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INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROJECT PAPER

ON A

PROPOSED ADDITIONAL TRUST FUND GRANT

IN THE AMOUNT OF US\$6.0 MILLION

FROM THE
GLOBAL ENVIRONMENT FACILITY TRUST FUND

TO THE

DEMOCRATIC REPUBLIC OF SÃO TOMÉ AND PRÍNCIPE

FOR THE

ADDITIONAL GRANT FOR THE WEST AFRICA COASTAL AREAS RESILIENCE
INVESTMENT PROJECT

NOVEMBER 10, 2020

Environment, Natural Resources and Blue Economy Global Practice
Western and Central Africa Region

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CURRENCY EQUIVALENTS

(Exchange Rate Effective September 30, 2020)

Currency Unit = Dobras (STN)

21.00131 STN= US\$1

US\$0.04761 = STN 1

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ABBREVIATIONS AND ACRONYMS

ABC	Abidjan Convention
AF	Additional Financing
AFAP	<i>Agência Fiduciária de Administração de Projectos</i> - Fiduciary Agency of Projects' Administration
BP	<i>Bank Policy</i>
CCA	Climate Change Adaptation
CEREMA	<i>Centre d'Études et d'Expertise sur les Risques, l'Environnement, la Mobilité et l'Aménagement</i> Centre for Studies and Expertise on Risks, Mobility, Land Planning and the Environment
CONPREC	<i>Conselho Nacional de preparação e Resposta as Catastrofes</i> - National Council for Disaster and Prevention
CSE	<i>Centre de Suivi Écologique</i> - Center for Ecological Monitoring
CPS	Country Partnership Strategy
DGE	Directorate General of Environment
ESF	Environmental and Social Framework
ESIA	Environmental and Social Impacts Assessment
ESMF	Environmental and Social Management Framework
FAO	Food and Agriculture Organization
FM	Financial Management
GEF	Global Environment Facility
IDA	International Development Association
IFR	Interim Financial Reports
IPCC	Intergovernmental Panel on Climate Change
IUCN	International Union for Conservation of Nature
LDCF	Least Developed Countries Funds
M&E	Monitoring and Evaluation
MIRN	Ministry of Infrastructure and Natural Resources
MoF	Ministry in charge of Finance
NCCC	National Committee for Climate Change
NDC	Nationally Determined Contributions
NGO	Non-Governmental Organization
NMI	National Meteorological Institute
OP	Operational Policies
PDO	Project Development Objectives
PIU	Project Implementation Unit
RAMPAO	<i>Réseau des Aires Marines Protégées d'Afrique de l'Ouest</i> - Network of West African Marine Protected Areas
RAP	Resettlement Action Plans
RCP	Representative Concentration Pathway
RISU	Regional Implementation Support Unit
RPF	Resettlement Policy Framework
STP	São Tomé and Príncipe
STEP	Systematic Tracking of Exchanges in Procurement
T PIU	Technical Project Implementation Unit
UNFCCC	United Nations Framework Convention on Climate Change
WACA	West Africa Coastal Area Management Program

WACA ResIP	West Africa Coastal Area Resilience Investment Project
WAEMU	West African Economic and Monetary Union

**BASIC INFORMATION – PARENT (West Africa Coastal Areas Resilience Investment Project - P162337)**

Country	Product Line	Team Leader(s)		
Western Africa	IBRD/IDA	Nicolas Benjamin Claude Desramaut		
Project ID	Financing Instrument	Resp CC	Req CC	Practice Area (Lead)
P162337	Investment Project Financing	SAWE1 (9268)	AFWRI (7960)	Environment, Natural Resources & the Blue Economy

Implementing Agency: Sao Tome and Principe - Ministry of Infrastructures and Natural Resources, Mauritania - Ministry of Environment and Sustainable Development, Benin - Ministry of Living Environment and Sustainable Development, Togo - Ministry of Environment, Sustainable Development and Protection of Nature, Cote d'Ivoire - Ministry of Environment and Sustainable Development, Senegal - Ministry of Environment and Sustainable Development, Cote d'Ivoire - Ministry of Economy and Finances, West Africa Economic and Monetary Union, International Union for Conservation of Nature

