



Improving biodiversity mainstreaming in the agro-forestry and fishery sectors in São Tomé and Príncipe

Part I: Project Information

GEF ID

10570

Project Type

FSP

Type of Trust Fund

GET

CBIT/NGI

CBIT

NGI

Project Title

Improving biodiversity mainstreaming in the agro-forestry and fishery sectors in São Tomé and Príncipe

Countries

Sao Tome and Principe

Agency(ies)

IFAD

Other Executing Partner(s)

Ministry of Agriculture, Fisheries and Rural Development

Executing Partner Type

Government

GEF Focal Area

Biodiversity

Taxonomy

Focal Areas, Civil Society, Stakeholders, Gender Equality, Capacity, Knowledge and Research, Biodiversity, Species, Invasive Alien Species, Biomes, Rivers, Mainstreaming, Infrastructure, Fisheries, Agriculture and agrobiodiversity, Influencing models, Strengthen institutional capacity and decision-making, Convene multi-stakeholder alliances, Transform policy and regulatory environments, Demonstrate innovative approaches, Private Sector, Individuals/Entrepreneurs, Community Based Organization, Non-Governmental Organization, Type of Engagement, Information Dissemination, Participation, Partnership, Consultation, Beneficiaries, Communications, Education, Public Campaigns, Awareness Raising, Local Communities, Gender Mainstreaming, Sex-disaggregated indicators, Women groups, Gender-sensitive indicators, Gender results areas, Capacity Development, Access to benefits and services, Access and control over natural resources, Participation and leadership, Learning, Adaptive management, Knowledge Exchange, Knowledge Generation, Innovation

Rio Markers**Climate Change Mitigation**

Climate Change Mitigation 1

Climate Change Adaptation

Climate Change Adaptation 1

Duration

72 In Months

Agency Fee(\$)

336,621.00

Submission Date

10/29/2020

A. Indicative Focal/Non-Focal Area Elements

Programming Directions	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
BD-1-1	GET	3,543,379.00	6,700,000.00
	Total Project Cost (\$)	3,543,379.00	6,700,000.00

B. Indicative Project description summary

Project Objective

To mainstream biodiversity conservation into the agro-forestry and fishery production and management to minimize the negative impacts on biodiversity of the agro-forestry and fishery sector development while enhancing the contribution of ecosystem services to livelihoods in São Tomé and Príncipe.

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
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Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
Component 1: Enabling policy, institutional and fiscal frameworks for mainstreaming biodiversity into the agro-forestry and fishery sectors	Technical Assistance	<p>1. Strengthened and harmonized policies and standards to mainstream biodiversity conservation into the agro-forestry and fishery sectors, as indicated by:</p> <ul style="list-style-type: none"> - <i>Agricultural and forestry sectors</i> - <i>Fishery sector policy</i> - <i>NBAP</i> - <i>National Environment policy</i> - <i>Increased number of certified and agricultural labelled products in the cocoa, coffee, wood and fish sectors leading to positive biodiversity criteria and impacts</i> - <i>Enhanced institutional capacity for mainstreaming biodiversity conservation into agro forestry and fishery planning, management and monitoring, measured through IFAD investment</i> 	<p>1.1. Biodiversity-compatible practices integrated into existing agro-forestry and fishery production standards for improved certifications and labelling of organic products for exports and domestic markets with a special attention to gender issues.</p> <p>1.2. Guidelines and policies on biodiversity finance developed and implemented in the agro forestry and fishery sectors to address harmful subsidies and provide incentives for biodiversity-friendly land and sustainable ecosystems management. Gender issues will be mainstreamed into these guidelines and policies during the design.</p> <p>1.3. One biodiversity public expenditure review in the agroforestry and fishery sectors undertaken to support advocacy for more biodiversity finance in the agroforestry and fishery sectors in STP. Gap of public expenditure allocation to empower women in these sectors will be assessed and integrated.</p>	GET	900,000.00	1,630,000.00

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
Component 2: Mainstreaming biodiversity into agricultural value chains development and financing mechanisms	Technical Assistance	<p>Increased sustainable, biodiversity-friendly agroforestry-fishery production and financing through biodiversity-compatible practices and to produce certified biodiversity based agriculture products by:</p> <p><i>Setting a pilot biodiversity financial payment for environmental services (PES) fund within the national investment bank to increase by 50% superficies under PES which targets women</i></p> <p><i>Increased revenues from marketing of certified biodiversity-based agroforestry and fishery products including for women by 100% through a 20% increase in the area under sustainable and biodiversity sensitive cultivation</i></p> <p><i>Reduced by 40% superficies under pressures from 1500 smallholder farmers and fishers e.g. reduced loss/</i></p>	<p>2.1. Spatial and land-use planning to ensure that land development in agro forestry sector development and resource use is appropriately situated to maximize agroforestry production with limited negative impacts on biodiversity and associated ecosystem services</p> <p>2.2. 1500 small holder farmers and fishermen (at least 50% women & youth) improve and change traditional agro-forestry production systems towards more biodiversity-compatible practices and products including the use of bio digesters and solar energy technologies that meet standards, certification and labelling requirements</p> <p>2.3. Piloting one biodiversity financial payment for environmental services (PES) fund within the national investment bank of São Tomé to provide financial incentives to agroforestry and fishery</p>	GET	2,299,760.00	4,000,000.00

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)	
Component 3: Monitoring, evaluation and knowledge management	Technical Assistance	The results and lessons generated from the project are monitored, collected, documented and disseminated.	<p>Output 3.1: knowledge products are generated and disseminated.</p> <p>Output 3.2 : Functioning and effective monitoring and evaluation plan in place.</p>	GET	176,000.00	300,000.00	
Sub Total (\$)					3,375,760.00	5,930,000.00	
Project Management Cost (PMC)							
					GET	167,619.00	770,000.00
Sub Total(\$)					167,619.00	770,000.00	
Total Project Cost(\$)					3,543,379.00	6,700,000.00	

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

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount(\$)
GEF Agency	IFAD	Grant	Investment mobilized	4,800,000.00
Donor Agency	International Labour Organization (ILO)	Grant	Investment mobilized	800,000.00
Recipient Country Government	Direction de l'agriculture	In-kind	Recurrent expenditures	400,000.00
Beneficiaries	Beneficiaries	In-kind	Recurrent expenditures	500,000.00
GEF Agency	The IFAD Rural Poor Stimulus Facility (RPSF)- COVID 19	Grant	Investment mobilized	200,000.00
			Total Project Cost(\$)	6,700,000.00

Describe how any "Investment Mobilized" was identified

The investment mobilised defined as co-financing that excludes recurrent expenditures is mixed and coming from two sources : a. IFAD co-financing : Through the project for support to marketing, agricultural productivity and nutrition (COMPRAN) which main development is to sustainably improve the incomes and food and nutritional security of small producers, especially women and youth. The expected performance at the end of the project includes: (i) support for wealth creation will impact 75 per cent of supported households, which will report an increase in income, as well as micro-project promoters and young micro-entrepreneurs; (ii) 75 per cent of supported producer organizations will declare a profit growth of around 30 per cent; (iii) a significant improvement in nutritional status; (iv) the adoption of environmentally friendly and climate resilient production techniques, technologies and practices by supported producers; and (v) the development of structural infrastructure to improve the resilience of production systems. Components. COMPRAN is structured in three components: component A: consolidation and development of business relations in the relevant sectors; Component B: promotion of efficient and resilient production systems; and Component C: provide coordination, management and monitoring and evaluation. The project will reach 8,700 rural households, corresponding to 34,800 people, 40 per cent of whom are women and 50 per cent youth. IFAD investment is estimated to 4,800,000 USD over 6 years with co-financing from ILO. This project has been approved by the IFAD board in 2020. b. The IFAD Rural Poor Stimulus Facility (RPSF)- COVID 19 ; The IFAD Rural Poor Stimulus Facility (RPSF) is a rapid response stimulus package for the rural poor people provided by IFAD to accelerate their recovery, by leveraging on the ongoing IFAD-supported COMPRAN project of which the GEF project is attached. The availability of RPSF funds would also mitigate the significant risks and negative impacts associated with relying on repurposing of COMPRAN and to address immediate COVID-19 needs. The development objective of the project will be focused on maintaining and improving agricultural productive capacity, post-harvest and market access

for small-scale producers affected by COVID-19 pandemic crisis. The activities would then be organised around two technical and one organisational components of the RPSF. The initial allocation is US\$200,000 Co-financing from ILO: is an additional co-financing attached to the IFAD baseline investment COMPRAN equivalent to 800,000 USD. It is dedicated to capacity building of beneficiaries on agricultural value chain development and commercialization Recurrent expenditures: Contributions from government and beneficiaries in the form of goods or services (in kind) other than money, including but not limited to salaries and wages, office space, and utilities. From the government side , recurrent expenditures are in form of tax exemption equivalent to 400,000 USD while from the beneficiaries, these are contributions in labour and or assets.

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

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)	Total(\$)
IFAD	GET	Sao Tome and Principe	Biodiversity	BD STAR Allocation	3,543,379	336,621	3,880,000.00
Total GEF Resources(\$)					3,543,379.00	336,621.00	3,880,000.00

E. Project Preparation Grant (PPG)

PPG Required

PPG Amount (\$)

109,589

PPG Agency Fee (\$)

10,411

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)	Total(\$)
IFAD	GET	Sao Tome and Principe	Biodiversity	BD STAR Allocation	109,589	10,411	120,000.00
Total Project Costs(\$)					109,589.00	10,411.00	120,000.00

Core Indicators

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

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

Indicator 1.1 Terrestrial Protected Areas Newly created

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

Name of the Protected Area	WDPA ID	IUCN Category	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
Akula National Park	125689	Select				<input type="checkbox"/>

Indicator 1.2 Terrestrial Protected Areas Under improved Management effectiveness

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

Name of the Protected Area	WDPA ID	IUCN Category	Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)	METT score (Baseline at CEO Endorsement)	METT score (Achieved at MTR)	METT score (Achieved at TE)
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Indicator 2 Marine protected areas created or under improved management for conservation and sustainable use

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
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0.00	0.00	0.00	0.00
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Indicator 2.1 Marine Protected Areas Newly created

Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
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0.00	0.00	0.00	0.00
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Name of the Protected Area	WDPA ID	IUCN Category	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
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Indicator 2.2 Marine Protected Areas Under improved management effectiveness

Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
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0.00	0.00	0.00	0.00
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Name of the Protected Area	WDPA ID	IUCN Category	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)	METT score (Baseline at CEO Endorsement)	METT score (Achieved at MTR)	METT score (Achieved at TE)
Akula National Park	125689	Select							

Indicator 3 Area of land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
10700.00	0.00	0.00	0.00

Indicator 3.1 Area of degraded agricultural land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
10,700.00			

Indicator 3.2 Area of Forest and Forest Land restored

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

Indicator 3.3 Area of natural grass and shrublands restored

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

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

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

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

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
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10700.00	0.00	0.00	0.00
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Indicator 4.1 Area of landscapes under improved management to benefit biodiversity (hectares, qualitative assessment, non-certified)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
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10,700.00			
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Indicator 4.2 Area of landscapes that meets national or international third party certification that incorporates biodiversity considerations (hectares)

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

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

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

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
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Documents (Please upload document(s) that justifies the HCVF)

Title

Submitted

Indicator 5 Area of marine habitat under improved practices to benefit biodiversity (excluding protected areas)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
20,000.00			

Indicator 5.1 Number of fisheries that meet national or international third party certification that incorporates biodiversity considerations

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
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Type/name of the third-party certification

Indicator 5.2 Number of Large Marine Ecosystems (LMEs) with reduced pollutions and hypoxia

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (achieved at MTR)	Number (achieved at TE)
0	0	0	0

LME at PIF	LME at CEO Endorsement	LME at MTR	LME at TE
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Indicator 5.3 Amount of Marine Litter Avoided

Metric Tons (expected at PIF)	Metric Tons (expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
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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)	155523	0	0	0
Expected metric tons of CO ₂ e (indirect)	0	0	0	0

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

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO ₂ e (direct)	155,523			
Expected metric tons of CO ₂ e (indirect)				
Anticipated start year of accounting				
Duration of accounting	20			

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

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

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

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

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

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

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

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female	3,480			
Male	3,480			
Total	6960	0	0	0

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

The project's targets for contributing to GEF-7 core indicators are based on mainstreaming biodiversity conservation into the agro-forestry and fishery production and management to minimize the negative impacts on biodiversity of the agro – forestry and fishery sector development while enhancing the contribution of ecosystem services to livelihoods in São Tomé. The project will benefit 48,300 people living on agro-forestry and fishery with unsustainable practices and management which have negative impacts and pressures on biodiversity and ecosystems (terrestrial area, freshwater wetland, marine area and offshore islands). The project benefits will be measured through improved agroforestry and fishery practices and management which reduce and minimize the negative impacts on biodiversity by sub sectors (agriculture, forestry, fishery). Through this project, it is expected to develop strengthened and harmonized policies, technical guidance, standards as well as capacity building through trainings to mainstream biodiversity conservation into the agricultural sector as well as promoting mainstreaming biodiversity into agricultural value chains development and financing mechanisms. All project contributions to core indicators will be confirmed during the PPG phase.

Part II. Project Justification

1a. Project Description

1A. PROJECT DESCRIPTION

1a1. Sao Tome and Principe's development and biodiversity profiles

Development profile

1. The island nation of São Tomé and Príncipe is located in the Gulf of Guinea, separated from the African mainland by the Atlantic ocean approximately 1800 m deep. The islands are part of a volcanic range that includes Pagalu to the southwest and Bioko on the northeast, extending to the African mainland via Mount Cameroon and reaching Lake Tchad. São Tomé and Príncipe faces the typical, common handicaps of a small island economy: high vulnerability to external shocks such as climate change, the inability to pursue economies of scale, lack of basic infrastructure and services, low human capacity, and a weak private sector. The sustained average economic growth of 5.2 percent over the last past decades has not been sufficient to absorb the level of poverty of rural people that depend mainly on agriculture, forestry, fishery and tourism sectors. The situation is likely to deteriorate given the economic and social impacts of the covid-19 pandemic in the country. Indeed, economic growth is likely to decelerate to 6.1 per cent (baseline scenario) to 8.2 per cent (pessimistic scenario in case the pandemic crisis continue until the end of the year) in 2020[1]¹. The extreme fragility of the socio-economic situation São Tomé and Príncipe is facing due to the pandemic outbreak is very high. As of 10 August, São Tomé and Príncipe has registered 878 cases of COVID-19, with 800 recoveries and 15 deaths. The per capita incidence of COVID-19 (3,999) is equivalent to that in Italy. This shows how the transmission has been significant on this small island and the risks to the health system. The coronavirus has made smallholder of the agroforestry and fishery sectors agriculture riskier than ever. Since the temporary closure of STP's international airport and a slowdown in maritime traffic in March 2020, the COVID-19 pandemic has caused food shortages, triggering food and nutritional insecurity and inflation. The UN agencies, and other development partners developed a short and a COVID -19 medium term emergency plan of which the recently IFAD Rural Poor Stimulus Facility (RPSF) approved proposal contribute to. The country's economy relies heavily on cocoa, tourism and hotel industry which are strongly impacted by the pandemic outbreak. Cocoa exports were estimated at 6.90 million USD in 2019, representing 52.4 per cent of total good exports and 1.6 per cent of GDP. Agriculture which is one of the key sector in Sao Tome and Principe, where 52 per cent of economically active people work in agriculture (57 per cent of economically active men and 42 per cent of economically active women). The sector is characterized by cash crop such as cocoa, and most food for household consumption was imported. The reliance of the country on incomes from cocoa exports, the imposed limitation of movement of people and goods contribute to food systems disruptions. Such limitations resulted form the pandemic outbreak have impacts on the way food is distributed and accessible to people, thus
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jeopardizing food security. São Tomé and Príncipe ranked 143 out of 188 countries in the UNDP Human Development Index in 2014. Currently, agricultural growth (agriculture, fishery, forestry) *will be negatively impacted* by the *predicted economic recession* deriving from *the COVID-19* outbreak, thus making the mobilisation of necessary investments that would strengthen the resilience of sustainable food systems which integrate biodiversity conservation the country's top priority. The agro-forestry and fishery sectors plays a key role in São Tomé and Príncipe and provides up to 22% of GDP while only 60% of the working population is primarily dependent on this sector (US Foreign Agriculture Service, 2016). Agriculture GDP declined after independence in 1975, mainly due to the decline in cocoa production, but recovered after 1991. Since 1991, agricultural GDP has been mainly composed of agricultural products for local consumption, with bananas and coconut making up for over 50% of agriculture GDP (2016). It is estimated that 64,000 people in STP live in rural areas (or 33% of the total population) and depend on agro forestry and fishery for and subsistence and local market based primary sector and income. Annual growth in gross domestic product (GDP) has typically exceeded 4% since 2012. As per the 1990 Agriculture Census, approximately 8,000 families (or 25% of households) cultivated crops, and 12,000 of them (or 40 percent of households) had livestock. The COVID-19 pandemic has imposed limitation of movement of people and goods within and across countries, which has been hindering food-related logistic services and disrupting entire food supply chains. Impacts on movement of agricultural labor and on the supply of inputs will soon pose critical challenges to food production, thus jeopardizing food security and hitting especially hard people living in vulnerable conditions.

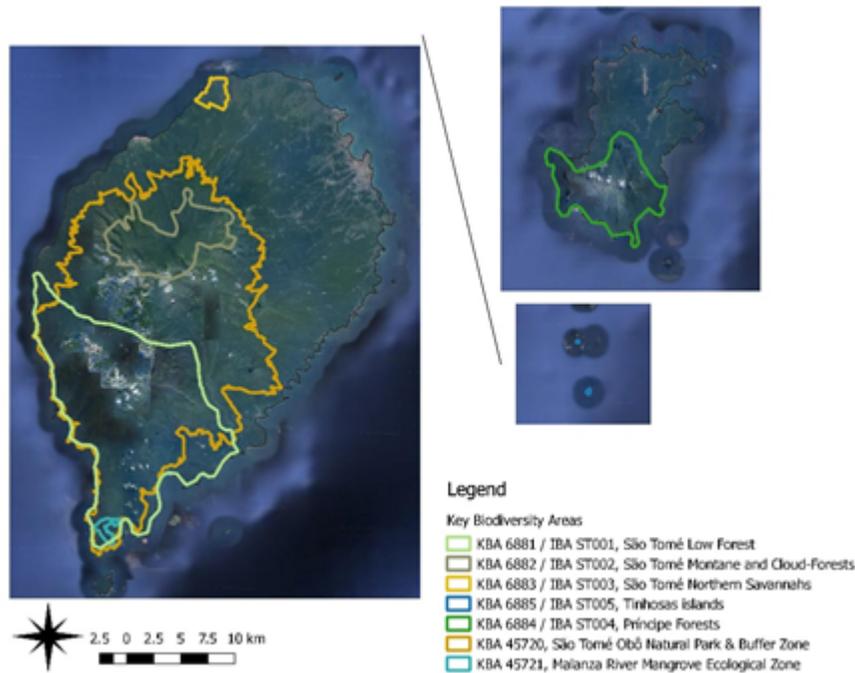
2. Agriculture production is dominated by smallholders with average landholdings of 3ha per farmer and employs 24 % of the working population. Farmers grow taro and cocoyam at lower levels, bananas, cacao and oil palm at mid-level and fruit and breadfruit trees at altitude. Specific farming systems have also developed for market gardening, pepper, tree fruit and to grow sugar cane for artisanal alcohol production. Livestock production is entirely focused on the local market and its performance has fallen significantly over the past two decades due mainly to poor grazing. However, a significant growth has been noted in the poultry subsector. Fisheries play a major role in the economic and social development of the country. STP has a long tradition of fish consumption and it represents 70-75% of the animal protein ingested by the population (Oceanic Développement et al. 2004; Lövin 2011). Fisheries resources are therefore critical for food security and nutritional quality in STP. Almost about one third of the country is covered by native forest of which 30,000 ha, or almost a third, is protected (AFD, 2019). The forest is made up of 30% Native Forest, 30% Secondary Forest (sometimes used for the providential collection of cocoa from abandoned, former colonial agricultural plots), 30% shade plantation and 10% urban areas (or not forested) (Directorate of Forests and Biodiversity, 2019). Elsewhere agroforestry dominates, with crops varying according to altitude. Climate change and human activities which impact on landscape ecosystems and productive capacities can be considered as anthropologic influence.
3. The agricultural sector including the forestry sector faces various challenges. The land reform in 1992 has led to arable land redistribution (43,775 ha) to agriculture workers (8,877 of them) who resided in the old cacao plantations, but who did not necessarily know how to farm (World Bank, 2014). Furthermore, in the past decades, STP has gone from having a majority of rural population to a majority of urban population. This led to a continued decline in cacao yields and an emergence of food production for local consumption. Cocoa, coffee, and palm oil exports are the cornerstone of the economy, though tourism is increasing.

