and M&E

This causal pathway is likely one of the most effective and efficient pathways to implement systemic behavioural change towards LDN through knowledge sharing and networking. The final phase will include setting up the LDN monitoring system based on the three global LDN indicators, one national indicator (soil erosion rate), and additional national impact, process, and stress-reduction indicators. Special attention is given to the national priority SDG indicators for higher leverage. Local knowledge and continuous learning will be applied to validate/interpret the data, and anticipate/adjust/create new

steps ? closing the LDN loop. LDN Principles 15-19 on monitoring are essential to this process. The Causal Pathway 3 directly addresses Barrier 3: Limited data, knowledge and experience to support decision-making processes on LDN.

Project Assumption 3 (A3):

Relevant data and information for evaluating project gaps from previous projects will be made available and with sufficient resolution for field application. Behaviour change is a long-term process. The project success will be accumulated after the project ends and may not be accounted for at the time of final evaluation to demonstrate impact. Thus the success of the intervention is based on learning from previous experiences, both already published and still in draft. Another related critical assumption is that the knowledge and expertise developed and piloted under the project will influence behaviour change of a wide range of stakeholders, from direct beneficiary to policy-maker level.

The project seeks to deliver intended outcomes through three interlinked project components leading to the desired objective *to promote sustainable land management, landscape restoration and nature-based solutions for improved food security and nutrition, livelihoods and resilience, supporting the achievement of Cabo Verde's LDN commitments.*

Component 1: Strengthening the enabling environment for achieving LDN in Cabo Verde

This component will strengthen the enabling environment for LDN by tackling fragmented policy and planning processes and weak institutional capacities and inter-sectoral coordination. The project's policy-focused interventions will therefore include reviews of policy and territorial planning instruments to enhance local stakeholder participation and mainstreaming of LDN. To facilitate informed decision making for Integrated Land Use Planning and LDN mainstreaming, a Decision Support System (LDN DSS) will be developed integrating validated and relevant biophysical and socio-economic data. The LDN DSS will in turn be used to develop action plans to achieve LDN in the three target landscapes. The action plans will be articulated with and contribute to the national voluntary LDN targets. To achieve this, the national LDN working group will be re-activated and strengthened to overview these processes in a participatory way. Capacity will need to be built among key actors within private and public institutions, as well as local land users, and training will play a key role in this process. This will be achieved through two outcomes with associated outputs and activities that will strengthen the policy and institutional enabling environment for LDN, enhance the understanding of LD drivers, and the capacities to implement LDN at national and local level.

Outcome 1.1. LDN mainstreamed into national policies and planning processes at multiple levels to support SLM in production landscapes.

A sound legal and institutional framework governing land management is of paramount importance for the successful implementation of LDN activities. LDN policy gaps will be addressed and collaboration and coordination among key sectors will be strengthened. To achieve this, a multi-sector and inter-institutional participatory process is proposed that builds on high-impact good practices and national capacities, enhancing national ownership. The national LDN Working Group will be reactivated and strengthened to oversee the activities of the project and revise the national voluntary LDN targets. Transparent and easy access to geospatial information, which is key for informed decision making, will be facilitated by a National LDN DSS with relevant and validated maps. Four outputs are expected:

Output 1.1.1. Review of strategic regulatory frameworks and territorial planning instruments to enhance local stakeholder participation and mainstreaming of LDN

To achieve this, an assessment of the regulatory framework, including tenure policy, and territorial planning instruments to identify possible gaps, inconsistencies, weaknesses and opportunities will take place. It will cover most of the technical, legal, policy and financial aspects related to land degradation and consider the synergies with other key national policy frameworks (i.e., NDCs, national SDG strategies, etc.). The reviews will have clear, achievable recommendations for cross-sectoral coordination and collaboration within a revised national framework, as well as providing support to GoCV and in testing and development of potential incentive programs for SLM technologies and approaches. To ensure that LDN efforts are linked to land administration at the appropriate level, the assessment will also provide information on the mechanisms for interactions between local, national and international governance levels. Based on a preliminary gap analysis undertaken during the PPG phase of this project, the following activities are proposed:

- ? Further analysis of policy gaps and constraints to implement LDN principles, including identification of gender-responsive provisions;
- ? Update of the National Action Program for Combating desertification[33]³³;
- ? Raise awareness on the VGGT (Voluntary Guidelines on the Responsible Governance of Tenure) and explore the nexus between land tenure and land degradation at national and subnational level; and
- ? Mapping of the entry points for including the LDN indicators and the neutrality mechanism in the current national land use planning processes and policy.

Output 1.1.2. LDN Decision Support System (LDN DSS) for planning and implementation in place

Through regular consultative and feedback processes, a knowledge platform and a decision support system will be developed and integrated into a national platform. The system will allow the identification and prioritisation of appropriate and gender-sensitive interventions for specific sites and

navigate trade-offs within landscapes at different scales, considering the environmental and socio-economic status and implications, the LDN response hierarchy and the principle of counterbalancing anticipated losses with planned gains. To develop the system, a bottom-up approach with full stakeholder participation (gender sensitive, inclusive and transparent) will be implemented to promote national empowerment and ownership of the LDN approach following previous successful experiences[34]³⁴. It will build on the DSS developed at PPG phase[35]³⁵. The design of the DSS will include the identification, testing and calibration of different metrics for LDN indicators (i.e. land cover change, trends in soil organic carbon, land productivity dynamics, soil erosion rate, and other relevant indicators) that will allow decision-makers to analyse trade-offs and synergies between different types of land use, practices, and national objectives (for example, food security and nutrition or poverty reduction). The selection of these metrics will build on the work currently being done by the country on desertification, erosion, drought management, climate resilience building, food security and nutrition and poverty alleviation. Activities for capacity building, horizontal exchange of knowledge and participatory validation of LDN indicators across scales will also take place throughout the process. Activities will include:

- ? Identification and compilation of national available LD related indicators;
- ? Identification of best available data to monitor trends in the three change of state indicators for Cabo Verde;
- ? Participatory definition of a land cover legend appropriate to monitor land cover changes related to degradation in Cabo verde;
- ? Participatory assessment and validation of land productivity trends through the integration of expert knowledge and field verification; and
- ? Further development of the decision support system for LDN established at the PPG stage together with all levels of stakeholders through discussions, capacity building and adaptation of the methodologies to the end users? needs and feedback.

Output 1.1.3. LDN Action Plan with voluntary targets defined for each target landscape

For each of the three target landscapes, an action plan to achieve LDN will be developed to provide clear guidance and targets at medium and long term. To achieve this, with the support of the Regional Delegations, participatory workshops will be organised during which, using the information and functionalities of the LDN DSS (Output 1.1.2), participants will prioritise and define areas to avoid, reduce and reverse land degradation. As a result a map at fine spatial resolution for each basin will be

obtained with the most appropriate type of response (avoid, reduce, reverse), which, in combination with the additional indicators and maps will result in a set of recommended actions in a spatially explicit way. Lessons learnt from previous experiences such as Turkey's national LDN action plan will provide guidance through South-South cooperation. Activities will include:

- ? Review existing LDN action plans in other countries and establish cooperation to exchange knowledge;
- ? Definition of a strategy based on existing information and tools to identify the most appropriate type of response in a spatially explicit way through participatory workshops;
- ? Identify actions for each land type and type of response at basin level; and
- ? Integration of the results and recommended actions in the National LDN DS.

Output 1.1.4. Interdisciplinary and multi institutional LDN working group at national level is strengthened

During the LDN target setting process in 2016-2017, a gender balanced LDN working group composed of 12 members was established[36]³⁶. The group included representatives of the National Water and Sanitation Agency (ANAS), the Directorate General Agriculture Forestry and Livestock (DGASP), the National Institute for Agrarian Research and Development (INIDA), the National Institute of Meteorology and Geophysics (INMG), the National Environment Directorate (DNA), and other relevant institutions. However, this group has been inactive for the last 3 years and should be expanded to include representatives of relevant institutions and organisations at subnational level. An active, gender-balanced multi-institutional and technical LDN working group is key for mainstreaming LDN and guiding progress towards achieving national targets following the UNCCD process. The project will revive and strengthen the national LDN Working Group, which will seek the support of international partners and will be re-established considering inclusiveness and gender equality. Representatives from the academic sector, including young researchers and postgraduate students will be invited to participate. Activities to re-establish the national LDN Working Group will be carried out in coordination with the National UNCCD focal point and include:

- ? Identification of main government institutions, NGOs, women associations, farmers associations and research groups involved with LDN and SLM, including the stakeholders identified in Annex H2;
 - ? Organization of a workshop to present the LDN conceptual framework and the objectives of the Group;
 - ? Adoption of TORs, formalisation and institutionalisation of the structure of the national LDN Working Group; and
 - ? Revision and update of national LDN targets.
-

Outcome 1.2: Enhanced capacity at national and sub-national levels to achieve LDN in target landscapes

To enhance national capacities for LDN, a capacity needs assessment and a training programme will be established targeting different stakeholders at different levels. This programme will build on available international as well as national training materials, that will be tailored to the needs of achieving LDN in Cabo Verde, focusing on linking of national LD indicators and monitoring systems with LDN specific indicators and requirements. In particular existing knowledge and previous experiences for monitoring and achieving LDN in SIDS will be considered. Development of training modules on LDN principles, including land tenure and gender dimensions, concepts and key indicators targeting decision makers and technical staff. Two outputs are expected:

Output 1.2.1. Capacity development programme in place for LDN implementation and monitoring targeting national and local government staff, including extensionists

Practical workshops and training for working groups and stakeholders from the public and private sectors, on LDN, land use planning, tenure rights, sustainable land management and value chains will be implemented. The training material will include a dedicated gender section that integrates relevant gender dimensions outlined in the UNCCD Manual for Gender-Responsive Land Degradation Neutrality Transformative Projects and Programs. The trainings will aim at mainstreaming and institutionalising SLM and LDN into decision-making processes so that policies, investments, planning, and technical assistance are supporting durable SLM implementation and scaling out beyond the project level.

Activities include:

- ? A capacity needs assessment and design of a corresponding training programme;
- ? A series of workshops targeting decision makers and technical staff from DGASP at national and municipal level involved in the implementation of LDN (at least 100 women out of total 200 people, with an emphasis on the sub-national level) will be held; and
- ? Training of decision makers and technical staff at the national level on LDN indicators, monitoring using standard tools and balancing strategies to report status and progress of UNCCD Strategic Objectives 1, 2 and 4.

Output 1.2.2. Capacity building program on SLM to achieve LDN at local level for farmers in the target landscapes

By promoting the establishment of a farmer-to-farmer training system, this output will result from building the capacity of farmers on the practice of sustainable soil management and support the extension programs of the MAA of Cabo Verde working on agricultural extension at the field level

(promoting broader impact and cost reduction). Increased awareness and access to monitoring tools, such as those provided by the Global Soil Partnership's Soil Doctors Programme, will allow farmers to make immediate and responsible decisions on soil management with a direct impact on reducing land degradation. To achieve this, training modules on implementation of LDN in practice and how SLM contributes to gender-responsive achievement of LDN targets at national and sub-national level targeting technical staff will be implemented. Local level participatory stakeholder workshops for inclusive selection of SLM practices and joint identification of relevant criteria for different stakeholder groups and negotiation of solutions will be carried out to develop trust and ownership for SLM adoption. Cooperation with global networks for Sustainable Land Management such as WOCAT, the Global Soil Partnership and existing Communities of Practice (CoPs) in the region, such as the GEF funded Drylands Sustainable Landscapes Impact Program CoP1 and CoP2 will strengthen the training modules and contribute to SLM mainstreaming in Cabo Verde. As a result, gender sensitive packages of theoretical and practical information shaped on specific pedoclimatic characteristics and crops available in the three target landscapes will be developed. Trainings will also rely on the establishment of demonstration areas and experimental fields (Outcome 2.1). Collaboration with research institutes and universities will be established, which will ultimately support and strengthen the link between academia and farmer practices. It is expected that at least 15,000 farmers and families will be involved in the following activities:

- ? Identification of key actors to establish cooperation on mainstreaming of SLM;
- ? Coordination with the national programmes on agricultural extension and identification of farmers interested in the programme in the target landscapes;
- ? Adaptation and development of training materials that address local-specific needs. According to the PPG analysis, key issues in project landscapes are minimization of water and wind erosion, increasing productivity and enhancement of soil organic matter content;
- ? General training of the farmers previously identified and higher-level training of trainers; and
- ? Establishment of demonstration farms for production of agricultural products to practise sustainable land management, training and assistance of farmers, discussion on sustainable soil management at farmers/community meetings (in coordination with activities of Outcome 2.1).

Component 2: Demonstrating the LDN approach and scaling out of SLM practices in target landscapes

This component will benefit from the improvements of the LDN policy and territorial planning processes brought about by Component 1 activities. It will demonstrate and test the LDN DSS developed under Component 1 in the watersheds of Santiago island (Ribeira Seca) and Santo Antao island (Vale de Gar?a and Ribeira das Patas) with the aim of generating GEBs in terms of improved

land cover, land productivity, and enhanced soil organic carbon sequestration, leading to improved local livelihoods, food security and nutrition, and reduced poverty.

National LDN targets in Cabo Verde aim at reducing the area of land degraded due to land cover changes, loss of productivity and erosion as well as increasing soil organic carbon stocks[37]³⁷. Through the activities in this component, the project will contribute to achieve these commitments by not only reversing and reducing degradation in 4,000 ha of degraded land by the implementation of gender sensitive SLM and soil rehabilitation measures, but also by providing and demonstrating a workflow and methodology to outscale sustainable management and restoration of croplands, grasslands and tree covered areas, building on previous experiences. Special focus will be placed on prioritising SLM practices that are gender responsive in order to avoid the implementation and dissemination of gender-blind technologies that therefore reduce the potential impact for adoption and reinforce existing prejudices and inequalities. The process for the final selection of the farms to implement these activities within the target communities will be conducted in a participatory and evidence based way, in close coordination with Outcomes 1.1 and 1.2. A sound baseline assessment of the conditions of the implementation areas and consistent monitoring of impacts will allow for adaptive management throughout the project and to evaluate the costs and benefits of the interventions. This will be achieved through two outcomes with associated outputs and activities that will contribute to reduce and reverse rangelands degradation in Cabo Verde.

Outcome 2.1: SLM technologies and approaches in the target landscapes upscaled to contribute to national LDN targets

Output 2.1.1. Existing land use plans in the target landscapes are revised and entry points for the principle of counterbalancing are identified

A revision of existing land use plans in the 3 target basins will be carried on, to identify opportunities to integrate the neutrality mechanism, strengthen land tenure security and also limit trade-offs, thereby ensuring that their implementation does not compromise the tenure rights of land holders. Identifying entry points for the principle of counterbalancing in the current land use plans will allow balancing identified environmental, economic and social priorities, to eventually achieve LDN. To optimise the spatial mix of possible interventions, the best information available on land degradation status, land potential and socio-economic data obtained through Component 1 will be used. Efficiency of LDN implementation within land use planning processes will be increased by enhancing multi-stakeholder participation for effective implementation of integrated land use planning. Through participatory assessment and evaluation of the different land uses and systems, an agreed analysis of the ecological state of each area of the landscapes can be reached and plans can be discussed to avoid degradation in healthy areas and improve those areas showing degradation. Involving communities in this ?neutrality? discussion will also allow them to implement the counterbalancing mechanism at plot level. Given that most of the land is private, these workshops will also contribute to mainstream planning to counterbalance anticipated losses and gains of natural capital at plot level by the land users. Taking

these factors into account, the revision will include an agreed concrete proposal with site-specific recommendations at landscape level as well as a mechanism for land users to achieve neutrality.

Activities include:

- ? Development of local LDN baseline assessment in each target landscape;
- ? Identification of environmental, economic and social priorities for each landscape;
- ? Identification of the location of significant gender related land and water use conflicts through the use of inventories, geospatial data, social and economic evaluations including field interviews, surveys and consultation meetings with stakeholders;
- ? Revision of existing land use plans and identification of gaps and opportunities to introduce the principle of counterbalancing gains and losses;
- ? Negotiation workshops that include discussions between different sectors, institutions and stakeholders about priorities, opportunities, and actions to accomplish Integrated Land Use Planning (ILUP) and achieve LDN in the territory; and
- ? Development of a proposal to include LDN principles in the current land use plans at landscape level and within land tenure units.

Output 2.1.2. Innovative SLM practices implemented to enhance productivity, restore degraded land and increase climate resilience

During the first year a participatory and evidence-based process will take place in each target basin to identify and map target areas for implementation of SLM practices, resulting in 4,000 ha of degraded land restored (GEF Core Indicator 3) in Cabo Verde. Criteria to prioritise these areas will include socioeconomic indicators, including land tenure status and clarity, rural poverty, population density, legal, institutional, policy and financial limitations/opportunities and level of demand for specific products; as well as environmental indicators such as intensity of degradation, potential to sequester SOC, availability of water resources, among others. The final combination and integration of SLM practices to restore the land will be defined based on the participatory local assessments and will synergize with the key value chains that were selected (Output 2.2.1). Based on the participatory selection of implementation sites, a baseline assessment at local level will be carried out to effectively identify the spatial variability of key characteristics of the intervention sites (soil properties, biodiversity, productivity, land and water degradation and socio-economic indicators), which will contribute to the selection of the most appropriate site-specific rehabilitation technologies and to effectively monitor the impact of these practices. For this, the baseline assessment (before implementation of technologies) will be compared with assessments that will be performed after the implementation. To monitor soil health, key aspects will be monitored, including soil productivity, soil biological activity, soil organic carbon and soil physical properties following a Protocol for the

assessment of Sustainable Soil Management[38]³⁸, in order to provide an evaluation of the soil's ability to maintain prioritised ecosystem services. The practices that will be implemented in each site will be selected based on the baseline assessment in a participatory way, and will include:

Living Barriers: Drought resistant species such as *Leucaena leucocephala* or *Aloe Vera* are closely planted along the contour lines to build an efficient barrier for retention of eroded sediments and superficial runoff. The living hedges stabilise the soil, increase soil humidity by improving infiltration and soil structure. Groundwater is recharged indirectly. Soil cover is improved, and thus evaporation and erosion reduced. These practices have been documented for Cabo Verde in WOCAT data base[39]³⁹.

Organic matter management (e.g., mulching, composting, reduced tillage): To arrest the decline of soil OM and combat soil degradation, strengthening the sustainability of agriculture in these landscapes. Soil OM will be improved through the application of stable and mature organic fertiliser called compost. To achieve a positive effect of compost application it is crucial to use good quality and mature compost, with high organic matter content and low concentrations of inorganic and organic pollutants. These activities will be demonstrated and then expanded to other areas.

Agroforestry with fruit trees: Agroforestry practices, consisting of planting fruit trees in coherence with agricultural production; will be implemented to promote long term production and protect the soils from sun and wind. Agroforestry practices will significantly allow local farmers to protect the soils from wind erosion and reverse degradation by increasing land productivity while contributing to food security and better nutrition. As the temperature extremes and droughts are expected to increase, agroforestry can be perceived as a particularly important measure to enhance the resilience of degraded landscapes.

Improved Irrigation Technologies: As the precipitation in the target areas is below 300 mm/year, irrigation plays an important part as a technology to overcome the dry periods. Improved irrigation methods will be implemented to maintain yields and minimise harvest losses caused by drought. To achieve these, different technologies will be introduced, including:

Improved Water harvesting technologies: Rainwater storage is a suitable method to use natural precipitation as efficiently as possible. Storage options include roof-top channel systems connected with a storage reservoir. This irrigation measure is particularly suitable for smallholder farming systems. Creating ponds for harvesting rainwater is another efficient irrigation method already applied in various agricultural sectors.

Drip Irrigation: Drip irrigation will be further introduced to improve farming in rural areas with limited resources. Drip irrigation reduces demand for water and minimises water evaporation losses by providing the necessary water resources direct to the root zone of high-value vegetable crops.

Outcome 2.2: Increased investments in SLM and NBS to achieve LDN

In the current context of the transition to SLM, it is necessary to show the pathways to LDN and emphasise the economic opportunities that will arise. Effective incentive systems are undoubtedly important for increasing farming and other land-use practices that preserve healthy soils and enhance the provision of ecosystem services for climate-resilient landscapes. Nevertheless, this requires establishing long-term incentives and insurance systems that encourage land managers to transform their farming practices over time. Greater clarity on land tenure rights is also indispensable for large-scale land and soil rehabilitation investments. To contribute to the sustainability of impacts and behavioural change needed, two outputs are expected under this outcome.

Output 2.2.1. Priority gender-sensitive and nutrition-sensitive value chains strengthened (involving suppliers, producers, support-advice, financiers, traders)

During the PPG phase, a value-chain analysis and mapping was undertaken to narrow down a selection of value chains and to identify opportunities for women and youth to increase their incomes in each target landscape. Value-chain selection was based on a number of selection criteria (see below), including the positive impact to LDN, but also gender and nutrition-sensitivity of the agri-food value chain. A link with the National School Feeding Programme was made. This latter was launched to increase school enrolment, boost learning, combat hunger and meet the nutritional needs of students, and is an integral part of the 2004 National Food Security Sustainable Strategy. Schools represent a stable and predictable market for developing local agri-food value chains.

Based on consultations with key stakeholders and the communities, the most appropriate solutions, including which agricultural products should be considered as having the greatest potential for value chain development were identified. Based on the information collected, five agricultural products were considered for the value chain prioritisation exercise, namely: fruit trees (mango, papaya, banana and citrus), Congo beans, vegetables (tomato, lettuce, pepper and cucumber), cassava and sugarcane. For each target landscape the five agricultural products were evaluated based on seven criteria: (1) impact of culture in relation to land degradation, (2) climate resilience, (3) market potential (with greater demand in the local, tourist and institutional markets), (4) income generation potential: (with greater job creation potential for women and youth), (5) alignment with Government priorities, (6) existing previous production experience and initiatives and (7) contribution to food security and nutrition. As a result, the prioritised value chains are:

Congo beans (rainfed)

Legume species are important food sources to reduce hunger and deal with malnutrition; they also play a crucial role in sustainable agriculture in the tropical dry islands of Cabo Verde. Congo beans (*Cajanus cajan*) contribute to the supply of bioactive compounds to the body due to their antioxidant activity, attributed to phenolic compounds, and are also rich sources of proteins, dietary fibres, and micronutrients[40]⁴⁰. In addition to being a source for nutrition, this multipurpose species improves soil aggregation, organic matter, and soil fertility[41]⁴¹ and can resist the dry conditions of the country. It

can also be an easier source of fodder for livestock. Currently, canned beans are often preferred to the low yielding ones grown in the local vegetable gardens and consuming them has become a habit. Strengthening the Congo bean value chain has high potential because it can serve as a contrast to canned products while promoting the association with other crops to enhance resilience and improve soil health. This value chain was identified as a priority for Vale da Garça and Ribeira Seca.