Is this a regionally tagged project?	Country (ies)
Yes	Benin, Cote d'Ivoire, Mauritania, Senegal, Sao Tome and Principe, Togo, Stateless

Bank/IFC Collaboration
No

Approval Date	Closing Date	Expected Guarantee Expiration Date	Original Environmental Assessment Category	Current EA Category
09-Apr-2018	31-Dec-2023		Full Assessment (A)	Full Assessment (A)

Financing & Implementation Modalities

<input type="checkbox"/> Multiphase Programmatic Approach [MPA]	<input type="checkbox"/> Contingent Emergency Response Component (CERC)
<input type="checkbox"/> Series of Projects (SOP)	<input type="checkbox"/> Fragile State(s)
<input type="checkbox"/> Performance-Based Conditions (PBCs)	<input type="checkbox"/> Small State(s)
<input type="checkbox"/> Financial Intermediaries (FI)	<input type="checkbox"/> Fragile within a Non-fragile Country
<input type="checkbox"/> Project-Based Guarantee	<input type="checkbox"/> Conflict



<input type="checkbox"/> Deferred Drawdown	<input type="checkbox"/> Responding to Natural or Man-made disaster
<input type="checkbox"/> Alternate Procurement Arrangements (APA)	<input type="checkbox"/> Hands-on, Enhanced Implementation Support (HEIS)

Development Objective(s)

To strengthen the resilience of targeted communities and areas in coastal Western Africa.

Ratings (from Parent ISR)

	Implementation			
	07-Aug-2018	06-Mar-2019	16-Oct-2019	03-May-2020
Progress towards achievement of PDO	S	S	S	MS
Overall Implementation Progress (IP)	S	S	MS	MS
Overall Safeguards Rating	S	S	S	S
Overall Risk	H	H	H	H
Financial Management	S	S	S	MS
Project Management	S	S	MS	MS
Procurement	S	S	MS	MS
Monitoring and Evaluation	S	S	MS	MS

BASIC INFORMATION – ADDITIONAL FINANCING (Additional grant for West Africa Coastal Area Resilience Investment Project - P168908)

Project ID	Project Name	Additional Financing Type	Urgent Need or Capacity Constraints
P168908	Additional grant for West Africa Coastal Area Resilience Investment	Restructuring, Scale Up	No



	Project		
Financing instrument	Product line	Approval Date	Focal Area
Investment Project Financing	Global Environment Project	01-Dec-2020	Multi-focal area
Projected Date of Full Disbursement	Bank/IFC Collaboration		
30-Apr-2024	No		
Is this a regionally tagged project?		Country (ies)	
Yes		Sao Tome and Principe	

Financing & Implementation Modalities

<input type="checkbox"/> Series of Projects (SOP)	<input type="checkbox"/> Fragile State(s)
<input type="checkbox"/> Performance-Based Conditions (PBCs)	<input type="checkbox"/> Small State(s)
<input type="checkbox"/> Financial Intermediaries (FI)	<input type="checkbox"/> Fragile within a Non-fragile Country
<input type="checkbox"/> Project-Based Guarantee	<input type="checkbox"/> Conflict
<input type="checkbox"/> Deferred Drawdown	<input type="checkbox"/> Responding to Natural or Man-made disaster
<input type="checkbox"/> Alternate Procurement Arrangements (APA)	<input type="checkbox"/> Hands-on, Enhanced Implementation Support (HEIS)
<input type="checkbox"/> Contingent Emergency Response Component (CERC)	

Disbursement Summary (from Parent ISR)

Source of Funds	Net Commitments	Total Disbursed	Remaining Balance	Disbursed
IBRD				%
IDA	190.00	25.91	154.98	14 %
Grants	20.25	2.12	18.12	10 %

PROJECT FINANCING DATA – ADDITIONAL FINANCING (Additional grant for West Africa Coastal Area Resilience Investment Project - P168908)

FINANCING DATA (US\$, Millions)



SUMMARY (Total Financing)

	Current Financing	Proposed Additional Financing	Total Proposed Financing
Total Project Cost	221.70	6.00	227.70
Total Financing	221.70	6.00	227.70
Financing Gap	0.00	0.00	0.00

DETAILS - Additional Financing

Non-World Bank Group Financing

Trust Funds	6.00
Global Environment Facility (GEF)	6.00

COMPLIANCE

Policy

Does the project depart from the CPF in content or in other significant respects?