Global importance of São Tomé and Príncipe Biodiversity.

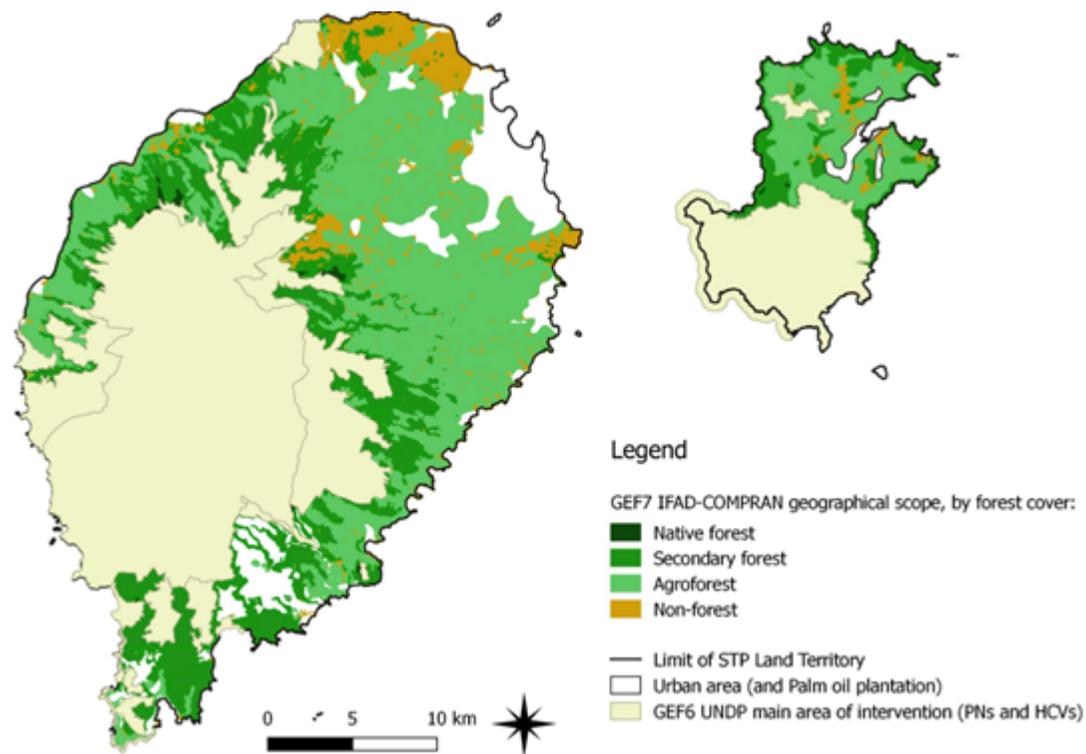
4. The islands of São Tomé and Príncipe, located on the East Atlantic Ocean, off the coast of Africa, have abundant, valuable and varied biological resources. The uniqueness of the biodiversity is linked to geographical history. São Tomé and Príncipe are close enough to the African mainland to receive immigrant species and far enough to allow them to differentiate, adapting to the peculiar ecological conditions of the islands. This isolation gave rise to a large number of endemic species including mammals, birds, reptiles, amphibians, butterflies, snails and plants. The biodiversity of São Tomé and Príncipe is so special that the tropical forest of São Tomé and Príncipe is ranked as the second highest priority for bird conservation among 75 forests in Africa. Sometimes referred to as the "Galapagos of Africa", São Tomé, and Príncipe is classified amongst the countries with the highest levels of endemic species in the world (RDSTP, 2014), mainly birds, amphibians, plants, bats, reptiles, butterflies and molluscs distributed in different terrestrial and marine ecosystems and habitats (Vaz & Oliveira, 2007).
 - STP is part of the Guinean Forests of West Africa biodiversity hotspot (Myers et al. 2000);

- The São Tomé, Príncipe and Annobón moist lowland forests (AT0127) are part of the Congolian Coastal Forests, which are amongst the 200 most threatened WWF terrestrial ecoregions of the world (Olson & Dinerstein 2002), and have been identified as the 3rd most important ecoregion for the conservation of forest-dependent birds worldwide (Buchanan et al. 2011);
- STP has been recognized as Centre of Plant Diversity (WWF & IUCN 1994-1997);
- São Tomé and Príncipe Islands are each classified as an Endemic Bird Area, with "São Tomé Island" (EBA-082) listed as "Critical" and "Príncipe Island" (EBA-083) listed as "Urgent" in terms of conservation need (Stattersfield & al., 1998; BirdLife International, 2019);
- STP holds two Alliance for Zero Extinction sites: the São Tomé Uplands, covering 4,839 ha triggered by the Endangered São Tomé Shrew *Crocidura thomensis* and São Tomé Giant Reed Frog *Hyperolius thomensis*; and the São Tomé lowlands, covering 21,832 ha triggered by the Critically Endangered Dwarf Olive Ibis *Bostrychia bocagei*, São Tomé Fiscal *Lanius newtoni* and São Tomé Grosbeak *Crithagra concolor* (AZE 2019);
- STP holds seven Key Biodiversity Areas (five of which are also Important Bird Areas, BirdLife International 2019):
 - o São Tomé Low Forest (KBA 6881, IBA ST001), located in the southwest of the island, between the Binda and Quija rivers, the west coast until the confluence of the Ana Chaves and Ió Grande rivers; the area includes the most central part of the Obô São Tomé Natural Park (Pico de Cabumbé, 1,403m); the southern slopes of the Pico de São Tomé massif delimit it to the north; near the coast, some areas of old "capoeiras" in the Binda, São Miguel and Quija streams belong to the site.
 - o São Tomé Montane and Cloud Forests (KBA 6882, IBA ST002), which includes the highest areas of 1,000m in the northern part of the Obô São Tomé Natural Park (peak of São Tomé - 2,024 m, Calvário - 1,594 m and peak Ana Chaves - 1,630 m, Amélia Lagoon).
 - o São Tomé Northern Savannahs (KBA 6883, IBA ST003), which covers 526 ha on the north coast between Lagoa Azul and Diogo Nunes and includes the vegetation of dry forest and shrubby and herbaceous savannah.
 - o São Tomé Obô Natural Park & Buffer Zone (KBA 45720), which covers 45,132 ha mostly over-imposed over other KBAs.
 - o Malanza River Mangrove Ecological Zone (KBA 45721).
 - o Príncipe Forests (KBA 6884, IBA ST004), covering the southern third of Príncipe from sea level to the summit of the 948m Pico do Príncipe; four other peaks greater than 500 m are included: Mesa (537 m), Pico Papagaio (680 m), Carriote (839 m) and Pico Mencorne (921 m).
 - o Tinhosas Islands (KBA 6885, IBA ST005), with Tinhosa Pequena (3 ha) and Tinhosa Grande (20 ha) located 22 km south-south-west of Príncipe.
- Worldwide, the Obô Natural Park, was considered the 32nd most important protected area for the conservation of mammals, birds and amphibians, the 17th if only threatened species are accounted for, and the 2nd ex aequo for the conservation of threatened bird species (Le Saout et al. 2013).
- São Tomé alone holds at least 59 threatened species, including 33 Vulnerable, 22 Endangered and four Critically Endangered (IUCN 2019).

Figure 1: Key Biodiversity Areas of São Tomé and Príncipe



5. The IFAD-COMPRAN scope of work in Sao Tomé and Principe are the rural areas, i.e., the productive ecosystems in the agricultural and forestry sector as shown in the map below. The priority areas of intervention of the project, still to be implemented at PPG. As shown on the map GEF6-funded UNDP-led Biodiversity focal area project, Enhancing Biodiversity Conservation and Sustainable Land and Natural Resource Management, are the Natural Parks and High Conservation Value areas. The terrestrial priority area of intervention of this IFAD GEF 7 project will focus on agroforests and secondary forests, excluding urban areas (PNOT, 2020) and palm oil plantations (mainly Socfin/Agripalma). Wherever there is some geographical overlaps with the UNDP GEF6 project, in particular regarding HCVs to be defined on Principe Island and the charcoal making threats specifically addressed by that project (taking into consideration that charcoal making is widespread), the activities will ensure full complementarity of action.



The creation and management of protected areas at landscape level is the first tool for effective biodiversity protection. However, biological diversity has no borders; on the contrary, some species are specific to ecosystems different from those covered by protected areas, or have adapted to anthroposised ecosystems - such as agroforests. This is particularly the case in São Tomé and Príncipe; given the parks, providing the highest level of protection, are mostly remote areas of high altitude; not covering coastal, and lowland forests, which are very important for biodiversity but highly impacted by agriculture. Biodiversity protection therefore requires continuous protection of biological wealth across sectoral activities, integrating it into decision-making, leading to intelligent, sustainable and responsible management of productive territories. Endemic species resident in productive areas are generally even more sensitive to threats such as habitat-changes, due to human growth and economic development; pesticides, associated with unregulated intensification of agricultural practices; and increasing competition from exotic and sometimes invasive species, abundant in degraded habitats (Soares and al., 2020). Agroforests and secondary forests are habitats for many species of global importance for biodiversity:

- Mammals – For instance, the endemic and Endangered São Tomé Free-tailed Bat *Chaerephon tomensis*: This little known species has been recorded from two lowland localities, Praia das Conchas and Agua Izé, in the northern part of São Tomé Island.

The endemic and Endangered São Tomé collared fruit bat *Myonycteris brachycephala* is another example of a mammal resident to the project area. Overall, bat species, mostly endemic from the archipelago, depend on lowland forest (agroforest and fruit-rich secondary forests).

· *Birds* – For instance, the endemic and Endangered Sao Tomé Green-pigeon *Treron sanctithomae*: It was formerly abundant and remains common at some fruiting trees in forests and less well-visited plantation areas, but is now nearly absent from the most populated northeast of the island.

Other examples, such as the São Tomé scops owl *Otus hartlaubi*, and the undescribed Príncipe scops owl (most probably a new species for science), the Giant sunbird *Dreptes thomensis*, both species recognised as Vulnerable, or even the Endangered African Grey Parrot *Psittacus erithacus/timneh* are mostly resident in agro-forest and secondary forests.

It is important to note that the distribution areas of the four Critically Endangered bird species resident on São Tomé en Príncipe; Sao Tome Grosbeak *Crithagra concolor*, Príncipe Thrush *Turdus xanthorhynchus*, Newton's Fiscal *Lanius newtoni* and Dwarf Ibis *Bostrychia bocagei* also overlap with the project area.

On Príncipe as well, many bird species – including non-threatened endemics such as the Príncipe Malachite Kingfisher, Príncipe Golden Weaver, Príncipe Speirops, & Príncipe Sunbird – occur primarily in the north, utilising secondary forest, agro-forest, and non-forest areas.

· *Reptiles* – Even though they have been described (Ceríaco, 2018), most endemic reptiles' species have not yet been assessed for the IUCN red list.

· *Amphibians* – The data on amphibians are scarce, especially regarding distribution; raising bias in red listing; the conservation priorities often being underestimated. Notwithstanding this information gap, the project intervention area is the main habitat for *endemic and threatened* species; such as the Endangered Newton's Grassland Frog *Ptychadena newtoni*; a lowland species, occurring from sea level up to approximately 600m.

· *Plants* – For instance, the endemic and Endangered orchid *Aerangis flexuosa* is restricted to forests of the northern part of the island; below 700m elevation. If the flora of the country is relatively well known (NBSAPII 2015-2020), it is highly diverse and specific, and species are still regularly being discovered. Very few species have been considered for IUCN red listing and further initiatives in the country, led by the Missouri Botanical Garden and funded by the Critically Ecosystems Partnership Fund, are promoting quantitative surveys and supporting red-listing assessments. In the lowland forest, it is expected that species such as the 'Pessegueiro de São Tomé' *Chytranthus mannii*, whose populations are known to be declining at an alarming rate, will be reassessed as threatened.

Forest types, cover and plant diversity

6. According to Jpnes (1991), Excell[2]² considered that STP's original vegetation was made up of tropical rainforests that evenly covered the coastal island almost to the top of Pico of São Tomé. Excell identified different communities depending on island and elevation:

- Lowland forest, from 0 to 800 m altitude: equivalent to Africa's nearby continental forests. The characteristic species of this formation are, in São Tomé: *Rinoera chevalieri*, *Zanthoxylum thomensi*, *Drypetes glagra*, *Anisophyllea cabole* and *Sorindeia grandifolia*; in Príncipe: *Rinorea insularis*, *Ouratea nutans*, *Casearia mannii*, *Croton stelluliferus* and *Erythrococca columnaris*.

- Mountain forest, from 800 to 1400 m altitude: presents a slow transition of species, with greater variety than in lower altitude formations, but with a similar general appearance. The trees are tall (30 to 40 m) with dense canopy and the high humidity favours the development of tree ferns, epiphytes, vines and ferns, which cover the trunk of the large trees. The characteristic tree species of these formations are: *Trichilia grandifolia*, *Pauridiantha insularis*, *Pavetta monticola*, *Erythrococca molleri*, and *Tabernaemontana stenosphon*.
 - Mist forest, from 1400 to 2024 m altitude: Characterised by high rainfall and humidity, with constant fog and low temperatures, making the trees smaller, dominated by Scheffleras, and rarely exceeding 10m in height. The epiphytes, in particular orchids and ferns, have an important place in these formations. The characteristic trees are: *Podocarpus mannii*, *Baltasaria mannii*, *Psychotria guerkeana* and *P. nubicola*.
 - Coastal formations, including riparian forests and mangrove areas. The mangrove is essentially composed of *Rhizophora racemosa*, *R. harrisonii* and *Avicennia germinans*, and occupies small areas, the most important of which are Malanza, Praia das Conchas, Praia dos Tamarindos, Pantufo and Água-Izé located at the southern end of São Tomé.
7. Recent protected areas management plans indicate plant species richness at 1,200 species of flora in the archipelago, of which around 900 are indigenous (100 pteridophytes and 800 spermatophytes) and about 300 are introduced. There are 148 endemic plant species (14% of the national flora), of which 50 are restricted to Príncipe, 98 are restricted to São Tomé and 25 are shared endemics) (NBSAP 2015-2020). The most representative angiosperm families are Rubiaceae (27 species), Orchidaceae (135 species with 35 / 23% endemic), Euphorbiaceae (11 endemic species), Melastomataceae (17 species with 8 / 47% endemic), Begoniaceae (11 species with 6 / 55% endemic). Only 90 of STP's plant species have been assessed regarding their conservation status on the global IUCN Red List (which include few of the endemic taxa, and many dated assessments)[3]³.

Table 1: São Tomé and Príncipe forest area in 2015 (estimated by Directorate of Forests and Biodiversity, 2019)

Forest type	Area (ha)	Area (%)
Primary Forest	28,000	28.3
Secondary Forest	27,000	27.3
Shade Plantation	32,000	32.3
Other Areas	12,000	12.1
Total	99,000	100

Table 2: Forest area in São Tomé in 2014 (Soares 2017) and Príncipe in 2016 (Freitas 2019)

#	Name	Príncipe Island		Sao Tomé Island			Total	
		Area (ha)	Distribution (%)	Area (ha)	Distribution (%)	Area (ha)	Distribution (%)	
1	Native Forest	3,478.50	25.0%	22,607.80	26.4%	26,086.30	26.2%	
2	Secondary Forest	4,926.96	35.4%	26,120.30	30.5%	31,047.26	31.2%	
3	Shade Plantation	4,237.13	30.4%	24,418.25	28.5%	28,655.38	28.8%	
			90.8%		85.5%		86.2%	

4	Non-Forest	1,274.41	9.2%	9.2%	12,423.30	14.5%	14.5%	13,697.71	13.8%	13.8%
	TOTAL	13,917	100.0%	100.0%	85,569.65	100.0%	100.0%	99,486.65	100.0%	100.0%

Land fauna diversity

8. As presented in the key biodiversity summary, STP is rich also in terms of faunal diversity. Although evidence on presence, distributions and conservation status of invertebrates, is still limited, isolated studies have established *inter alia* that endemism is high among land snails, with about 60 endemic species in São Tomé, Príncipe and Annobon, including one endemic family and six endemic genera (Gascoigne, 1994); and that among butterflies, São Tomé has 64 endemic species and Príncipe 45, 28 of which are shared among them (Pyrzcz, 1992 in Carvalho, 2015) according to the NBSAP 2015-2020, 89 species of butterflies are in STP, 47 of which in ST and 42 in Príncipe with an endemism rate of 38% and 21% respectively). The West African Giant Snail (*Archachatina marginata*) was introduced to the island.
9. Native vertebrates include 60 endemic taxa. On São Tomé, native terrestrial mammals include 2 endemic shrews (São Tomé Shrew *Crocidura thomensis* EN and Fingui White-Toothed Shrew *Crocidura finguí* on Príncipe) and at least 10 bat species (4 endemic species and 1 endemic subspecies, including São Tomé Collared Fruit Bat *Myonycteris brachycephala* EN and São Tomé Free-tailed Bat *Chaerephon tomensis* EN; versus NBSAP 2025-2020: two species and three endemic subspecies on ST, and one endemic species and one endemic subspecies on Príncipe).
10. The terrestrial and freshwater herpetofauna of STP consists of 30 species. This includes 22 species of reptiles, of which c. 18 are currently considered endemic including all eight snake species. Other endemic reptiles and 8 amphibians all of which are endemic. The islands harbour at least 89 species of birds, by far the most studied taxa in STP. There are 28 breeding endemics (21 on ST and 7 on Príncipe), including 62 land bird, 12 sea bird and 20 water bird species. 13 species (15%) are globally threatened (4 CR, 5 EN, 4 VU; plus 4 NT). The breeding avifauna encompass forest, savannah, water, shore and seabirds. Most of the endemics are found in the forests; but bird surveys done in 2015 and 2016 (BirdLife International, 2017) also recorded 26 species (including 10 endemic) in the mangroves of Príncipe and 29 species. The seabird colonies of Príncipe and the surrounding islands are the largest of the tropical eastern Atlantic Ocean including the Gulf of Guinea. The diversity, endemism and importance of STP's avifauna has led to the declaration of five IBAs on the islands.