Kitchen gardens (Fruit Trees & Horticulture)

Community/home/kitchen/nutrition gardens can play an important role in providing food security and nutrition by supplementing rations and providing essential nutrients. These nutrition gardens can enhance dietary diversity by providing micronutrients through a constant supply of fruits and vegetables sufficient to meet the family's requirements. They can also provide a source for income through their transformation, especially when linked to tourism, which is an important activity in Ribeira das Patas and Vale da Garça. Fruit trees (Mangoes, papaya and citrus) were identified as a priority product in the three watersheds. In Ribeira das Patas, there is already a potential in this sector, both in production and in processing, so the project will build on the existing know-how (good practices). Cultivation of fruit trees also reduces land degradation by increasing productivity and protecting the soil from erosion. Regarding horticulture, the production of vegetables and their added value through the production of 'pickles', among other products, will also contribute to the improvement of nutrition in the communities and additional sources of income. Horticulture was particularly selected for Ribeira das Patas watershed. Activities include:

- ? Train and support Suppliers/producers/farmers/families' cultivation best practices accordingly with the products (50% women and young) (in coordination with Output 2.1.2);
- ? Support the organizational capacity of local producers in cooperatives (at least 40% are women);
- ? Identify the adequate processing and transformation techniques of each value chain;
- ? Train women and youth on processing, transformation techniques and quality standards;
- ? Support/boost production units (artisanal and semi-industrial) and strengthen the technical capacities of the people in charge;
- ? Develop Mentorship in marketing and branding products made locally and made by women and youth with a clear focus on nutrient-rich products;
- ? Promote the entrepreneurship of young people and women and strengthen their technical skills of business management; and
- ? Promote the marketing of products transformed into priority target markets.



Figure 16: Pictures of women entrepreneurs and their agri-food products

Output 2.2.2: Innovative and sustainable financial mechanisms (e.g. subsidies, tradable permits, Public-Private Partnerships, certification programs, penalties, local resource mobilization plans, etc.) for producers and their organizations along the priority value chains identified and developed

Regional and national experiences related to innovative and sustainable financial mechanisms will be revised and evaluated to identify possible adaptations for Cabo Verde. Based on this analysis, mechanisms that promote a structure of economic-financial incentives, facilitating access to credit lines to producers who want to implement sustainable land management technologies will be proposed. A dialogue with financing entities will take place to evaluate the possibility of a pilot experience. Resource mobilization plans will be developed to prioritize approaches that benefit/are accessible to women as well as men, and organizations known to prioritize gender equity will be approached, such as Morabi credit and OMCV credit. It is expected that the amount of funding mobilized for LDN implementation will be approximately USD 15,000,000. Activities include:

- ? Identification of possible sources of financing for scaling up of SLM to achieve LDN at sub-national level, including in-kind contributions from communities, cooperatives, private sector, etc. Special efforts to identify women-specific support will be made e.g., local development plans with budgets for gender equality;
- ? Identification of national level LDN financing including from line ministries, donors, climate finance, private sector, etc. Organizations known to prioritize gender equity e.g., Austrian Development Agency, ADB, United States Agency for International Development (USAID), Green Climate Fund etc. will be prioritized;
- ? Development of resource mobilization plans at the national and sub-national levels to scale up LDN;
- ? Engagement of Microfinance organisations; and
- ? Promotion of Financial training targeting farmers, women and young people in the communities.

Component 3: Land degradation data and information, project monitoring, evaluation and lessons learned

Outcome 3.1. Data and information on land degradation improved

Best practices and lessons learned from the project will be summarized and organized in a framework for scaling-up at regional and national level. At least three (3) gender sensitive LDN knowledge products will be developed and disseminated, and lessons learned on SLM and LDN will be mainstreamed in the national and regional development plans. The outcome will be generated by the following outputs and associated activities.

Output 3.1.1. Data and information on land degradation status and trends (such as LADA, Sustainable Soil Management Protocol, soil map, grazing map, soil organic carbon map, soil fertility map, land cover map, etc.) made available

Building on the results and capacities developed in component 1 and 2, maps at national scale will be produced to identify hotspots of degradation and priority areas. The assessments will consider the state, causes and evolution of soil, water and biological characteristics. It will also consider socio-economic causes of these phenomena including its impact on ecosystem services. The database and mapped outputs will provide a powerful tool to obtain an overview of land degradation and conservation in Cabo Verde. Main activities include:

- ? Identification of existing documents and maps (GIS layers, high resolution satellite images, socio-economic and land use data etc.) to construct a base map of land use systems in Cabo Verde;
- ? Participatory completion of a detailed and georeferenced questionnaire on the intensity, rate, type and causes of land degradation and their impacts on ecosystems services, as well as the recommendations and conservation measures (LADA QM);
- ? Development of maps by linking the information obtained through the questionnaire to a Geographical Information System (GIS) and the implementation of the convergence of evidence principle; and
- ? Publication of the resulting maps in open access platforms.

Output 3.1.2. A national soil information system and remote sensing-based land degradation monitoring and knowledge sharing system are set up and operational (linked to the LDN DSS (1.1.2))

After the evaluation and use of the LDN DSS an assessment and documentation of its usability will be performed and based on consultation with stakeholders a strategy to develop either additional information systems or to centralize information in one platform will be made. If the LDN DSS was successful it will be further developed to include additional national data on soil health and land degradation. Activities will include:

- ? Evaluation and documentation of the LDN DSS use and potential;
- ? Development of an strategy to develop and integrate land monitoring systems; and
- ? Further development of the land monitoring system according to the evaluation and strategy previously identified.

Output 3.1.3. M&E system in place to capture and develop knowledge. Global Environment Benefits, co-benefits and costs of SLM monitored, assessed and lessons analyzed

A Project M&E system will be established to measure project progress and impacts in terms of multiple GEBs, and social and economic benefits. Baseline and targets for project indicators will be refined and used for monitoring project progress and impacts and reporting through annual project reports (PIRs)

submitted to GEF Secretariat and project progress reports submitted by the PMU to the LTO and FAO/GEF unit. A mid-term evaluation will be carried out with field visits to selected sites and consultation with local stakeholders and national project partners. A final evaluation will also be conducted and will include review of project reports, web-based information, and field visits to selected project sites, with recommendations for ensuring sustainability of Project outcomes and the LDN system. Both evaluations will be carried out by teams that include gender expertise. Activities include:

- ? Monitoring of GEBs, including area under SLM and carbon benefits;
- ? Monitoring of socio-economic benefits using gender disaggregated data;
- ? Assessment of GEBs and co-benefits disaggregated by gender for reporting to the GEF and for the mid-term and final evaluations;
- ? Annual review of the means of verification, the targets and milestones and reviewing whether any targets need to be readjusted or what steps need to be taken to achieve them;

- ? Project mid-term evaluation with a section reporting on the implementation of the Gender Action Plan (GAP) of the project; and

- ? Project final evaluation with a section reporting on the implementation of the GAP of the project.

Output 3.1.4. Knowledge sharing/dissemination plan implemented

Gender sensitive knowledge and communication products will be developed on SLM and value-chain management that can be applied to achieve LDN at sub-national and national level. A national LDN guideline will be published that describes how LDN should be monitored at different scales and how gains and losses could be balanced from plot level, landscape and up to the national scale. The project will also prepare a gender responsive communication and outreach strategy to support the dissemination of its results and lessons. Activities include:

- ? Development of a national LDN guideline and fact sheets on how to balance degradation, including country-specific examples that integrate gender concerns;

- ? Development of two gender-focused knowledge management products that will contribute to relevant databases e.g., WOCAT so as to inform future interventions in Cabo Verde: one related to gender-responsive SLM approaches for LDN targets, targeting policymakers/stakeholders and others related to gender-responsive value chains that will support reaching the LDN targets in Cabo Verde, including mapping, selection, implementation and value addition benefiting male and female farmers;

- ? Development of gender responsive communication strategy in consultation with key line ministries and stakeholders; and
- ? Design and implementation of a public awareness raising campaign to reach all project direct and indirect beneficiaries.

4) Alignment with GEF LD focal area

The project is aligned to the Land Degradation Focal Area programmes LD-1-1 *Maintain or improve flow of agro-ecosystem services to sustain food production and livelihoods through SLM* and LD-2-5 *Create enabling environments to support scaling up and mainstreaming of SLM and LDN*. The project proposes to strengthen the policy and decision-making environment to facilitate investment in land degradation measures toward achieving LDN, with the underpinning of enhancing climate resilience, that in the case of Cabo Verde, a SIDS, is of critical importance. Climate change hazards - storms, floods and droughts ? immediately impact recharge of aquifers, reduced crop productivity, and shrinking native vegetation to microrefugia sites, with detrimental impacts on agricultural production and productivity and farmers? livelihoods. Drought alone is expected to reduce incomes by USD 2 million due to crop failure. This will be in line with the proposal made in the Cabo Verde?s LDN Target Setting Program. The project will address the drivers of land degradation within productive landscapes of three watersheds on two target islands that are degraded or unsustainably managed. The project will integrate innovative SLM and nature-based restoration measures into comprehensive integrated watershed management plans, generating co-benefits to improved food security and nutrition, livelihoods, resilience (to climate change, though not exclusively), while significantly contributing to the achievement of global environmental benefits (see section below).

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

The project will have three components where incremental GEF support builds on the strong national baseline to strengthen land policy, planning, management, and knowledge sharing that will eventually lead to Land Degradation-Neutral Cabo Verde by 2030.

Project Component	Baseline scenario	With-project scenario
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Component 1.
Enabling
Environment for
LDN monitoring

The project builds on the strong baseline that is inherited thanks to the work of the LDN Working Group that led the development of the national voluntary LDN targets, where many different stakeholder groups took an active role. The country has a fairly **stable and robust institutional structure** with relevant national institutions mandated to protect the environment, manage and use land and natural resources, monitor and assess impact. The implementation of environmental protection measures is entrusted to a number of Ministries and entities, whose functions and actions are clearly defined. However, the country does **not have a robust multi-level coordination mechanism** to meet LDN criteria.

A **regulatory framework** that supports the environmental sector and maintains the ecological balance is in place at national level. A set of **strategic instruments** guides the entire development process of the country, aiming to mainstream environmental issues into the planning process to eradicate poverty and to promote sustainable development. In the baseline, however, policies still have **limited reach and scope**, and there is a lack of a holistic and integrated approach for landscape level planning. Unclear land tenure is one of the biggest obstacles for SLM as reported by the LDN TSP report.

The country has different levels of **land planning** that ranges in given sectors or landscapes and are led by different institutions. A **watershed? is considered the minimum land planning unit** that allows sound management approach for tackling various land degradation causes and trends (drought, salinity, etc.). The array of planning processes needs to be **better coordinated** in order to support the LDN approach in which land degradation management is coupled with land use planning. The institutions at national levels that are leading in designing and implementation of the sectoral plans should be better informed to ensure successful acceptance and integration

With the GEF investment, land degradation neutrality objectives will provide a **basis to guide land use planning and policy reform** for land degradation mitigation. The GEF investment will contribute to enhancement of stakeholder engagement in contribution to planning and development processes.

GEF support will **revive the LDN Working Group and strengthen capacities** at national and sub-national level to achieve land degradation neutrality and no net loss of productive land. With GEF funding, the project will complement baseline interventions to **capacitate key stakeholders** for an integrated planning and implementation of sustainable landscape-level interventions and for mainstreaming LDN into relevant policies and practices, enabling the upscaling/outscaling of SLM. The project will focus on building capacity of government institutions at the national level and within the three target watersheds, keeping in mind the underlying goal of the project to upscale its experience both at the island (other watersheds) and national levels (under similar biophysical and socio-economic contexts).

The project will develop a **LDN decision support system (DSS)** to analyse trade-offs and synergies between different types of land uses, practices, and national objectives to prevent future land degradation and allow the country to have a solid quantitative basis to achieve its LDN targets by 2030.

Component 2.
Demonstrating the LDN approach and scaling out of SLM practices in target landscapes

Since most of the rainfed cropland is on steep slopes, the main concern has been to protect citizens from crop failure due to erosion. Following six famines in the 20th century that took more than 75,000 lives and caused outmigration, the authorities took **famine eradication measures by stabilizing the agricultural landscape**. Thus, significant investments have been made on **technology-based solutions**, such as terraces, dams, afforestation, and irrigation schemes, thus reducing the acute risk of erosion and food insecurity. While the hillsides were protected from runoff and erosion caused by heavy rain events, in-field agronomic measures, or nature-based solutions that lead to sustainable productivity increase, such as **soil cover and nutrient management were neglected**. There is also no systematic effort to strengthen **value chains in support of sustainable resilient production systems**. Without GEF support, baseline interventions would be limited in scope and not lead to long-term increase of productivity of limited land resources.

The GEF project will make targeted investments in implementing **ecological restoration through climate-resilient SLM under integrated land use plans** that will be developed in a participatory manner. The project will complement baseline interventions with enhancing agricultural know-how and leveraging investments for sustainable resilient value chains with focus on gender and youth inclusion. It is anticipated that the improved practices and restoration interventions will generate significant land degradation GEBs and deliver climate change adaptation and substantial socio-economic co-benefits that are closely linked to the national SDG targets. Thus, the project presents a strategic opportunity to position LDN to leverage the achievement of the national SDG priorities.

<p>Component 3. Land degradation data and information, project monitoring, evaluation and lessons learned</p>	<p>In the baseline, the country lacks an integrated information management framework/ monitoring system that is focused on assessment of land degradation status and trends and tracking of investments in sustainable land management across agricultural and rural landscapes in particular. Vital national maps, such as land cover map, soil map, grazing map, soil organic carbon map are incomplete. This compromises the ability to invest in the process of establishing LDN that may inform spatial development trade-offs and decisions on land development.</p> <p>Monitoring and assessment of SLM measures in Cabo Verde are at an initial stage. Information on past interventions is scattered and of little influence for new SLM activities. Technical professionals do not have capacity in state-of-art research tools and methodologies that prevents them from employing them adequately in their work or maintaining them beyond initial investment when introduced under short-term initiatives. At a national scale, this also hampers the achievement of the SDG commitments, as the linkages between them are not sought/accounted for. Consequently, there is low buy-in and limited recognition of the importance of data application by stakeholders. Generally, knowledge gained from field data collection are not translated into public awareness products to drive behaviour change.</p>	<p>GEF investments will fund the incremental costs of setting up the LDN monitoring system including the three global LDN indicators, one national indicator (soil erosion rate), and additional national impact, process, and stress-reduction indicators. Special attention will be given to the national priority SDG indicators for higher leverage. Local knowledge and continuous learning will be applied to validate/interpret the data and anticipate/adjust/create new steps ? closing the LDN loop.</p> <p>Furthermore, regular meetings and exchanges will be organized under the Project Steering Committee, to ensure that lessons learned in the project are collected, developed and disseminated to inform policies at the national and sub-national levels.</p>
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6) Global environmental benefits (GEFTF)

The proposed project will deliver global environmental benefits in the form of the following:

? Increased amount of productive land (4,000 ha land restored and 5,500 ha land degradation avoided) in three watersheds

? Increased CO₂ sequestration in AFOLU systems (avoided emissions amount to 249,903 metric ton CO₂-eq) thanks to LDN demonstration measures and improved management in agriculture, grass and forest land

Estimation of core indicators is based on the following assumptions :

Indicator #3: The project will work in the LDN hierarchy of responses and be based on FAO's position on 'Ecosystem Restoration' of production ecosystems, in the context of the UN Decade of Ecosystem Restoration 2021-2030, of which ultimate objective is to promote the opportunity of restorative efforts to 'reverse the trend in many unsustainable agricultural systems, optimizing the ecological interactions between plants, animals, humans and the environment, while leaving no-one behind'. The project will directly support implementation of measures within the proposed watersheds on 4,000 ha of agriculture, grassland and tree-covered land using 'reduce' and 'reverse' responses. The targets are based on the cost estimates of SLM technologies (US\$200-350/ha) and stable livelihood opportunities from previous experiences in similar contexts in Cabo Verde.

Indicator #4: The project will work in the LDN hierarchy of responses. The proposed three target landscapes cover the area of 14,000 ha approximately, where AFOLU is the dominant land cover covering (67% of the watersheds). Integrated management plans will be developed using 'avoid, reduce, reverse' LDN response measures and target at least 9,500 ha (avoided (5,500 ha) of the agriculture land: at least 2,000 ha under improved LDN policy (Component 1) and at least 3,500 ha through improved planning and other SLM approaches in production systems (i.e forestry plans, avoiding further LD on irrigated lands, etc.) (Component 2); reduced and reversed (4,000 ha) with the main focus on rain-fed croplands with some investments on forest and grasslands to follow a landscape approach. Avoided LD (5,500 ha) is counted under core indicator # 4, while reduced and reversed LD is counted under core indicator #3.

Indicator #6. National and local institutions, local communities, NGOs and small-scale farmers will help deliver carbon benefits through the implementation of field activities. Estimates have been calculated through the EX-Ante Carbon-balance Tool (EX-ACT v9.0). The direct carbon-benefit of this project amounts to 249,903 tCO₂e for a total period of 20 years (4 years of implementation and 16 years of capitalization). The following assumptions were considered to complete the EX-ACT v. 9.0 calculation sheets:

Project activity Direct project targets (ha)

REDUCE the level of degradation of production land

Cropland 2,400

Grassland 1,100

Tree-cover 500

AVOID degradation of cropland, grassland and forest land through improved management, including:

Cropland 3200

Grassland 1,600

Tree-cover 700

Total 9,500

The indirect carbon-benefit of this project amounts to 1,312,836 tCO₂e for a total period of 20 years (4 years of implementation and 16 years of capitalization). For this calculation, the best available maps were used, and the figures for the avoid scenario reflect the stable land (no signs of degradation), while the figures of the reduce scenario include all the land that is degrading or showing early signs of degradation. For the indirect carbon benefit calculations, the production land of the Santiago and Santo Antao Islands have been considered. The resulting figures inputted into EX-ACT v. 9.0 calculation sheets:

Project activity Indirect project targets (ha)

REDUCE the level of degradation of production land

Cropland 2,400

Grassland 34,000

Tree-cover 720

AVOID degradation of cropland, grassland and forest land through improved management, including:

Cropland 3,200

Grassland 55,000

Tree-cover 2,600

Total 98,420

Indicator #11: The figure, 23,400 is the sum of all the direct beneficiaries estimated under the various project components. These include: 200 local government staff trained under outcome 1.2, 15,000 local producers and extensionists trained under outcome 1.2, 200 land users trained on land use planning for neutrality under outcome 2.1, 3,000 value-chain actors with strengthened capacity in sustainable VC management under outcome 2.2, and 5,000 persons benefitting from KM activities under component 3. The project aims at an equal participation and benefit sharing of women and men throughout all components and indicators.

7) Innovativeness, sustainability, potential for scaling up and capacity development⁴²

In recent decades, several SLM practices and climate change mitigation and adaptation measures and technologies have been developed to cope with the gradual degradation of the environment and people's livelihoods. However, these practices have faced a multitude of constraints, particularly in terms of their implementation at the local level. An analysis of lessons learnt from past investments point at some context-specific elements to consider for a more sustainable project that has a potential for up-scaling and out-scaling.

Innovation: This initiative together with the baseline projects on turning the LDN concept into practice is the first of its kind in Cabo Verde and is linked to the global target setting project and other activities promoted by the UNCCD. As such, the project will generate multiple innovative approaches and set the foundation for the country's achievement of the LDN by 2030. The communities, hard hit by the destabilization of production systems and the structural adjustment, have been concerned primarily with surviving daily. Populations in remote areas have limited options for managing land and accessing other benefits of economic development. The structural food deficit is exacerbated by drought and worsening soil fertility, putting an increased pressure on natural resources, destabilizing fragile production systems, and their eventual degradation, and subsequent conversion of nearby woodlands and forests and ultimately leading to outmigration.

The project targets enhancing climate-resilient food production and nutrition in productive landscapes through nature-based solutions in support of Cabo Verde's voluntary LDN targets. Cabo Verde faces substantial land degradation issues, further exacerbated by climate change, and drought. COVID-19

pandemic has further exposed the vulnerabilities of the economy of the country that is extremely reliant on tourism, underscoring the need to diversify the economic base through investment in other sectors, such as agriculture – the sector that already supports livelihoods and food security on the weak natural capital base. To avoid anticipated land degradation, the project intends to introduce innovation in policy and planning processes that mainstream SLM into wider national development planning frameworks under the national land use planning processes (watershed unit).

Analysis of the policy options may include examination of the dynamic system behaviour, where a system is understood as ‘a set of elements or parts that is coherently organized and inter-connected in a pattern or structure that produces a characteristic set of behaviours, often classified as its functions or purpose’. Such socio-economic system is bound by the ecosystems’ carrying capacity locally and nationally, and ‘planetary boundaries’ regionally and globally. Thus, an important and innovative feature of the project is the LDN Decision Support System that is linked with relevant priority SDG indicators within a context of a single system bound by a system boundary (island, watershed) and feedback loops (social and economic drivers through social/institutional network connectivity). Understanding of the long-term dynamic behaviour of watersheds for exploring plausible policy scenarios is necessary for cross-sectoral management and synergies. As management of natural resources often overlooks feedback processes between key social and economic system components, a dynamic integrated decision support system for policymakers will be developed and updated as new data and information becomes available, thus serving as a long-term planning tool for risk informed decision-making.