Yes No

Does the project require any other Policy waiver(s)?

Yes No

INSTITUTIONAL DATA

Practice Area (Lead)

Environment, Natural Resources & the Blue Economy

Contributing Practice Areas

Climate Change

Urban, Resilience and Land

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Extended Team			
Name	Title	Organization	Location



Western Africa

Additional Grant for West Africa Coastal Areas Resilience Investment Project
(P168908)

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I. BACKGROUND AND RATIONALE FOR ADDITIONAL FINANCING

A. Background Information

1. Introduction

1. This Project Paper seeks the approval of the Executive Directors for a proposed additional financing (AF) in the amount of US\$6.0 million grant by the Global Environment Facility (GEF) to the Democratic Republic of São Tomé and Príncipe (STP) for the West Africa Coastal Area Resilient Investment Project (WACA ResIP) (P162337).

2. The Parent Project, the regional WACA ResIP project, approved by the Board in April 2018, covers six countries (Benin, Cote d'Ivoire, Mauritania, Sao Tome and Principe, Senegal and Togo) and also benefits four regional institutions (West African Economic and Monetary Union - WAEMU, International Union for Conservation of Nature – IUCN, Secretariat of the Abidjan Convention – ABC and the *Centre de Suivi Écologique/* Center for Ecological Monitoring – CSE). The financing agreements for STP became effective on July 31, 2018 and the latest financing agreement of the Parent Project, between the International Development Association (IDA) and WAEMU, has been effective since November 30, 2018.

3. The overall budget of WACA ResIP is US\$221.7 million, including US\$11.45 million from counterpart financing, with US\$9.1 million allocated to the national activities in STP (US\$8.0 million from IDA and US\$1.1 million grant from the International water window of the GEF). More information on the context of STP is provided in Annex 1.

4. This AF and corresponding restructuring concerns only the national activities for STP.

2. Project's Original Development Objectives and Scope

5. The Project Development Objective (PDO) of the WACA ResIP will remain unchanged and is to “strengthen the resilience of targeted communities and areas in coastal Western Africa”. The Global Environment Objective of the project is same as the PDO.

6. To achieve these objectives, the main activities in STP aims to support policies, plans and protocols for coastal management, build capacities for coastal zone monitoring, strengthen early warning systems, and reduce the coastal risks threatening populations and assets through green and grey infrastructure and planned retreat.

B. Performance of the parent Project

7. Over the past 24 months of project implementation, the progress towards the overall achievement of the PDO of WACA ResIP and the overall implementation progress have always been rated “Moderately Satisfactory” or above. For national activities in STP, both progress towards achievement of the PDO and the overall implementation progress have always been rated “Satisfactory”. The Global Environmental Objectives of the Project is same as the PDO, and therefore, ratings are the same.

8. Even if the disbursement rate of the overall WACA ResIP is low (around 14 percent), the national activities implemented in São Tomé and Príncipe have been progressing well, with disbursement ratio around 34 percent, as presented in the table below.

Table 1: Evolution of disbursement ratio for the overall project and the national activities



	January 2019	December 2019	October 2020
Disbursement for the Overall WACA ResIP	4.9%	9.5%	14.0%
Disbursement ratio for STP	9.6%	20.6%	33.8%

9. All the due covenants of the grant agreements of the parent project for STP have been complied with. The list of covenants can be found in annex 3.

C. Components Description and Status of Project implementation in São Tomé and Príncipe

Component 1: Strengthening Regional Integration (regional):

10. This component aims to support regional institutions to reinforce the transboundary collaboration, common coastal planning, mobilization of financial and technical resources to support national implementations, harmonization of coastal regulations and the development of shared decision-making support tools, such as the coastal observatory.

Status

11. The regional management unit in WAEMU is operational and has started the implementation of activities, including the development of a regional gender action plan for coastal resilience, a regional strategic investment action plan, and identification of innovative financing mechanisms tailored to country contexts to leverage AF for coastal resilience.