Marine biodiversity and fisheries

11. The archipelago of STP has a large maritime territory of 160,000 km², however, its marine ecosystems/biodiversity and resources remain relatively poorly studied and understood. STP's maritime territory holds or forms part of two Ecologically and Biologically Sensitive Areas (EBSAs):
 - The Tinhosas Islands located between São Tomé and Príncipe, which provide important nesting habitat for over 300,000 migratory seabirds (see §10 and 24 above) but also attract key marine megafauna.
 - The Equatorial Tuna Production Zone, which encompasses portions of the coastal waters of Gabon, Congo, Equatorial Guinea and STP, and is important for the life cycles of several large, commercially valuable, pelagic, migratory fish species.
12. Even though the dataset is largely incomplete, São Tomé alone holds at least 59 threatened species, including 33 Vulnerable, 22 Endangered and four Critically Endangered (IUCN 2019). In addition, the specificity of Santomean biodiversity is illustrated by the variety of ecosystems in the two islands. Forest formations range from savannah on the northeastern fringe of São Tomé Island to fog forests on the mountain tops. It is worth highlighting also the shade plantations, which are home to the cultivation of cocoa, the main

product of the São Tomé and Príncipe economy, also sustain significant numbers of endemic species. Therefore, protecting the islands biodiversity is essential to maintaining a globally significant and recognised biological resource. In recognition of the importance of this biodiversity richness, São Tomé and Príncipe is a member of the Convention on International Trade in Endangered Species of Wild Fauna and Flora, the Convention on Migratory Species, the Ramsar Convention and the World Heritage Convention which aim to protect the islands' unique natural history and highlight its global importance.

13. Marine Geographical Scope and Associated Biodiversity of Global Importance

- This approach applies similarly to the definition of the project intervention area in the Sao Tomé and Príncipe seascape, which is of great relevance to global biodiversity. Indeed it provides habitat to a number of threatened species; for instance, critically endangered species such as the Scalloped Hammerhead *Sphyrna lewini* or the Oceanic Whitetip Shark *Carcharhinus longimanus*, feeding in STP's water and the Hawksbill Turtle *Eretmochelys imbricata*, nesting on its beaches.
- Technical and scientific reports (PAPAFPA, 2015; MEDSEA, 2016; Maia, 2018, 2019) highlight the need to increase marine conservation efforts; and inform on priority areas for conservation and fisheries management around Príncipe and Sao Tomé islands. Given that the highest diversity and abundance of fish is found in rocky reefs, and that some fish, such as snappers, feed in the surrounding sandy areas, it is broadly accepted that marine conservation priorities covers rocky reefs and surrounding areas of sand or maerl. An on-going initiative led by the NGO Fauna and Flora International and funded under the Blue Action Fund (BAF) aims at establishing Protected Areas; using systematic and transparent methodology such as Marxan and promoting co-management and dialogue with local fishing communities. The BAF project will produce preliminary results by 2021 that will further inform the priority intervention areas for the project.
- Peripheral islets, such as the Tinhosas Islands, next to Príncipe, are the largest seabird colonies in the tropical eastern Atlantic Ocean and are therefore habitats of global importance.
- Therefore, the project will promote conservation and enforcement of fisheries co-management models and protected area processes; focussing on the main fishing grounds, small islets with narrow platforms and shallow areas with good coral cover and thick maerl beds. This includes, in Sao Tomé: *Sete Pedras*, *Ilheu Santana*, area between *Ilheu das Rolas* and *Porto Alegre*, *Ilheu de São Miguel*; and on Príncipe: *Pedra Metade*, *Galé*, *Mosteiros*, *Agulhas Bay*, *Rio São Tomé* and *Pedra Vermelha*, as well as the *Tinhosas islands*.



1a3. Environmental problems and their root causes and barriers to be addressed in Sao Tome and Principe

14. Despite their richness, the status and distribution of STP's forests have been exposed to centuries of human occupation. The islands have been used to produce plantation crops. Numerous exotic species were introduced (Monod, 1960), modifying and disturbing the ecological balance. Lowland forests largely disappeared in their primary form.
15. Most of the lowland forests and part of the mountain forests were deforested in the northern and eastern areas of the island of São Tomé. In some of the southern parts of both islands, where agricultural crops have been abandoned for several decades, mature secondary lowland forests have developed. The shade forest has suffered from important variations, notably

due to some attempts to reduce shade, which may have resulted in reduced soil fertility, strong attacks from trips and armillaria infections in cocoa plantations, drastically reducing their production. The species used for shading, in addition to the improvement of cocoa production, additionally responds to objectives of food production and quality wood production.

16. The north-east region of São Tomé (Praia das Conchas and Lagoa Azul areas), the region of the country with the least precipitation (<1,000 mm/year), with two well marked dry seasons is covered by a mosaic of herbaceous savannah interrupted by small tree and shrub formations of small dimensions that, due to the absence of a continuous tree cover, contrast strongly with the rest of the country. It is believed that these formations resulted from the intense deforestation and frequent fires that have been practised since the beginning of colonisation, particularly for sugar cane cultivation. *Adansonia digitata* stands out for its silhouette, and the presence of *Ziziphus mauritania*, *Capparis tomentosa*, *Parkia biglobosa* and *Borassus aethiopicum* in this area should also be mentioned

Biodiversity challenges and their root causes

17. Several human activities are having, and have potential to have direct and indirect impacts on the marine, terrestrial, freshwater and coastal life, ecosystems and biodiversity, including protected landscape; Terrestrial, freshwater and coastal life, ecosystems and biodiversity loss. Loss in terrestrial, freshwater and coastal life, ecosystems and biodiversity is driven in STP by i) land-use change and habitat loss, ii) natural resource use and over-exploitation, iii) pollution, iv) invasive alien species, and v) climate change in land-use is changing and habitat being lost due to the following major drivers.

18. Large-scale infrastructure developments led to habitat loss. This biggest larger-scale threat is evidenced through construction of road, large-scale tourism infrastructure, hydroelectric power generation infrastructure which could cause transformative and devastating impacts on key ecosystems if not addressed and managed properly. The construction of these infrastructures would cause major direct and indirect damage, impacting forests, opening access, causing landslides, erosion and sedimentation. On Príncipe, the new settlement Terra Prometida is currently being finalized to resettle 100 inhabitants of a colonial plantation farm (Roça Sundy) being converted into a luxury hotel, led by UN-Habitat with funding from private tourism operator HBD. A forest area was granted in the centre of the island for that purpose, next to the Azeitona Forest PA.
19. The Power Sector Recovery Project (PSRP) of the World Bank cofinanced by the EIB will be implemented partly in the watershed of the Contador River, in the north-west of the island of ST, more specifically five of the Contador tributaries: Zico, Vilela, Angolar, Lisboa, and Agrião. The upper part of the Contador River watershed lies within the boundaries of the PNST, in an area of high environmental and biodiversity value.
20. Three hydroelectric dams in Yô Grande River, in the district of Caué in the SSE of São Tomé are planned to be built. The proposed project location challenges the goals of the PNST (Fig. 13). The project stretches into the NP's core zone and would have direct adverse impacts on key biodiversity sites – for example, it would impact the habitats of two endemic and Critically Endangered birds, the Sao Tomé Grosbeak and the Dwarf Olive Ibis

21. **Conversion for agriculture is causing secondary and valuable forests loss.** The granting of new agricultural concessions by the government of STP and the spread of small-scale farming (agriculture and agroforestry, for subsistence and local markets) have prompted renewed levels of deforestation – of both secondary forests and of valuable forests including HCV areas, including significant areas in PA buffer zones. This resulted spread of small-holder farming triggered by the land tenure regime has increasingly encroached illegally on public forest lands and the NP, due partly to the weak land use planning and surveillance. While in Príncipe, land conversion has been limited, in the island of Sao Tome, the average annual deforestation for the 2009-2013 period was estimated at 0.5% (R-PP, 2014).

22. The deforestation from agricultural conversion is driven by two categories of stakeholders. One of these two stakeholders refers to large-scale agricultural developments; which induce the most significant transformative and devastating impacts on key ecosystems. The granting of 4,917-ha concession by the government of STP to AgriPalma has led to the clearing of 2,100 ha of valuable forests in southern São Tomé for oil palm^[4] plantation between 2009 and 2012/2013 . In addition, this plantation causes forest fragmentation and disturbance; and roads for improving transportation between concession areas split potential home range/suitable habitat patches for the São Tomé Fiscal and São Tomé Grosbeak. Another 2,500 ha-large scale land concession on São Tomé was granted to SATOCAO, STP's largest cocoa trader/exporter, for a period of 25 years that included large areas of forest. Up to date, 275 ha were converted to planting with cocoa.
 23. The second category of stakeholders that drives deforestation from agricultural conversion is small-holder agriculture. This is a growing threat linked primarily to the growth of the human population including in rural areas. The impacts are more gradual and dispersed than in the case of land conversions by large agricultural concessions, but also more difficult to manage due to the large number of stakeholders involved and their fragmentation. Small-holder farming leading to actual deforestation is especially for crops like pepper and vanilla and horticulture at mid-altitude in the centre of São Tomé offering suitable climatic conditions, grown largely after tree cover has been removed. Low-intensity agroforestry areas surrounding the PNOT are increasingly being cleared in the more accessible areas of the island, such as in the centre around Bom Sucesso. Such clearance is encouraged by investment in transport infrastructure and increased market opportunities for agricultural produce. An additional pressure is forest conversion by farmers planting crops in agroforestry systems; this is less visible on satellite imagery or deforestation maps because some tree cover is retained but in fact affects a far larger area that has not been adequately quantified recently. The mangrove habitats of STP are threatened by historical conversion to arable land, overharvesting for firewood and charcoal-making. On a smaller scale, the (anthropogenic) savanna area in northern ST has seen forest loss and habitat degradation caused by slash-and burn practices (widely used in this part of the island for maize and sugarcane production by family farming), compounded by charcoal-production and infrastructure development.
 24. Sand mining is leading to loss of sea turtle nesting beaches. The extraction of sand and rolled stones from beaches for construction purposes causes destruction of beaches with potential for tourism or that represent turtle breeding areas (Polovina et al. 2004, Programa Tatô 2019). The resulting coastal erosion is also heavily affecting São Tomé leading to the destruction of coastal infrastructures such as roads and promenades.
 25. Urbanisation and related infrastructure, especially in coastal and rural areas resulted in habitat loss. This threat is spreading in an uncontrolled manner, especially on São Tomé, causing both direct and indirect impacts on natural ecosystems, affecting forests, coastal habitats including mangroves, and beaches that may be sea turtle nesting beaches. This is a result of the growth of STP's human population, but also of weaknesses in land-use planning, surveillance and law enforcement. Natural resources are being over-exploited and is evidenced by forest degradation from logging, unsustainable exploitation of NTFP and wild life hunting.
 26. **Forest degradation from unsustainable and illegal selective logging.** This is the third major threat that could cause transformative impacts on key ecosystems. Selective logging to source timber for construction purposes^[5] and wood to produce charcoal for local use or sale are the primary two drivers of forest degradation in STP – although there are important differences between the two islands. In some areas forest degradation has advanced sufficiently that it could be classified under deforestation. Unsustainable and illegal selective logging is mainly caused by timber and charcoal production.
 27. **Increasing production of timber.** From 1989 to1999, there was an increase in the total volume of all species, resulting from the increase in consumption of sawn timber and its derivatives. According to Espírito & al. (2015), the pressure on forest resources had increased further since 1999, although a further sharp decrease in the commercial volume of standing timber is noted. If in Príncipe, logging activities are limited, in São Tomé in contrast, most of these activities (80-95%) are unlicensed and illegal, and exploitation is poorly controlled and unsustainable. For example, in 2014, the Forest Directorate authorized the felling of 1,452 trees on Príncipe (where illegal logging is rare) – and of only 1,269 trees on
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São Tomé, which shows how poorly controlled logging is in ST. Some species targeted for timber production are of high value. Azeitona and Viro which are key to the health of the ecosystem and provide important ecosystem services can be mentioned. Other species like “pau-vermelho” *Staudtia pterocarpa*, which is endemic to São Tomé and *Cedrela odorata* which has been introduced to São Tomé are both very but classified as Vulnerable by the IUCN Red List. Carapa gogo and *Santiria* sp. are endemic to São Tomé and to STP, respectively have not yet been formally described, and as such have not yet been assessed by IUCN (do Espírito, 2015).

28. Logging activities for timber are concentrated around and inside the buffer zones but also extend into the actual NPs. This is an indicator that there are no valuable resources left outside the NP and BZ in other parts of the island. On São Tomé, logging begins to impact areas inside the PNOST, particularly around the northern border where the forest is accessible and in better condition. Logging largely relies on access by roads reachable from the forest via trails, however also affects the SW-quarter of ST (where there is no coastal road) where timber is brought to the coast to be transported by boat
29. Charcoal production. Logging for charcoal-making is the other key driver of forest degradation in STP. According to the 2012 census of the National Institute of Statistics (INE, 2012), around 57.6% of the population uses firewood and/or charcoal resource as energy source. Charcoal is used extensively in urban areas that have less access to firewood, for grilling fish. FAO provided an estimate of 8 tons of charcoal used in STP per year, but this number appears to be very low. Extraction is selective in initial stages when resources are abundant: the native African Oil Bean (Moandi) *Pentaclethra macrophylla* is the most sought-after species for the quality of its charcoal. It is still being targeted in Príncipe even though resources are declining. However, once resources decline, charcoal-makers turn to other lower-quality species, such as in São Tomé where the preferred Moandi has disappeared from the charcoal market. Charcoal-making can clear out any woody vegetation. In that sense, charcoal-making is more widespread than timber logging, it can be done in agricultural plots where no timber species remain, and it can have wider systemic impacts than timber logging leading to wholesale deforestation. Charcoal-making is also prone to be more opportunistic than timber logging. Mangrove habitats are also lost due to overharvesting for charcoal-making and firewood.
30. In Sao Tome, the DFB estimated the total number of charcoal-makers to 5000 while on Príncipe, according to the Regional Forestry Department, there are 100 active charcoal workers on the island, concentrated in the communities of S. Joaquim and around the Azeitona forest (Gaspar and Azeitona). However, this will include also more opportunistic charcoal-makers, because the demand and pressure from charcoal-making is much smaller in Príncipe.
31. **Unsustainable exploitation of Non Timber Forests Products-NTFPs.** NTFPs are important resources for local communities. In STP many NTFPs are part of the diet, others are used for income generation and for prevention and treatment of many diseases by traditional doctors and present pharmaceutical values; some are ornamental, and others are used for handicrafts. The exploitation of NTFP contributes to the well-being and poverty reduction, especially in rural areas, especially for women who are key stakeholders in some NTFP value chains. Another aspect to emphasize is its physical and economic accessibility, even for people who do not have agricultural land or regular incomes (Biloso, 2008). However, there is a lack of studies on their real importance in the Santomean economy.
32. In many cases NTFP are an open-access resource – when exploitation quickly becomes unsustainable and contributes to the increasing pressure on forests (Carvalho, 2013). NTFP collection also leads to unintended indirect impacts, most notably the spread of IAS plants and disturbance of habitats critical for sensitive birds during the breeding season.
 33. The main NTFPs exploited in STP are african giant and snail and Sao Tomé and Príncipe giant land Snail, palm wine, the wild and domesticated honey, the african oil bean *Pentaclethra macrophylla*, the african Cardamom *Aframomum danielli*, the kola nuts *Cola acuminata*, the ashanti pepper *Piper guineense*, the african fan palm *Borassus aethiopicum*, the african breadfruit *Treculia Africana* and the medicinal and aromatic plants.
34. **Wildlife hunting and collection.** Hunting is a major threat for the Dwarf Ibis CR and São Tomé Olive-pigeon EN, given their low population sizes and limited range. Other species of birds are hunted in great numbers and consumed as delicacies. Hunting is a major threat for the Dwarf Ibis CR and São Tomé Olive-pigeon EN, given their low population sizes and limited range. Other species of birds hunted in great numbers and consumed as delicacies include the São Tomé Bronze-naped Pigeon *Columba malherbii* NT, São Tomé Green-

pigeon *Treron sanctithomae* EN, Príncipe African Green-pigeon *Treron calvus* ssp. *virescens*, Lemon Dove *Aplopelia larvata* ssp. *simplex/principalis* and Laughing Dove *Spilopelia senegalensis* LC.

35. Uncontrolled collection for food of the endemic Obô Giant Land Snail *Archachatina bicarinata* VU is a notable threat to this endemic species, considered a conservation priority. Managing the threat is difficult because it is similar to the West African Giant Land Snail *Archachatina marginata*, an invasive pest species that was introduced to the islands 30 years ago and has become the third most important source of protein in STP (after fish & feral pig meat) – a preliminary study found that it accounted for 46% of all protein consumed in one community (Carvalho et al., 2015). Research, awareness activities and concrete conservation action are underway to protect the species, mainly through CEPF funding.[6]⁶ Also, a growing and undocumented threat is the uncontrolled collection of insects and the informal and illegal market of insects.

36. **Pollution.** The pollution caused by chemical pesticides is a threat especially for the freshwater biodiversity in the country's rivers, creeks and streams. These stem from discarded pesticide-impregnated anti-malaria mosquito nets, and from agricultural (especially horticultural) fields where farmers apply pesticides with hardly any controls in place. There are growing calls for a reduction or ban in pesticide use given the effects on human health. There has been a decrease in the fish *Eleotris vittata* and the freshwater shrimp *Sicydium bustamantei*, which play an important role in food security of rural communities.

37. **Invasive alien species.** While there is no evidence that IAS have had any systemic impact on the ecology and diversity of STP's ecosystems or led to the extinction of species like on other SIDS, they are a growing background concern. In terms of animal IAS, feral cats *Felis silvestris*, Black Rat *Rattus rattus*, African Civet *Civettictis civetta* and Least Weasel *Mustela nivalis* are present. While civets and weasels have been observed to prefer plantations, rats and civets have both colonized native forest or certainly the edges of it and are very likely to have had a deleterious effect upon birds and other vertebrate species. Predation of adults, juveniles and bird nests by IAS could be a potential threat for all endangered species, in particular for the Dwarf Ibis. Introduced feral pigs affect the forest floor by churning up the undergrowth, which reduces tree regeneration. This could also have a positive impact on the Ibis as it creates potentially good feeding habitat. The Mona Monkey *Cercopithecus mona* is an exotic species but not considered invasive, which impacts the forest vegetation through seed dispersal, including of non-native plants. The West African Giant Land Snail *Archachatina marginata*, introduced 30 years ago on the islands, is fully established in the coastal areas and secondary forests of São Tomé and Príncipe. The species has begun to expand into areas of native forest, which strongly correlates with the decrease of the endemic Obô Giant Land Snail *Archachatina bicarinata* VU (Conservation Status currently being reviewed), and will have impacts also on other fauna and flora. Both species are collected for food, see above.

38. The expansion of invasive and exotic plants into native and secondary forests is a further concern, especially in Sao Tomé that has been exposed to more trade, inhabitants and agricultural transformation. The expansion of IAS plants causes increasingly dense vegetation in the forest understory reducing for instance the suitability of forest habitat for the critically endangered Dwarf Ibis and São Tomé Fiscal Fiscal

39. **Climate change.** The identified threats to ecosystems from climate change are:

- Ø Accelerated erosion of soils due to the very rugged nature of the islands.
 - Ø Flooding and subsequent degradation of forest areas on flat relief, such as shade forests located in the plateaus.
 - Ø Increase of the extent of the savannah zone to the north-east of the island of São Tomé, which is already suffering from degradation due to indiscriminate trees and shrubs cutting to produce charcoal.
 - Ø Increasing trend of annual mean temperature values and decrease in rainfall.
 - Ø Loss of forest cover by landslides, as about 90 percent of forests are located on sharp relief regions.
-

- Ø Reduction of forest area in case of prolonged drought, especially shade forests and secondary forests.
- Ø Proliferation of pests and diseases in forest ecosystems.
- Ø Local extinction of animal and plant taxa (which will imply global extinction for endemic taxa)
- Ø Loss of plant and animal (insect) biomass
- Ø Reduction of soil water content, especially in black and brown clays and savannah soils that are already exposed to water shortage.
- Ø Sea-level rise & extreme events, loss of sea turtle nesting beaches.
- Ø Changing hydrology and coastal erosion, increasing with forest degradation and the illegal/uncontrolled felling of tree.