Opportunity for innovation will also be extended in the project’s field investments into nature-based solutions and climate-resilient agricultural production practices that will help reduce and reverse land degradation. Innovation in technical assessment and knowledge management systems will be introduced through improved data and information on land degradation that will initially feed into the LDN DSS, and eventually into policy planning.

One of the core challenges to achieve Land Degradation Neutrality (LDN) is to spatially identify, and strategically prioritise, the areas to implement actions to avoid, reduce and reverse land degradation. To achieve this, a tool for a participatory and data-driven assessment considering both the biophysical, and socio-economic dimensions of land degradation across scales was developed for Cabo Verde. It consists of a spatially explicit interactive tool that integrates indicators that support the scaling-up of sustainable land management (SLM). It will be further co-developed with specialists from national and international institutions, as well as decision makers from the public sector and other relevant stakeholders. The tool is based on a Google Earth Engine application and allows decision makers to easily compare results and obtain statistics at different spatial scales and landscapes, including islands, watersheds and municipalities. It also includes a multi-criteria module to identify areas with specific characteristics to prioritise different types of interventions to achieve the country’s LDN targets. It

makes use of cloud computing to integrate different sources of data, such as national data sets on land cover and land use, soil properties, and hydro climatic indicators as well as global satellite-derived LDN indicators, such as Land Productivity Dynamics; and documented SLM practices from WOCAT Global SLM Database. The tool is based on the principle of convergence of local and global evidence for the identification of hotspots of degradation as well as areas of false positives/negatives. Further development through a participatory process during project implementation will contribute to strengthening multi-sector cooperation mechanisms and to guaranteeing ownership of the tool and the results. The system's code is shared as a repository at Earth Engine.

Lastly, the project will involve the stakeholders at all levels, from local to national and international. The project rationale is grounded in the results and lessons learned of FAO-WOCAT DS-SLM project. The project will develop a strategy and action plan for mainstreaming, scaling up and scaling out of SLM. For that, further analysis of the relevant previous activities, the existing data and information on different SLM practices, including their implementation details, and the remaining critical barriers will be conducted.

Sustainability: The current COVID-19 pandemic poses a significant 'global risk' on sustainability of all projects, and this project is not shielded from this risk. Furthermore, current and future climate change impacts threaten the sustainability of SLM investments. However, there is a demonstrated interest of the government and local community to develop and implement a soil and water conservation program aimed at combating erosion, increasing water availability to sustain production while the government has the willingness to develop the capacity as well as strengthen its environmental institutions. Furthermore, the country's young population has a critical role towards sustainable development and shaping the future, being active architects of development.

In order to sustain the project outcomes, key design considerations have been made for better durability. For instance, the project emphasizes multi-stakeholder processes, supporting the capacity building and mobilisation of multiple stakeholders at national and landscape level. Stakeholder needs at the local level will be supported with strategic capacity assessments and capacity building activities tailored to local culture and targeted to develop champions and build trust and ownership. Capacity building and training activities targeting farmers will be conducted in collaboration with MAA. Gender empowerment is at the forefront of the project, with the establishment of a capacity and knowledge building programme targeting women.

The project outcomes and outputs will be sustained, and the impacts on the lives of the local communities will be maintained through demonstration of SLM practices with locally adapted measures supporting distributional benefit, which will be possible for the target community to sustain

thanks to an enabling financial context and improved access to finance for SLM investment contributing to LDN. The project is targeting to remove major barriers causing degradation of land, such as land tenure. The capacity and knowledge development actions of the project seek to strengthen local know-how, which equips the communities with the right skills to pave their own development paths in a sustainable manner.

The LDN approach will be effectively mainstreamed into key sectors, especially environment, forestry, agriculture and livestock, and tourism. Moreover, monitoring of LDN will capitalize on Cabo Verde's existing land use planning processes (watershed level). This will contribute to the financial and economic sustainability of the LDN approach and monitoring and DSS. In addition, an LDN action plan will potentially include an investment programme and capacity to develop bankable projects (potentially through FAO's Rural Invest tool).

The project strategy, throughout the project life cycle, places particular importance to engaging with women and in designing its activities as gender-sensitive as possible. Demonstrating SLM practices at local level need to take local needs and circumstances into account, so that they not only particularly target women and their specific needs, but to also include measures for broadening livelihood opportunities or improving nutritional status in LD targets. This is done to ensure the project's sustainability at the same time through strengthening incentive systems favoring SLM and conservation measures as well as increasing the rural population's intrinsic motivation.

Scalability: The project has significant prospect to be scaled-up and -out. First, it will revise the enabling environment with respect to know-how (not the least through the revival of the LDN working group), policies, regulations as well as capacity and knowledge building, which will ultimately lead to the improvement in the management of land in the country. With the enabling environment and practical experience, the government of Cabo Verde and municipalities will have the necessary skills to replicate the projects interventions in other watersheds and islands and in general at national level. Finally, the project will focus on ecosystem vulnerability assessments and surveys of key land degradation leading to locally adaptive LDN measures, allowing for the establishment of a strong baseline to protect and maintain the ecosystem productivity. The integrated watershed management approach to SLM across degraded landscapes developed in this project can serve as a good practice model for other projects seeking to balance ecosystem conservation and long-term productivity, while also addressing socio-economic and food and nutrition needs of local vulnerable producers. Finally, site selection was done with scalability and replicability in mind, prioritising sites that are representative of the target islands' landscapes.

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

During the project preparation phase, the PIF was further built upon. Indeed, the PIF already identified the areas that needed more and more updated information, consultation and validation. These information and data gaps were completed in order to identify and validate project activities in detail. As a result, some minor changes can be observed from PIF, including:

- Given that in Cabo Verde there is no previous experience with the development and roll-out of Farmer Field Schools, in Output 1.2.2, (Capacity building programme on SLM to achieve LDN at local level for farmers in the target landscapes), the farmer field school approach was substituted by the use of demonstration sites and farmer to farmer knowledge exchange. Setting up FFS from scratch is a cost the project cannot bear, and the proposed alternative has been successful in previous investments in Cabo Verde.
- Output 2.1.1. was modified from "Participatory integrated plans developed in the target landscapes within the watersheds" to "Existing land use plans in the target landscapes are revised and entry points for the principle of counterbalancing are identified". During the PPG phase, the team learnt that the watersheds already have recently developed land use plans. Governments at national and local scales expressed that the existing land use plans will be implemented and that they were not willing to develop new plans. However, given that these plans do not consider LDN and the principle of counterbalancing, it was decided with the government they could be updated to include the LDN framework.
- Finally, USAID co-financing was removed. The *West Africa Biodiversity and Low Emissions Development Activity (WABiLED)* prioritised a limited number of countries for technical assistance, and Cabo Verde has not been prioritised. Concomitantly, co-financing from the Adaptation Fund was increased because the project proposal "Increasing the Resilience of Local Communities to Climate Change through Improved Watershed Management and Land Restoration" was approved in early 2022 and uncertainties about the time overlap with the LDN project cleared. As both projects will advance during similar timeframes, and operate in overlapping geographies, it was agreed that they co-finance project management and key PMU positions, including the administrative and financial manager, gender expert, communication expert and MAEL expert.

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

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

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

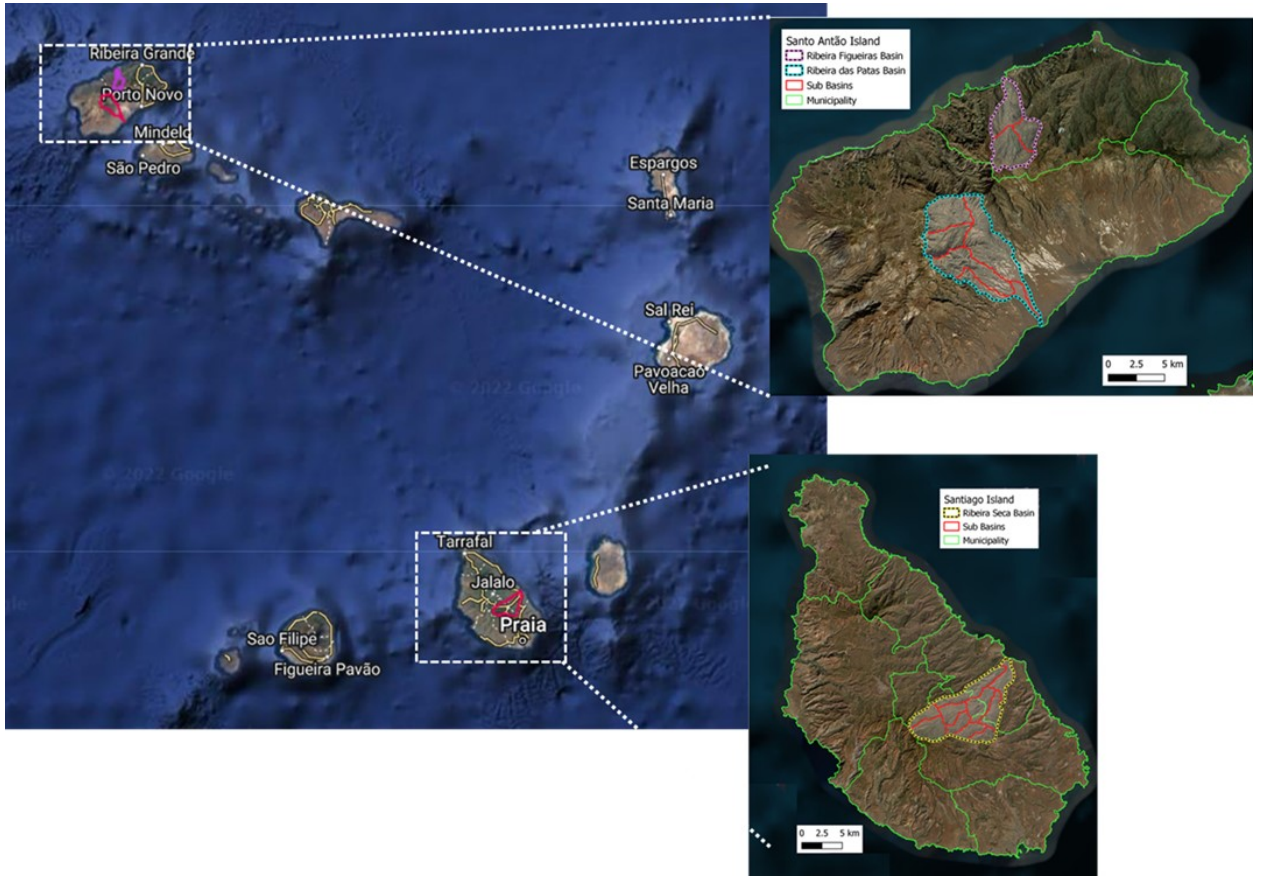
? Describe the project's exit / sustainability strategy and related handover mechanism as appropriate.

1b. Project Map and Coordinates

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

To better understand and present the location and information available on LDN and natural resources of the project selected Basins and municipalities, the project designers have developed an interactive Decision Support System (DSS) that was used during the PPG phase. It will be available for use, and further development during project implementation (as described in Outcome 1 of the alternative scenario). The LDN-DSS allows for context specific baseline establishment at the required scales, providing data for different administrative and landscape units, with a set of spatial data layers, toolboxes and cross-analytical statistics. To access the project specific LDN-DSS, please follow the provided link: <https://projectgeffao.users.earthengine.app/view/ldn-cabo-verde>

This system allows users to explore relevant baseline data, visualize maps and use them for a wide range of scenarios and scales. The LDN-DSS allows to perform multi-criteria analysis and explore land cover transitions to select hotspot and areas of interest and thus serving as a basis for a future monitoring and reporting system. The possibility to explore the dataset in a dynamic way without any GIS requirement and in an intuitive environment also facilitates stakeholder engagement; more people can evaluate the quality and usefulness of the data, which contributes to understand how to improve the LDN indicators in the future. It also can provide a range of information on project demonstration sites as described below.



Location of the three target basins in the Santo Ant?o and Santiago Islands.

Watershed	Island	Municipality	Latitude	Longitude
Ribeira Seca	Santiago	SLDO/SD/SC	15.07	-23.56
Ribeira das Patas	Santo Ant?o	Ribeira Grande	17.03	-25.20
Vale de Gar?a	Santo Ant?o	Porto Novo	17.12	-25.16

1c. Child Project?

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

N/A

2. Stakeholders

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

Civil Society Organizations Yes

Indigenous Peoples and Local Communities Yes

Private Sector Entities Yes

If none of the above, please explain why:

Please provide the Stakeholder Engagement Plan or equivalent assessment.

Please, consider the comprehensive stakeholder engagement plan in Annex H2 of the ProDoc, reflective of the continuous engagement with many different stakeholder groups.

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

Type of stakeholder	Stakeholder	Mode of participation	Consultation Methodology/Mobilization	Planned schedule
Sectoral ministries	Ministry of Agriculture and Environment (MAA) and relevant central ministries (e.g. The administrative land planning is done by the Ministry of Infrastructure, Territorial Development Planning, and Housing)	Project orientations / Decision making Validation of processes; verification of compliance with government priorities Facilitation of interactions with the private sector	Periodic meetings Periodic Reports Workshop	Month 1 Quarter 1; 2; 3; 4

Type of stakeholder	Stakeholder	Mode of participation	Consultation Methodology/Mobilization	Planned schedule
GEF implementing agency	FAO	<p>Harmonizes the contribution of multiple actors</p> <p>Coordinate the implementation of integrated plans</p> <p>Stimulate cooperation between stakeholders</p> <p>Maintaining dialogue with ministries and parastatal organizations and certain community groups, NGOs and the international community.</p>	<p>Workshop organization</p> <p>Field visit</p> <p>Visit of partners</p> <p>Periodic meeting</p> <p>Videoconference</p>	Permanent
Executing agencies	DGASP, INIDA, Academic institution and NGOs	<p>Project implementation</p> <p>Organization of diagnostics</p> <p>Training of direct beneficiaries</p> <p>Contracting with other service providers</p>	<p>Workshop organization</p> <p>Field visit</p> <p>Visit of partners</p> <p>Periodic meeting</p> <p>Training</p>	Permanent
Direct beneficiaries	<p>Any owner of plots to restore</p> <p>Beneficiaries of the identified localities</p> <p>Youth and women groups</p> <p>Community of producers</p>	<p>Definition of needs and interests</p> <p>Commitments to building a common vision</p> <p>Participation in the planning process</p> <p>Participation in platforms</p>	<p>Focus group</p> <p>Community meeting</p> <p>Workshops</p>	Periodic during implementation

Type of stakeholder	Stakeholder	Mode of participation	Consultation Methodology/Mobilization	Planned schedule
Farmers associations	Food producers; Cooperatives	<p>Participation in training courses and various meetings</p> <p>Participation in decision-making</p> <p>Sharing knowledge and experiences</p> <p>Implementation of technologies resilient to climate change</p> <p>Participation in monitoring and evaluation of the project</p> <p>Are informed of the environmental and social consequences of the implementation of the project and assured of the possibility of feedback.</p>	Exchange of experiences	
Local communities	Ribeira Seca, Ribeira das Patas, Vale de Garça municipalities Mutual development; Cooperatives	<p>Commitments in socio-cultural transformation</p> <p>Community mobilization</p> <p>Facilitation of transformations of gender equality and access of women and the disadvantaged to resources</p> <p>Participation in local development plan processes</p>	Platform meetings	Quarter 1; 2; 3; 4; 5; 6; 7; 8

Type of stakeholder	Stakeholder	Mode of participation	Consultation Methodology/Mobilization	Planned schedule
Territorial communities	Regional councils; Town halls	Provides the secretariat for the dialogue framework Convening platforms. Facilitates the participation of farmers in the development of action plans Lobbying and defending the interests of the disadvantaged Mobilization of decision-makers at the local level	Planning Workshops Platform meetings Follow-up Visits in the field Advisory board meetings	Quarter 1; 2; 3; 4; 5; 6; 7; 8
Administrative authorities Local governments	Prefectural body; Community leaders Political authorities Mayors of the intervention municipalities	Establishment of Municipal Commissions for Territorial Planning and Development and any other mechanisms necessary for the smooth running of the project. Improved land tenure security and access to land for women and young people. Identification of sites, beneficiaries and monitoring of implementation .	Validation meetings Platform meetings Document analysis	Quarter 1; 2; 3; 4; 5; 6; 7; 8
Government agency	the National Institute for Agrarian Research and Development (INIDA),	Scaling up best practices	Animation of Farmer Field Schools (CEP), Smart Climate Villages, activity reports, choice of sites and beneficiaries, monitoring of activities	Periodic in relevant quarters

Type of stakeholder	Stakeholder	Mode of participation	Consultation Methodology/Mobilization	Planned schedule
	National Water and Sanitation Agency (ANAS)	Promote water supply and sanitation systems that are capable of responding to the demands of the population and improve the living conditions of Cape Verdean.	Improving financing for the sector whilst finding cost effective ways of delivering water, sanitation and hygiene services, as well as in addressing paramount issues related to climate change.	
	the National Institute of Meteorology and Geophysics (INMG),	Provision of climate information	SMS, weather reports, field visits to provision of climate information services	
State and para-state supervisory structures Research institutions	The School of Environmental Sciences and Agriculture (ECAA) of the University of Cabo Verde (Uni-CV), The Centre of Livestock Development, a Unity of Agriculture Transformation and the Delegation of the Ministry of Agriculture and Environment	Training of local actors on LDN and monitoring of indicators, implementation of activities in protected areas Capacity building of expert in LDN and biodiversity conservation	Planning Workshops Platform meetings Follow-up Visits in the field Capacity building Advisory board meetings	Quarter 1; 2; 3; 4; 5; 6; 7; 8; 9; 10; 11; 12
Government, project/program	The National School Feeding Programme	Combat hunger and meet the nutritional needs of students.	Project orientations / Decision making	Periodic in relevant quarters

Type of stakeholder	Stakeholder	Mode of participation	Consultation Methodology/Mobilization	Planned schedule
	OMCV microfinance programme	Deliver its main objective: the socio-economic promotion of Cape Verdean women.	Validation of processes; Facilitation of interactions with the private sector Planning Workshops Platform meetings Advisory board meetings PTF Taskforce	
Civil society	Local environmental CSOs, Associations, Local NGOs	Represents civil society in landscapes, in platforms and participatory meetings. Contributes to execution in case of comparative advantage Awareness information on land activities	Planning Workshops Platform meetings Visits in the field Advisory board meetings	Periodic in relevant quarters

Select what role civil society will play in the project:

Consulted only;

Member of Advisory Body; Contractor;

Co-financier;

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

Executor or co-executor; Yes

Other (Please explain)

3. Gender Equality and Women's Empowerment

Provide the gender analysis or equivalent socio-economic assesment.

A comprehensive gender analysis and gender action plan are available as a separate document. The document addressed two main concerns, i.e.

- identify possible barriers for women and men based on gender relationships and roles regarding land degradation and its impact on their quality of life; and
- propose specific measures to guarantee that men and women of the beneficiary communities are equally involved in order to assist and actively participate in, contribute to and benefit from the project.

The analysis was conducted based on a multi-level stakeholder mapping, gendered focus group discussions at the watershed level and a desk review, including quantitative data collection and mining. The analysis and action plan was lead and developed by a national gender expert. The report presents more detail, but the main findings of the gender analysis can be summarised as follows:

Household typologies

In Cabo Verde the families headed by women tend to be poorer, 60% of the poor families are headed by women. These households are likely to have fewer opportunities, less access, control of and benefits from food and nutrition security, lack access to land and water, as well as finance compared to households headed by men.

In Ribeira Seca, monoparental families headed by women are a predominant typology, meaning that women are likely to carry out the unpaid work burden and economic stress of being the sole provider for the families and children.

In Santo Ant?o island instead, the household typologies tend to be composite, with both parents present. Men are considered the head of the family, with subsequently sex-related division of labour rooted in traditional gender roles, i.e. women occupy the domestic sphere and men the public space.

Migration

Migration of the youth is considered a constraint to the development of both islands. However, Santo Ant?o is the island of Cabo Verde that - according to the 2021 Census - records the highest decrease in annual average growth of the population. In Ribeira Grande municipality (Vale da Gra?a) the average population growth is currently -2,1 and in Porto Novo (Ribeira das Patas) it is -1,1. As soon as the young people complete secondary school the majority tend to migrate to other islands in search for jobs

in the tourism industry in Sal, Boavista and San Vicente. Historically, in Santo Antão migration is mainly a women issue. The youth exodus phenomenon happens also in Santiago island, however it is a male dominant phenomenon; they go abroad or to the touristic islands to work in construction sites.

Gender equality and agricultural production

Both in Santiago and in Santo Antão, agriculture employs more men than women. The latter take care of domestic tasks, and to a lesser extent small agricultural and animal breeding activities. Some women take care of agri-food transformation (jams, pickles, juices etc.) for local markets.

There are two types of agriculture practiced in the targeted watersheds: rain-fed agriculture, and irrigated agriculture. In the three watersheds, irrigated agriculture is mainly practiced by men, while women have access to the steeper-sloped land and dominantly practice rainfed agriculture, which in consecutive years of drought, is little productive and does neither guarantee household food security nor a decent income.

According to the observations from field visits in Vale da Garça, rain-fed agriculture is practiced on highly degraded terraces on the steep mountain slopes. As precipitation has been erratic and oftentimes absent in recent years, crop production (mostly maize and beans) has been irregular. The severe droughts of the past 5 years led to many terraces, stone walls, and other land management infrastructure, to be abandoned.

Rainfed agriculture generally supports family subsistence and is practised by men and, to a lesser extent, by women. It involves small-scale and occasionally seasonal labour contracts. It is oftentimes practised to complement other income generating activities.

In the three watersheds, irrigated agriculture is generally practised in the alluvial plain, where the most fertile land is available, and where water availability is greater. Sugarcane is the most common crop produced for production of cane brandy. This is a men dominated value chain. Other important food crops produced in the watershed are onions, potatoes, cassava, inhame, cabbage, carrots, lettuce and different fruits, namely banana, papaya, and mango.