12. The Regional Implementation Support Unit (RISU), hosted at IUCN, has, jointly with the Project Implementation Unit (PIU), developed a five-year support plan for STP. The RISU provides, in coordination with the World Bank task team, implementation and technical assistance to the national PIUs, supported by a network of technical partners, such as *Centre d'Études et d'Expertise sur les Risques, l'Environnement, la Mobilité et l'Aménagement (CEREMA)* - Centre for Studies and Expertise on Risks, Mobility, Land Planning and the Environment, *the Réseau des Aires Marines Protégées d'Afrique de l'Ouest (RAMPAO)* - Network of West African Marine Protected Areas and the technical commissions of IUCN, such as the ones on nature-based solutions or marine plastics. These resources are also available upon request from the national PIUs.

13. The CSE is starting a feasibility study to establish the regional coastal observatory and to support countries, including STP, establish or strengthen their own national coastal observatory. Under those activities, civil servants of the national environmental observatory in STP have already received technical training. Procedures and systems will be put in place to facilitate sharing of data and information between regional and national levels, giving also STP access to regional and global data.

14. Key activities of the ABC are on track to support the countries in the preparation and implementation of national actions plans for the ratification of the four additional protocols of the Abidjan Convention. These protocols on (i) Environmental Standards and Guidelines for Offshore Oil and Gas Activities, (ii) Pollution from land-based Sources and Activities, (iii) Sustainable Mangroves Management and (iv) Integrated Coastal Zone Management, will help the harmonization of national legislations and the adoption of best practices by the countries. The ABC is also providing support to the countries in the elaboration of spatial marine and coastal zone planning.

Component 2: Strengthening the Policy and Institutional Framework (national activities)

15. This component provides technical assistance and equipment to (i) develop and operationalize coastal management and land use strategies and plans, (ii) support coastal policies, regulations and



institutional framework, (iii) promote effective management of transboundary coastal ecosystems and (iv) strengthen systems for better and safer coastal zone management. All these activities will mainstream climate and coastal risks, to ensure that documents and policies consider current and future situations.

Status of national activities in São Tomé and Príncipe

16. In STP specifically, the main activities aim to (i) harmonize the different laws regulating the coastal zones, and the management of the risks in those areas, (ii) develop a spatial coastal zone and marine master plan, with a focus on development of marine protected areas, (iii) structure and equip the institutions to collect, capitalize and share coastal data through the observatory and (iv) reinforce the national capacities to monitor and forecast marine weather conditions, as well as disseminate the warnings to different sets of end-users (national institutions, coastal communities and artisanal fishermen). The new coastal laws will have, among others, provisions for the shoreline retreat and the other impacts of climate changes.

17. The terms of reference for the harmonization and improvement of current legislation on disaster risk management have been validated, including the review of all the sectorial laws with a link to disaster risk management as well as climate risks.

18. An international consultant has assessed the human and technical capacities of the National Meteorological Institute (NMI) to host the center for marine weather and storm prediction. His recommendations resulted in the preparation of an action plan to set up this center, including short in-country, and long-term international, training for the workforce of the NMI, as well as acquisition of equipment and numerical models.

19. The optimal locations for the installation of two additional marine weather stations have also been identified, to make sure they will capture representative waves and current conditions, but are also accessible for maintenance, and able to transmit data through existing networks.

20. A survey led by the Directorate of Fisheries has identified 4,155 artisanal fishermen as the beneficiaries of the project along with an analysis of fishing practices to identify measures to improve safety at sea practices. 2,237 canoes have also been registered in the national database and marked to support search and rescue activities. This information has permitted the PIU to develop with the Directorate of Fishery and the Non-Governmental organization (NGO) MARAPA, the strategy for the training and awareness campaign as well as the distribution of safety-at-sea equipment for artisanal fishermen who didn't receive any during the first Adaptation to Climate Change Project.