Marine life, ecosystems and biodiversity reduction

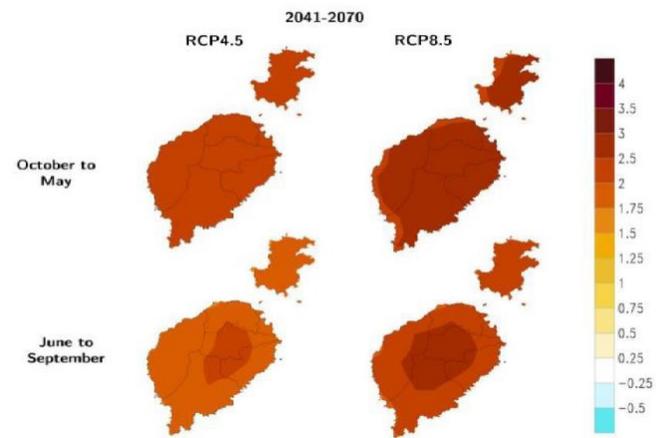
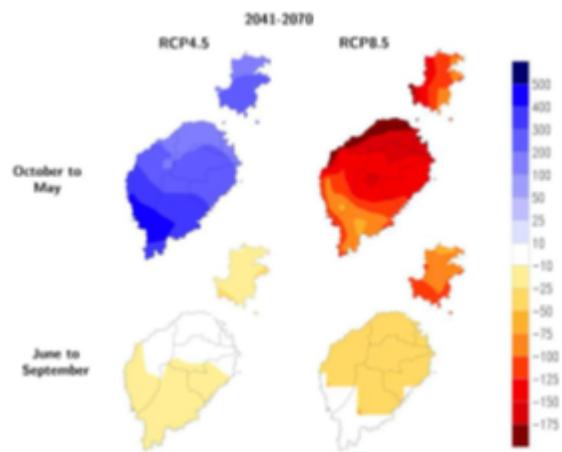
40. Habitat loss. Even though, there is no evidence for marine habitat loss in STP, port construction and the related sedimentation may have caused local impacts. Some fishing techniques like dynamite fishing that are still being practiced may cause habitat degradation and loss. Sand mining is negatively impacting beach habitats and therefore major threat to sea turtle reproduction.

41. Unsustainable, harmful fisheries and related impacts. Dynamite fishing, non-selective gear, scuba spearfishing have led to local stock declines of fisheries resources (especially demersal) with cascade effects on the marine trophic chain and ecosystems. In Príncipe, 67% out of 355 surveyed fishers and fish traders have perceived a decline in total fish catches over the last 10 years, suggesting significant changes in marine ecosystems. With the decline of resources (especially of the most valuable species such as Atlantic Wreckfish (*Cherne*) *Polyprion americanus*), local artisanal fishermen are now increasingly travelling further out in the open sea, often without suitable fishing boats and safety gear, putting their lives at risk. On São Tomé fishing is very intense in the northern part of the island due to the concentration of populations and the proximity of the capital, and fishers are now increasingly targeting the rich waters of the south. According to recent surveys, 70% of all fishers actively exploiting the southern fishing grounds reside in communities located on the northern coast of São Tomé. Fishers from São Tomé are also increasingly travel to the less exploited waters around Príncipe and the surrounding islets including the Tinhosas Islands, which generates conflict between fishers from the two islands. A gradual decline in fish abundance and the growing use of maladaptive fishing techniques are growing threats to the main source of protein for the island population. Today, overfishing and habitat degradation are negatively impacting the viability of fishing livelihoods on both islands. As a result, fishers are resorting to illegal wildlife harvesting and/or unsustainable fishing practices. Foreign industrial trawlers operating in STP's EEZ are affecting fishery resources. Although AIS systems are in place and were due to be put into practise by 2018, but overall, government capacity to patrol and enforce its marine area is limited.
42. Sea turtles: capture, egg collection and bycatch. Sea turtles have been traditionally exploited for human consumption in STP, adult turtles being killed for their meat and eggs being collected on nesting beaches – with adult sea turtles indiscriminately captured through hooks, harpoons and gillnets set in front of the main nesting beaches surrounding the island (Castroviejo et al. 1994). In addition, some sea turtle byproducts are used for traditional medicinal purposes. The manufacture of handicraft (mainly jewelry) from its shell was the greatest driver behind the indiscriminate harvesting of Hawksbill Turtle (CR) in the past, especially in the 1990s. Until recently it was common to find sea turtle jewelry in the street and in shops of São Tomé for sale to unaware tourists, yet such products are difficult to find in local markets today. However, local crafters have reported trade with Angola.
43. **Pollution.** Pollution from rivers carrying pesticides and from urban liquid waste emissaries are a major threat to marine ecosystems in STP. There are anecdotal reports that the application of pesticides in the fight against malaria has damaged marine life (corals) in at least parts of São Tomé. The pollution with plastics (plastic bags and items, fishing lines and nets, micro plastics) from land sources as well as from cargo and fishing boats is becoming an emerging problem that has affected sea turtles and cetaceans. It may potentially affect the entire marine food chain yet there is no evidence at this stage. Noise pollution from shipping and seismic surveys linked to oil and gas exploration are transforming the marine soundscape and there is a growing concern over the potential impacts on marine fauna (Compton et al. 2008; Hatch and Wright 2007), Lavender et al. 2014; Weir and Dolman 2007).
44. **Invasive alien species.** There are no reports or evidence yet for the presence of or impacts from marine IAS, yet this may be due to the lack of relevant research.

45. **Climate change.** Climate change is expected to cause major impacts on fish stocks affecting reproduction, distributional ranges of stocks and migration patterns. Given that STP relies heavily on fisheries resources in terms of food security, as explained above, impacts may be severe unless fisheries and marine ecosystems are managed for resilience – which will require stock management, marine ecosystem and conservation, and reducing other stress factors such as disturbance and pollution.
46. According to the Third National Communication (2019), the **observed rainfall data** do not show a clear trend. However, according to producers, the length of the rainy season has shortened compared to 4-5 years ago when the duration of the dry season (*gravana*) was normal and allowed two seasons. Historically, the period of heavy rainfall in the rainy season typically lasted 2 to 3 months. However, this period has now shortened considerably. Furthermore, heavy winds and rains have become more frequent and intense, with more frequent hot nights as observed by coffee producers. The *Gravanita* (a small dry season between January and March) tends to extend into April causing extend dry conditions for agriculture. Previously, stormy events occurred in April, May and in October, but now thunderstorms tend to occur continuously throughout the wet seasons.
47. **Climate projections.** In terms of **Precipitation**, the projections for the two islands in the scenario RCP4.5 (Figure 2) indicate a rainier climate from October to May and slightly drier conditions in the other months of the year. The most significant variations in precipitation (+ 150 mm / month) occur in the south-southwest part of the island of São Tomé, where total precipitation is also the highest. For the scenario RCP8.5 (Figure 2), projections indicate that the reduction in precipitation occurs both in rainy and dry periods. However, in this emission scenario, December and January show an increase in precipitation, with a significant reduction in precipitation in April and which can reach the rate of -100 mm / month. Regarding the **temperatures**, there is a global warming, that is most pronounced between October and May. During the "*gravana*" period, warming is greatest in the central part of the island of São Tomé where the highest altitudes are found (Figure 3). It is important to mention that the warming pattern in the two scenarios (RCP4.5 and RCP8.5) is quite similar, but with a more intense temperature increase in the RCP8.5 scenario. Temperature changes in the two islands reaching values of around 2.5°C in RCP4.5 and 3°C in RCP8.5 both during the rainy season and the dry season. According to predictions, **weather extremes** will increase between 2041 and 2070, and indicate an increase in heavy rains, especially in the southwestern region of Sao Tome Island. This will be complimented by an increase in the observed number of consecutive dry days (days without rain) throughout the *Gravana*. Moreover, projections of extreme temperature between 2041 and 2070 indicate warming in both scenarios, with increases in heat waves, hot days, annual maximum temperatures and increasing annual minimum temperatures. 1. Given this situation, a comprehensive climate risk assessment will be undertaken during PPG.

Figure 2: Evolution of accumulated precipitation (mm) from October to March (rainy season) and from June to September (dry season) projected by the Eta3-4 km model for the period 2041-2070 in the RCP4.5 and RCP8.5

Figure 3: Evolution of the average temperature (° C) from October to March (rainy season) and from June to September (dry season) projected by the Eta-4 km model4 for the 2041-2070 period of RCP4 .5 and RCP8.5 relating to the period 1971-2000



Problem statement.

As described above, ecosystems and biodiversity, including those of high environmental value, are highly affected by a range of human and natural drivers as well as the impact of COVID-19. Key human drivers of biodiversity and ecosystem loss in STP include road and energy infrastructure projects, agricultural expansion linked to agribusiness and family farming, selective and illegal logging, overexploitation of non-timber forest products, dynamite fishing, pollution from the use of pesticides in connection with impregnated mosquito nets and agricultural chemical inputs, collection of sea turtles and their eggs and extraction of marine sand. Such causes have resulted in the loss of habitats of high environmental and biological diversity value, the depletion of secondary forests and ecosystems of high ecological value, the loss of endemic species, the decline of fish stocks and fish populations and the loss of marine biodiversity. Climate change is the main natural phenomenon affecting biodiversity and ecosystems including endemic species and others classified as vulnerable or relatively vulnerable. Indeed, climate change is leading to accelerated soil erosion due to the very rugged nature of islands, flooding and subsequent degradation of flat forest areas, such as upland shade forests, increasing trends in mean annual temperature values and decreasing precipitation, the loss of forest cover by landslides, since about 90 per cent of forests are located in areas of steep relief, and the reduction of soil moisture content, especially in black and brown clays and savannah soils that are already exposed to water scarcity. Climate change is also affecting the reproduction, stocks, distribution and migration of fish populations. The COVID-19 pandemic is already having repercussions on the agricultural sector and the country COVID -19 medium term emergency plan sets key measures to mitigate the impact on the agro forestry and fishery sectors.

48. In view of the above, agricultural, forestry and fisheries activities are major causes of species diversity, habitats and ecosystem services loss in STP. Agricultural activities, through the expansion of areas under small-scale and large-scale agriculture, are responsible for the increasing conversion of forests. In this respect, agricultural activities lead to a significant loss of habitat and biodiversity and thus to the reduction of biodiversity. Forestry activities, more precisely wood and charcoal production, have led to forest degradation, the disappearance or strong reduction of endemic or vulnerable species. In some cases, deforestation occurs especially in the case of charcoal production. Activities in the marine and coastal environment destroy the habitat and reduce the biological diversity of these ecosystems.
49. Agriculture, while being one of the major causes of biodiversity loss, is also a victim. Indeed, soil erosion, declining soil moisture and rising temperatures coupled with declining rainfall due to climate change are affecting agricultural production.
50. The root causes and drivers of these threats can be summarised as a combination of intense and fast economic development pursued by local authorities and/or local developers, combined with weak and inefficient governance mechanisms for the protection of important ecological sites and resources.

51. Long term agricultural development vision and key barriers :STP long term development is to achieve food and nutrition security, more agricultural revenues based on the export of high value-added products through a model (at least regionally and for SIDS) of climate & biodiversity-smart agriculture; supporting innovative methods toward agro-forest conservation and sustainable development of rural populations; promoting niche markets development and highly certified products; based on an integrated environment approach, for local development and landscape conservation (e.g. use of endemic insects for biological control, developing a new value chain promoting biodiversity conservation, agro-eco-certification such as the Gold Standard for coffee production, etc.). Various agricultural projects including IFAD funded projects promote the inclusion of biodiversity conservation into the value chain and financing mechanisms and management. To achieve these development objectives, the following key barriers must be addressed:

Barriers to the integration of eco-system services & biodiversity in the agricultural sector in São Tomé and Príncipe.

52. **Barrier 1: Limited institutional capacity, policy frameworks and guidance to articulate the biodiversity and agro forestry and fishery nexus.** State institutions, private sector and NGOs in the agricultural and environmental sectors have a strategic role to play in integrating biodiversity into the agricultural sector. In São Tomé and Príncipe, most of the personnel of the governmental and non-governmental organizations structures involved in biodiversity conservation, agricultural, fishery and forest development require capacity building to improve their knowledge with appropriate skills to ensure the articulation between sectorial activities and the protection of biodiversity. As a result, these institutions are struggling to strengthen and harmonize policies and standards to mainstream biodiversity conservation into the agricultural sector. Currently, there is a need to develop Biodiversity-compatible policies, guidelines which integrate biodiversity into existing agro forestry, fishery production standards, certifications and labelling of organic and sustainable agriculture for exports and domestic markets. There is also a lack of coherence between agriculture on one side and forestry and fisheries sub sectors on the other. In addition, local institutions are under-equipped with regard to the logistical requirements of their mandate, which requires frequent travel to monitor the state of biodiversity in relation to agricultural and fishery activities. This is mainly due to limited financing toward biodiversity and the lack of mechanisms and incentives to increase domestic budget allocation and investment in biodiversity conservation linked to agriculture, fishery and forestry. This calls for improved knowledge, skills and cross sector coordination to overcome the main barrier to integrate biodiversity protection into agricultural and fish farming systems.

53. **Barrier 2: Limited knowledge, and technical capacity of farmers on biodiversity-friendly farming and fishing practices.** Analysis of documents and information collected from stakeholders as well as from the National Biodiversity Strategy and Action Plan 2015-2020 of the country shows an insufficient level of technical capacity and knowledge on the biodiversity, agroforestry and fishery nexus. As a result of limited knowledge of the concept of biodiversity and agriculture nexus, there are signs of threats and loss of biodiversity across agricultural landscapes including in agro forestry zones buffering protected areas. This results in the erosion of biological diversity particularly valuable species of global importance such as Atlantic Wreckfish (Cherne) *Polyprion americanus*, the Dwarf Ibis CR and São Tomé Olive-pigeon, native vertebrates among others listed under the section *Global importance of São Tomé and Príncipe Biodiversity*. Agricultural tillage practices do not always take into account the requirements for conserving biodiversity in soils. The increasing use of chemical fertilisers represents a real threat to biodiversity. The downward trend in polyculture, and thus in crop diversity, is an indicator of reduced biodiversity in agricultural ecosystems. Fishing practices with small-mesh nets and the use of dynamites are techniques that destroy biological diversity and globally endangered species such as the loggerhead and green turtle. Agro forestry and fishery practices and current technologies are not adequate and are negatively impacting biodiversity in São Tomé and Príncipe. There are few examples of sustainable agriculture with mainstreaming of biodiversity and limited replication mechanisms. Current agricultural investment pays limited attention to biodiversity mainstreaming into investments.

54. **Barrier 3: Limited financing and incentive mechanisms to foster biodiversity-compatible farming and fishing practices.** Farmers and fishermen living in rural areas, according to the third communication of São Tomé and Príncipe (2019), are among the poorest. There are limited or non-existent financial mechanisms to provide incentives for biodiversity conservation within the agricultural sector development. In the absence of incentive such as Payments for Ecosystems Services (PES) schemes, more biodiversity finance from domestic resources and private sector; a limited number of farmers can be engaged in biodiversity-based agriculture, forestry and fishery certified products (organic, certified products); Biodiversity-compatible practices or in the production of certified biodiversity based agriculture products. There is a lack of spatial and land-use planning to ensure that land development in the agricultural development sector and resource use is appropriately situated to maximize agricultural production without impact on the countries endemic and

globally significant biodiversity. By accessing PES, farmers should be able to adopt sustainable agriculture that has previously been hampered by a lack of financial incentives for poor smallholders to adopt more sustainable agricultural practices and adhere to biodiversity-friendly standards and criteria. Private and public sector investments could be unlocked when the sector is supported by appropriate financing mechanisms and business development skills.

55. **Barrier 4: Limited awareness across government institutions and local communities on agriculture and biodiversity nexus:** National and local institutions, local stakeholders (e.g. communities, social enterprises, provincial and sub-provincial administrations) have limited awareness of biodiversity-agriculture nexus opportunities and lack the required skills to develop the agricultural sector in a biodiversity sensitive manner while meeting required standards and ensure objectives of different partners. There is more and more interest to develop certified agricultural products for both local and international markets. However, a lack of awareness and skills remain the main barriers.

1a.2. The baseline scenario and any associated baseline projects

56. Biodiversity conservation initiatives in São Tomé and Príncipe. São Tomé and Príncipe ratified the Convention on Biological Diversity in 1998 and has since undertaken National Biodiversity Strategies and Action Plans and Reports in 2002, 2004, 2005, 2007 and 2009 second one in 2016 (for 2015-2022). São Tomé and Príncipe has also prepared a national action plan for adaptation to climate change, a national plan for the implementation of the Stockholm Convention on Persistent Organic Pollutants and a plan to combat deforestation and land degradation. It is part of the Central African Forestry Commission, the Convention on International Trade in Endangered Species of Wild Fauna and Flora, the Convention on Migratory Species, the Ramsar Convention and the World Heritage Convention. In terms of biodiversity conservation policy and planning tools, São Tomé and Príncipe has prepared initiatives such as the National Plan for Sustainable Development and laws on biodiversity conservation issues such as the law regulating fauna, flora and protected areas, the forestry law, the fisheries law, the law regulating the Obô National Park in São Tomé and Príncipe, as well as the decree regulating raw material extraction and the decree regulating environmental impact. The activities of this initiative have been identified in the framework of the National Biodiversity Strategies and Action Plans and are aligned with the implementation of the Management Plan of Obô National Park in São Tomé 2009-2014, contributing to the implementation of the Management Plan of Obô National Park 2009-2010 in terms of buffer zone management. São Tomé and Príncipe has formulated a national plan of economic development 2017-2022, in which it has integrated the issues of biodiversity conservation. Beside these planning documents; following projects have been developed and may be linked to this PIF project.

Associated Baseline Projects

57. The EU-funded ECOFAC -6. The EU-funded ECOFAC (Écosystèmes Forestiers en Afrique Centrale) programme is part of a regional initiative that focuses on the conservation of forest ecosystems. ECOFAC began its operations in São Tomé and Príncipe in 1995 under the responsibility of the then Directorate of Forestry, with the aim to establish protected areas on both islands and put systems in place for their management as well as sustainable utilisation of their buffer zones. The successive ECOFAC projects contributed to the establishment of the two Obô Nature Parks, initial development of ecotourism services including community-managed lodges, hiking trails and the establishment of the Botanical Garden at Obô Nature Park in São Tomé, promotion of agro-forestry practices in buffer zones, support to biodiversity-related research programmes, and under ECOFAC-5 the development of a protected area management plan for 2015-2020. From 1005 to the end of ECOFAC-5, the ECOFAC projects in STP were implemented by Government, with mixed success.