Gender equality and land tenure

In all three watersheds, land with agricultural potential is mostly private and owned by men. Women own less productive land through inheritance. In many cases, smallholders rent the land they work on. Oftentimes, there are no records of the verbal agreements made with landowners 40 or more years ago.

In Vale da Gar?a, some landowners invest in - supported by foreign investments - eco-tourism facilities. As a result, less land is available for agricultural production.

Gender equality and water management

Irrigated land is mainly owned and worked by men, particularly in Val da Gar?a and Ribeira das Patas. In Ribeira Seca, there is a more meaningful participation of women as agricultural entrepreneurs, especially downstream of the Poil?o dam.

However, power imbalances between female and male producers were observed during field work and focus group discussions, particularly in Ribeira Seca. The women-only focus group in Ribeira Seca stated that water for irrigation has been a source of conflict between female and male farmers, with men having more access.

Agri-food processing and transformation

There are no significant post-harvest processing activities in any of the watersheds, despite the significant food loss and waste resulting from a lack of proper food conservation and packaging. Particularly in Vale da Gar?a and in Ribeira das Patas, food processing is a female dominated informal activity, carried out in micro units of treatment, at home or at the local agro-food transformation centre, which is a community-based facility managed by a local association. Food processing rarely is the main source of income.

Food and nutrition security

As a small-island developing state, Cape Verde is a vulnerable country significantly impacted by COVID-19 pandemic, exacerbating food insecurity problems caused by consecutive years of drought. The war on Ukraine caused further food price spikes, putting further strains on vulnerable rural poor households.

Since 2020, the economic recession has increased unemployment and decreased purchasing power, making it more challenging for rural poor to access sufficient, safe, healthy and nutritious food. Recent data show that large parts of the population in the watersheds are affected by food insecurity. From interviews, both women and men reported that monoparental households headed by women are the most affected. In vulnerable families, women's coping strategy has been to reduce the number of meals to 2 or 1 daily.

Regarding nutrition and the diversity of food groups consumed, all focus groups stated that the families in the communities consume the majority of the foods produced locally (corn, beans (congo bean), fruits, starches including inhames, cassava and potatoes, vegetables), complemented with products that are not locally produced such as rice, oil, powder milk and sugar. However when asked to describe the foods consumed in recent meals, mainly cheap and little nutritious processed foods are mentioned.

Women participation and decision-making

In Ribeira das Patas and Vale da Garça there are stronger gender norms and roles at the household and community levels than in Ribeira Seca. However, in all watersheds, men lead Community-Based Organizations, Farmers Associations and decide on and manage access to water. During focus group discussions, women emphasised water and land tenure to be gendered.

Women's NGO and micro-finance institutions

Microfinance institutions have given women the possibility to develop businesses and break the poverty cycle. This sector is well organized, endowed with a legal framework, and governed by an umbrella organization called FAM-F "Federation of Cabo Verde Associations operating in the microfinance area". The project will collaborate with OMCV and Morabi. In addition, cooperatives and associations (e.g. Cooperativa PARES) adopt principles of the solidarity economy model, with successful outcomes in the watersheds.

Summary of women and men's perception on Land Degradation Neutrality

In all three watersheds, land degradation impacts production and productivity, and women and men point at both anthropic and natural causes, including:

- large infrastructure by central government (roads, port etc.)
- flood irrigation

- burning to clean land
- weeding (rainfed land)
- over-grazing
- unsustainable sugarcane monoculture production practices
- lack of maintenance of soil conservation infrastructure

Men and women are also aware of the solutions to promote LDN such as:

- natural barriers with Aloe Vera, Linhaxo, and more
- cultivation of legumes, including Congo beans
- fruit trees planting
- confinement of livestock
- water and land conservation infrastructure (walls, terraces)
- drip irrigation

During focus group discussions, women highlighted the multiple benefits from fruits tree planting (economic, nutritional, ?), and shared positive lessons with Congo bean cultivation (improving land quality, use as fodder for animals,?).

Gender Action Plan

Component 1: Enabling Environment for LDN monitoring

Output 1.1.1: Review of strategic regulatory frameworks and territorial planning instruments to enhance local stakeholder participation and mainstreaming of LDN (update and regularize draft forestry law, territorial planning/land use management policy and law, participatory approach methodology in rural and peri-urban areas by the rural extension sector, land tenure, definition of grazing areas)

Output 1.1.2. :LDN Decision Support System (LDN DSS) for planning and implementation in place

Output 1.1.3. :LDN Action Plan with voluntary targets defined for each target landscape

<i>Gender-related activity</i>	<i>Indicator</i>	<i>Target</i>	<i>Baseline</i>	<i>Budget (USD)</i>	<i>Timeline</i>	<i>Responsibility</i>
Identify and analyse gender gaps regarding the regulatory frameworks and territorial planning instruments other regulations with a gender perspective and in consultation with key stakeholders.	Number of related regulatory frameworks and territorial planning instruments, plans or instruments mainstreaming gender	At least three (3) policies, plans, regulations, instruments revised	0	15.000	<i>Year 1</i>	Project Management Unit: Project Gender Expert; ICIEG Women?s NGOS
<p>Output 1.1.4. LDN coordination mechanism reviving the LDN Working Group at national level is strengthened by vertical coordination with municipalities (through participatory approach methodology done under 1.1.1)</p> <p>Output 1.2.1 . Capacity development program in place for LDN implementation and monitoring targeting national and local government staff, including extension</p> <p>Output 1.2.2. Capacity building program on SLM to achieve LDN (using LADA, WOCAT, etc.) at local level for farmers in the target landscapes</p>						
Women?s voice and gender needs and gaps integrated in the LDN coordination mechanism.	Gender responsive LDN Working Group at national level	Gender needs are part of the agenda of the Working Group	0		<i>Years 1 and 2</i>	Project Management Unit; Gender Expert;

Local women participate in equal proportion and conditions as men in the capacity building program on SLM to achieve LDN	Number of women and men that participated in the trainings	50% women participation	0	Department of Gender; ICIEG Women?s NGOS
Provide gender equality sensitization training to key project stakeholders including policy makers and stakeholders for mainstreaming gender in project activities.	Percent of key project implementers demonstrating capacity to mainstream gender in all project documents and activities.	75 percent	?10 percent of understanding of mainstreaming gender issues in the sector	
Conduct gender responsive training and capacity building for the collection of gender specific data and use in the development of policies and guidelines to build national and local capacity in LDN projects	Number of gender responsive training events for the collection of gender specific data in support of project activities.	At least 4 training events: 2 national level and 2 at the local level for the four sites.	No capacity in gender training	

Provide training targeted at women to strengthen their ability to take on leadership roles in negotiations and agreements regarding LDN Working Group.	Percent of women participating in LDN Working Group	30 percent	0 percent	<i>Year 1</i>	Project Management Unit; Gender Expert; Department of Gender; ICIEG Women's NGOS
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Component 2: Demonstrating the LDN approach and scaling out of SLM practices in target landscapes

Output 2.1.1: Participatory integrated plans developed in the target landscapes within the watersheds of Santiago Island (Ribeira Seca) and Santo Antao Island (Vale de Gar?a and Ribeira das Patas) (land use plans, forestry /agroforestry management plans in accordance with National Forest Inventory)

Output 2.1.2. Innovative SLM practices implemented to enhance productivity, restore degraded land and increase climate resilience (assisted natural regeneration, re-naturalization of forested areas, live barriers on fallow lands/cliffs, manure application on drylands, installation of green barrier on rain-fed lands, mineral fertilizer management in the irrigated lands, grazing crop residues to allow vegetation recovery, pasture rotation, agro-forestry, conservation agriculture, restoration of salinized lands, rainwater harvesting, , pest management in agro-forestry systems, etc.)

Developed participatory gender responsive plans in the target landscapes within the watersheds of Santiago Island (Ribeira Seca) and Santo Antao Island (Vale de Gar?a and Ribeira das Patas) (land use plans, forestry /agroforestry management plans in accordance with National Forest Inventory)	Gender responsive LDN plan for the three watershed	3 LDN plan for the each watershed	0	<i>Year 1</i>	Gender Expert
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Developed gender responsive value chains and related gender needs	Percentage of women participating in value chains opportunities for women entrepreneurs	At least 60 percent	0 percent	<i>Year 2</i>	Gender Expert ICIEG Microfinance institution Pro-empresa
Conduct a market analysis and develop an action plan to ensure that women have access to financial incentives to participate in gender responsive and nutrition sensitive value chains	Percent of incentives, including grants, to encourage women groups to participate in gender responsive and nutrition sensitive value chains	At least 50 percent	0 percent	<i>Year 1</i>	Gender Expert ICIEG Microfinance institution Pro-empresa
Capacity building and technical support for women-owned business entities about production, food transformation labelling, and marketing of products in collaboration with and support of community-based and private sector producers	Percent of women enterprises benefiting from training	At least 50 percent	0 percent	<i>Year 3</i>	Gender expert, Private sector
Component 3: Land degradation data and information, project monitoring, evaluation and lessons learned					

Output 3.1.3. M&E system in place to capture and develop knowledge. Global Environment Benefits, co-benefits and costs of SLM monitored, assessed and lessons analysed

Output 3.1.3. 3.1.4. Knowledge sharing/dissemination plan implemented

<i>Gender-related activity</i>	<i>Indicator</i>	<i>Target</i>	<i>Baseline</i>	<i>Timeline</i>	<i>Responsibility</i>
Develop a gender mainstreaming strategy to guide implementation, monitoring and reporting of project activities	Ratio of women/men by age benefitting from all project interventions.	50/50	Institutional Gender mainstreaming strategy not in place	Years 1 & 2	Gender Expert Department of Gender.
Conduct project surveys and gender disaggregated data collection for baseline and ensure that a proportionate number of men and women respondents are included.	Percent of men and women respondents participating in project surveys to collect gender disaggregated data	100%	0%	<i>Years 1 to 2</i>	Communication and Knowledge Management Expert Gender Expert

<p>Develop materials to document women experiences and to raise public awareness about women's needs and interests regarding developments of gender responsive and nutrition sensitive value chains and LDN solution and management</p>	<p>Percent of public awareness materials demonstrating women experiences and knowledge regarding developments of gender responsive and nutrition sensitive value chains and LDN solution and management</p>	<p>At least 30 percent</p>	<p>0 percent</p>		
<p>Integrate women's experiences into knowledge products that will incorporate institutional strengthening and capacity building initiatives, for continued institutional learning and activity implementation in LDN</p>	<p>Number of knowledge products reflecting women's experiences implementation in LDN</p>	<p>100 percent</p>	<p>0 percent</p>		
<p><i>Output 3.2.2. Participatory Monitoring and Evaluation and Learning strategy developed and implemented to support project management, collate and disseminate lessons.</i></p>					

Monitor and track indicators in the project results framework, including gender related indicators disaggregated for men and women	Percent of gender responsive indicators in project reporting, monitoring and evaluation tracked.	100 percent	0 percent		<i>Years 1 to 5</i>	Gender Expert M&E Expert
Include sex disaggregated data into the project information management database for the 3 Project sites	Percent of sex disaggregated data for the four prioritized project sites included in the information management database	100 percent	0 percent		<i>Year 1&2</i>	Gender Expert M&E Expert

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

Yes

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

Improving women's participation and decision making Yes

Generating socio-economic benefits or services or women Yes

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

Yes

4. Private sector engagement

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

The private sector is intended to be the smallholder farmers and farmer associations in the target landscapes, as well as financing entities/lenders. Engagement of both is critical for success under component 2 in particular.

Under outcome 2.1, smallholder farmers play a central role. The project will work directly with individual farmers, whether these are part of an association/cooperative or not. This is reflective of the

context, as Cabo Verde's agriculture is family-oriented, based on small, unorganised small units (micro-owners), not exceeding 1?1.5 ha.

Under outcome 2.2, a dialogue with national financing entities will take place to evaluate the possibility of a pilot experience. Resource mobilisation plans will be developed to prioritise approaches that benefit/are accessible to women and youth for a preferential credit lines in order to facilitate the investment of smallholders in SLM practices and techniques. 2 financing institutes have been identified during PPG and early exchanges have been held. Both Morabi and OMCV have credit lines, and are organisations known to prioritise gender equity.

OMCV microfinance programme was created within the organisational structure in order to deliver its main objective: the socio-economic promotion of Cape Verdean women. As women oftentimes have no access to financial services or financing from banks, OMCV's microcredit service grants loans to women in order to support the development of income-generating activities. OMCV microcredit services also include fostering entrepreneurship and self-employment, empower beneficiaries through training activities, and offering follow-up service and technical assistance to customers. Credit lines include loans to individuals, as well as solidarity groups and small groups of people (3-5).

Morabi's mission is to improve the social, political and economic position of Cape Verdean women, as catalysts for change at the household, community and eventually country level. Their services deliver on a mandate of financial inclusion, therefore aim at democratising access to credit. They offer 5 different credit lines to women, including microcredit for income-generating activities and agro-pastoral investments. Morabi microcredits offer flexible refunding options, depending on the agri-food product, and commit amounts large enough to invest in transformational practices and technologies.

5. Risks to Achieving Project Objectives

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

Description of risk	Impact[1]	Probability of occurrence ³	Mitigation actions	Responsible party
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<p>Lack of political will to reform and harmonise a cross-sectoral policy framework for LDN</p>	<p>Medium</p>	<p>Low</p>	<p>Project priorities are aligned with the international commitment of the GoCV to the UNCCD and with the most recent national strategies, policies and legislation. Support for LDN will be further strengthened through implementation of components 1 focusing on improving the enabling environment for LDN that will increase the chances for long term buy-in. The leading role of the MAE and DGASP will build robust support to LDN among technical staff from key ministerial departments that enjoy a more stable position within the administration and reducing turnover volatility. The institutional success will be particularly assured by the revival and strengthening of the LDN Working Group under Output 1.1.4.</p>	<p>Project Management Unit</p>
<p>Insufficient capacity within the concerned ministerial departments of the GoCV to successfully engage in a comprehensive LDN multi-sectoral and multi-level programming</p>	<p>Medium</p>	<p>Low</p>	<p>Component 1 will strengthen capacity at the national level to enable DGASP and other stakeholders to effectively engage and coordinate multi-sectoral and multi-stakeholder integrated land planning and implementation processes. Capacity development efforts will also be supported by Component 3, particularly through opportunities for learning and knowledge sharing.</p>	<p>Project Management Unit</p>

<p>Land users are reluctant to engage in SLM in their respective landscapes</p>	<p>High</p>	<p>Medium</p>	<p>The project was designed considering that capacity development does not equate to the number of workshops; it is a long-term endeavour requiring long-term support throughout the right implementation process. Community-based organisations will help consolidate the long-term adoption of SLM by land users. The participatory nature of the selection of SLM priority interventions based on the LDN hierarchy of responses, together with the accompanying capacity development actions and financial mechanisms will maximise community buy in. The fact that the project interventions are clearly aimed at food security and rural poverty reduction and creating business opportunities for the communities will encourage involvement of the grassroots beneficiaries. The targeted communities were consulted during project design to ensure proposed technologies and approaches reflect the nuances of the socio-economic dynamics. The project will involve all stakeholders in the dissemination of good practices using appropriate tools for building social mobilisation, gender mainstreaming capacities developed by FAO and other partners. Capacity building activities will be secured to prepare land users for implementation of the project.</p>	<p>Project Management Unit</p>
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<p>Women participation in project decision-making and implementation is limited due to socio-cultural barriers</p>	<p>High</p>	<p>Medium</p>	<p>The project recognizes the gender constraints of women-headed households in terms of land tenure rights, access to credit, to irrigation technology and modern farming and livestock practices. Capacity enhancement interventions will address the specific role, constraints and needs of women in rural development, with concrete awareness raising and training activities to strengthen women leadership and secure their land rights and effective involvement in SLM and value chains. A project-specific gender action plan was developed, proposing corrective measures to ensure full and active participation of women throughout the project components. Sex-disaggregated targets aiming at capacity development activities and with respect to access to finance for investments in SLM and sustainable value chain development were included.</p>	<p>Project Management Unit</p>
<p>Project activities are implemented in a compartmentalised fashion with little integration and coordination with all relevant government departments / municipalities</p>	<p>Medium</p>	<p>Low</p>	<p>The project will enhance a multi-stakeholder dialogue (Under component 1) to ensure that Stakeholders and key sectors coordinate and can influence and benefit from lessons learned from the project through a structured dialogue on mainstreaming results. The stakeholder engagement plan defines the roles of the stakeholders at the early stage of the project. During project implementation, the project will actively engage local communities and will raise awareness through communication campaigns.</p>	<p>Project Management Unit</p>

Current and future climate change impacts threaten the sustainability of the SLM investments demonstrated in selected watersheds	Medium	Medium	The climate change risk screening informed project proponents on the sensitivity to change, and ways to further embed mitigation actions into the project response strategy were considered. Furthermore, the project seeks to restore and improve land productivity, strengthening resilience to anticipated climate hazards and threats (with a focus on drought), embedding resilience into land planning and SLM investments. Also, project approaches have the capacity to absorb climate change, addressing it in real time in curricula, and therefore minimising the immediate and visible impact on SLM.	Project Management Unit
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[1] H: High; M: Moderate; L: Low.

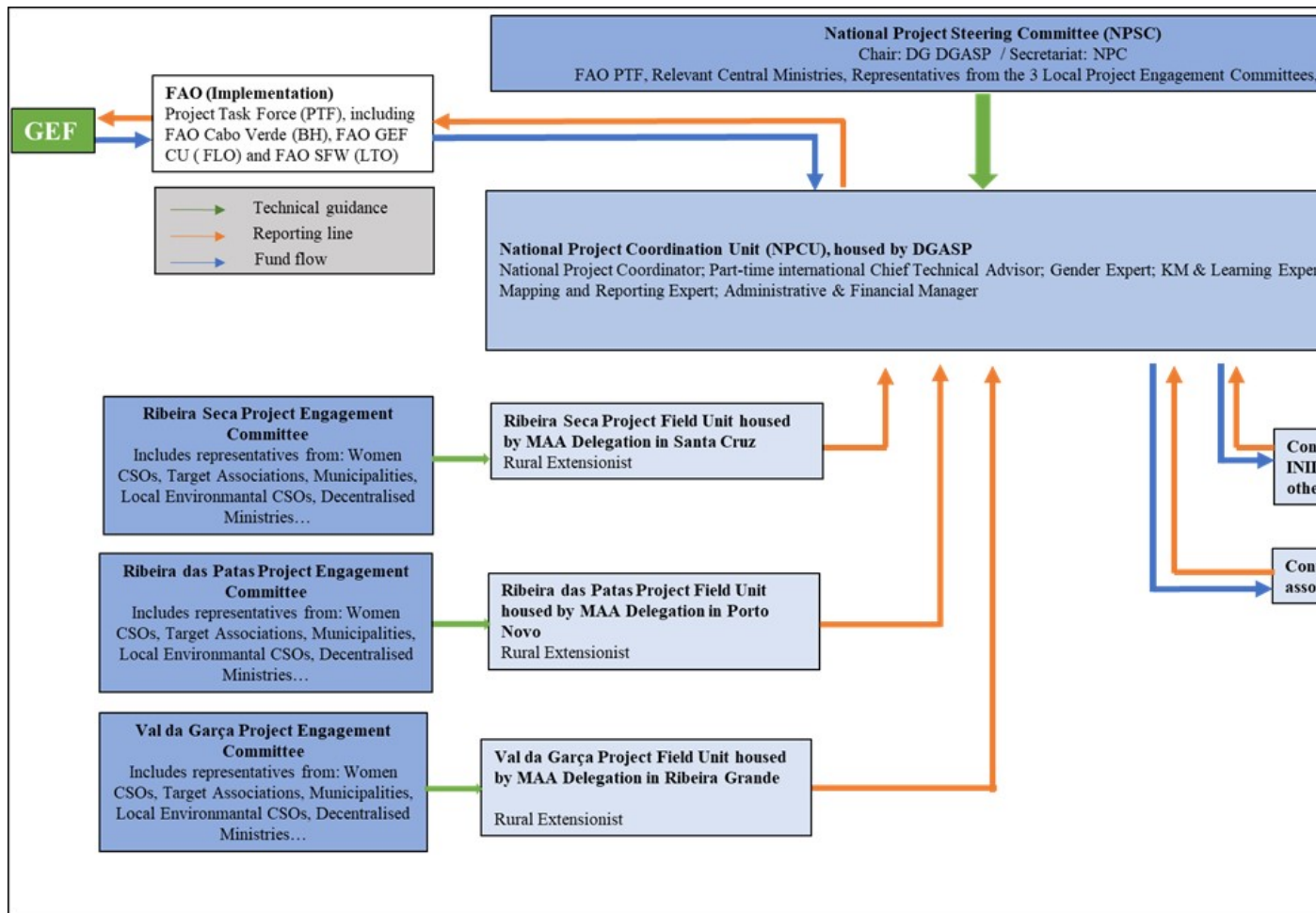
6. Institutional Arrangement and Coordination

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

6.a Institutional arrangements for project implementation.

The *Directorate-General for Agriculture, Silviculture and Livestock (DGASP)* from the *Ministry of Agriculture and Environment (MAA)* will have the overall executing and technical responsibility for the project, with FAO providing oversight as GEF Agency as described below. The DGASP (MAA) will act as the lead executing agency and will be responsible for the day-to-day management of project results entrusted to it in full compliance with all terms and conditions of the Operational Partnership Agreement signed with FAO[1]. As OP of the project the DGASP (MAA) is responsible and accountable to FAO for the timely implementation of the agreed project results, operational oversight of implementation activities, timely reporting, and for effective use of GEF resources for the intended purposes and in line with FAO and GEF policy requirements.

The project organization structure is as follows:



The government will designate a National Project Director (NPD). Located in MAA's Directorate General of Agriculture, Forestry and Livestock (DGASP), the NPD will be responsible for coordinating the activities with all the national bodies related to the different project components, as well as with the project partners. He/She will also be responsible for supervising and guiding the Project Coordinator (see below) on the government policies and priorities.

The NPD (or designated person from lead national institution) will chair the Project Steering Committee which will be the main governing body of the project. The PSC will approve Annual Work Plans and Budgets on a yearly basis and will provide strategic guidance to the Project Management Team and to all executing partners.