58. The IFAD Participatory Smallholder Agriculture and Artisanal Fisheries Development Programme (PAPAFPA) and Smallholder Commercial Agriculture Project (PAPAC) took place from 2003 to 2015. PAPAFPA incurred a total cost of US\$16.3 million, with contributions from IFAD, OFID, and GEF. PAPAC has an estimated cost of US\$12.8 million. Key impact estimates positive impacts of the projects on agricultural production and productivity, household income and assets, food security, and commercialization for beneficiary farmers. The evaluation revealed that the project contributed to an increase in the extent of organic certification among beneficiaries. The evidence also shows that the projects increased harvests and yields (kg/ha) for the value chains targeted by the interventions: yields increases for the three crops ranged from 16 to 35 per cent for beneficiaries compared with non-beneficiary households. Beneficiary households also benefitted from increased sales revenues from these crops, ranging from 29 to 45 per cent. Households in the treatment group earned net income 46 per cent higher in the 12 months preceding the data collection—equivalent to an increase of approximately US\$650 a year compared with non-beneficiary households. Key lessons learnt to take into account into this new GEF project are : i) Linked interventions in the provision of agricultural organic inputs and techniques, farmers’ professional development, and rural infrastructure were crucial to ensure that gains in agricultural yields resulted in increased sales revenues, asset ownership, and income for beneficiary households ii gains in yields and sales revenues were not restricted to project-targeted crops but extended to other crops such as sugar cane, tobacco, fruit, and tuber iii) The projects accentuated households’ specialization in agricultural activities as a source of income, mostly at expenses of self-employment iv) The project cooperatives played a key role articulating different agents in the value chains, thus buffering the impact of price shocks and building the resilience v) Although the qualitative evidence suggests that the projects generated a high level of satisfaction among beneficiary women, it showed no significant measurable impacts on women’s empowerment
59. The ECOFAC-6 project started in 2018 (\$2,214,400, 2018-2022), and is for the first time in STP being implemented through an NGO – BirdLife International. It is implemented via a consortium of NGOs that in addition includes OIKOS, SPEA, RSPB and the local NGO Fundação Príncipe. The project aims to reinforce the management of the two NPs, to mainstream biodiversity in development decision-making, to create new models for the management of the buffer zone involving communities, and to raise new sustainable finance for the PAs working focusing especially on tourists.
60. **Landscape Restoration for Ecosystem Functionality and Climate Change Mitigation in the Republic of São Tomé e Príncipe** has been developed and approved. It will start during 2020. It has been developed by FAO. The main goal of the project is to promote the restoration and sustainable management of the forest ecosystems of São Tomé and Príncipe in order to reduce carbon emissions from deforestation, and stop and reverse forest and soil degradation. The project is structured into four interlinked technical components: Policy Development and Integration (Component 1); Implementation of Restoration Programs and Complementary Activities (Component 2); Institutions, Finance and Upscaling (Component 3), and Knowledge, Partnerships, Monitoring and Assessments, and linkages with GCP (Component 4).
61. The partnership between the project and the **Landscape Restoration for Ecosystem Functionality and Climate Change Mitigation in the Republic of São Tomé** project will be under Component 1 and Component 2 of the latter project mentioned above. A mechanism will be set up between both projects to explore all areas of collaboration. Areas of collaboration may include: (i) improvement of *policy framework* under Component 1; ii) *high-quality restoration and management of agro-forestry plantations through shadow forests in the buffer zones of Obo and Príncipe Natural Parks*, (ii) promoting *production, processing and sale of NWFP* under Component 2 of the Landscape Restoration for Ecosystem Functionality and Climate Change Mitigation in the Republic of São Tomé project.
62. **Support for the preparation of the national interim report on the implementation of the Nagoya Protocol.** The main objective of this project is to assist eligible Parties to the Nagoya Protocol on Access and Benefit-sharing in the preparation and timely submission of their interim national reports on the measures that each Party has taken to implement the Protocol, in accordance with Article 29. The project will build on the experience that São Tomé and Príncipe has already gained, in order to effectively ensure the participation of national authorities, non-governmental organizations, the private sector and research institutions, as well as local communities, through ongoing GEF projects on access and benefit-sharing. The project is implemented through data collection, consultative workshops and interactive meetings at the national level. The various government departments acting as competent authorities are consulted to establish the background information needed to prepare the national report. The project ensures that the Nagoya Protocol will receive more and better quality reports from São Tomé that provide the data necessary for the analysis required to meet the requirements of Articles 29 and 31 and

also provide relevant data for the first assessment and review of the implementation of the Nagoya Protocol. The reports also provide reliable data for the implementation of the Nagoya Protocol, in particular its decision-making processes and the mechanisms supporting the COP-MOP processes.

63. Support to eligible parties for the production of the sixth national report to the CBD (Africa 2). The objective of the project is to provide financial and technical support to GEF-eligible Parties to the Convention on Biological Diversity (CBD), including São Tomé and Príncipe, in their work to produce high-quality, data-based Sixth National Reports (6NRs), which will improve national decision-making processes for the implementation of National Biodiversity Strategies and Action Plans and report on progress towards the Aichi Biodiversity Targets (ABTs) and inform both the fifth Global Biodiversity Outlook (GBO5) and the Global Biodiversity Strategy 2021 - 2030.

64. Building capacity for biodiversity conservation and protected area management. The objective of the project, for which UNDP is the implementing agency, is to strengthen systemic, institutional and operational capacities at national and site levels for protected area management and sustainable land management, in order to safeguard globally important terrestrial, marine flora and fauna, and ensure ecologically sustainable livelihoods. To this end, the project has established four components. The first component aims at strengthening systemic and institutional capacities for protected area management and biodiversity conservation. The second component seeks to develop effective biodiversity conservation and protected area site management actions. Component 3 is dedicated to the promotion of integrated and ecologically sustainable land management in a multiple-use buffer zone. The fourth component is dedicated to the development of a knowledge management and communication programme.

65. Pro biodiversity legislation The Constitution of the Democratic Republic of São Tomé and Príncipe foresees that everyone has the right to housing and to a human living environment and the duty to defend it (art. 48 p.1st), and the State has the responsibility to defend the environment and biological resources through the adoption of strategies, policies and environmental legislation, and abide to international conventions relevant to the conservation and sustainable use of natural resources. The Law of Environmental Bases (Law 10/99), as a framework-law, defines the guiding principles for the protection and valuation of flora and fauna, and determines that the State, through appropriate bodies and by appealing to popular and communitarian initiatives, should establish environmental quality standards, promoting a better individual and collective welfare of citizens. After the publication of the Law of Environmental Bases, the production of environmental legislation in the country increased considerably. From this produced legislation is worth to highlight:

- Decree Law No. 6/2014, on the capture and commercialization of sea turtles and their products – published in the Official Gazette (DR) No. 25 of 04.11.2014;
- Regional Decree No. 3, on the Protection and Conservation of Sea Turtles – published on the 18th Supplement, of the Official Gazette No. 90 of 07.08.2009;
- Law of the Obô Natural Park of São Tomé and the Natural Park of Príncipe, Law No. 6/06 – published in the Official Gazette (DR) No. 29 of 02/08/2006;
- Law of the Natural Park of Príncipe, Law No. 7/06 – published in DR No. 29 of 02.08.2006;
- Law of the Forests, Law No. 5/2001 – published in DR No. 8 of 31/12/2001;
- Law of Fisheries and Fishery Resources, Law No. 9/2001 – published in the Official Gazette (DR) No. 8 of 31/12/2001;
- Law of the Conservation of Flora, Fauna and Protected Areas, Law No. 11/99 – published in the Official Gazette (DR) No. 15, 5th Supplement of December 31, 1999;
- Decree on the Extraction of Inert in the Coastal Areas and Rivers, Decree No. 35/99 – published in the Official Gazette (DR) No. 12, of 30/11/99;

- Decree on the Management of Municipal Solid Wastes, Decree No. 36/99 – published in the Official Gazette (DR) No 12, of 30/11/99;
- Regulation on the Evaluation Process of Environmental Impact, Decree No. 37/99 – published in the Official Gazette (DR) No. 12 of 30/11/99.

66. Significant efforts have been and are being made to protect the biodiversity of the islands of São Tomé and Príncipe. However, the challenges remain significant particularly in the agro forestry and fishery sector (agriculture, forestry and fishery) despite the initiatives implemented. The project focuses on tree sub sectors and targeted areas where there will be no overlap of activities but a complementary and synergies with all associated baseline investments.

Mainstreaming of biodiversity into agro forestry and fishery sectors

67. For several decades IFAD has been supporting the Government of STP in the agriculture and fisheries sector. This includes the USD 19.2m project “Participatory Smallholder Agriculture and Artisanal Fisheries Development Programme (PAPAFPA)”^[7] that was implemented between 2001 and 2015. From 2012 to 2017, this project was co-financed by a GEF-5 grant for the project “Integrated Ecosystem Approach to Biodiversity Mainstreaming and Conservation in the Buffer Zones of the Obo and Príncipe Natural Parks” (GEF # 4494, \$2,418,182), implemented by IFAD/MOPIRINA/MAPRD. The project was conceived to face causes of biodiversity loss and ecosystem degradation by means of an integrated approach linking up a direct support to actors and stakeholders, implementation of investments for the sustainable development of target communities in rural, PA buffer areas and the deployment of monitoring actions making use of modern technologies and adequate know-how, and the implementation of a private-public tourist platform (tourist operators, eco-lodge and hotel owners, agricultural cooperatives and international certification bodies), to promote agritourism packages to international tourists. The project aimed to sustainably manage 7,200 ha of biodiversity-rich ecosystems; 5,000 ha of forests in buffer zones; 2,000 ha of marine ecosystems; and 200 ha of mangrove forests. The project prepared an environmental education manual that is presently being used to support school curricula, a baseline assessment of fisheries resources, training of 1,090 farmers in agroforestry methods, and the development of a management plan for mangrove forests.

68. The successor project Smallholder Commercial Agriculture Project (PAPAC, \$12.2m, 2015-2020) has as objectives to reduce rural poverty and food insecurity in STP, through 1. Development of three inclusive value chains for organic cacao, coffee, and pepper, 2. Development of family plantations, 3. Strengthening of producer associations.

69. The latest successor project is presently under development that will seek co-financing under GEF-7. COMPRAN will focus on extending the practices and the cooperative approach to other farmers and commodities which support the national policies of MAPDR to gradually reduce food imports and replace them with local products and expand the production base by increasing and diversifying agricultural production, livestock and fisheries.

70. These projects have brought important livelihood improvements to rural farmers in STP. The introduction of organic value chains is also a notable success with ecological and human health benefits. However, the returns for biodiversity and sustainable buffer zone management are less visible. The successful promotion of the pepper value chain may well have negative impacts on ecosystems, and there are important plans to expand production. Further biodiversity and environmental mainstreaming in the agriculture sector appears below.

1a.3. The proposed alternative scenario with a brief description of expected outcomes and components of the project

71. Against the above-mentioned threats and barriers, the proposed project will build on the baseline scenario to deliver the Specific Objective (SO): To mainstream biodiversity conservation into agro-forestry and fishery production and management and minimize the negative impacts on biodiversity caused by the development of the agro – forestry and fishery sector, while enhancing the contribution of ecosystem services to livelihoods in São Tomé.

The project SO will be achieved through three mutually reinforced components:

- ü **Component 1:** Enabling policy, institutional and fiscal frameworks for mainstreaming biodiversity into the agro-forestry and fishery sectors
- ü **Component 2:** Mainstreaming biodiversity into agricultural value chains development and financing mechanisms
- ü **Component 3:** Monitoring, evaluation and knowledge management
- ü

72. The project's theory of change is that mainstreaming biodiversity conservation into the agricultural sector development (agriculture, forestry and fishery) at national and local level through biodiversity-based agriculture to enhance on the contribution of ecosystem services to livelihoods and reduce the impacts on biodiversity require : i) Strengthened and harmonized policies and standards to mainstream biodiversity conservation into the agricultural sector ii) Increased sustainable, biodiversity-friendly agricultural, agroforestry and fishery production and financing through the adoption and scaling up of biodiversity-compatible practices and to produce certified biodiversity based agriculture products using incentives such as payment for ecosystem services (PES), certification and labelling while at the same time supporting the agricultural and fishery sectors to enter specific niche markets adapted to national supply. The PES mechanism to help achieve two of its Objectives Biodiversity Focal Area Strategy: 1) the Sustainable Financing of Protected Area Systems at the National Level and 2) Fostering Markets for Biodiversity Goods and Services. In these two strategic programs, the GEF supports the design and implementation of PES schemes as revenue mechanisms to support biodiversity conservation in protected areas and to compensate resource managers for off-site ecological benefits associated with biodiversity conservation compatible land-use practices. The project's approach is based on the assumption that mainstreaming biodiversity into agricultural, forestry and fishery development requires understanding and acceptance of the positive impacts of healthy ecosystems. The adoption of biodiversity-friendly agricultural and fishing techniques will in turn improve the state of biodiversity in ecosystems subject to agriculture and fisheries not yet targeted by previous similar projects including IFAD funded projects.

73. The proposed alternative scenario is to facilitate a transformative shift towards integrated and ecologically sensitive management of agricultural, agroforestry and fishery ecosystems through the integration of conservation concepts in key production sectors; in order to protect biodiversity of global and national importance, reduce resource conflicts and maintain a continuous flow of ecosystem services, including water, carbon sequestration, endemic species and wild areas. In addition, this overall project's expected result will contribute to global biodiversity and to the achievement of the objectives set by the Convention on Biological Diversity and its relevant protocols. This project focuses on integrated biodiversity management and is aligned with the GEF 7 Biodiversity Programming Guidance Document. Indeed, the objective of the GEF-7 Biodiversity focal area strategy is to maintain globally significant biodiversity in landscapes and seascapes through, inter alia, the objectives of integrating biodiversity across sectors and in landscapes and seascapes, protecting habitats and species by addressing the direct causes of their degradation, and developing biodiversity policies and institutional frameworks.

74. Biodiversity mainstreaming into the agricultural sector is important because currently agricultural plans, policies and strategies are developed separately from environmental concerns. This happens both in the public and private agricultural institutions. As a result of this, agricultural (agricultural and forestry) and fishery developments have happened, that have led to the destruction of biodiversity, and the ongoing management of these agricultural areas is unsustainable and impacts negatively on biodiversity. This is a huge area of work and would benefit from a comprehensive policy review that identifies the key policies, plans and processes that need to integrate better with biodiversity conservation as a first step, on the basis of the impacts that lack of integration has on biodiversity. Then from this, working to address improved integration of biodiversity conservation, particularly ensuring protection of important high conservation value habitats and threatened species, into identified policies, plans, processes is necessary. Of particular importance is mainstreaming biodiversity conservation into agricultural land-use and fishery planning processes, so that new developments are not leading to biodiversity loss. In the private sector, developing some guidelines for sustainable management of biodiversity within agricultural concessions would be very valuable. At the smaller-scale, the Governments initiative of leasing land plots to local people for smallholding development is now causing issues of encroachment, as the ownership of these areas is only temporary and people have been given no support in sustainable practices. The highest diversity and abundance of fish is found in rocky reefs, and that some fish, such as snappers, feed in the surrounding sandy areas. Hence marine conservation priorities which covers rocky reefs and surrounding areas of sand or maerl are a priority for government. An on-going initiative led by the NGO Fauna and Flora International and funded under the Blue Action Fund (BAF) aims at establishing Protected Areas; using systematic and transparent methodology such as Marxan and promoting co-management and dialogue with local fishing communities. The BAF project will produce preliminary results by 2021 that will further inform the priority intervention areas for the project and the PPG. A strategy that integrates biodiversity conservation, on what happens next with these leased areas and how to support sustainable smallholder agricultural development is key. Biodiversity mainstreaming is also not just about the policies, plans, processes but it is also about the people – the decision-makers. They need to have access to the necessary information, they need to have opportunities for cross-sectoral engagement, they need to have a certain level of awareness to motivate them to drive the mainstreaming agenda. This means strong government buy-in to the process from Agriculture, Fishery and Environments Ministries, as well as supporting activities on awareness creation, production of knowledge materials, cross-sectoral ministerial communications.

75. With the incremental GEF financing coming from the national STAR allocations, this project will promote operational use of standardized biodiversity compatible practices in agriculture and supports a transformative shift of key-production sectors (agriculture, forestry and fishery) in São Tomé and Príncipe. This project will target the same IFAD target groups particularly youth and women. A gender action plan will be developed at PPG stage as well as the baseline targets.

76. To address the impact of COVID on ongoing and future IFAD investment, The IFAD Rural Poor Stimulus Facility (RPSF) proposal recently by IFAD in will therefore be part of a stimulus package for the rural poor people to accelerate their recovery, by leveraging on the ongoing IFAD-supported COMPRAN project. The availability of RPSF funds also mitigate the significant risks and negative impacts associated with relying on repurposing of COMPRAN funds to address immediate COVID-19 needs. This will allow the limited GEF resources to be used on the proposed objective.

The objective of the project will be achieved through the following components and outcomes

77. COMPONENT 1: Enabling policy, institutional and fiscal frameworks for mainstreaming biodiversity into the agro-forestry and fishery sectors. The outcome expected under this component is strengthened policy, institutional and fiscal frameworks and standards to mainstream biodiversity conservation into the Agro forestry and fishery sectors. Key outputs and activities expected are :

- Biodiversity-compatible practices integrated into existing agro-forestry and fishery production standards for improved certifications and labelling of organic products for exports and domestic markets. This activity is proposed to address the gap including gender gap, in terms of international certification and labelling standards, observed in the

cocoa, coffee, palm oil value chains and practices, as well as in the fishery and forestry sectors. By promoting certification and labelling, the project will contribute to creating and positioning STP on the national, regional and international markets for certified organic agroforestry and fishery products.

- Guidelines and policies on biodiversity finance developed and implemented in the agro forestry and fishery sectors to address harmful subsidies and provide incentives for biodiversity-friendly land and sustainable ecosystems management using PES schemes at country level. Activities under this output aim at developing and implementing policy and regulations that maintain harmful subsidies, but also promote practice of raising and managing capital and using financial incentives to support sustainable biodiversity management in the agro forestry and fishery sectors. Gender dimension will be included in the guidelines and policies. Such guidelines and policies will contribute to sustaining and scaling up the project beyond its lifecycle.

- One biodiversity public expenditure review (BPER) in the agroforestry and fishery sectors will be developed to support advocacy for more biodiversity finance in the agroforestry and fishery sectors in STP. This policy guide will collate and use detailed data on public, private, and civil society budgets, allocations and expenditures to inform and promote improved biodiversity policies, financing, and outcomes in the agro forestry and fishery sectors. The main objective of the BPER is to help policy makers reduce the harmful agroforestry (deforestation, overuse of pesticides and fertilizers) and fishery (the overexploitation of fish stocks) harmful subsidies and tax rebates that have negatives impact of agro forestry and fishery sector and the biodiversity, so the country could engage in policy reforms that lead to re-allocation of these resources on PES schemes on biodiversity conservation. This BPER will also review the expenditure on gender issues to address the gender gap in agro forestry and fishery sectors.

- One capacity development program developed for mainstreaming biodiversity conservation within the agroforestry, fishery sector planning, standards and investments for key national and local stakeholders and sector institutions. Given the lack of capacity and knowledge on the topic, this program will define all actions needed to improve skills and awareness of all stakeholders involved in Biodiversity-compatible practices in agro forestry and fishery sectors. The program will integrate gender mainstreaming challenges to address the gender gap. It will include research on baseline scenarios versus alternatives, trainings, education, sensitization, engagement and policy dialogue using the main outcome of the public expenditure review to support the PES schemes. To financial sustain this PES schemes, key recommendations from public expenditure review will be mainly focused on the taxes, subsidies and fees as the main source of funding for paying land owners and deposit in the PES account at the International bank of STP. This would represent the country co-financing in the long run into the PES schemes. The design and implementation of the PES will be further developed at the PPG stage.

- Cross-sector coordination mechanisms and awareness raising of 2000 small holder farmers and fishermen; 100 individuals from governmental technical institutions and NGOs improved on biodiversity-compatible practices in agro forestry and fishery sectors, the activities proposed under this output will address limited awareness of biodiversity-agriculture nexus, opportunities and the lack of required skills from National and local institutions as well as local stakeholders (e.g. communities, social enterprises, provincial and sub-provincial administrations). Trainings and workshops both at national and provincial level will be organized with at least 50% women participants.

78. Component 2: Mainstreaming biodiversity into agro forestry and fishery value chains development and financing mechanisms

This component is dedicated to the practical integration of biodiversity conservation into producers' agricultural, fish farming and forestry practices as well as financing mechanisms. It will focus on concrete measures that promote the mainstreaming of biodiversity (including threatened species) into agro forestry and fishery production systems; communicate engagement to sustain the results, as well as into investments and domestic budget allocation. The proposed interventions will contribute to addressing biodiversity loss due to poor practices in the agricultural sector (agriculture, fisheries and forestry). Key expected outputs and activities under this component include:

- Spatial and land-use planning to ensure that land development in agro forestry sector development and resource use is appropriately situated to maximize agro-forestry production with limited negative impacts on biodiversity and associated ecosystem services. This output is proposed to provide a decision-support tool for decision-makers in the field of land use planning and ecosystem management. The tool will enable decision-makers to organize and control different forms of land use for sustainable agro forestry production while ensuring that there are no negative impacts on the biodiversity and associated ecosystem services.
- 1500 small holder farmers and fishermen improve and change traditional production systems towards more biodiversity-compatible practices including the use of bio digesters and solar energy technologies and products that meet standards, certification and labelling requirements. Due to the urbanization, the contribution of wood fuel demand to deforestation can lead directly to biodiversity loss when animal species that live in three no longer have their natural habitat, cannot relocate and therefore become extinct. Additionally certain tree species could permanently disappear which affects biodiversity of plant species in an environment. While wood fuel particularly charcoal is used to conserve and process fish and other sea products, there are still limited source of energy alternatives (bio digesters and solar energy) to power fishery value options which in turn will reduce daily fish stock capture, pressure and biodiversity loss particularly for specific species that need regeneration. Key activities under this output will reverse the increased threat trend on specific species particularly the *Milicia excelsa* ('amoreira'ou 'molela'), *Ficus mucoso* ('figo porco'), *Falcataria moluccana* ('acácia mimosa'), *Carapa procera* ('gogô'), *Scytopetalum kamerunianum* ('viro branco') and *Zanthoxylum gillettii* ('marapião') due to overexploitation. Proposed activity will also address the declining trend in the population of demersal species in marine areas as well as the economically important *Eleotris vittata* ('charoco') and *Sicydium bustamantei* (freshwater shrimp), which play an important role in food and nutrition security in the population. This will be disaggregated by gender.

Piloting one biodiversity orientated Payment for Environmental Services (PES) Fund within the national investment bank of São Tomé to provide financial incentives to agroforestry and fishery value chain actors. The fund will aim to positively change current practices that are damaging biodiversity levels across the sector. The piloting of the PES Fund will encourage actors across the financial sector to invest more across the biodiversity, agro-forestry and livestock nexus, establishing. The PES Fund will provide matching grants which will serve as incentives to producers to adopt biodiversity compatible practices and meet certification and labelling standards. In the medium and long term, it is expected that the bank will continue to sustain the Fund. GEF's fund will not only as a source of funding for the PES schemes, but also to strengthen the institutional and technical capacity to manage complex systems of payments for environmental services. The project will engage Land owners, especially local communities and indigenous peoples, are key elements of the schemes and need to be successfully engaged during early stages of project at PPG stage. Local governments and international and national NGOs will contribute to the design and implementation. Potential buyers (private sector) involved in forestry and sellers (smallholder farmers) will be identified and their capacity built to pilot PES on biodiversity conservation (forest) in the country. On agro forestry, the project will promote PES which PAs is likely to play a role is in international PES systems, such as in a compensation system for Reducing (carbon) Emissions from Deforestation and Forest Degradation (REDD), in which carbon buyers would remunerate the local states/ country or directly landowners to landowners to finance improved command-and-control systems, including improved PA management as well as sustainable land use. On fishery, the PES will be used to support Biological fishing rest and address hard trade-offs between biodiversity conservation and fishery development The project will ensure that that at least 15 % to 40 % are buyers and the PES contribute to addressing the gender gap. While the carbon market is immature, the PES scheme on biodiversity has a great potential. The International Bank of Sao Tome will be the main partner for the PES schemes where transactions will be done.

- 500 selected smallholders (50% women), and 50 local leaders are engaged in biodiversity conservation activities in the agroforestry and fishery sectors through biodiversity threats analysis, education, improved agroforestry, alternative crops and markets, and local institution development. Activities proposed will enhance the protection of biodiversity in the agroforestry and fishery sectors; provide in depth biodiversity threats analysis, education outreach, improved capacity for biodiversity sensitive agroforestry practices, alternative crops and markets, and local institution development.

- One national digital platform including mobile application developed and launched, providing an e-marketplace for certified biodiversity based agro-forestry and fishery products. In a context of COVID-19 and post COVID-19, this tool will facilitate better supply and demand, better access to market prices for products that comply with biodiversity conservation certification standards. In this way, producers will be able to sell their products at advantageous prices. The economic gains generated by these attractive prices will incentivise the behavioural change away from the traditional over-exploitation of biodiversity.

79. COMPONENT 3: MONITORING-EVALUATION AND KNOWLEDGE MANAGEMENT

This component consists of setting up a monitoring, evaluation and coordination system including CBD to guide and harmonize the interventions of the actors in the zone. It will be a question of taking into account not only the lessons learned from previous interventions, and also ensuring a good capitalization of the experience of this project, as well as the effective dissemination of lessons and good practices. The project will ensure that the experiences and lessons generated by the implementation of the activities will be systematically collected, analysed and disseminated throughout the country to facilitate awareness raising, replication and extension. Component 3 complements activities in Components 1 and 2 by capturing, documenting and ensuring the dissemination of results from the project. Knowledge acquisition and dissemination in areas of common interest requires overall institutional coordination. For this reason, the project will develop planning, monitoring, and evaluation capacity to establish and monitor complementary investments in the sector. Component 3 will also support exchanges of information, knowledge, and technologies through (among other channels) a web-based exchange platform; specialized training and exchanges on priority themes for farmers, scientists, technicians, or extension workers, creating communities of practice. Key outputs and activities are:

- At least 12 knowledge/capitalisation products are generated and disseminated. After development of a knowledge management plan that will include the different capitalization supports, media, channels, and target public in terms of biodiversity integration in the project intervention areas, elaboration of a strategy for communication and dissemination of the project's successful results and designing of a sustainability plan, the project will ensure that lessons learned are captured, documented and disseminated through the most appropriate channels and towards the relevant audience.
- Functioning and effective monitoring and evaluation plan in place. This output consists of developing and implementing a coordination mechanism for interventions in the area. A monitoring and evaluation plan and system for project activities will also be designed and implemented. A focus will be on gender targeting and monitoring.

1a.4. Alignment with GEF focal area and/or Impact Program strategies;

80. The project is aligned with priorities, outcomes and programming options associated with the three objectives as identified by COP-13 and with some of the programming options for each of the three objectives.
81. The project follows the four-year framework and program priorities for GEF-7 and fully responds to the guidance that the "framework encourages integrated approaches to project design", as well as to the GEF mandate to support activities that promote synergies among its focal areas. The project is expected to generate global environmental benefits that

correspond to one GEF focal areas (BD-1-1. Mainstream biodiversity across sectors as well as landscapes and seascapes through biodiversity mainstreaming in priority sectors) by addressing the underlying drivers of land degradation and biodiversity loss. Thus, the project is guided by the strategic direction of the GEF-7 programming guidance for biodiversity focal areas. Project components 1 and 2 and their associated activities contribute to the objectives, priorities, outcomes and programming options of the Biodiversity focal area strategy and or impacts programmes.

Alignment with the results of the Biodiversity Focal Area Strategy and Impact Programs.

82. The project will support biodiversity across sectors as well as landscapes and seascapes especially the following focal areas and will contribute to meeting the Aichi targets .

- a. Biodiversity Mainstreaming in Priority Sectors. In fact, the components' activities that will promote biodiversity conservation practices in agriculture, fishery and forestry, which are among sectors that have significant biodiversity impacts, will be implemented and will help making production practices more biodiversity-positive. The capacity building and financial payment for environmental services mechanisms which will incentivize actors to change current practices that may be degrading biodiversity are contributing to the first entry point, "policy and regulatory frameworks that remove perverse subsidies and provide incentives for biodiversity-positive land and resource use that remains productive but that does not degrade biodiversity".

Through component 2 outputs, the project will support São Tomé and Príncipe efforts' to increase productivity in crops, industrial species, but also in fishery and forestry.. The project area, which will include forests and trees outside forests has a globally important biodiversity, stores large amounts of carbon, and provides livelihoods to forest dependent communities.

1a. 5. Incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and co-financing;

83. The barriers identified in the analysis of the current operational model, particularly conventional agricultural practices, highlight that there is a need for improved capacities and resources, there are unfavourable environmental conditions and poor coordination between and within sectors in STP. These factors will accentuate the overexploitation of resources and continue the negative impact on biodiversity in STP. In particular, forests edges to protected areas and buffer zones are threatened by ongoing conventional agricultural processes. Continued business as usual will precipitate the significant local decline of biological diversity and ecosystem services through ecosystem destruction in these areas. This will have a significant negative impact on the species of global importance mentioned in Part II 1.a above. This project builds on all past baseline projects and complements ongoing initiatives STP and no duplication is foreseen. This project intends to fill the gap assessed from all associated baseline projects both in terms of activities but also target areas and sub sectors.

84. In the alternative scenario made possible by GEF 7 funding, systemic and institutional barriers to the integration of biodiversity into the agricultural and forestry (environmental) sectors will be removed through improved governance and management frameworks for biodiversity across the agricultural and forestry sectors. The capacities of government structures directly involved in mainstreaming biodiversity in agriculture, fisheries and forestry will be strengthened. Awareness of the importance of reducing or reversing the sustained trend towards biological diversity will be increased. All of these gains that GEF funding will produce will counterbalance and reinforce the overall environmental benefits. During the PPG phase, the project's contribution to expected global environmental benefits will be further reflected through impact indicators and targets in the project results-framework.

85. Apart from the GEF, São Tomé and Príncipe has limited sources of funding to support mainstreaming biodiversity in agriculture, forestry and fishery sectors. The government budget is in deficit particularly in the COVID -19 context and therefore does not allow covering the costs related to the strengthening of biodiversity integration in the agroforestry and fishery and environment sectors. The financing capacity of the domestic private sector is still too weak to provide investment for biodiversity conservation. These funds will serve as catalytic to the financial sector and other source of funding including the limited national budget allocations and investments to sustain regular public and private expenditure on biodiversity finance after the project completion.

1a.6. Global environmental benefits (GEFTF) and/or adaptation benefits (LDCE/SCCF);

86. The baseline analysis noted that São Tomé and Príncipe's biological diversity is one of the richest and most endemic in the world. The biological richness of the archipelagos is measurable not only through the specific diversity but also through the diversity of ecosystems. Forest formations cover 55.8% of the country's surface area. However, this richness is strongly threatened by a reduction trend illustrated by the decline in forest cover. According to FAO, the area covered by forest formations has decreased from 58.3% in 1990 to 55.8% in 2016.

87. GEF 7 funding will help save biological diversity in agrarian, river and coastal marine ecosystems. Fertilizing control techniques, PES focusing on value chains of some ornamental, medicinal, aromatic and food species will secure environmental and economic benefits as they will prevent loss of soil biodiversity, carbon storage, increasing income revenues. This project intends to protect a large number of endemic species including mammals, birds, reptiles, amphibians, butterflies, snail's butterflies and molluscs distributed in different terrestrial and marine ecosystems and habitats under threats. 59 threatened species, including 33 Vulnerable, 22 Endangered and four Critically Endangered (IUCN 2019) will benefit from the outcomes of the project. Through the anti-erosion practices that the project will implement, land and biodiversity degradation in soils and at the ecosystem level will be reduced. The activities of crop diversification, water control, snail and shrimp fish farming, the exploitation of non-wood forest products will reverse the trend towards reforestation driven by the search for income and fuelwood. Other activities such the reduction of forest edge loss and harmful practices, the use of agroforestry trees that provide habitat for key species etc, the reduction of charcoal use and safeguarding important endemic species will contribute to the environmental global benefits. Component 1 activities will improve the governance and management of the biodiversity nexus and the agricultural and environmental sectors. The public expenditure review will guide policy makers in assessing current budget allocation, the gap and long term investment needed to sustain the project after completion through the national budget and other investments.

These gains in terms of forest cover, enrichment of the diversity of soil fauna, macro-fauna, globally important species and ecosystems contribute to maintaining the state of the environment, to combating climate change through carbon sequestration and the increase in yields favoured by the increase in soil fertility. These are 1,200 species of flora in the archipelago, of which around 900 are indigenous (100 pteridophytes and 800 spermatophytes) and about 300 are introduced. There are 148 endemic plant species (14% of the national flora), of which 50 are restricted to Príncipe, 98 are restricted to São Tomé and 25 are shared endemics) (NBSAP 2015-2020). The most representative angiosperm families are Rubiaceae (27 species), Orchidaceae (135 species with 35 / 23% endemic), Euphorbiaceae (11 endemic species), Melastomataceae (17 species with 8 / 47% endemic), Begoniaceae (11 species with 6 / 55% endemic). Only 90 of STP's plant species have been assessed regarding their conservation status on the global IUCN Red List (which include few of the endemic taxa, and many dated assessments)[8]⁸ and will be protected . 1a.7. Innovation, sustainability and potential for scaling up.

Innovation

88. The challenges faced by the country in terms of biodiversity degradation are related to inadequate frameworks, lack of skills and financial resources for appropriate integration of biodiversity into productive sectors such as agriculture, fisheries and forestry. The implementation of this proposed project will lead to the adoption by farmers, fishermen and non-timber forest product operators of sustainable practices for the integration of biodiversity. The project will also support the development of institutional capacities, which will strengthen biodiversity governance and management frameworks. The development of organic fertilizers coupled with the production of renewable energy from banana tree trunks for domestic use through bio digester technology, the use of solar energy for water resource mobilization and anti-erosion techniques are technological innovations in the project intervention areas. The Establishment of the first PES mechanism on biodiversity in the agroforestry and fishery sectors will pilot incentives offered to farmers or landowners, fisherman's in exchange for managing their land to provide some sort of ecological service certification and labellisation bring innovation in the biodiversity conservation in the country. In terms of innovation policy, public expenditure review on biodiversity will be the first exercise to be accrued out in the country on biodiversity and will help decision makers on mainstreaming biodiversity into national budget and investments. These innovations will also foster sustainability of the project results.

Sustainability and scaling up

89. To ensure sustainability and scaling up, the project will work on various aspects: The increased inclusion, participation and accountability of multiple stakeholders (e.g. private sector, natural resource-dependent populations, development partners, civil society organizations) in project activities, decision-making and monitoring will ensure sustainability. This inclusion will lead to enhanced buy in to improved practices and greater adaption of activities as standard practice in longevity. The project will build on the achievements of previous projects, in particular PAPAC, by integrating and improving the existing institutional framework. The government, through its current initiatives and projects, but also through the integration of biological diversity into future projects, will ensure investments for the long-term sustainability of this project. The implementation of this proposed project will rely heavily on the expertise of the staff of the previous projects. The capacity building activities will ensure that the beneficiaries will perpetuate the skills acquired in the training courses. Additionally, the project is promoting PES schemes which will be sustain by GEF incentives but also government re-allocation of harmful subsidies, taxes, fees towards biodiversity conservation and sustainable agroforestry and fishery.

90. To ensure the sustainability of this project, a knowledge management system and collaboration with other national and regional biodiversity projects will be put in place. Thus, the experience gained and lessons learned from the project will be documented and shared through the national and regional projects. The objective of this knowledge sharing is to ensure that the impacts of the project go beyond its lifetime and the direct target groups. This knowledge sharing is also intended to promote peer learning and exchange of experiences. Brochures, leaflets and videos will be produced. Regular interactions will be undertaken throughout the implementation of the project.

91. Training sessions will be targeted at government officials and communities and not at consultants. This choice responds to the concern to ensure the sustainability of the project results, since these civil servants work permanently for the government. The same applies to the activity of sensitizing policy makers and other stakeholders on the importance of integrating biological diversity into the agricultural and forestry sectors.

92. Output 2.3, which consists of training eco-entrepreneurs in practices such as the manufacture of biodigesters, the establishment of fish farms and the recovery of non-timber forest products. These activities contribute to the conservation of biodiversity but above all to its integration into agriculture will allow the project results to be extended to other areas of the country. By training people in green entrepreneurship, they will provide services for other areas and other populations. The training of technical structures of the State as well as NGOs in the integration of biodiversity in the agricultural and environmental sectors will enable them, as part of their mission to supervise producers, to extend these achievements for the benefit of other regions and other populations of the country. During the PPG, the project will identify the most suitable financial institution to manage the PES Fund and Public Expenditure Review on Biodiversity and serve as the anchor to start biodiversity related finance in the country. To sustain the PES mechanism, the project will work at PPG stage with The International Bank of Sao Tome (main partner of IFAD) to host and sustain this mechanism and capacity building and policy dialogue will lead to the country contributions in the PES through the reallocation of harmful subsidies, taxes and fees on biodiversity conservation

[1] <https://www.afdb.org/fr/documents/perspectives-economiques-en-afrique-2020-supplement>

[2] PRODOC - São Tomé & Príncipe BD-LD UNDP 5881 GEF 10007

[3] PRODOC - São Tomé & Príncipe BD-LD UNDP 5881 GEF 10007

[4] A company of the Luxembourgian/Belgian Société Financière des Caoutchoucs, Socfin. Details in <https://www.socfin.com/en/investors/agripalma>

[5] Primarily houses given that 80% of houses in STP are made of wood; and for furniture and boats; there are no timber exports. See Annex 20 of PRODOC - São Tomé & Príncipe BD-LD UNDP 5881 GEF 10007

[6] <https://www.cepf.net/grants/grantee-projects/save-sao-tome-giant-snail-learning-and-teaching-preserve>

[7] https://www.ifad.org/en/web/operations/project/id/1100001027/country/sao_tome_and_Principe

[8] PRODOC - São Tomé & Príncipe BD-LD UNDP 5881 GEF 10007

1b. Project Map and Coordinates

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

1. Located in the Gulf of Guinea, the archipelago of São Tomé and Príncipe is located at latitude 0° 25'N and longitude 6 20'E. The islands cover an area of 1001 km², including 859 km² for the island of São Tomé and 142 km² for the island of Príncipe. 104. The project will be national in scope and its activities will be implemented in the rural areas of the two islands of São Tomé and Príncipe by adopting an approach aimed at intensifying sustainable farming practices in the current basins which concentrate more than 80% of family farms (Me-zochi districts), Lobata and Cantagalo in São Tomé) and in addition, make use of the contribution of biodiversity in the msie to develop the agricultural potential in poorly exploited areas (Caue and Lemba districts in São Tomé and the autonomous region of Príncipe). In these areas, the project will focus on : (i) target the basins that concentrate a critical mass of producers, particularly for export-oriented sectors; (ii) identify polyculture zones that can be extended with facilities to limit the degradation of the vegetation cover; (iii) target production zones requiring facilities for integrated water resource management and for improving the productivity and marketing of agricultural and fishery products; (iv) preserve the integrity of the protected zones located near the production zones; (v) develop a system for the protection of the environment and the protection of the environment in order to reduce the risk of pollution and the degradation of the vegetation cover; (vi) develop a system for the protection of the environment and the protection of the environment in the production zones.