The PSC will be comprised of representatives from relevant central ministries, representatives from the 3 local project engagement committees, NGOs/CSOs, and FAO. The members of the PSC will each assure

the role of a Focal Point for the project in their respective agencies. Hence, the project will have a Focal Point in each concerned institution. As Focal Points in their agency, the concerned PSC members will: (i) technically oversee activities in their sector; (ii) ensure a fluid two-way exchange of information and knowledge between their agency and the project; (iii) facilitate coordination and links between the project activities and the work plan of their agency; and (iv) facilitate the provision of co-financing to the project.

The National Project Coordinator (see below) will be the Secretary to the PSC. The PSC will meet at least twice per year to ensure: i) Oversight and assurance of technical quality of outputs; ii) Close linkages between the project and other ongoing projects and programmes relevant to the project; iii) Timely availability and effectiveness of co-financing support; iv) Sustainability of key project outcomes, including up-scaling and replication; v) Effective coordination of governmental partners work under this project; vi) Approval of the six-monthly Project Progress and Financial Reports, the Annual Work Plan and Budget; vii) Making by consensus, management decisions when guidance is required by the National Project Coordinator of the PMU.

A Project Management Unit (PMU) will be co-funded by the GEF grant, co-funded by the mobilised investment (see letters of co-financing for detail) and established within DGASP. The main functions of the PMU, following the guidance of the Project Steering Committee, are to ensure overall efficient management, coordination, implementation and monitoring of the project through the effective implementation of the annual work plans and budgets (AWP/Bs). The PMU will be composed of a National Project Coordinator (NPC) who will work full-time for the project lifetime. In addition, the PMU will include a part-time international Chief Technical Advisor, Gender Expert, MAEL Expert, SLM Expert, LDN Mapping and Reporting Expert, and an Administrative and Financial Manager.

The National Project Coordinator (NPC) will oversee daily implementation, management, administration and technical supervision of the project, on behalf of the Operational partner and within the framework delineated by the PSC. S/he will be responsible, among others, for:

- i) Coordination with relevant initiatives;
- ii) Ensuring a high level of collaboration among participating institutions and organisations at the national and local levels;
- iii) Ensuring compliance with all Operational Partners Agreement (OPA) provisions during the implementation, including on timely reporting and financial management;
- iv) Coordination and close monitoring of the implementation of project activities;
- v) Tracking the project's progress and ensuring timely delivery of inputs and outputs;

- vi) Providing technical support and assessing the outputs of the project national consultants hired with GEF funds, as well as the products generated in the implementation of the project,;
- vii) Approving and managing requests for provision of financial resources using provided format in OPA annexes;
- viii) Monitoring financial resources and accounting to ensure accuracy and reliability of financial reports;
- ix) Ensuring timely preparation and submission of requests for funds, financial and progress reports to FAO as per OPA reporting requirements;
- x) Maintaining documentation and evidence that describes the proper and prudent use of project resources as per OPA provisions, including making available this supporting documentation to FAO and designated auditors when requested;
- xi) Implementing and managing the project's monitoring and communications plans;
- xii) Organizing project workshops and meetings to monitor progress and preparing the Annual Budget and Work Plan;
- xiii) Submitting the six-monthly Project Progress Reports (PPRs) with the AWP/B to the PSC and FAO;
- xiv) Preparing the first draft of the Project Implementation Review (PIR);
- xv) Supporting the organization of the mid-term and final evaluations in close coordination with the FAO Budget Holder and the FAO Independent Office of Evaluation (OED);
- xvi) Submitting the OP six-monthly technical and financial reports to FAO and facilitate the information exchange between the OP and FAO, if needed;
- xvii) Informing the PSC and FAO of any delays and difficulties as they arise during the implementation to ensure timely corrective measure and support.

The Food and Agriculture Organization (FAO) will be the GEF Implementing Agency (IA) for the Project, providing project cycle management and support services as established in the GEF Policy. As the GEF IA, FAO holds overall accountability and responsibility to the GEF for delivery of the results. In the IA role, FAO will utilise the GEF fees to deploy three different actors within the organisation to support the project (see Annex J for details):

? The Budget Holder, which is usually the most decentralised FAO office, will provide oversight of day to day project execution;

? The Lead Technical Officer(s), drawn from across FAO will provide oversight/support to the projects technical work in coordination with government representatives participating in the Project Steering Committee;

? The Funding Liaison Officer(s) within FAO will monitor and support the project cycle to ensure that the project is being carried out and reporting done in accordance with agreed standards and requirements.

FAO responsibilities, as GEF agency, will include:

? Administrate funds from GEF in accordance with the rules and procedures of FAO;

? Oversee project implementation in accordance with the project document, work plans, budgets, agreements with co-financiers, Operational Partners Agreement(s) and other rules and procedures of FAO;

? Provide technical guidance to ensure that appropriate technical quality is applied to all activities concerned;

? Conduct at least one supervision mission per year; and

? Reporting to the GEF Secretariat and Evaluation Office, through the annual Project Implementation Review, the Mid Term Review, the Terminal Evaluation and the Project Closure Report on project progress;

? Financial reporting to the GEF Trustee.

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

There are a great number of national projects delivering on land management, SLM and NBS for rural development in Cabo Verde, and in Santiago and Santo Antao islands in particular as these are the islands where the agriculture sectors represent the largest part of the land use. These projects offer insights, lessons and context-specific success factors. These have been integrated in the alternative scenario section. During the project implementation phase, the PMU and the decentralised representations of the project, will entertain a continued dialogue with these projects through bilateral meetings, joint field missions, participation in consultation workshops.

Particularly concerning the coordination across the GEF portfolio in Cabo Verde, under the leadership of the GEF Operational Focal Point, an inter-Agency working group will be set up to secure progress reporting and diligent sharing of lessons and knowledge, and where possible, explore synergies to maximize the return on investment.

During the PPG phase, extensive consultations were held with GEF Small Grants Programme coordination unit in Praia in order to define collaboration for more impactful results at scale. GEF-SGP adopted selection criteria to prioritise investments in the same geographies as the LDN project. There is an intention to collaborate specifically on complementing and scaling the value chain development efforts of the LDN project under component 2. During project implementation, the dialogue with GEF-SGP will continue.

There are other GEF investments in the country of particular interest to the LDN project, and the project teams and partners will continue to be called upon and engaged throughout the implementation phase:

- ? Starting soonest - UNDP/GEF (GEF ID 10871): Strengthening biodiversity governance systems for the sustainable management of living natural resources in Cabo Verde;
- ? FAO/GEF (GEF ID 9126): Delivering Sustainable Environmental, Social and Economic Benefits in West Africa through Good Governance, Correct Incentives and Innovation (2017-2022 - extended); and
- ? UNIDO/GEF (GEFID 9812): Sustainable Energy Access to Manage Water Resources: Addressing the Energy-water Nexus (2018-2022 - extended).

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

7. Consistency with National Priorities

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

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

With the implementation of the targets set for LDN 2030, various leverage opportunities will arise. LDN will bring several positive impacts and accelerate the achievement of SDGs linked to the fields of poverty reduction, food and nutrition security, environmental protection and sustainable use of natural resources.

Cabo Verde LDN WG has put forward the following priorities:

- ? Propose and design guidelines for a genuine land tenure and land use management policy;

- ? Promote effective articulation with the institutions responsible for Territorial Planning, so that interventions may be in accordance with the national policy and directive for territorial planning and with what is established in the respective planning plans, already prepared and/or to be prepared;
- ? To identify and adopt measures to regulate the use of fertilisers, particularly NPK, in irrigated agricultural production systems, taking into account the impact that their inappropriate use has caused on the degradation of agricultural land and water points.
- ? To look for alternatives for the civil construction sector, so that the prohibition of inert extraction on beaches is viable and to increase the "protection" of agricultural soils, against the salinization process;
- ? Design and propose intervention measures in non-irrigated land (dry culture) and restrict the type of crops in areas with a high slope, as a way of minimising the process of erosion and degradation of such land;
- ? To design and propose animal production techniques that maximise production, adapt to the carrying capacity and minimise the effects of soil compaction by livestock (ruminants) and the consequent soil degradation;
- ? To update the national carbon stock, both in its aerial component and in the soil;
- ? Revaluation of agricultural land invaded by inappropriate species according to the productive capacity of such land and the needs of the affected population.
- ? Propose the integration of interventions, which contribute to the mitigation of climate change effects, in a logic of integrated intervention with the other land protection measures;
- ? Institutionalise an information and knowledge-sharing network as a way of avoiding the duplication of efforts and waste of resources, and of enhancing a more integrating intervention;
- ? Set up a multidisciplinary team to monitor and evaluate indicators on the neutrality of land degradation.

To achieve land degradation neutrality by 2030, in 2015 Cabo Verde has set the following targets based on the global data sources:

1. From 2,156 ha of land degraded due to shifting occupation to 1,078 ha. This means working to ecologically recover 50 % of this land.
2. To go from 8,404 ha of land with negative productivity to 3,182 ha (45 % reduction).
3. Increase by 2% the soil organic carbon stock within ecosystems whose stock varies between 18-45 t/ha.

4. Reduce from 40% of eroded land to 15%, betting heavily on the correction of water lines, maximising the conservation of agricultural land (rain fed and irrigated), recovery of hydro-agricultural works weakened by exceptional rains, strengthen the protection of pastureland with the containment of animals and also strengthen awareness campaigns and training of land users in relation to the problem of soil erosion.

NDC

Cabo Verde made the following relevant commitments: renewable energy and energy efficiency, sustainable low carbon policies and limiting the global average temperature increase to a maximum of 2°C and in the long term 1.5°C. Some commitments contained in the NDC document were put forward, namely the forestation of an additional 10,000 ha of land with its own funding, and if there is support from the international community, it could reach 20,000 ha by 2030 (Building adaptive capacity and resilience of the forestry sector in Cabo Verde, 2016).

National Adaptation Programme of Action on Climate Change (NAPA)

The main goal of the NAPA is the identification of the urgent and immediate needs and concerns of Cabo Verde relating to adaptation to the adverse effects of climate change. As per the guidelines, the formulation of the Cabo Verde NAPA followed a participatory process that involved those most affected by climatic impacts, that is rural people and the poor. Moreover, the NAPA process builds upon existing coping strategies implemented by local communities in order to enhance their adaptation capacity. More specifically, the objectives of the NAPA were: (1) to understand the main characteristics of climate hazards in Cabo Verde (notably floods, droughts and sea level rise); (2) to understand coping mechanisms to climate hazards and climate change at the grassroots level; (3) to understand existing programmes and institutional arrangements for addressing climate hazards and climate change; (4) to identify and prioritize adaptation activities to climate hazards and climate change .

Sustainable Development Plan 2022 -2026 (PEDS II)

The most important and more recent national strategy is the *Plano de Desenvolvimento Sustentável 2022 - 2026* (PEDS II). It operationalizes the Government Program of the Xth Legislature and the Strategic Agenda for Sustainable Development of Cabo Verde 2030 and drives changes to accelerate progress towards achieving the ambition 2030. With PEDS II, Cape Verde aims to, by 2026, become an advanced democracy, a dynamic digital and diversified economy, an inclusive nation, integrated in ECOWAS, with shared prosperity, high international prestige, and reference of pride for all. Progress will be operationalized by 28 Programmes distributed across 4 Pillars. The **Economy Pillar** with 13 Programmes, The **Social Pillar** with 5 programmes The **Environment Pillar** with 3 programmes, and the **Sovereignty Pillar** with 7 Programmes.

National Plan for Agricultural Investment, Food and Nutritional Security 2017 ? 2024 (PNIASAN)

The *Plano Nacional de Investimento Agr?cola, Seguran?a Alimentar e Nutricional 2017 ? 2024* (PNIASAN) aims to promote agricultural growth and transformation with a commitment to allocate at least 10% of public spending to the agricultural sector. Additionally, its goals are to encourage public-private partnerships and private-sector initiatives to increase and support investments in the agricultural sector, inducing the transition to a Green Economy with an agricultural GDP growth of 6% per year. To support the objectives of the PNIASAN, the *Plano Estrat?gico de Extens?o Rural 2017-2026* (PLANEER) provides medium and long-term strategic orientations for rural advisory, notably agricultural modernization, professionalization of producers, and the fight against poverty and food insecurity. Likewise, the *Estrat?gia Nacional de Seguran?a Alimentar 2017 -2021* (ENSAN) supports the PNIASAN, based on the fundamental Human Right to Adequate Food, participation, promotion of family farming, family capacity building, and Food and Nutritional Security. The overall goal is to ensure permanent and stable access of the population to sufficient, safe, nutritious foods. Its strategic objectives are: (a) To strengthen the legislative and institutional framework to consolidate food and nutrition security; (b) Contribute to improving access to water, basic sanitation, and other elements of household welfare; (c) Increase agricultural, livestock and fisheries production sustainably; (d) Improve the income of vulnerable populations for financial access to food; and (e) Develop prevention and treatment of nutritional disorders, counseling and nutrition education to adopt healthy eating habits.

8. Knowledge Management

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

The knowledge management strategy of the project is two-pronged, with a focus on knowledge capture and one on knowledge development and sharing targeting multiple audiences at the landscape and national levels primarily. The proposed project will develop and update a set of manuals and knowledge products that describe the improved practices, measures and technologies, for use by extension workers and producers (Component 3). These products will document lessons learnt, share validated technical options developed under Component 2. In addition, Component 3 will strengthen existing knowledge networks of national partners, and enhance participatory management of the knowledge of producers' associations and organisations and their discussion forums, to identify relevant innovations while improving the tools for communication with external partners.

The activities implemented under Component 3 - effective knowledge management (KM) through Result Based Management (RBM), Monitoring and Evaluation - will result in (Outcome 3.1) the elaboration of a Knowledge Management System that captures and shares the results of the project and supports the replication of tested methodologies in other municipalities and regions across the country. The KM system will contribute to scale-up and replicate context-specific best options using various types of knowledge

9. Monitoring and Evaluation

Describe the budgeted M and E plan

The project results, as outlined in the project results framework (Annex I) will be monitored regularly, reported annually and assessed during project implementation to ensure the project effectively achieves these results. Monitoring and evaluation activities will follow FAO and GEF's policies and guidelines for monitoring and evaluation. The M&E system will also facilitate learning, replication of the project's results and lessons which will feed the project's knowledge management strategy.

Monitoring Arrangements

Project oversight and supervision will be carried out by the Budget Holder with the support of the PTF, including the LTO and FLO and relevant technical units in FAO headquarters. Oversight will ensure that: (i) project outputs are produced in accordance with the project results framework and leading to the achievement of project outcomes; (ii) project outcomes are leading to the achievement of the project objective; (iii) risks are continuously identified and monitored and appropriate mitigation strategies are applied; and (iv) agreed project global environmental benefits are being delivered.

The FAO-GEF Coordination Unit and HQ Technical Units will provide oversight of GEF financed activities, outputs and outcomes largely through the annual Project Implementation Reports (PIRs), periodic backstopping and supervision missions.

Day-to-day project monitoring will be carried out by the Project Management Unit. Project performance will be monitored using the project results matrix, including indicators (baseline and targets) and annual work plans and budgets. At inception phase, the results matrix will be reviewed to finalise the identification of i) outputs ii) indicators iii) targets and iv) any missing baseline information

A detailed M&E System, which builds on the results matrix and defines specific requirements for each indicator (data collection methods, frequency, responsibilities for data collection and analysis, etc) will also be developed during project inception by the PMU MEAL specialist.

Monitoring and Evaluation Plan and Budget			
GEF M&E requirements	Responsible parties	Indicative costs (USD)	Time frame

Inception Workshops and Report (One in Santiago, and one in Santo Antao)	Project Coordinator	7,000	Within 120 days from CEO endorsement of this project
GEF Project Implementation Reports (PIR)	Project Coordinator/ FAO	None	Annually typically between June-August
Monitoring of gender action plan	Gender Consultant	9,720	On-going/ cost of gender expert
Project Monitoring	MAEL Expert Travel	64,800 16,000	On-going / cost of MAEL expert
Monitoring of stakeholder engagement plan	Project Coordinator	None	On-going
Reports of Project Steering Committee Meetings	Project Coordinator	14,000	Annually
Progress reports	Project Coordinator LDN/SLM Expert CTA	 8,640 2,800	Annually
Final Workshop	Project Coordinator	7,000	
Independent Midterm Review (MTR) and management response	Independent evaluation consultants	40,000	Midterm point

Independent Terminal Evaluation (TE) and management response	Independent evaluation consultants	40,000	Three to six months before project closure
Terminal Report	Project Coordinator	7,000	End of Project
TOTAL indicative COST		216,960	

Monitoring and Reporting

In compliance with FAO and GEF M&E policies and requirements, the PMU, in consultation with the PSC and PTF will prepare the following i) Project inception report; (ii) Annual Work Plan and Budget (AWP/B); (iii) Project Progress Reports (PPRs); (iv) annual Project Implementation Review (PIR); (v) Technical Reports; (vi) co-financing reports; and (vii) Terminal Report. In addition, the Core Indicators will be used to monitor Global Environmental benefits and updated regularly by the PMU.

Project Inception Report. A project inception workshop will be held within four months of project start date and signature of relevant agreements with partners. During this workshop the following will be reviewed and agreed:

- the proposed implementation arrangement, the roles and responsibilities of each stakeholder and project partners;
- an update of any changed external conditions that may affect project implementation;
- the results framework, the SMART indicators and targets, the means of verification, and monitoring plan;
- the responsibilities for monitoring the various project plans and strategies, including the risk matrix, the Environmental and Social Risk Management Plan, the gender strategy, the knowledge management strategy, and other relevant strategies;
- finalize the preparation of the first year AWP/B, the financial reporting and audit procedures;
- schedule the PSC meetings;
- prepare a detailed first year AWP/B,

The PMU will draft the inception report based on the agreement reached during the workshop and circulate among PSC members, BH, LTO and FLO for review within one month. The final report will be cleared by the FAO BH, LTO and the FAO GEF Coordination Unit and uploaded in FAO's Field Program Management Information System (FPMIS) by the BH.

Results-based Annual Work Plan and Budget (AWP/B). The draft of the first AWP/B will be prepared by the PMU in consultation with the FAO Project Task Force and reviewed at the project Inception Workshop. The Inception Workshop inputs will be incorporated and subsequently, the PMU will submit a final draft AWP/B to the BH within two weeks after the workshop. For subsequent AWP/B, the PMU will organize a project progress review and planning meeting for its progress review and adaptive management. Once PSC comments have been incorporated, the PMU will submit the AWP/B to the BH for non-objection, LTO and the FAO GEF Coordination Unit for comments and for clearance by BH and LTO prior to uploading in FPMIS by the BH. The AWP/B must be linked to the project's Results Framework indicators to ensure that the project's work and activities are contributing to the achievement of the indicators. The AWP/B should include detailed activities to be implemented to achieve the project outputs and output targets and divided into monthly timeframes and targets and milestone dates for output indicators to be achieved during the year. A detailed project budget for the activities to be implemented during the year should also be included together with all monitoring and supervision activities required during the year. The AWP/B should be approved by the Project Steering Committee, LTO, BH and the FAO GEF Coordination Unit, and uploaded on the FPMIS by the BH.

Project Progress Reports (PPR): The PPRs are used to identify constraints, problems or bottlenecks that impede timely implementation and to take appropriate remedial action. PPRs will be prepared based on the systematic monitoring of output and outcome indicators identified in the Project Results Framework *indicate annex number*, AWP/B and M&E Plan. Each semester the *indicate as appropriate Project Coordinator (PC) or Project Manager* will prepare a draft PPR, will collect and consolidate any comments from the FAO PTF. The *PC / PM* will submit the final PPRs to the FAO Representation in *indicate country* every six months, prior to 31 July (covering the period between January and June) and before 31 December (covering the period between July and December). The July-December report should be accompanied by the updated AWP/B for the following Project Year (PY) for review and no-objection by the FAO PTF. The Budget Holder has the responsibility to coordinate the preparation and finalization of the PPR, in consultation with the PMU, LTO and the FLO. After LTO, BH and FLO clearance, the FLO will ensure that project progress reports are uploaded in FPMIS in a timely manner.

Annual Project Implementation Report (PIR): The PIR is a key self-assessment tool used by GEF Agencies for reporting every year on project implementation status. It helps to assess progress toward achieving the project objective and implementation progress and challenges, risks and actions that need to be taken. Under the lead of the BH, the Project Coordinator / Project Manager will prepare a consolidated annual PIR report covering the period July (the previous year) through June (current year) for each year of implementation, in collaboration with national project partners (including the GEF OFP), the Lead Technical Officer, and the FLO. The PC/PM will ensure that the indicators included in the project results framework are monitored annually in advance of the PIR submission and report these results in the draft PIR.

BH will be responsible for consolidating and submitting the PIR report to the FAO-GEF Coordination Unit for review by the date specified each year *after each co-implementing agency's review for each respective output under their responsibilities (to be included for joint implementation only)*. FAO - GEF Funding

Liaison Officer review PIRs and discuss the progress reported with BHs and LTOs as required. The BH will submit the final version of the PIR to the FAO-GEF Coordination Unit for final approval. The FAO-GEF Coordination Unit will then submit the PIR(s) to the GEF Secretariat as part of the Annual Monitoring Review of the FAO-GEF portfolio

Technical Reports: Technical reports will be prepared as part of project outputs and to document and share project outcomes and lessons learned. The LTO will be responsible for ensuring appropriate technical review and quality assurance of technical reports. Copies of the technical reports will be distributed to project partners and the Project Steering Committee as appropriate.

Co-financing Reports: The PMU will be responsible for tracking co-financing materialized against the confirmed amounts at project approval and reporting. The co-financing report, which covers the GEF fiscal year 1 July through 30 June, is to be submitted on or before 31 July and will be incorporated into the annual PIR. The co-financing report needs to include the activities that were financed by the contribution of the partners.