2. Stakeholders

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

Indigenous Peoples and Local Communities Yes

Civil Society Organizations Yes

Private Sector Entities Yes

If none of the above, please explain why:

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

- 1- 1. Public consultation during the preparation of the project, were conducted in accordance with the requirements of the GEF and IFAD (see in Table 1 a part of the list of people consulted). It happens during the IFAD appraisal mission to design the new IFAD COMPRAN project for São Tomé and Príncipe. During the IFAD design mission, it was identified the need to design a development project which take into account the conservation of the biodiversity.
2. The main objective of this approach of information, communication and participation of stakeholders throughout the entire IFAD design project (7 months) was to create a climate of mutually beneficial exchanges, favorable to an open dialogue with the aim of: (i) ownership of the project by beneficiaries at the stage of preparation and planning; (ii) the consideration of the concerns of all stakeholders including vulnerable populations (women, youth, children, etc.) in the design and implementation of the project; (iii) exchanges on financing and project sustainability; (iv) identification of environmental and social impacts and risks and appropriate mitigation, compensation and environmental and social cooperation particularly induced by agricultural development projects including the IFAD new funded project COMPRAN. The consultative process comprises 3 weeks firstly on field trips, and partly on interviews with all stakeholders and beneficiaries of the project. These include: central and local government, administrative authorities, technical services, local communities, private actors along the various agricultural value chains etc. (see list of people met in Appendix 10). These public consultations were held in the regions covered by the IFAD project. During these series of consultations, the gender element was very present given that women and youth are generally regarded as vulnerable groups.
3. A literature review was conducted to prepare both IFAD and this PIF including the Social Environment and Climate Procedures (SECAP). Interviews with resource persons working in different ministries and structures involved as well as main actors engaged in main agricultural value chains (staple crops, cocoa, coffee, palm oil, fisheries, wood industry) were made. Field visits (potential sites and sites in exploitation) and interviews with the beneficiaries of perimeters in exploitation were made. This helped to establish in a participatory manner the context of project development, problems to solve, the types of adapted solutions, etc. and the consideration of the problems of vulnerable populations. The process was conducted as follow :
4. Step 1: Information on content of the project: In the first stage, beneficiaries were widely informed on the objectives and activities of the project. These meetings were conducted in each area of intervention of the project by representatives of technical services (agriculture, environment, fishery, forestry regional representations of Agriculture rooms and representatives of farmers' organizations, etc.) and representatives of local authorities (municipalities).
5. Step 2: During the second stage of consultation, sessions with stakeholders were organized at local level. Thus, public meetings with local communities were organized in some major centers of groups. The approach in these consultations was also to: (i) present the project (rationale, objectives, planned activities, expected outcomes of the project, (ii) collect the views, concerns and suggestions made by beneficiaries. the animation technique used has allowed to orient the discussions towards the expression of expectations and concerns that the proposed activities could eventually raise.
6. It is through this approach that the concerns and expectations of the people interviewed, have mainly concerned: the difficulty in developing a vibrant agricultural sector but at the same time conserving the biodiversity. The responses of these concerns, in the proposal, have been given to the public consulted (see table below). Several national institutions and

private organizations whose mandates and activities are related to biodiversity issues at different levels are presented below . At the PPG, different ministries will be involved at different stages of this project depending on the role they are expected to play in the project. Following stakeholders have been met during the project identification phase.

7. At PPG stage, further consultations will be engage with local governments and international and national NGOs have contributed to the design and implementation. The project will work closely with buyers of environmental services (private sector), land owners, especially local communities , financial institution (International Bank of STP and well as the decision makers to undertake all reform to re-allocate the harmful subsidies , taxes towards biodiversity conservation under the PES schemes.

Table 1: List of stakeholders met in STP

Names of stakeholders	Contact Persons
General Directorate for Environnement & GEF Focal Point	Lourenço Monteiro
Directorate of Agriculture	Hermenegildo Santos
GCF Focal Point	Fausto Neves
Directorate of Fishery	Joao Lima
Pepper Cooperative CEPIBA	Carlos Tavares
CECAFEB Coffee	Luis Mário
CIAT	José Xavier Mendes
Directorate of Livestock	Natalina Vera Cruz
CECAB	Antonio Dias
CECAQ	Adalbeto Luiz
MARAPA	Jorge Carvalho ou João Pessoa
OIKOS NGO	Bastien Loloum

BirdLife International (INGO)	Jean-Baptiste Deffontaines
ALISEI NGO on Gender	Tiziano Pisoni
International Bank of STP	Ronisia Santana

8. The institutional arrangement of the project will build on that of the AHSUPP project. The institutions that will play key roles are listed in Table 2 below.

Table 2: Stakeholders of the project

Names of key stakeholders	Role in the project
Ministry of Agriculture, Fisheries and Rural Development (MAPDR)	It will host and coordinate the execution of the project and ensure its overall management. The Ministry of Agriculture , Fisheries Ministry of Agriculture, Fisheries and Rural Development (MAPDR) will chair the National Steering Committee (NSC).
Ministry in charge of Communities	In charge of the development of grassroots communities, this Ministry is one of the key partners of the project in the sense that the project targets mainly rural communities.
Ministry in charge of entrepreneurship and youth	In charge of promoting youth entrepreneurship, it will be a strategic partner because of the importance of young people who are one of the priority targets of the project and the importance of entrepreneurship development in this project.
Ministry in charge of infrastructure,	In charge of infrastructure development, this Ministry will be a partner of the project within the framework of the implementation of irrigation infrastructure for water control.

<p>Directorate General for Forests and Biodiversity</p>	<p>This Directorate is responsible for executing government policies on the management and protection of national forest assets. The Directorate is also responsible for the development of legislation relating to the protection and sustainable use of forest resources.</p> <p>It may be involved in activities related to the exploitation of non-timber forest products and the monitoring of the impact of project activities on biodiversity in the ecosystems concerned.</p>
<p>Directorate General for the Environment</p>	<p>This Directorate is responsible for implementing the government's environmental policies. The Directorate is also responsible for the development of environmental protection legislation.</p> <p>It may be involved in agricultural, piscicultural and non-timber forest product activities as well as in monitoring the impact of project activities on the environment.</p>
<p>Ministry in charge of health</p>	<p>Support on activities related to the health of the populations in the project area.</p>
<p>The Autonomous Region of Principe through the Secretariat in charge of Economic Affairs</p>	<p>Represents the Autonomous Region of Principe, whose visibility he will work to promote in the project.</p>
<p>The National Federation of Small Producers of São Tomé and Príncipe (FENAPA)</p>	<p>Is a credible partner of the project in activities aimed at increasing agricultural production, improving trade in agricultural products, preserving the environment and supporting public health in rural areas.</p>
<p>The Chamber of Commerce</p>	<p>Technical partners: contribute to the implementation of activities</p>
<p>The Research Centre (CIAT)</p>	<p>Technical partners: contribute to the implementation of activities</p>
<p>The Central Bank and the National Investment Bank</p>	<p>Technical partners: contribute to the implementation of activities</p>
<p>Producers' cooperatives</p>	<p>Technical partners: contribute to the implementation of activities</p>
<p>Regional technical directorates of the ministries involved</p>	<p>Technical partners: contribute to the implementation of activities</p>

MARAPA	<p>The NGO MARAPA is known for its expertise at the national level in the fields of the marine environment, fisheries resources and artisanal fisheries. Created by fisheries technicians, marine biologists and development agents.</p> <p>MARAPA could be a credible partner of the project in activities related to the protection of habitats, marine and coastal ecosystems of the territory; co-management of fisheries resources and support to actors in the fisheries sector.</p>
IUCN	<p>IUCN is a global network NGO working on conservation</p> <p>Technical partner</p>
OIKOS – Cooperacao e Desenvolvimento	<p>Founded on February 23rd 1988, in Portugal, NGO specialized in Development, including Education, Social Mobilization and Public Influence. Oikos opened an office in São Tomé and Príncipe in 2015. Currently implementation partner of the ECOFAC VI project and the Blue Action Fund, Oikos has carried out projects such as:</p> <ul style="list-style-type: none"> • Strengthening civil society and relevant stakeholders to participate in the institutional construction of biodiversity conservation policies and benefit sharing in São Tomé and Príncipe, and • Sustainable co-management of fisheries in the south of São Tomé Island.
BirdLife International	<p>BirdLife International is a global partnership of conservation organisations (NGOs) working to conserve birds, their habitats and global biodiversity by working with people towards the sustainable use of natural resources.</p> <p>It will be the main executing partner and will support the project in the execution of certain activities.</p>
United Nations Coordination Teams	<p>The UNCT is supporting the country to develop a COVID-19 Response. IFAD has developed a Rural Poor Stimulus Facility (RPSF) to support its current and future investments to cope with the impact of COVID. Some activities under COMPRAN have been repurposed</p>

9. The institutions listed in the table above will be represented on the steering committee. Following the stakeholder identification, civil society organizations (CSOs) will also be informed at the beginning of the project, and their views will be taken into account at different stages of the process. Stakeholders will be asked to provide inputs on the scope/coverage and relevance of project activities, and the strategies to be adopted during project implementation as well as their commitment to participate during the implementation phase. Government institutions, civil society and private sector organizations, decentralized services as well as women and youth will be consulted through workshops and bilateral meetings.

10. IFAD will sign an MoU with BirdLife International and IUCN to be executing partners.

3. Gender Equality and Women's Empowerment

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

1. In São Tomé and Príncipe, gender equality is provided in the Basic Law and mentioned in various laws and legislations. The country is signatory to all international conventions that promote gender equality and combat discrimination. In practice, these policies and laws have at best mixed and worst contradictory results. Indeed, the Human Development Index (HDI) report for the year 2018 (published in 2019) gives Sao Tome and Principe a score of 0.609, which places the country in the "average human development" category and in 137th place among 189 countries. Between 1990 and 2018, Sao Tome and Principe's HDI progressed from 0.437 to 0.609, an increase of 39.3%.

2. Also, the Gender Inequality Index (GII) highlights gender-based inequalities in three dimensions: reproductive health, women's empowerment and economic activity. For example, Sao Tome and Principe has a GII of 0.547, which places it 136th out of 162 countries in the 2018 GII. In Sao Tome and Principe, 14.5% of parliamentary seats are held by women and 31.5% of adult women have at least secondary education, compared with 45.8% of men. Out of 100,000 live births, 156 women die of pregnancy-related causes; the teenage birth rate is 94.6 births per 1,000 women aged 15 to 19. The female participation rate is 43.3% compared with a male participation rate of 76.2%.

3. In addition, women's participation in decision-making at the local level is marginal. Cultural attitudes seem to relegate women to more traditional roles, such as household chores and childcare, while limiting their access to economic opportunities mainly through employment in the informal sector.

4. With regard to women's economic situation, it is important to note that there are very few statistics on informal employment and women's work, particularly in rural areas. The available statistics (RGPH 2012) show that only 39.6% of the working population is female as opposed to 60.4% male. Housewives, who are considered inactive, account for almost 13% of the population aged 10 years and over, compared with barely 0.6% for men. Only 20.5% of women work in agriculture and fishing,

which remain male-dominated sectors (38% of working men). It is estimated that the low presence of women in these sectors is due to the lack of support for small farmers and women's preference for trade. In rural areas, women divide their time between domestic and agricultural activities, most often practising subsistence farming or selling their labour force as farm labourers.

5. Sao Tome and Principe still experiences discrimination against women regarding employment access, and the gender gap in labour force participation is relatively high. The ratio of male to female labour force participation rate is 69 percent, and just 41 percent of women are participating to the labour force. The gender gap is higher in rural areas, and data from the latest census found that only 34 percent of rural women are employed compared to 66 percent of rural men[1]. The gender gap in economic participation is more important based on the DHS, with 43 percent of women compared to 15 percent of men responding that they did not work over the previous 12 months. Spatial disparities show that the gap between women and men is highest in the North, where 45 percent of women compared to 9 percent of men mentioning that they did not work over the previous 12 months. Women are more represented in sectors such as Agriculture, Livestock, Hunting and Fishing, with 32 percent of the total, compared to fishing (4 percent)[2]. For public administration, defense and social security, while women make up around half of jobs in these sectors, they are only 25 percent of legislators or directors and 27 percent of town councillors[3]. The country also faces gender wage gap, with women earning on average half as much as men do.

6. It is therefore more important to address the causes of gender inequalities to redress the balance and enable both women and men to have equal access to capacities, means of production, national resources, markets, decision-making institutions at both local and government levels.

7. On the basis of the above, the project will support women's activities by enabling them to access financing and helping them to remove the obstacles they may encounter in accessing to land and controlling the resources resulting from their economic activities.

8. The project will ensure the inclusion of women and youth during the preparation and implementation phases. Gender mainstreaming will take place from the steering committee and the project management team to the consultants, and from training to active participation in consultation workshops. In this sense, the management and monitoring of the project will be gender-sensitive, including through sex-disaggregated indicators showing who is involved and whose opinions are represented. In short, gender considerations will be mainstreamed in this project, both in terms of its products and processes. Indeed, by focusing on biodiversity, highlighting how women and men, youth and adults participate in decision-making related to the integration of biodiversity in the agricultural and forestry sectors, the project will contribute to the equal commitment of women and youth to the sustainable management of biodiversity in agricultural ecosystems and its benefits. In line with GEF's policy on gender

mainstreaming and its Gender Action Plan, based on this important initial mainstreaming effort, a results-oriented and gender-sensitive framework will be developed during the design phase of the PPG.

9. In addition, the project will organize a gender workshop on a topic to be agreed upon during the PPG phase, possibly addressing, for example, training on how women and men as well as young people have been engaged in adopting farming, fishing and forestry practices compatible with the protection of biological diversity. Institutions that will be consulted on the commitment to gender mainstreaming will include, but not be limited to, the following: ministries for the advancement of women, the gender focal point for the Convention on Biological Diversity, civil society organizations, as well as research institutions and development partners working on gender and biodiversity or the environment.

[1] <http://documents.worldbank.org/curated/en/474701562909890340/pdf/Sao-Tome-and-Principe-Country-Economic-Memorandum-Background-Note-7-What-are-the-bottlenecks-on-land-governance-and-how-to-remove-them-to-support-tourism-and-agriculture-development.pdf>

[2] INE 2014 data

[3] Institut national Pour la Promotion de L'égalité et L'équité du Genre –INPG. 2017. Profil de genre en agricultural et développement rural.

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

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

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

generating socio-economic benefits or services for women. Yes

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

Yes

4. Private sector engagement

Will there be private sector engagement in the project?

Yes

Please briefly explain the rationale behind your answer.

1. Private sector organizations will be actively involved due to the strategic nature of their activities in relation to the priorities of this project particularly in the PES scheme as buyers. At STP, the analysis of ongoing projects has shown that the private sector is engaged in areas of activity that affect biodiversity. This is the case for agriculture, forestry and fisheries. However, very often, private sector actors are not very aware of the problems of biodiversity loss. The fight against the loss of biological diversity at STP therefore requires the awareness and commitment of private sector actors. During the PPG phase, the analysis and plan for awareness raising and engagement of private sector stakeholders for the protection of biodiversity in productive activities will be deepened and their engagement to embrace the PES schemes will be further assessed. To initiate biodiversity finance in STP, the project will work closely with financial institutions across the country. The PPG phase will lead to an assessment of financial institutions to identify the most suitable host for piloting the PES Fund. At this stage the International Bank of Sato Tome is selected. Further, throughout project implementation lessons learned including reporting of benefits and successes of the PES Fund will be disseminated to encourage buy in from additional financial institutions.

5. Risks to Achieving Project Objectives

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

1. A comprehensive and detailed risk management framework will be developed in the full proposal document. Project risk management measures will be evaluated throughout the implementation of the project. Overall, the project is considered as moderately at risk with all measures put in place by IFAD in response to the COVID-19

The potential financial and other risks of the project are as follows:

Risk	Level	Mitigation Measures
Inflation leading to higher costs of goods and services	Low	· Recruitment of finance and procurement officers in programme management units. They will ensure the proper management of funds and will alert the Project Manager in a timely manner to make the necessary adjustments

Marginalization of women, youth and people with disabilities	Low	<ul style="list-style-type: none"> · Discriminatory targeting strategy in favour of women and young people in the promotion of income-generating activities (micro-projects) on the one hand and in the process of economic integration of young people on the other. · A positive approach to the integration of persons with disabilities
Traditional farming methods and techniques not adapted to the context of climate change and affecting yield, self-sufficiency and farm incomes	Low	<ul style="list-style-type: none"> · The Farmer Field School (FFS) approach to learning and adopting improved practices · Promotion of high-performance and resistant varieties in partnership with research (CIAT) · Financing (on request) of micro-projects of income-generating activities in the production of food crops. · Deployment of operations advisors · Strengthening biological control
Pressure on fishing resources	Medium	<ul style="list-style-type: none"> · Strategic support for the implementation of precautionary measures governing fish catches · Support for activities to mitigate the risks of overfishing · Actions to reduce post-harvest losses and increase the value of catches · Institutional strengthening of the Fisheries Directorate
Adverse effects related to irrigation development projects	Medium to Low	<ul style="list-style-type: none"> · Community awareness of project objectives and the need to ensure ecosystem integrity · Development limited to land for food and seasonal crops · Training of users on erosion control, water conservation management, water distribution techniques and efficient application of water to the plot, conflict management techniques and management of organic fertilizers to minimize their impact on water resources · Measures will be put in place to ensure an ecological flow equal to at least one-third of the low water flow of the watercourses in order to ensure the maintenance of aquatic ecosystems downstream of the water intake structures. · Promotion of organic production systems · Strengthening of the Irrigation Department
Severity of climate change and variability	Medium	<ul style="list-style-type: none"> · Climate change adaptation measures · Sustainable water and soil management · Environmental and Social Management Plan · Extending climate-smart farming techniques · Environmental information, education and communication · Ecological monitoring and climate change adaptation measures

Lack of institutional capacity to take ownership of programme achievements and their sustainability	Low	<ul style="list-style-type: none"> · Institutional strengthening of technical services with the aim of making them capable of fulfilling their regalian functions. · Partnerships in the form of agreements with the technical services concerned · Support to the regional (district) delegations of the agricultural and rural development support offices (CADR)
Weak stakeholder consultation	Medium	<ul style="list-style-type: none"> · Develop and implement a stakeholder engagement plan
Natural hazards (high winds and floods, droughts and storms, etc.)	Medium	<ul style="list-style-type: none"> · Implementation of techniques to reduce the effects of heavy rainfall on soils, crops and plantations
Low public support	Low	<ul style="list-style-type: none"> · Capacity-building for understanding and raising awareness of climate change and the potential benefits of sustainable management of biodiversity for income generation and food security · Practices with positive short-term effects, such as improved water security · Youth and women's participation
Lack of collaboration of technical institutions	Low	<ul style="list-style-type: none"> · Collaboration and cooperation of relevant technical institutions
COVID-19	Medium to High	<p>Action See the Framework for the COVID-19 pandemic for this GEF project the project</p> <ul style="list-style-type: none"> · · · ·

Global Environmental Facility

Project Design and Review Considerations in Response to the COVID-19 Crisis and the Mitigation of Future Pandemics

As the GEF adapts to the impacts the COVID-19 crisis is having on its business, there is a need to document how new proposed projects being presented to Council have integrated and considered the various aspects of COVID-19 on the design and eventual implementation of said projects. This short template is designed to capture how each project presented to Council has addressed this issue.

COVID-19 Considerations for GEF Projects and Programs

1. **General:** Describe briefly how the pandemic overall is addressed in the project, including associated impacts, risks and opportunities. Projects are required to identify and establish likely impacts and risks from COVID-19, and how they will be dealt with in the context of delivering GEBs and/or climate adaptation and resilience benefits.

The community health in São Tomé and Príncipe is weak and there is no third party health care at country level. The country has four intensive care beds and all complicated diseases are evacuated to Portugal. In this context, the extreme fragility of the socio-economic situation São Tomé and Príncipe is facing due to the pandemic outbreak is very high. As of 10 August, São Tomé and Príncipe has registered 932 cases of COVID-19, with 800 recoveries and 15 deaths (WHO, 2020). This shows how the transmission has been significant on this small island and the risks to the health system. This situation led the Government to introduce a wide range of mitigation measures to limit a potential spread (restriction of movement, closure of borders, closure of schools, bars, events, etc.) to limit its spread. The COVID-19 pandemic has therefore imposed limitation of movement of people and goods within and across countries, which has been hindering food-related logistic services and disrupting entire food supply chains. Impacts on movement of agricultural labor and on the supply of inputs will soon pose critical challenges to food production, thus jeopardizing food security and hitting especially hard people living in vulnerable conditions. Decisive collective actions are therefore required to face these unprecedented challenges and helping build communities' resilience to current and future shocks.

Against this situation, key measures were put in place by the government to contain the impact of the COVID. These are COVID -19 emergency response and more recently the reopening **of the economy**. The government moved from a state of emergency to a state of alert in October following these measures, in the final phase of reopening the economy. The country has reopened hotels, restaurants, commercial flights, and extended the operation of commerce and public service to normal hours. They also started in-person classes at schools and universities, while taking steps to ensure social distancing and prevent re-emergence of the virus.

At country programmes level, COVID programmes responses have been developed to address the potential impact of COVID 19. These include the IFAD Rural Stimulus Fund to safeguards both IFAD investments and additional finance mobilised such as this GEF Program.

At GEF project level, These are remote design and work and online interactions as well as limited remote data and information access and processing capacities for the design of the PIF , partnership with local governments and IFAD projects at local level to collect all needed information's for the design, baselines, indicators, target areas, and coordination with other donors . Specific guidelines for PIF design and implementation have been developed. At the implementation stage, specific measures to safeguards the portfolio are : Trainings on safe labour practices, and transports, access to more protective equipment such as masks and gloves, restrictions on workers on producer's field, use of drones and

other digital extension tools for labour and input saving practices, shared mechanization, digital marketing platforms and logistics, sanitary and phyto-sanitary controls amongst other

2. **Risk analysis:** Describe further how risks from COVID-19 have been analyzed and mitigation strategies incorporated into the design. Project documents are expected to include consideration to the risks that COVID-19 poses for all aspects of project design and eventual implementation.

The COVID -19 limitation of movement of people and goods within and across countries, has been hindering food-related logistic services and disrupting entire food supply chains. Impacts on movement of agricultural labor and on the supply of inputs could soon pose critical challenges to food production, thus jeopardizing food security and hitting especially hard people living in vulnerable condition. To address these risks, IFAD has developed specific guidelines to support the design of all IFAD projects including GEF (PIF, PPG) and at implementation .

With regard to mobility and stakeholder engagement, IFAD has developed a design guidelines which recommend virtual consultations wherever the risk of COVID contamination is high. For areas where, the risk is high the remote design is prioritized. IFAD provides digital connexion to all stakeholders including indigenous people. Extension agents and local partners are engaged to provide support during the consultation. Additionally, IFAD and governments partners provide mobile phones and airtime to connect during the design of the PIF, PPG and implementation of the project when consultations are needed and mobility is not permitted. Specific agreements will be signed with local NGOs to provide support.

Enabling Environment : key measures put by the government which support all projects including the GEF project are : (i) Implementation of the health contingency plan prepared in coordination with the WHO and increased health spending (on medicine, equipment, staffing, and treatment centres) to protect against COVID-19; (ii) Expansion of social assistance to the most vulnerable, including expansion of the WB-supported cash-transfer program, and increased support to the disadvantaged (the elderly, disabled and abandoned children); (iii) Protecting small businesses and employment, in particular through salary contributions; (iv) Financial assistance to workers who lost their jobs in both the formal and informal sectors; (v) Implementation of automatic stabilizers; (vi) Where supply chains are disrupted, the state will procure seeds, feedstock, and other essential inputs to be sold to farmers at market price; (vii) Introduction of a solidarity tax on workers, including public servants, whose salaries are relatively unaffected by the shock. The Central Bank of Sao Tome (BCSTP) has reduced the policy rate and minimum cash reserve requirement, and temporarily eased some prudential ratios for three months to ensure adequate provision of liquidity in the market.

The government moved from a state of emergency to a state of alert in October following these measures, in the final phase of **reopening the economy**. The country has reopened hotels, restaurants, commercial flights, and extended the operation of commerce and public service to normal hours. They also started in-person classes at schools and universities, while taking steps to ensure social distancing and prevent re-emergence of the virus.

Other measures have been taken by the government through the Central Bank of Sao Tome (BCSTP) to reduce the policy rate and minimum cash reserve requirement, and temporarily eased some prudential ratios for three months to ensure adequate provision of liquidity in the market. The BCSTP has also encouraged commercial banks to reduce some banking fees and grant a temporary moratorium on debt repayments for fundamentally sound businesses affected by the crisis. They are also working on options to increase liquidity to banks so that they will be able to grant credit to the economy

The project co-financing is on tax exemption from the government and beneficiaries contributions in assets and work. Hence debt and narrow fiscal space due to impact of COVID will not affect the project

With regards to future similar crisis , Ebola pandemic has been reported in neighbouring countries like DRC the last past years. Specific measures have been put in place by IFAD and the government to safeguards all investments. These sanitary measures and restrictions have been taken against all people from the neighbouring countries to prevent Ebola. Country capacity is being reinforced to maintain the livelihood at the same level and pressure on ecosystems is contained with all COVID-19 responses at country level

3. **Opportunity analysis:** Describe further how the project has identified potential opportunities (if any) created by COVID-19 to deliver GEBs and/or climate adaptation and resilience benefits, and contribute toward green recovery and building back better.

The project itself is a response to the COVID -19 crisis and indirectly to future similar diseases as it focuses mainly on specific interventions that support the implementation of the National Biodiversity Strategy through biodiversity conservation in the agro forestry and fishery sectors. The GEF 7 Project will help the IFAD project to mainstream biodiversity conservation into the agro-forestry and fishery production and management to minimize the negative impacts on biodiversity of the agro-forestry and fishery sector development while enhancing the contribution of ecosystem services to livelihoods in São Tomé and Príncipe. Through the project components, The GEF project will contribute to protect and restore natural systems (land, forest, marine biodiversity) and their ecological functionality particularly in areas where biodiversity of global importance is under threats. This indirectly will n particular in high-risk areas based on what we know of potential future pandemics Food security, considering biodiversity, land use, water/marine resources, safe chemicals management, energy efficiency approaches; Promote sustainable land uses that limit deforestation, focus on production landscapes and land use practices within them to decrease the risk of biodiversity losses. Ultimately, the project will contribute to healthy environment and communities particularly in a COVID-19 context. Through the various interventions planned, the project will contribute through the management of forest, land and fisheries to protect and conserve the biodiversity but also build the resilience to climate adaptation and resilience benefits, and contribute toward green recovery and building back better.

The GEF project will support both soft (institutional, legal and regulatory, guidelines, PES schemes , Public expenditures review) that will support the implementation hard activities which will improve and change traditional agro-forestry production systems towards more biodiversity-compatible practices and products that meet standards, certification and labelling requirements. Such measures will lead to reforms that will reduce unsustainable resource extraction of forest, land and fish stock and environmental degradation. While project is not focused on water management, it has specific activities mainstreaming biodiversity conservation into the agro-forestry and fishery production and management to minimize the negative impacts on biodiversity of the agro-forestry and fishery sector development while enhancing the contribution of ecosystem services to

livelihoods in São Tomé and Príncipe. As various diseases and pandemics are related to biodiversity, weather conditions- climate change; partnership with the private sector (buyers) with innovative solutions such as the PES mechanisms will help to mitigate the climate change impact and future trends.

Key opportunities that COVID brings to countries:

- Adoption of remote and tele-supervision
- Knowledge and skills on safe labour practices, and transports
- Better access and use of more protective equipment such as masks and gloves,
- Use of drones and other digital extension tools for labour and input saving practices, shared mechanization.
- Discussion of risk sharing mechanism such as insurance including pandemic insurance,
- Opportunities to develop digital marketing platforms and logistics, sanitary and phyto-sanitary controls as proposed in the project

Based on the list of the risks listed above, the overall project risk classification is **medium** as the COVID -19 medium national plan is being deployed at country level

6. Coordination

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

1. This GEF funded project will be under the coordination of the IFAD funded project COMPRAN governance structure and will benefit from the recently approved COVID-19 IFAD RPSF. The project will not duplicate activities of the associated baseline projects in the country and coordination will deepen at PPG stage. As described in the COMPRAN design report[1], the GEF project will be supervised by the Ministry of Agriculture, Fisheries and Rural Development (MAPDR) in coordination with the ministry of environment, which will chair the National Steering Committee (NSC). Principe will establish a Regional Participatory Planning Committee. A coordination and management team with specialised and experienced skills will perform the administrative and accounting, planning and monitoring and evaluation functions as well as the targeted technical functions required. The Coordination Unit will be established in São Tomé and will have a regional office in Principe. The implementation of the project will be based on a series of partnerships oriented towards the expected results: (i) institutional partnerships; (ii) performance-oriented operational collaborations with operators of facilitation and advisory support with various specialized expertise; (iii) partnerships with professional organizations; (iv) synergies and complementarities with other stakeholders (projects/programs, technical and financial partners. At the PPG stage the governance system will be further refined and detailed in relation to the above roles and responsibilities. IFAD will sign a MoU with executing partners Birdlife International to support the implementation of the project.

2. During the project design phase, specific project details management and stakeholder engagement strategies will be discussed and synergies created with existing institutional structures of GEF-financed projects in São Tomé and Principe to avoid any duplication and overlap. This will ensure that the project will build on other initiatives, as indicated in the baseline scenario and create synergies. Please see the below table for detailed information on the synergies with relevant projects.

Table 3: Synergies with relevant Projects

Initiative	Objectives/Brief description of how it relates to the project	Coordination arrangements (Project Steering Committee, sharing of reports and ad hoc meetings)
Building capacity for biodiversity conservation and protected area management	Synergy could be developed with this project through activities aimed at component 3 is dedicated to the promotion of integrated and ecologically sustainable land management in a multiple-use buffer zone. The fourth component is dedicated to the development of a knowledge management and communication programme	Sharing of reports, meetings
Support to eligible parties for the production of the sixth national report to the CBD (Africa 2)	Synergy could be developed with this project the component 3 activities on M&E and Knowledge management	Sharing of reports, meetings
Integrated Ecosystem Approach for the Management and Conservation of Biodiversity in the Buffer Zones of the Obô Natural Parks of São Tomé and Príncipe	Synergy could be developed with this project through activities aimed at the sustainable management of 7,200 ha of biodiversity-rich ecosystems: (i) about 5,000 ha of rainforests in the TZ; (ii) 2,000 ha of marine ecosystems; and (iii) 200 ha of coastal mangroves.	Sharing of reports
São Tomé and Príncipe - Complementary financing - West Africa Coastal Resilience Investment Project (WACA)	Synergy could be developed with this project through activities aimed at implementing medium- and small-scale community-based coastal adaptation activities (including maintenance of drainage and revegetation), capacity building on ecosystem approaches to climate change adaptation, and the development of a comprehensive set of tools and tools for the implementation of the project.	Sharing of reports, meetings
The Restoration Initiative (TRI), funded by GEF (2018-2023) with the support of IUCN, FAO and UN Environment in a number of countries	Synergy could be developed with this project through activities aimed at restoring the plant greenery.	Sharing of reports, meetings
GEF-funded project to strengthen the capacity of rural communities to seek climate resilient livelihoods in the districts of Caué, Me-Zochi, Príncipe, Lemba, Cantagalo and Lobata (2014-2018) with \$20,351,281 and support from UNDP.	Synergy could be developed with this project through activities aimed at building capacity for the implementation of agro-sylvo-pastoral adaptation technologies to improve the climate resilience of rural communities' livelihoods.	Sharing of reports

EU-funded ECOFAC VI programme (2018-2021) led by BirdLife International	Linkages will be established through activities aimed at "strengthening the capacity of governments to effectively promote biodiversity conservation in development policy and planning".	Sharing of reports, meetings
Kike da Mungu Project ("Fishing for Tomorrow") supported by MARAPA and Oikos	Synergy could be developed with this project through activities aimed at conserving biodiversity and marine resources by strengthening community participation in marine resource management and coastal management processes.	Sharing of reports, meetings
Project on long-term biodiversity research and conservation supported BirdLife International (BLI) – and partners such as RSPB & SPEA, and the University of Lisbon	Synergy could be developed with this project through activities aimed at producing reliable data on the state of biodiversity in São Tomé and Príncipe	Sharing of reports
The IFAD Rural Poor Stimulus Facility (RPSF) proposal	The RPSF supports the country and IFAD funded and supported projects to be more resilient to the COVID -19	Coordination between IFAD projects at country level

[1] <https://www.ifad.org/en/document-detail/asset/41708809>

7. Consistency with National Priorities

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

Yes

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

1. **With the SDGs and the National Biodiversity Strategy.** The implementation of the SDGs is a huge challenge for many developing countries, especially for SIDS as PTS, due to the number of targets (17), the number of targets (169), the number of indicators (231) and their overall complexity. This leads São Tomé and Príncipe to prioritize 7 SDGs for implementation. This project is aligned with one of these 7 priority SDGs, namely SDG 14 on "the protection, restoration and promotion of the sustainable use of terrestrial ecosystems, sustainable forest management, combating desertification, halting and reversing the degradation and preventing the loss of biodiversity". Through land restoration practices, biofertilization, valorization of non-timber forest products and water control, as well as the adoption of bio-cropping practices in cocoa and coffee plantations, this

project will contribute to PTS efforts to achieve the objectives of SDG 14. These activities contribute to protecting, restoring and promoting the sustainable use of terrestrial ecosystems, halting, reversing degradation and preventing the loss of biodiversity; especially soil biodiversity.

2. **With the National Development Plan.** This programme is in line with the priorities of the National Development Plan of São Tomé and Príncipe. Indeed, in the context of sustainable development at the national level, it is designed to increase the productivity of traditional sectors such as agriculture, forestry and fisheries while ensuring the protection of biodiversity in these ecosystems. In the National Development Plan, a programme of "sustainable management of natural resources" is foreseen. It will include a set of measures to promote the preservation of a healthy environment and the rational use of forest resources, including non-timber resources, improved water management and the fight against deforestation. This project will contribute to this programme.

3. **With NAPA.** This project contributes to achievement of NAPA priorities related to “Sustainable management of forest resources”, “Construction of shelters and parks for artisanal fleet”, “Construction and installation of concentration fish device (DFC), at coastal zone” and “Training the artisanal fishermen” These priorities are identified to support biodiversity in t forestry and fishry sectors.

4. **With NDC.** This project, through its component 2 activities is aligned to the NDC as it supports following planned actions in the NDC:

- Develop a national program for sustainable management of the forest and agro forestry ecosystems by 2025;
- Train and equip fishermen with means to enable safe fishing and train them in the proper use of fishing gear.
- Reduce the illegal and indiscriminate felling of trees by 15%, by 2030;
- Increase the resilience to erosion and maritime, river and storm flooding of coastal areas through improved Coastal Protection for vulnerable communities;
- Reduce the use of nitrogen fertilizers in agriculture by 2030.

5. The project is also in line with **national strategies and priorities**, including the **Programme for the Transformation of São Tomé and Príncipe to 2030**: the country to be built, the first letter of the Agricultural, Rural Development and Fisheries Policy (CPADRP) 1997-2000. It will contribute to the achievement of the objectives of the National Programme for Food and Nutritional Security 2013-2023, as well as the "Zero Hunger in 2030" strategy and sub-sectoral plans.

8. Knowledge Management

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

Component 3 of the project focuses on knowledge management. This component will consist of (i) developing a Knowledge Management Plan (KMP), and (ii) implementing the KMP. Concretely, it will involve collecting, documenting and disseminating lessons learned from project activities, both at the local and institutional levels, in order to improve biodiversity in agricultural, forestry and fisheries landscapes. Monitoring and evaluation activities will also be implemented under component 3 to inform long-term policies and strategies and future projects and programmes in agriculture, fisheries and forestry that take into account biodiversity protection. The knowledge gained from the project will be shared on the IFAD website and at national and international events. The Knowledge Management Plan will be expanded at the PPG stage.

9. Environmental and Social Safeguard (ESS) Risks

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

Overall Project/Program Risk Classification*

PIF

CEO Endorsement/Approval

MTR

TE

Medium/Moderate

Measures to address identified risks and impacts

Provide preliminary information on the types and levels of risk classifications/ratings of any identified environmental and social risks and potential impacts associated with the project (considering the GEF ESS Minimum Standards) and describe measures to address these risks during the project design.

Given the identified environment and social risks, in terms of mitigation measures it is important to increase the resilience of existing systems and propose innovative mitigation and adaptation systems (especially in irrigation and agroforestry). For social aspects, it is proposed to prepare or update the cadastral map to identify abandoned parcels and distribute them to youth in particular women and/or disabled with incentives for integration in agricultural production activities.

Supporting Documents

Upload available ESS supporting documents.

Title	Submitted
PIF Biodiversity SECAP English version 22 oct	
Others_SECAP Sao Tome (1)	

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

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

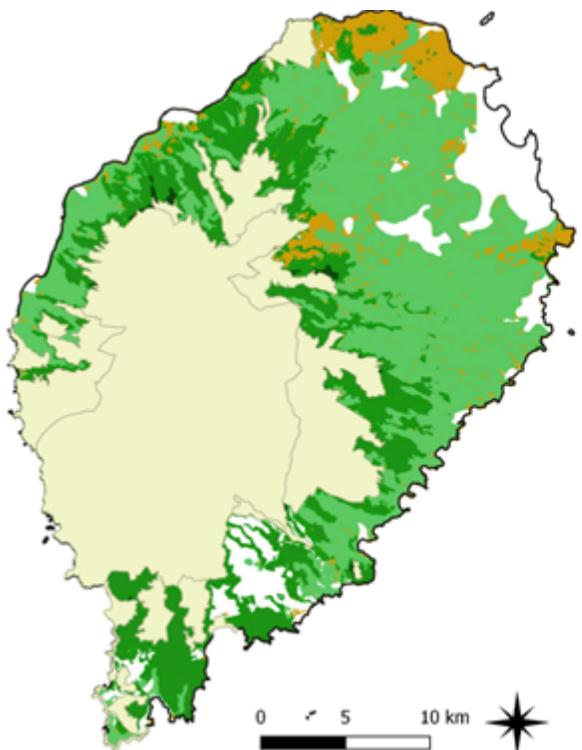
Name	Position	Ministry	Date
Lourenco Monteiro de Jesus	General Director of Environment	Ministry of Public Works, Infrastructure, Natural Resources and Environment	11/20/2019
IFAD PIF Document			9/28/2020
Lourenco Monteiro de Jesus	General Director of Environment	Ministry of Public Works, Infrastructure, Natural Resources and Environment - Amended letter of Endorsement	10/22/2020
Clean amended PiF			10/22/2020
Tracked amended PIF			10/22/2020
Clean amended PIF of 25 October 2020			10/26/2020
Tracked amended PIF of 25 October 2020			10/26/2020
Review sheet with IFAD responses			10/26/2020
Amended review sheet with IFAD responses			10/29/2020

Name	Position	Ministry	Date
Clean amended PIF of 29 October 2020			10/29/2020
Tracked amended PIF of 29 October 2020			10/29/2020

ANNEX A: Project Map and Geographic Coordinates

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





Legend

- GEF7 IFAD-COMPRAN geographical scope, by forest cover:
- Native forest
 - Secondary forest
 - Agroforest
 - Non-forest
- Limit of STP Land Territory
- Urban area (and Palm oil plantation)
- GEF6 UNDP main area of intervention (PNs and HCVs)