Tracking and reporting on results across the GEF 7 core indicators and sub-indicators: As of July 1, 2018, the GEF Secretariat requires FAO as a GEF Agency, in collaboration with recipient country governments, executing partners and other stakeholders to provide indicative, expected results across applicable core indicators and sub-indicators for all new GEF projects submitted for Approval. During the approval process of the (insert short project title) expected results against the relevant indicators and sub-indicators have been provided to the GEF Secretariat. Throughout the implementation period of the project, the PMU, is required to track the project's progress in achieving these results across applicable core indicators and sub-indicators. At project mid-term and project completion stage, the project team in consultation with the PTF and the FAO-GEF CU are required to report achieved results against the core indicators and sub-indicators used at CEO Endorsement/ Approval. Methodologies, responsibilities and timelines for measuring core-indicators will be outlined in the M&E Plan prepared at inception.

Terminal Report: Within two months before the end date of the project, and one month before the Final Evaluation, the PMU will submit to FAO (*to specify the unit in charge in HQ*) a draft Terminal Report. The main purpose of the Terminal Report is to give guidance at ministerial or senior government level on the policy decisions required for the follow-up of the project, and to provide the donor with information on how the funds were utilized. The Terminal Report is accordingly a concise account of the main products, results, conclusions and recommendations of the project. The target readership consists of persons who are not necessarily technical specialists but who need to understand the policy implications of technical findings and needs for ensuring sustainability of project results.

MTR and Evaluation provisions

Mid-Term Review

As outlined in the GEF Evaluation Policy, Mid-Term Reviews (MTRs) or mid-term evaluations (MTEs) are mandatory for all GEF-financed full-sized projects (FSPs), including Enabling Activities processed as full-sized projects. It is also strongly encouraged for medium-sized projects (MSPs). The Mid-Term review will (i) assess the progress made towards achievement of planned results (ii) identify problems and make recommendations to redress the project (iii) highlight good practices, lessons learned and areas with the potential for upscaling.

The Budget Holder is responsible for the conduct of the Mid-Term Review (MTR) of the project in consultation with the FAO-GEF Coordination Unit halfway through implementation. He/she will contact the FAO-GEF Coordination Unit about 3 months before the project half-point (within 3 years of project CEO Endorsement) to initiate the MTR exercise.

To support the planning and conduct of the MTR, the FAO GEF CU has developed a guidance document **‘The Guide for planning and conducting Mid-Term Reviews of FAO-GEF projects and programmes’**. The FAO-GEF CU will appoint a MTR focal point who will provide guidance on GEF specific requirements, quality assurance on the review process and overall backstopping support for the effective management of the exercise and for timely the submission of the MTR report to the GEF Secretariat.

After the completion of the Mid-Term Review, the BH will be responsible for the distribution of the MTR report at country level (including to the GEF OFP) and for the preparation of the **Management Response** within 4 weeks and share it with national partners, GEF OFP and the FAO-GEF CU. The BH will also send the updated core indicators used during the MTR to the FAO-GEF CU for their submission to the GEF Secretariat.

Terminal Evaluation

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

The Budget Holder will be responsible to contact the **Regional Evaluation Specialist (RES)** within six months prior to the actual completion date (NTE date). The RES will manage the decentralized independent terminal evaluation of this project under the guidance and support of OED and will be responsible for quality assurance. Independent external evaluators will conduct the terminal evaluation of the project taking into account the ‘GEF Guidelines for GEF Agencies in Conducting Terminal Evaluation

for Full-sized Projects?. FAO Office of Evaluation (OED) will provide technical assistance throughout the evaluation process, via the OED Decentralized Evaluation Support team ? in particular, it will also give quality assurance feedback on: selection of the external evaluators, Terms of Reference of the evaluation, draft and final report. OED will be responsible for the quality assessment of the terminal evaluation report, including the GEF ratings.

After the completion of the terminal evaluation, the BH will be responsible to prepare the management response to the evaluation within 4 weeks and share it with national partners, GEF OFP, OED and the FAO-GEF CU. The BH will also send the updated core indicators used during the TE to the FAO-GEF CU for their submission to the GEF Secretariat.

Disclosure

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

10. Benefits

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

Degraded lands in Cabo Verde provide many important ecosystem goods and services. These lands provide not only economic benefits, but also social and environmental services. Global environmental benefits related to the establishment of an effective Land Degradation Neutrality system that balances gains and losses of productive land and supports resilient and productive landscapes with a mosaic of land uses and diverse livelihood opportunities will also generate socio-economic benefits for the local communities in the project targeted areas. These benefits include:

- ? Strengthening of value chains and improvement of market access for revenue and income generation, with improved employment opportunities for rural women and youth in particular;
- ? Improved food, nutritional and water security for vulnerable rural households that are often headed by women, strengthening their human rights to access to food and water;
- ? More resilient and equitable livelihoods for both women and men;
- ? Reduced risk (natural disasters, market volatility, access to information and finance) related to investing in value-chain development, restoration and SLM on degraded lands; and
- ? Improved access to finance for smallholders for investing in new business plans related to SLM for achieving LDN.

11. Environmental and Social Safeguard (ESS) Risks

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

Overall Project/Program Risk Classification*

PIF	CEO Endorsement/Approval	MTR	TE
Medium/Moderate	Medium/Moderate		

Measures to address identified risks and impacts

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

Project activity	Risk/ impact	Safeguard triggered	Risk classification	Mitigation Measure	Implementation responsible

<p>The project will promote the use and upscaling of drip irrigation and rainwater harvesting.</p> <p>Massification of drip irrigation</p>	<p>As a result of this activities some direct impact will occur, namely soil salinization, acidification, and alkalization.</p> <p>The construction and operation of the systems will cause solid waste production.</p> <p>The installation process needs time and land available. Land issues can be an important constrain to develop drip irrigation</p> <p>Sun heat affects tubes, sometimes they get broken for excessive heat production.</p> <p>Plastic tubes affect soils fertility. Sun degrades plastic sometimes and that affect soil and fertilisers too.</p> <p>Tubes get clogged sometimes. Water cannot pass through, and roots get dehydrated.</p>	<p>ESS1 ? Natural resource management</p>	<p>Moderate</p>	<p>Maintain channels to prevent seepages and reduce inefficiencies resulting from siltation and weeds. Allow for access to channels for maintenance in design.</p> <p>Provide water for leaching as a specific operation.</p> <p>Analyse soils and water, and monitor changes so that potential problems can be managed. Monitor irrigation water quality.</p> <p>Remove all the waste produced during construction and maintenance of the drip irrigation system</p> <p>The land tenure must be clarified before investment in drip irrigation systems</p> <p>The system must receive proper maintenance to correctly perform.</p> <p>The farmers using the drip irrigation systems will be trained in installation, operation and maintenance of systems</p>	<p>DGASP, MAA Delegations, beneficiaries</p>
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<p>Water resources recovery and installation of water supply network, improvement of water supply networks</p>	<p>Overexploitation of water resources, depletion of water sources.</p> <p>Water degradation and pollution.</p> <p>Leaks.</p> <p>Accidents to both employees and third parties.</p>	<p>ESS1 ? Natural resource management</p>	<p>Moderate</p>	<p>Previously assess the current availability and only use the ecological flow rates adapted to each specific situation.</p> <p>Adopt measures to retain any accidental spills and implement structures to contain possible natural or human contamination.</p> <p>Implement health and safety measures during construction and physically or socially fence of the built structures.</p>	<p>DGASP, MAA Delegations, beneficiaries</p>
<p>Live barrier establishment, introduction of fruit trees</p>	<p>The project will benefit land in terms of soil protection, agriculture productivity and economic incomes for land users, owners and communities.</p> <p>The project could result in any changes to existing tenure rights (formal and informal) of individuals, communities or others to land, or forest resources.</p>	<p>ESS1 ? Natural resource management</p>	<p>Moderate</p>	<p>Allow sufficient time for extensive public consultation to ensure that activities planned are optimal and all affected persons are considered and listened to, and local institutions are in place to sustain project activities, particularly in respect of land and water rights.</p> <p>In case of possibility of any change in land tenure, the project should adopt the CFS[1] & FAO voluntary guidelines on the Responsible Government of Tenure, mainly Section 3 ?Legal recognition and allocation of tenure rights and duties, on Informal Tenure (point 10)</p>	<p>DGASP, MAA Delegations, beneficiaries</p>

<p>Live barrier installation and establish and/or manage planted forests.</p> <p>The project will support farmer to deploy assisted natural regeneration, agroforestry, re-naturalization of forested areas using native species, on their own land. Natural barriers to control soil erosion on slopes is one of the main activity of the project.</p>	<p>The incorrect selection of living barrier species can negatively affect ecosystem services. This choice may result in the spread of invasive species, which will have a competitive and devastating effect with protected species and/ or other ecosystem services.</p>	<p>ESS 2 - Biodiversity, Ecosystems and Natural Habitats</p>	<p>Moderate</p>	<p>Assess the risks of species introduced as living barriers that may become invasive and have adverse effects on local biodiversity. Control illegal practices such as illegal fires and removal of plants for animal feed.</p> <p>Protecting wildlife habitat diversity and the conservation of forest plants by implementing measures to keep landscape levels. Training the supervisors of forest to understand ecosystem services and how to protect them.</p> <p>Avoid the conversion of naturally regenerating forests or other ecosystems of significant conservation value into planted forests</p> <p>Prepare baseline studies to monitor the impact of planted forest management on the maintenance of plants and animals and the conservation of genetic resources.</p>	<p>DGASP, MAA Delegations, Project PIU</p>
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<p>Introduction of fruit trees and live barriers</p> <p>The project will support farmers to deploy assisted natural regeneration, agroforestry, re-naturalization of forested areas using native species, on their own land. Natural barriers to control soil erosion on slopes is one of the main activity of the project.</p>	<p>The wrong selection and planting of seed/seedlings may generate negative environmental externalities, like the loss of crop genetic diversity that generates significant costs in the form of lost option values for future varietal development, poor fitness to changing climate conditions, as well as increased genetic vulnerability to pest and diseases.</p>	<p>ESS 3 - Plant Genetic Resources for Food and Agriculture</p>	<p>Moderate</p>	<p>Ensure that seed and seedlings sources for the project provide relevant information on treatment against diseases and pests, adaptation to climate change, and genetic vulnerability.</p> <p>Valuable information is indeed an important factor determining farmers' choice of accessing seed and seedling from local markets.</p> <p>Enhance social capital, and particularly forms that allow communities and farmers to link to broader networks of information and seed and seedling supplies, will also generate positive benefits to household welfare as well as to the maintenance of on-farm crop diversity.</p>	<p>DGASP, MAA Delegations, Project PIU</p>
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<p>Massification of drip irrigation, introduction of fruit trees creation of irrigated perimeters</p>	<p>The project will not finance the acquisition of pesticides or fertilisers, but these activities would indirectly imply the use of a significant amount of pesticides and phytosanitary products to protect the crops and further improve the efficiency of production. All these substances have a chemical nature that will cause water and soil pollution, Health issues (intoxication of the population) following in particular the consumption of contaminated water or vegetable products, and Risks of poor health and safety conditions due to deficient storage and handling of pesticides.</p>	<p>ESS 5 - Pest and Pesticides Management</p>	<p>Moderate</p>	<p>Preference must always be given to sustainable pest management approaches such as Integrated Pest Management (IPM), the use of ecological pest management approaches and the use of mechanical/cultural/physical or biological pest control tools in favour of synthetic chemicals; and preventive measures and monitoring.</p> <p>When no viable alternative to the use of chemical pesticides exists, the selection and procurement of pesticides is subject to an internal clearance procedure (Consider the Cabo Verde National Management Plan of Pesticides and FAO ESS5 Code).</p>	<p>DGASP, MAA Delegations, Project PIU</p>
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<p>Construction of reservoirs and Construction and Expansion of water supply systems and networks</p>	<p>The construction of reservoirs and water supply networks may imply in involuntary resettlement that can be both physical relocation and economic displacement, meaning loss of assets or access to assets that lead to a loss of income or means of livelihoods, whether full or partial, permanent or temporary, as a result of land or resource restrictions</p>	<p>ESS 6 - Involuntary Resettlement and Displacement</p>	<p>Moderate</p>	<p>Prohibits forced evictions which include acts involving the coerced or involuntary displacement of individuals, groups, or communities</p> <p>Avoid physical and economic displacement in the project, and, when avoidance is not possible, mitigate displacement impacts and risks. In exceptional circumstances where displacement may occur, it would be negotiated with the affected individual, group or community. Alternative infrastructure's location will be explored, and measures elaborated to mitigate impacts will be designed and implemented.</p>	<p>DGASP, MAA Delegations, Project PIU, beneficiaries, affected persons</p>
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<p>Value chain development, Agriculture production, construction, and operation of infrastructures</p>	<p>The project will operate in sectors or value chains that are dominated by subsistence producers and other vulnerable informal agricultural workers, and more generally characterised by high levels of "working poverty".</p> <p>There is a risk of perpetuating poverty and inequality in socially unsustainable agriculture and food systems.</p> <p>The project will operate in situations of lack of access to decent jobs and where youth are increasingly abandoning agriculture and rural areas.</p> <p>Exist the risk to increase and perpetuate this situation.</p> <p>The project will involve sub-contracting workers. There is the risk of perpetuating inequality and labour rights violations and risk of increasing health and safety issues to workers.</p>	<p>ESS 7 ? Decent work conditions</p>	<p>Moderate</p>	<p>The project should defend decent work and productive employment and establish synergies with specific employment and social protection programmes. The workers associated with the project will have access to the social protection official system (INPS).</p> <p>The project will implement specific measures to support youth empowerment and employment in agriculture, like:</p> <p>Develop a youth livelihoods/employment assessment in project's target watersheds; and based on this assessment develop and implement a capacity building plan, focused in agriculture and business management for targeting youth readiness to fully participate in and benefit from economic growth and employment expansion;</p> <p>Establish bridges and provisions regarding Financing Mechanisms and Resource Mobilization, to benefit young people living in the project's target watersheds.</p> <p>The project will prioritise subcontracting local entrepreneurs - particularly to rural women and youth - to maximise employment creation under decent working conditions.</p> <p>The project will provide capacity building to contractors/ subcontractors/ and workers to fulfil the standards of performance and quality, health and safety, taking into account national and international social and labour standards.</p>	
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<p>Value chain development, Agriculture production, construction, and operation of infrastructures</p>	<p>The project could reinforce existing gender-based discrimination, by not taking into account the specific needs and priorities of women and girls.</p> <p>The project could not target the different needs and priorities of women and men in terms of access to services, assets, resources, markets, and decent employment and decision-making</p>	<p>ESS 8 ? Gender equality</p>	<p>Moderate</p>	<p>An age- and gender-sensitive social value chain analysis or livelihoods/employment assessment was carried out, to empower in particular the most vulnerable /disadvantaged categories of rural workers such as small-scale producers, contributing family workers, subsistence farmers, agricultural informal wage workers, with a special attention to women and youth who are predominantly found in these employment statuses. needed for large-scale projects.</p>	<p>The mitigation measures proposed to youth will be applicable to women and girls. Therefore, the project will develop Gender Risk Analysis and assessment in the project's target watersheds to: develop capacity building programs and facilitate the access to credit for women and girls.</p>	<p>The project will implement activities to strengthen the collective voice, leadership and decision-making of all rural women and girls in order to empower them.</p>	<p>Provisions for maternity protection, including child care facilities, should be foreseen to favour women participation and anticipate potential negative effects on child labour, increased workloads for women, and health related risks for pregnant and breastfeeding women.</p>	<p>The project will provide facilitation for men and women of all ages to access productive resources (including land), credit, markets and marketing channels, education and TVET, technology, collective action or mentorship.</p>
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Supporting Documents

Upload available ESS supporting documents.

Title	Module	Submitted
ESR Certificate	CEO Endorsement ESS	
ESR Analysis and Mitigation Plan	CEO Endorsement ESS	
ESS Moderate risk	Project PIF ESS	

ANNEX A: PROJECT RESULTS FRAMEWORK (either copy and paste here the framework from the Agency document, or provide reference to the page in the project document where the framework could be found).

Results chain	Indicators	Baseline	Mid-term target	Final target	Means of verification	Assumptions	Responsible for data collection
Objective: Enhance climate-resilient food production and nutrition in productive landscapes through nature-based solutions in support of Cabo Verde's voluntary LDN targets							
Component 1: Strengthening the enabling environment to achieve LDN in Cabo Verde							
<u>Outcome 1.1: LDN mainstreamed into national policies and planning processes at multiple levels to support SLM in production landscapes</u>							

<p><u>Output.1.1.1:</u> Review of strategic regulatory frameworks and territorial planning instruments to enhance local stakeholder participation and mainstreaming of LDN</p>	<p>Regulatory framework assessment for the implementation of LDN</p> <p>Updated National Action Program for Combating desertification</p> <p>Roadmap with proposals for integrating LDN counterbalancing mechanism in basin management plans</p>	<p>National Action Programme (NAP) to Combat Desertification and implement UNCCD outdated</p> <p>No specific policy or strategy to promote the introduction and dissemination of LDN</p> <p>Existing policies and regulations do not clearly identify sources of financing and investment to prevent and combat land degradation</p>	<p>LDN policy assessment that includes a gender lens</p> <p>Analysis report on the integration of the neutrality mechanism in the territorial planning instruments at basin level</p>	<p>Gaps and opportunities of the existing regulatory framework for the implementation of LDN are identified</p> <p>National Action Program for Combating desertification is updated in a participatory way and officially endorsed by key Government Sectors</p>	<p>LDN policy assessment report</p> <p>LDN principles are reflected in the National Action Plan for Combating Desertification</p> <p>Proposals to overcome the identified constraints to mainstream LDN and increase and stimulate financial support</p> <p>Technical reports from validation and stakeholder dialogue workshops</p>	<p>Strengthening the regulatory framework for LDN has support from central government</p>	<p>PMU - MAA</p>
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<p><u>Output 1.1.2:</u> LDN Decision Support System (LDN DSS) for planning and implementation in place</p>	<p>Intersectoral and gender sensitive LDN knowledge platform in place; DSS that integrates validated maps of socio economic and biophysical indicators</p>	<p>No LDN knowledge platform or DSS exist in Cabo Verde</p>	<p>LDN knowledge platform with national datasets in place</p>	<p>LDN DSS integrated, tested and used to support intersectoral and gender sensitive governance of land and water resources in Cabo Verde</p>	<p>Technical description, user guidelines and LDN-DSS web-portal and platform</p>	<p>Willingness of the government to integrate LDN in the decision-making process through the establishment and use of a DSS</p> <p>There is willingness of national and local authorities to cooperate on sharing information</p>	<p>PMU - MAA</p>
<p><u>Output 1.1.3:</u> LDN Action Plan with voluntary targets defined for each target landscape</p>	<p>LDN Action Plans at basin level officially endorsed</p>	<p>No LDN action plan exists in Cabo Verde</p>	<p>Maps of response hierarchy for each watershed integrated in the DSS</p>	<p>Action Plan for achieving LDN targets in watersheds of Santiago Island (Ribeira Seca) and Santo Antao Island (Vale de Garça and Ribeira das Patas) (1 in each watershed, 3 in total)</p>	<p>Technical workshop and working meeting reports, technical guideline with methodology to obtain LDN response hierarchy maps in Cabo Verde</p>	<p>Establishment of LDN action plans group has support from central and local government</p>	<p>PMU - DGASP</p>

<p><u>Output 1.1.4:</u> Interdisciplinary and multi-institutional LDN working group at national level is strengthened</p>	<p>Number of central and local governmental institutions, professional associations/representatives of local pilot communities, civil society and non-governmental organizations, academia, businesses, youth and gender groups and experts, involved in the multi-stakeholder LDN Working Group</p>	<p>National LDN working group is not active</p>	<p>Gender balanced multi-stakeholder LDN working group structure is agreed with key stakeholders</p>	<p>National LDN Working Group is fully functioning with agreed terms of reference and communication channels</p>	<p>Technical workshop and working meeting reports; Terms of reference</p>	<p>Establishment of a LDN working group has support from central government</p>	<p>PMU - DGASP</p>
<p>Outcome 1.2. Enhanced capacity at national and sub-national levels to achieve LDN in target landscapes</p>							
<p><u>Output 1.2.1:</u> Capacity development program in place for LDN implementation and monitoring targeting national and local government staff</p>	<p>Number of individuals, disaggregated by gender, with enhanced capacity in LDN at the national and sub-national levels, Number of government officers trained in reporting on LDN to the UNCCD</p>	<p>There is limited understanding of how to monitor and achieve LDN in Cabo Verde and how to mainstream LDN targets into policy and planning</p>	<p>At least 100 local government staff, (at least 50 women) trained</p>	<p>At least 200 local government staff, (at least 100 women) trained</p>	<p>Training material in the form on online modules and reports; reports from training events; participants' lists</p>	<p>Willingness and interest to participate in LDN trainings by national and local staff</p>	<p>PMU - DGASP</p>
<p><u>Output 1.2.2:</u> Capacity building program on SLM to achieve LDN at local level for farmers in the target landscapes</p>	<p>Number of farmers and extensionists, disaggregated by gender, with enhanced capacity in SLM technologies</p>	<p>There is limited knowledge on the identification and implementation of NBS and SLM technologies</p>	<p>At least 10,000 local producers and extensionists trained of which 50% are women</p>	<p>At least 15,000 local producers and extensionists trained of which 50% are women</p>	<p>Reports from training events; participants' lists</p>	<p>Farmers are willing to participate in the trainings and knowledge exchange and the extension service is supportive</p>	<p>PMU - DGASP</p>
<p>Component 2: Demonstrating the LDN approach and scaling out of SLM practices in target landscapes</p>							

Outcome 2.1: SLM technologies and approaches in the target landscapes upscaled to contribute to national LDN targets							
Output 2.1.1: Existing land use plans in the target landscapes are revised and entry points for the principle of counterbalancing are identified	Number of land-use plans updated and considering LDN; Area covered by the plans (ha)	LDN and the counterbalancing mechanism are not considered in the existing land use plans of the three watersheds	3 land-use plans in the target water basins are revised, 100 and users trained land use planning for neutrality (50 women)	The 3 land-use plans in the target water basins support achievement LDN targets, 200 and users trained land use planning for neutrality (100 women)	Technical validation reports, workshop meetings, technical report on the mechanism to include LDN in the existing land use plans	Willingness of local stakeholders to participate in land-use planning	PMU - DGASP
Output 2.1.2: Innovative SLM practices implemented to enhance productivity, restore degraded land and increase climate resilience	Land area (ha) with reduced or reversed degradation from the implementation of SLM practices, and avoided emissions or carbon sequestration	Land degradation is widespread and current land management is unsustainable and not based on up-to-date SLM knowledge	9 SLM technologies adopted in the target landscapes (3 in each basin)	4,000 ha of land with reduced or reversed degradation and 249,903 tCO ₂ eq of avoided emissions or carbon sequestration	Carbon monitoring using Ex-Act; remote sensing; monitoring at local level of soil productivity, soil biological activity, soil organic carbon and soil physical properties	SLM measures and associated plans will reduce or reverse degradation Land users see benefits from implementing SLM and sustain their efforts	PMU - DGASP
Outcome 2.2: Increased investments in SLM and NBS to achieve LDN							

<p><u>Output 2.2.1:</u> Priority gender-sensitive and nutrition-sensitive value chains selected and a functional framework for their sustainable development proposed (involving suppliers, producers, support-advice, financiers, traders)</p>	<p>Number of value-chains strengthened, gender disaggregated number of VC actors trained and strengthened</p>	<p>Local communities have weak links to viable value chains. Most VCs do not consider environmental sustainability, including LDN</p>	<p>1,000 value-chain actors with strengthened capacity in sustainable VC management that integrates LDN principles and/or with better access to credit and innovative financing mechanisms along target value chains</p>	<p>3,000 value-chain actors (50% women) with strengthened capacity in sustainable VC management that integrates LDN principles and/or with better access to credit and innovative financing mechanisms along target value chains</p>	<p>Reports from training events; participants' lists</p>	<p>Willingness among value-chain actors to improve management of selected value chains in line with LDN principles</p>	<p>PMU - DGASP</p>
<p><u>Output 2.2.2:</u> Innovative and sustainable financial mechanisms for producers and their organizations along the priority value chains identified and developed</p>	<p>Number of plans developed; amount of resources (USD) targeted</p>	<p>Access to international funding is needed to scale out SLM and achieve LDN in Cabo Verde</p>	<p>USD 7,000,000 of funding mobilized for LDN implementation</p>	<p>USD 15,000,000 of funding mobilized for LDN implementation</p>	<p>Meeting minutes and proposals</p>	<p>Government is willing to apply and develop plans to mobilize international funds to achieve LDN</p>	<p>PMU - DGASP</p>
<p>Component 3: Land degradation data and information, project monitoring, evaluation and lessons learned</p>							
<p><u>Outcome 3.1: Data and information on land degradation improved</u></p>							

<p><u>Output 3.1.1:</u> Data and information on land degradation status and trends (such as LADA, Sustainable Soil Management Protocol, soil map, grazing map, soil organic carbon map, soil fertility map, land cover map, etc.) made available</p>	<p>Validated maps of LDN indicators (land cover trends, degradation causes, intensity, SOC, etc.) available</p>	<p>No participatory assessment of land degradation at national level exists in Cabo Verde</p>	<p>Land Use Systems identified at national level, platform to implement LADA QM is identified and in place, stakeholders for the participatory assessment identified and trained</p>	<p>National maps of land degradation and SLM following a participatory assessment at national level available</p>	<p>Workshop minutes, list of participants, maps, reports</p>	<p>There is willingness of national and local authorities to cooperate on sharing information and to participate in workshops for LD mapping</p>	<p>PMU - DGASP</p>
<p><u>Output 3.1.2:</u> A national soil information system and remote sensing-based land degradation monitoring and knowledge sharing system are set up and operational (linked to the LDN DSS (1.1.2))</p>	<p>Strategy to integrate national land and water monitoring systems, integrated monitoring system in place</p>	<p>No integrated monitoring system exists in Cabo Verde</p>	<p>LDN DSS evaluated and gaps and opportunities to develop an integrated land monitoring system are identified</p>	<p>Operational land monitoring system in place integrating existing soil data and LDN</p>	<p>Technical reports, Guidelines and User Manuals</p>	<p>Willingness of the government to establish a land monitoring system There is willingness of national and local authorities to cooperate on sharing information</p>	<p>PMU - DGASP</p>

<p><u>Output 3.1.3.</u> M&E system in place to capture and develop knowledge. Global Environment Benefits, co-benefits and costs of SLM monitored, assessed and lessons analysed</p>	<p>M&E system that ensures timely delivery of project benefits in terms of GEBs and gender-dis-aggregated co-benefits, mid-term evaluation; final evaluation</p>	<p>None</p>	<p>Timely monitoring of project outcomes, outputs and activities informs the mid-term evaluation; Mid-term evaluation and recommendations implemented</p>	<p>M&E information informs the final evaluation; Final evaluation with recommendations</p>	<p>PIRs, PPRs; Evaluation reports</p>	<p>Adequate funding to M&E and evaluations; national lead agency support M&E processes</p>	<p>FAO - DGASP</p>
<p><u>Output 3.1.4</u> Knowledge sharing/dissemination plan implemented</p>	<p>Number of beneficiaries (Direct and indirect) with increased knowledge and awareness about SLM and LDN; National LDN guideline; communication strategy; number of people reached by public awareness raising campaigns; number of events and appearances in media and websites</p>	<p>No guideline or Knowledge Management products on LDN available</p>	<p>1 National LDN guideline; 10 fact sheets; public awareness raising campaign reaches 1500 people (50% women); at least 4 informational events and media outreach activities</p>	<p>National LDN guideline; 15 fact sheets; 3 gender-focused Knowledge Management products; public awareness raising campaign reaches 5,000 people (50% women); at least 10 informational events and media outreach activities</p>	<p>Guideline document; fact sheets, Knowledge Management publications; Articles in national and local media, appearance in TV, website and social media statistics</p>	<p>Continuous project M&E lead to iterative learning and identification of lessons learned; National lead agencies and other stakeholders are committed to reaching out to project beneficiaries as well as the general public to create awareness about LDN</p>	<p>FAO - DGASP</p>

ANNEX B: RESPONSES TO PROJECT REVIEWS (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF).

B1: Council Members Review:

Comment by Jennifer Novotney, U.S. Department of State (DOS), Bureau of Oceans and International Environmental and Scientific Affairs (OES), Office of Environmental Quality (ENV), Council, made on 1/14/2022

Comment:

We have strongly opposed the use of non-voluntary land degradation neutrality (LDN) targets because Land Degradation Neutrality is only one approach of many to combat the impacts of drought and desertification. We support in a general sense the aim or aspiration of land degradation neutrality, but we want to ensure that LDN is not promoted to the exclusion of other approaches or being codified with mandatory targets.

Response: Cabo Verde has set its National Voluntary LDN targets and is committed to work towards achieving them. The project envisions the LDN framework as an accelerator for achieving SDGs and a creator of opportunities for Cabo Verde with regards to sustainable land management leverage, updating land data and creating country capacity in monitoring and accounting for voluntary LDN targets.

Comment by Annette Windmeisser, GEF Council Member, Head of Climate Finance Division, German Federal Ministry for Economic Cooperation and Development, Council, made on 1/7/2022

Comment:

Germany approves the following PIF in the work program but requests that the following comments are taken into account:

Germany requests that the following requirements are taken into account during the design of the final project proposal:

On data for LDN, WOCAT and LADA are mentioned as international networks. With special regard to achieving LDN, Germany suggests to integrate the specialized LDN Initiative of the Group on Earth Observations (GEO-LDN) into the design of the project, especially of Components 1 and 3. The GEO-LDN Initiative is mandated by UNCCD parties and supports all parties in achieving or exceeding LDN by supporting the reporting, monitoring and decision making for LDN.

Response: The initiatives and guidelines provided by the GEO-LDN group were considered, in particular the Good Practice Guidance for estimating SDG 15.3.1 was followed to obtain the land

degradation maps of the baseline and reporting periods using Trends.Earth in each target landscape and at national. The latest developments of the Tools4LDN project were also implemented, for the development of the LDN DSS.

With view to establishing mechanisms for neutrality and the project's intention to develop participatory integrated land-use plans, Germany suggests considering the newly developed software tool ?LUP4LDN? that tackles the challenge of aligning land use and management decisions with LDN goals (Competition's winning Team ? GEO-LDN Initiative - <https://www.geo-ldn.org/winner>)

Response: Given that LUP4LDN is still being validated and it is not free to use, this tool was not included

Synergies with CBD and UNFCCC targets and activities could be emphasized more clearly throughout the project, e.g. data, land use planning, soil mapping can contribute to the countries NDCs and should be described.

Response: Key Biodiversity area and protected areas maps were included in the LDN DSS to increase synergies when project sites for implementation of SLMs are selected and scaled out. Additionally maps of precipitation trends were also developed and included.

It is important to ensure local ownership through economic prospects, income and employment of the local population as crucial elements of sustainability of SLM activities, integration and support to existing civil society initiatives, full and equal participation of all ethnic groups, young people and woman.

Response: A comprehensive socio economic and gender analysis were developed to identify possible barriers for women and men based on gender relationships and roles regarding land degradation and its impact on their quality of life; and to propose specific measures to guarantee that men and women of the beneficiary communities are equally involved in order to assist and actively participate in, contribute to and benefit from the project.

B2: STAP Review:

Part I: Project Information	
GEF ID	10863
Project Title	Towards Land Degradation Neutrality for Improved Equity, Sustainability, and Resilience
Date of Screening	November 9, 2021
STAP member screener	Graciela Metternicht
STAP secretariat screener	Guadalupe Dur?n

STAP Overall Assessment and Rating **Concur**

STAP welcomes FAO's proposal 'Towards Land Degradation Neutrality for Improved Equity, Sustainability, and Resilience'. The project aims to mainstream sustainable land management (SLM) into national planning and policies to achieve Land Degradation Neutrality (LDN), food and nutritional security. The project is expected to generate co-benefits to improved food security and nutrition, livelihoods, equity, overall resilience, including to the impacts of climate change that will contribute to the global environmental benefits.

STAP commends the project team for a clear articulation of a LDN methodology that supports Cape Verde's LDN targets, while seeking to generate local benefits and global environmental outcomes. The proposal applies an LDN conceptual framework based on its decision hierarchy (avoiding, reducing and reversing) that seeks to test, validate, and prioritize actions. STAP welcomes the project team's initiative to complement the LDN framework by applying the LDN interpretation matrix. The project team is encouraged to document learning from the application of these two processes, and share this learning through the project's knowledge network. In this vein, the LDN decision support system is welcomed, along with its objectives to collect data on LDN metrics to track Cape Verde's progress on meeting its LDN targets, and contributions to SDG 2, 13 and 15.

To inform the project design, STAP welcomes the baseline studies on an assessment of the land potential in the targeted landscapes and analyses of the social and gender contexts. These studies will help articulate further the project activities, and how they will lead to outputs, outcomes, and, ultimately, the desired change. The clearer these causal linkages are articulated, the easier it will be to identify meaningful indicators that complement the LDN metrics and core indicators to monitor the changes resulting from the complex socio-ecological interactions described in the project. The same rationale applies to the expected co-benefits the project seeks to achieve. On co-benefits, STAP also recommends the PPG considers indicators and associated metrics to estimate and report on these benefits. N metrics to track Cape Verde's progress on meeting its LDN targets, and contributions to SDG 2, 13 and 15.

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STAP highly appreciates the recognition and planned inclusion of behavioral insights in the project design phase, given the assertion that dryland crops like maize and beans continue to be cultivated more for cultural than economic value, making them an important consideration when promoting SLM and LDN. It is, hence, important that the PPG identifies behavioral changes that may need to be fostered to ensure durability of outcomes, respectful of the socio-cultural context. It also encourages the team to realise the innovation that it proposes, and develop the PPG activities accordingly ('Analysis of the policy options may include examination of the dynamic system behavior?'). STAP also encourages the project team to better reflect scaling in the theory of change. This could be done by developing a separate scaling pathway that articulates how the project aims to scale, based on an understanding of how the causal links may develop in the future across sectors (e.g. agriculture, forestry, groundwater), and spatial scales (e.g. watershed, island, national level). STAP provides below initial advice on developing alternative pathways, along with other recommendations. As the project is designed, STAP encourages the project team to develop the project with the same rigour as was demonstrated in the development of the PIF. Below, STAP details further its guidance.

FAO response: STAP's comments and suggestions have been addressed during the PPG phase and more specific responses are provided below.

Part I: Project Information B. Indicative Project Description Summary			
	What STAP looks for	STAP Response	FAO Response
Project Objective	Is the objective clearly defined, and consistently related to the problem diagnosis?	Yes, the objective is clearly defined, and consistently relates to the problem analysis. A minor point, the objective is stated differently in the PIF and in the theory of change annex. Please amend as necessary.	<i>The objective in the Theory of changed was changed and is stated in the same way than in the project document.</i>
Project components	A brief description of the planned activities. Do these support the project's objectives?	Yes, the planned activities support the project objective.	<i>Indeed, activities were further described</i>
Outcomes	A description of the expected short-term and medium-term effects of an intervention. Do the planned outcomes encompass important global environmental benefits/adaptation benefits?	Yes, the outcomes focus on avoided land degradation.	<i>Yes, Outputs were further described</i>
	Are the global environmental benefits/adaptation benefits likely to be generated?	Yes, with good monitoring and evaluation.	<i>Monitoring and evaluation section was further developed</i>
Outputs	A description of the products and services which are expected to result from the project. Is the sum of the outputs likely to contribute to the outcomes?	Yes. STAP recommends the team develops national level indicators of LDN, complementary to the 3 global indicators. Those indicators should capture the pressures and drivers of land degradation in Cabo Verde (e.g. soil salinization, soil erosion), and the ecosystem services that can be affected (positively or negatively) through the planned LDN interventions.	<i>Additional indicators were included to monitor the impacts of the planned LDN interventions. In Component 2, indicators to monitor soil health, indicators for soil productivity, soil biological activity, soil organic carbon and soil physical properties will be monitored following a Protocol for the assessment of Sustainable Soil Management, in order to provide an evaluation of the soil's ability to maintain prioritised ecosystem services.</i>

	<p>STAP recommends to use Landsat or Sentinel-2 time series satellite imagery (for trends in landcover/land use change), rather than coarse spatial resolution MODIS, which is not suitable for the catchment scale adopted for this project.</p>	<p><i>During PPG phase the team developed maps of land cover at 10m resolution based on Sentinel-1 and Sentinel-2 data (WorldCover).</i></p>
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<p>Part II: Project justification</p>	<p>A simple narrative explaining the project's logic, i.e. a theory of change.</p>		<p>FAO Response</p>
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<p>1. Project description.</p> <p>Briefly describe</p> <p>1) the global environmental and/or adaptation problems, root causes and barriers that need to be addressed (systems description)</p>	<p>Is the problem statement well-defined?</p>	<p>Yes, the objective is clearly defined, and consistently relates to the problem analysis. STAP welcomes the clear description of the biophysical and socioeconomic context, influencing the degradation of land and livelihood constraints. The land degradation trends, and how climate change is (will) affect land degradation, (drought and extreme rainfall events) are also specified, and support the planned activities. An analysis is also provided of how the targeted watersheds were identified using baseline data from 2016, and other key indicators (e.g. NDVI data, population data, fuelwood consumption, and others).</p>	<p><i>The biophysical and socioeconomic context was further analyzed following STAP suggestions. In addition to developing an online system integrating spatially explicit indicators on climate change, degradation, socio economic data and biodiversity, the socio economic assessment performed during PPG phase further informed the project design.</i></p>
	<p>Are the barriers and threats well described, and substantiated by data and references?</p>	<p>Yes.</p>	<p><i>Barriers were further described based on the socio economic assessment carried out during PPG and land tenure issues were incorporated.</i></p>

2) the baseline scenario or any associated baseline projects	Is the baseline identified clearly?	Yes. The project defines the baseline using LDN indicators (land cover change, land productivity, soil organic carbon), and erosion rate.	<i>The baseline was described in more detail in the project document including an analysis using the latest data available for the baseline and reporting period for UNCCD reporting (for PRAIS4).</i>
	Does it provide a feasible basis for quantifying the project's benefits?	Yes.	
	Is the baseline sufficiently robust to support the incremental (additional cost) reasoning for the project?	Yes. The LDN indicators are linked to global environmental benefits ? e.g. soil organic carbon is needed for carbon storage and sequestration.	<i>During PPG maps on land use and productivity were produced using national and subnational data. An interactive application was developed to integrate the data and strengthen data transparency and sharing. The project includes activities to produce meaningful geospatial data that will support land use planning processes and LDN monitoring</i>
	are the multiple baseline analyses presented (supported by data and references), and the multiple benefits specified, including the proposed indicators;	Non-applicable.	

	<p>are the lessons learned from similar or related past GEF and non-GEF interventions described; and</p>	<p>A baseline description is provided of local and international initiatives that are tangential to this project. During the project development, please elaborate how this project will build on lessons learned from the other initiatives. Placing this information in a table will be helpful ? i.e. adding a column specifying lessons, and how this project will be influenced by this learning</p>	<p><i>The project document includes activities that will build on previous initiatives, such as the capacities already built in the communities and in particular women of the target landscapes regarding food transformation. The project knowledge management strategy will also capitalize on the achievements of FAO led project REFLOR-CV (Building Adaptive Capacity and Resilience of the Forestry Sector in Cabo Verde).</i></p>
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<p>3) the proposed alternative scenario with a brief description of expected outcomes and components of the project</p>	<p>What is the theory of change?</p>	<p>STAP welcomes the theory of change figure, and encourages the project team to write a narrative to accompany the figure during the PPG phase.</p> <p>The theory of change describes three causal pathways. The first pathway is focused on achieving LDN governance and planning. The project plans to mainstream LDN into policies and planning processes across scales and sectors, while enhancing local capacity to carry out LDN. The second pathway is focused on LDN demonstration. Increased SLM practices and technologies will be targeted, and upscaled as appropriate. Nature-based Solutions will be promoted. The third pathway will assess LDN by establishing monitoring, evaluation and learning systems. Data and information on LDN will be the focus of this pathway. Combined, the pathways seek to mainstream SLM in national planning and policies to achieve LDN for food and nutritional security.</p>	<p><i>The theory of change was updated to include the gender inequalities on land and water tenure in the first barrier. A narrative including the description of the causal pathways and assumptions considered in the theory of change is included in project document.</i></p>
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	What is the set of linked activities, outputs, and outcomes to address the project's objectives?	Together, the three pathways will achieve the project objective on achieving LDN and resilience, through SLM and landscape restoration, for food and nutritional security.	<i>Indeed, the project document is in line with the PIF and will address the barriers through the pathways identified.</i>
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<p>Are the mechanisms of change plausible, and is there a well-informed identification of the underlying assumptions?</p>	<p>Three assumptions are identified initially in the theory of change. During the project development, STAP suggests revisiting these initial assumptions, and asking whether there are additional underlying conditions, or resources, that need to exist for planned changes to occur. For example, are there other assumptions besides stakeholder willingness that underpin the development of land use plans, the adoption and the scaling of SLM?</p> <p>In addition, STAP welcomes FAO's and Cape Verde's plans to revisit the theory of change once a land potential analysis is conducted, and a gender assessment is completed.</p> <p>The theory of change also should be adjusted to reflect the identification of LDN metrics, and adjusted as needed based on the testing and adjustment of these metrics (component 1).</p>	<p><i>The initial assumptions were revisited and no additional underlying conditions or resources were identified for the planned changes to occur. The theory of change was revisited and land and water tenure inequalities were integrated as part of barrier 1. The project proposes to better estimate LDN metrics by using more representative datasets and methodologies across scales.</i></p>
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	Is there a recognition of what adaptations may be required during project implementation to respond to changing conditions in pursuit of the targeted outcomes?	Yes, the project recognizes that adaptations might be required due to climate change. However, it would be good for the project team to also consider other potential drivers of change ? such as population changes, fluctuations in the economy, among other elements.	<i>The project team has considered other potential drivers of change as suggested by the STAP, particularly the projections on food security given the recent Russia and Ukraine conflict and recurrent droughts. Special importance on the linkages between SLMs and value chains that increase food security and nutrition was given to address this situation.</i>
5) incremental/additional cost reasoning and expected contributions from the baseline, the GEF trust fund, LDCF, SCCF, and co-financing	GEF trust fund: will the proposed incremental activities lead to the delivery of global environmental benefits?	Yes with careful monitoring and evaluation and learning as described throughout the project, particularly in component 3.	<i>Monitoring and evaluation were further described in the alternative scenario.</i>
	Are the global environmental benefits/adaptation benefits explicitly defined?	Yes. Co-benefits also are identified. STAP recommends thinking on indicators and metrics to report on those co-benefits (see earlier comments)	<i>GEBs and indicators were revised and strengthened</i>

	<p>Are indicators, or methodologies, provided to will be measured and monitored during project implementation?</p> <p>Yes. The project will measure and monitor the voluntary LDN indicators on land cover land productivity, and soil organic carbon. The project also will apply the LDN response hierarchy of avoid, reduce, reverse land degradation. The EX-Ante Carbon-balance Tool (EX-ACT v9.0) will be used to estimate and monitor soil carbon benefits. Other national indicators linked to SDG 15.3 will also be identified during the project development.</p> <p>See earlier comments on developing national LDN indicators complementary to the three global indicators.</p>	<p><i>In addition to the 3 LDN change of state indicators, during PPG complementary indicators and metrics to monitor the LDN pathway were explored and included in the project document.</i></p>
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	<p>What activities will be implemented to increase the project's resilience to climate change?</p>	<p>The project plans to rely on technologies that further enhance the resilience of the land to negative impacts from climate change, including relying on nature-based solutions, conservation agriculture, and other practices. The climate risk assessment also provides detailed recommendations on practices and technologies the project could usefully adopt to increase the project's resilience to climate change.</p>	<p><i>Component 2 will focus on the project implementation landscapes and will implement NBS to enhance climate resilience in Cabo Verde. These involve improved carbon sequestration and soil conservation, and improved irrigation. The project will apply a combination of the technologies, through an integrated landscape approach to progress towards LDN, based on the priorities identified during PPG and the updated land use plans.</i></p>
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<p>7) innovative, sustainability and potential for scaling-up</p>	<p>Is the project innovative, for example, in its design, method of financing, technology, business model, policy, monitoring and evaluation, or learning?</p>	<p>Yes. The project aims to mainstream SLM into national and planning processes to contribute to Cape Verde's LDN targets, achieve landscape restoration, and a number of co-benefits linked to food security, improved livelihoods, and resilience. The project's LDN decision support system is also innovative and integral to the project's management of knowledge and learning, and ultimately scaling on SLM, local benefits (e.g. food security) and global benefits (e.g. carbon sequestration).</p> <p>There will also be additional innovation if the project pursues the stated analysis of policy options accounting for the dynamic system behavior.</p>	<p><i>The basis of the LDN DSS was developed during PPG phase to integrate baseline information and inform the project design process. The system is based on the latest technologies available and makes use of cloud computing and several sources of data in transparent way.</i></p>
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	<p>Is there a clearly-articulated vision of how the innovation will be scaled-up, for example, over time, across geographies, among institutional actors?</p>	<p>Partly. The intention to define explicitly a vision for scaling SLM will be defined at a later stage. As pathways associated with scaling SLM in the theory of change along with assumptions and risks affiliated with scaling SLM across sectors and scales.</p>	<p><i>During PPG phase a multicriteria module in the LDN DSS was developed in order to provide the basis for scaling up SLM by the identification of potential areas for the most appropriate responses (avoid, reduce and reverse) SLM implementation.</i></p>
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	<p>Will incremental adaptation be required, or more fundamental transformational change to achieve long term sustainability?</p>	<p>It is likely that both, incremental, and transformational, change will be required to maintain resilience of the targeted social-ecological systems. Suggest using the theory of change to generate knowledge and learning by monitoring the outcomes while looking for opportunities to adapt (incremental change) or transform more fundamentally its pathway.</p>	<p><i>The project will strengthen dialogue among stakeholders and farmer to farmer knowledge exchange, promoting gender inclusive organizations in target landscapes. This will lead to greater attention to sustainable production practices and better natural resource management to preserve ecosystem function under increased climate stress and ensure the sustainability of agricultural production systems and risk-adjusted returns to farmers.</i></p>
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<p>1b. Project Map and Coordinates. Please provide geo-referenced information and map where the project interventions will take place.</p>	<p>Yes, maps of the targeted watersheds are provided.</p> <p>When developing the project, suggest referring to STAP's guidance on Earth Observation (page A1-2)</p> <p>2) The guidance specifies elements that ought to be covered in a map.</p>	<p><i>STAP suggestions were considered when producing maps and a user friendly geospatial system was developed to explore and integrate the available and developed maps:</i> https://projectgeffao.users.earthengine.app/view/ldn-cabo-verde</p>
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<p>2. Stakeholders. Select the stakeholders that have participated in consultations during the project identification phase: Indigenous people and local communities; Civil society organizations; Private sector entities. 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.</p>	<p>Have all the key relevant stakeholders been identified to cover the complexity of the problem, and project implementation barriers?</p>	<p>Yes. STAP welcomes the stakeholder engagement plan that will be developed during the project design. During this process, it would be valuable to revisit the theory of change with stakeholders, adjust as necessary, including by involving additional stakeholders that are essential to the design and implementation of the project.</p> <p>Furthermore, the project proponents should aim to build trust and legitimacy during the stakeholder engagement process. Such efforts establish relationships that facilitate the uptake of behavioral change interventions, which are linked to scaling and transformational change. STAP's advice on behavioral change would be useful to consider during forthcoming stakeholder consultations.</p>	<p><i>Stakeholders were engaged throughout project formulation. A field trip visiting the target areas was undertaken by the project design team and national stakeholders, during which consultations and capacity building activities took place, building trust and legitimacy. Results and conclusions are presented in the stakeholder engagement matrix and a stakeholder engagement plan is proposed in the project document considering the consultations.</i></p>
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	What are the stakeholders? roles, and how will their combined roles contribute to robust project design, to achieving global environmental outcomes, and to lessons learned and knowledge?	Please specify stakeholders? roles during the PPG phase.	<i>Key stakeholders and their role in the project have been further identified and summarized in a table in the ProDoc.</i>
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<p>3. Gender Equality and Women's Empowerment</p> <p>. Please briefly include below any gender dimensions relevant to the project, and any plans to address gender in project design (e.g. gender analysis). Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment? Yes/no/tbd.</p> <p>If possible, indicate in which results area(s) the project is expected to contribute to gender equality: access to and control over resources; participation and decision-making; and/or economic benefits or services. Will the</p>	<p>Have gender differentiated risks and opportunities been identified, and were preliminary response measures described that would address these differences?</p>	<p>Gender differentiated risks and opportunities will be identified during the PPG. STAP welcomes FAO's plan to involve a gender expert during the design process, and to deepen further a gender analysis with field studies.</p>	<p><i>A gender expert developed a comprehensive gender analysis and gender action plan were developed, to identify possible barriers for women and men based on gender relationships and roles regarding land degradation and its impact on their quality of life; and to propose specific measures to guarantee that men and women of the beneficiary communities are equally involved in order to assist and actively participate in, contribute to and benefit from the project.</i></p> <p><i>The analysis was conducted based on a multi-level stakeholder mapping, gendered focus group discussions at the watershed level and a desk review, including quantitative data collection and mining. The analysis and action plan were led and developed by a national gender expert.:</i></p>
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<p>Do gender considerations hinder full participation of an important stakeholder group (or groups)? If so, how will these obstacles be addressed?</p>	<p>Please consider whether the participation of an important group (or groups) are hindered during the gender analysis.</p>	<p><i>Gendered focus group discussions allowed women to participate in consultation freely. A gender action plan was developed.</i></p>
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<p>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</p>	<p>Are the identified risks valid and comprehensive? Are the risks specifically for things outside the project's control? Are there social and environmental risks which could affect the project? For climate risk, and climate resilience measures: How will the project's objectives or outputs be affected by climate risks over the period 2020 to 2050, and have the impact of these risks been addressed adequately? Has the sensitivity to climate change, and its impacts, been assessed? Have resilience practices and measures to address projected climate risks and impacts been considered? How will these be dealt with? What</p>	<p>Yes, the risks to the project have been initially identified in the PIF. STAP welcomes the climate risk assessment, and encourages the project team to implement the recommendations for each component. STAP suggests revisiting the risks during the project design phase, and ensuring they form part of the theory of change. Additionally, STAP recommends developing two, or three, potential alternative pathways during the subsequent phase. This scenario planning will help the project manage and respond to long-term drivers, such as drought, economic slow-down, and population changes (in and out migration). Refer to STAP's advice on resilience, theory of change durability for assistance on scenario planning. (STAP is developing further advice on scenario planning in 2022).</p>	<p><i>The climate change context and risks at the project sites have been described and have informed the preliminary selection of SLM practices that will be introduced. The projections in terms of food security and climate were considered to propose a strategy that could be successfully implemented in case the worse scenarios (persistent drought and increasing food insecurity) take place.</i></p>
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<p>6. Coordination Outline the coordination with other relevant GEF-financed and other related initiatives</p>	<p>Are the project proponents tapping into relevant knowledge and learning generated by other projects, including GEF projects?</p>	<p>Yes.</p>	
	<p>Is there adequate recognition of previous projects and the learning derived from them?</p>	<p>Partly. Coordination are described at length for some projects, while others are less so. Suggest adding a table listing the projects, specifying the lessons, and how these lessons will inform the design of this project. This information also can be listed under the baseline narrative.</p>	<p><i>During the PPG phase a more thorough stocktaking of other projects and lessons learnt was undertaken. The current project is building on the lessons and knowledge generated by these projects. The LDN DSS will build on the developments of the GEF funded project on LDN in Turkey.</i></p>

<p>8. Knowledge management. Outline the ?Knowledge Management Approach? for the project, and how it will contribute to the project?s overall impact, including plans to learn from relevant projects, initiatives and evaluations.</p>	<p>What overall approach will be taken, and what knowledge management indicators and metrics will be used?</p>	<p>In addition to developing products, the project will rely on component 3 to manage knowledge through monitoring, evaluation, and learning. The project plans to adapt as necessary based on the outcomes of component 3. STAP also encourages the project team to use the theory of change for knowledge management and results monitoring. This process would involve revisiting the theory of change during implementation and testing, or validating, assumptions, as well as assessing whether the outcomes need to be enhanced, maintained, increased, decreased, or other</p>	<p><i>The project has developed a learning cycle that will be informed by its M&E system. In addition, a communication strategy will be implemented and lessons analysed and knowledge management products disseminated under Component 3. Indicators and metrics for this is included in the Project Result Framework. Assumptions were validated.</i></p>
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ANNEX C: Status of Utilization of Project Preparation Grant (PPG).
(Provide detailed funding amount of the PPG activities financing status in the table below:

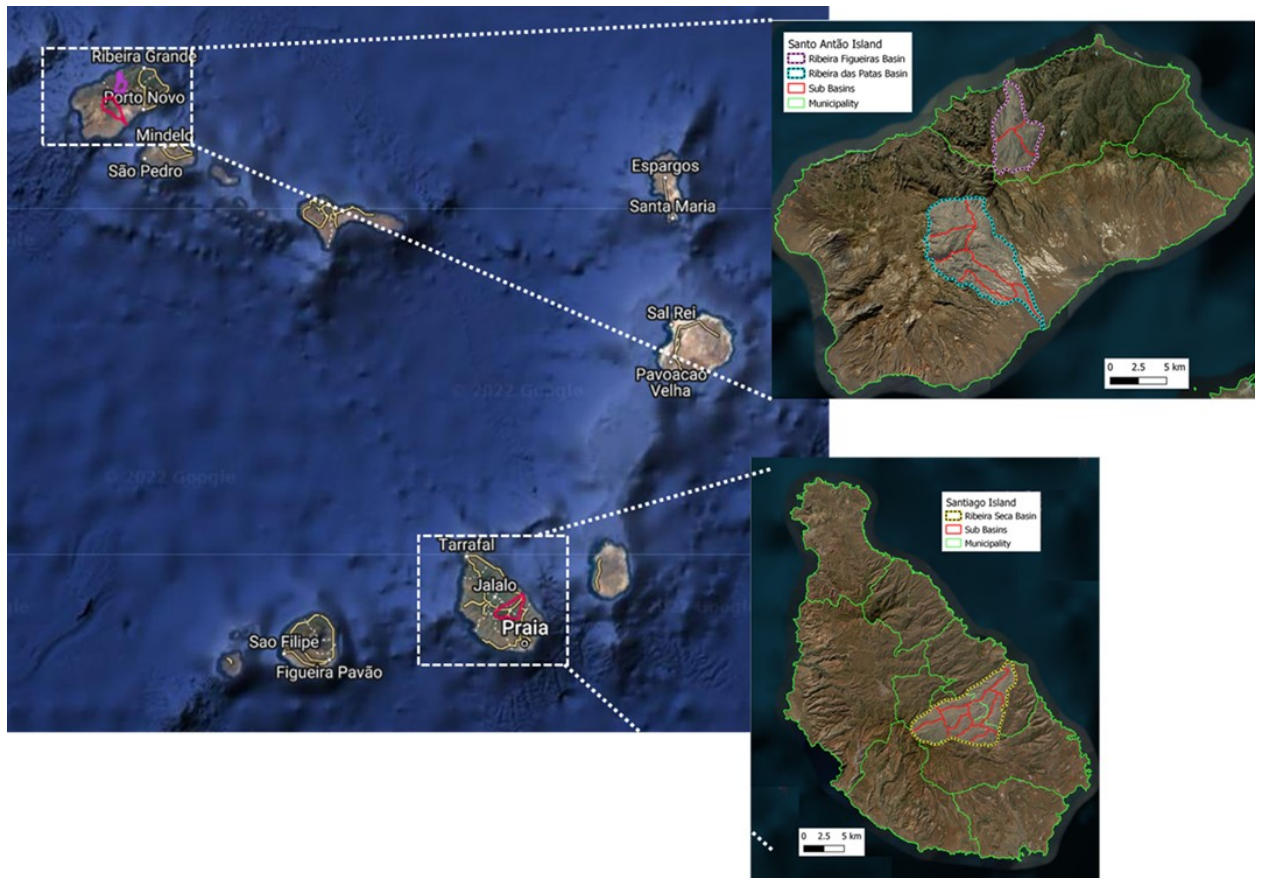
<p>PPG Grant Approved at PIF: 100,000 USD GCP/CVI/051P/GFF</p>			
<p><i>PPG Activities</i></p>	<p><i>Budgeted Amount (\$)</i></p>	<p><i>Amount Spent To date (\$)</i></p>	<p><i>Amount Committed</i></p>

HR inputs (Personnel)	68,000	14,200	53,800
(5014) Contracts	5,000	4,513	487
(5021) Travel	19,000	18,733	168
(5023) Training	8,000	8,099	
Total	100,000	45,545	54,455

ANNEX D: Project Map(s) and Coordinates

Please attach the geographical location of the project area, if possible.

<https://projectgeffao.users.earthengine.app/view/ldn-cabo-verde>



Location of the three target basins in the Santo Ant?o and Santiago Islands.

Watershed	Island	Municipality	Latitude	Longitude
Ribeira Seca	Santiago	SLDO/SD/SC	15.07	-23.56
Ribeira das Patas	Santo Ant?o	Ribeira Grande	17.03	-25.20
Vale de Gar?a	Santo Ant?o	Porto Novo	17.12	-25.16

ANNEX E: Project Budget Table

Please attach a project budget table.

FAD Cost Categories	Unit	No. of units	Unit cost	Component 1			Component 2			Component 3		M&E	PMC	Total	Operational Partner Budget	FAO Support Services	Total GEF	Year
				1	1	Total	2	2	Total	3	Total							
B013 Consultants																		
Chief Technical Advisor	Daily rate	160	350	14,000	5,600	19,600	28,000		28,000	5,600	5,600	2,800		96,000	96,000		96,000	1
Nutrition Expert	Daily rate	40	350			-	14,000	14,000			-			14,000	14,000		14,000	1
Food Systems Expert	Daily rate	40	350			-	14,000	14,000			-			14,000	14,000		14,000	1
Sub-total International Consultants				14,000	6,000	20,000	28,000	28,000	64,000	6,000	6,000	2,800	-	96,000	96,000	-	96,000	1
National Project Coordinator	Monthly salary	48	1,800			-			-		-	86,400		86,400	86,400		86,400	2
Gender Expert (partially co-financed)	Monthly salary	36	1,800	6,480	6,480	12,960	16,200	16,200	32,400	9,720	9,720	9,720		64,800	64,800		64,800	1
Monitoring, Evaluation and Learning Expert (partially co-financed)	Monthly salary	36	1,800			-			-		-	64,800		64,800	64,800		64,800	1
LDN/SDM Expert	Monthly salary	48	1,800	21,600	17,280	38,880	17,280		17,280	17,280	17,280	8,540		82,080	82,080		82,080	2
Administrative and Financial Manager (partially co-financed)	Monthly salary	36	1,800			-			-		-	54,000		54,000	54,000		54,000	1
Food Security and Nutrition Expert	Daily rate	100	200			-	20,000	20,000			-			20,000	20,000		20,000	1
Markets and Food Value Chain Development Expert	Daily rate	100	200			-	20,000	20,000			-			20,000	20,000		20,000	1
Environment Experts (co-financing)	Daily rate	100				-			-		-			-	-		-	1
Rural Engineers (co-financing)	Daily rate	300				-			-		-			-	-		-	1
Rural Extensionists (one per watershed)	Monthly salary	144	500	11,000	11,000	22,000	50,000		50,000					72,000	72,000		72,000	1
Sub-total national Consultants				32,080	34,760	73,840	53,480	66,200	132,680	27,000	27,000	83,100	140,400	454,050	454,050	-	454,050	11
B013 Sub-total consultants				63,080	40,360	93,440	111,480	84,200	196,880	32,800	32,800	85,940	140,400	648,080	648,080	-	648,080	12
B020 Contracts																		
Rehabilitation of 1100 ha of degraded land	hectares	1100	350				385,000		385,000		-			385,000	385,000		385,000	1
Tri-cropping of congo beans in association with other crops in 900 ha	hectares	900	200				180,000		180,000		-			180,000	180,000		180,000	1
Implementation of Agroforestry with fruit trees in 800 ha	hectares	500	200				100,000		100,000		-			100,000	100,000		100,000	1
Implementation of improved water management technologies and practices	hectares	1500	350				525,000		525,000		-			525,000	525,000		525,000	1
Development of food value chains (support production units, mentorship and branding, marketing, ...)	lump sum	1	11,200				11,200	11,200	23,200		-			25,200	25,200		25,200	1
Development RFP strategy and financial scaling	lump sum	1	4,000				4,000	4,000	8,000		-			8,000	8,000		8,000	1
Publication of maps	lump sum	1	4,000				4,000		4,000	4,000				4,000	4,000		4,000	1
Mid-Term Review	unit	1	40,000				-		-		-	40,000		40,000		40,000	40,000	1
Terminal Evaluation	unit	1	40,000				-		-		-	40,000		40,000		40,000	40,000	1
Terminal Report	unit	1	7,000				-		-		-	7,000		7,000		7,000	7,000	1
Audit (1 per year, 10P)	unit	4	7,125				-		-		-	28,500		28,500		28,500	28,500	1
Spot-check (2 per year, 10P)	unit	8	3,600				-		-		-	28,800		28,800		28,800	28,800	1
B020 Sub-total Contracts				-	-	-	1,206,800	16,800	1,221,200	4,000	4,000	87,000	67,300	1,385,600	1,228,200	144,300	1,385,600	1

B021 Travel				8,720	8,720	17,440	8,720	8,720	17,440	8,720	8,720			45,600	45,600		
Lump sum / International travel	Lump Sum	1	45,600														
(Lump sum / National travel)	Lump Sum	1	80,000	12,000	12,000	24,000	12,000	12,000	24,000	16,000	16,000	16,000	-	80,000	80,000		
B021 Sub-total travel				20,720	20,720	41,440	20,720	20,720	41,440	24,720	24,720	16,000	-	123,600	123,600		
B023 Training																	
Inception Workshop	Lump Sum	2	3,500									7,000		7,000	7,000		
Final Workshop	Lump Sum	2	3,500									7,000		7,000	7,000		
RSC meetings	unit	4	3,500									14,000		14,000	14,000		
Gender related training, learning and awareness raising	unit	4	3,500	7,000	7,000	14,000								14,000	14,000		
Business development training	unit	3	3,500				10,500	10,500						10,500	10,500		
Workshops on LDN Framework, VGGT, LDN DSS, LDN action plan	unit	7	3,500	24,000										24,000	24,000		
Training of decision makers and technical staff DGASP	Lump Sum	1	5,000			5,000	5,000							5,000	5,000		
Capacity development of farmers (including demonstration farms)	Lump Sum	1	5,000			5,000								5,000	5,000		
Institutions, multi-sector and multi-stakeholder dialogues	Lump Sum	1	5,000			5,000		5,000						5,000	5,000		
Suppliers/producers/farmers/ families cultivation best practices training	Lump Sum	1	10,000					10,000	10,000					10,000	10,000		
Train women and young people in processing, transformation techniques and quality standard	Lump Sum	1	10,000					10,000	10,000					10,000	10,000		
B023 Sub-total training				31,600	17,000	48,600	6,000	30,600	36,600	-	-	28,000	-	112,000	112,000		
B034 Expendable procurement																	
Field work related spare parts, tools, and other	Lump sum	1	10,000			10,000		10,000						10,000	10,000		
B034 Sub-total expendable procurement				-	-	10,000	-	10,000	-	-	-	-	-	10,000	10,000		
B025 OOE Budget																	
(Lump sum) misc. expenses	Lump sum	1	19,925	3,985	3,985	7,970	3,985	3,985	7,970	3,985	3,985			19,925	19,925		
B025 Sub-total OOE budget				3,985	3,985	7,970	3,985	3,985	7,970	3,985	3,985	-	-	19,925	19,925		
TOTAL				100,285	82,065	191,350	1,986,765	155,005	1,511,730	65,505	65,505	216,960	197,700	2,185,105	2,036,805	144,300	2,185,105

SUBTOTAL Comp 1	191,350	
SUBTOTAL Comp 2	1,611,760	
SUBTOTAL Comp 3	66,305	
MSE Budget	216,960	252,286
Subtotal	1,936,405	
Project Management Cost (PMC)	197,700	
TOTAL OEF	2,133,105	

ANNEX F: (For NGI only) Termsheet

Instructions. Please submit an finalized termsheet in this section. The NGI Program Call for Proposals provided a template in Annex A of the Call for Proposals that can be used by the Agency. Agencies can use their own termsheets but must add sections on Currency Risk, Co-financing Ratio and Financial Additionality as defined in the template provided in Annex A of the Call for proposals. Termsheets submitted at CEO endorsement stage should include final terms and conditions of the financing.

N/A

ANNEX G: (For NGI only) Reflows

Instructions. Please submit a reflows table as provided in Annex B of the NGI Program Call for Proposals and the Trustee excel sheet for reflows (as provided by the Secretariat or the Trustee) in the Document Section of the CEO endorsement. The Agency is required to quantify any expected financial return/gains/interests earned on non-grant instruments that will be transferred to the GEF Trust Fund as noted in the Guidelines on the Project and Program Cycle Policy. Partner Agencies will be required to comply with the reflows procedures established in their respective Financial Procedures Agreement with the GEF Trustee. Agencies are welcomed to provide assumptions that explain expected financial reflow schedules.

N/A

ANNEX H: (For NGI only) Agency Capacity to generate reflows

Instructions. The GEF Agency submitting the CEO endorsement request is required to respond to any questions raised as part of the PIF review process that required clarifications on the Agency Capacity to manage reflows. This Annex seeks to demonstrate Agencies? capacity and eligibility to administer NGI resources as established in the Guidelines on the Project and Program Cycle Policy, GEF/C.52/Inf.06/Rev.01, June 9, 2017 (Annex 5).

N/A