Component 3: Strengthening National Physical and Social Investments (national):

21. This component finances coastal adaptation activities, through physical and social investments. For coastal protection, preference is given to ecosystem-based approaches when effective and feasible. Social activities and participatory risk assessments will be implemented to enhance community resilience, safety, and livelihoods. Planned retreat, which people can choose on a voluntary basis, will be used as a long-term adaptation option for coastal communities most exposed to coastal erosion and flooding. Its implementation will follow the principles of Operational Policies/Bank Policies (OP/BP) 4.12 despite the voluntary nature of the decision. The IDA grant of the parent project is financing the preparation of the safer expansion areas in the seven coastal communities where the population decided to relocate as well as the construction of the 202 houses for the population who decided to retreat, through community-led activities. No civil work directly related to planned retreat process would therefore be financed by GEF grants (either Least Development Countries Fund (LDCF) or International Water). A strong emphasis will be given for mangrove restoration and development of natural buffer zones as adaptation strategies, to



also provide co-benefits for tourism and social activities. Hence, the liberated, at risk areas will become community-managed places, to transform them for either leisure or economic developments (only activities not requiring permanent infrastructure) to avoid new settlement in exposed areas, while providing job opportunities for the population, especially for the women and the most vulnerable.

Status of national activities in São Tomé and Príncipe

22. In STP, risk modeling exercises, including participatory risk mappings, in eight coastal communities (Io Grande, Micolo, Praia Gamboa/Cruz/Loxinga, Pantufo, Praia Melão and Praia Abade) have helped developing with the population, climate-informed adaptation plans. Identified measures include ecosystem-based options, conventional engineering infrastructure and planned retreat strategies. The priority options, to be financed both by the parent project (civil work for the planned retreat) and the AF (eco-system based and small-scale risk reduction infrastructure), have been agreed upon with the population and the government. The detailed designs of safer areas for the retreat of four coastal communities (Santa Catarina, Malanza, Ribeira Afonso and Praia Burra), identified during the previous LDCF-financed project (Sao Tome - Adaptation to Climate Change Project - P111669), have now been finalized. The construction of wall and preparation of the safer expansion areas started in August 2020 in Malanza and Santa Catarina. In addition to the activities tackling coastal erosion and coastal flooding in 12 communities, support for pollution abatement is provided in the 31 coastal communities.

23. Tree nurseries have already been created, and managed by two NGOs, one in Príncipe and one on São Tome islands, to provide plants for fixation of the shoreline, some mangrove reforestation, with the help of directorate of forestry and specialists, as well as to compensate the use of timber for the construction of houses for people who chose to retreat in safer expansion areas.

Component 4 (National Coordination):

24. The Project management unit is composed of two cells and has been fully operational since July 2018. AFAP, Fiduciary Agency of Projects' Administration, is in charge of all fiduciary aspects (procurement and financial management) while the technical unit is located in the Directorate General of Environment, under the Ministry of Infrastructures and Natural Resources and ensures the daily implementation of the project, the coordination between implementing institutions, the supervision of safeguards procedures and the Monitoring and Evaluation (M&E) of project activities. The roles and responsibilities of the two cells are clearly described in the project implementation manual of the parent project and the coordination and collaboration has been effective and efficient.

D. Rationale for Additional Financing

25. During the preparation of the Parent Project, WACA-ResIP, a set of activities for STP were identified for a total budget of US\$15.15 million. While US\$8.0 million was available from IDA and US\$1.15 million from the International Water Window of the GEF, a US\$6.0 million proposal was submitted to the GEF secretariat to finance, from LDCF the activities proposed under this AF. The proposal was technically cleared by the GEF secretariat in 2016 but placed on hold due to unavailability of LDCF. The LDCF has since been replenished and the proposal was finally endorsed by the GEF secretariat on August 2018. Therefore, this AF aims to scale-up the development impact of the project by implementing activities already envisaged in the early planning phase of the Parent Project, but not yet financed.

26. The Parent project, WACA ResIP, emphasizes, in STP, the development of safer relocation areas to provide incentives and conditions for the population not to stay in the most at-risk areas. Additional investments are needed to protect the rest of the communities; to restore the natural ecosystems so that



they could play their original role of adaptative protection from tides; surges and sea-level-rise; and to restore and develop the vacated place to promote community-based social and/or sustainable income generating activities, such as tourism and sustainable fisheries.

27. Indeed, activities under this proposed AF will scale-up risk mitigation and adaptation measures from eight¹ to 12 of the most vulnerable communities following the Parent Project's participatory approach. In the eight communities of the parent project, activities under the AF will complement planned retreat activities, by (1) building additional risk reduction measures, where more appropriate, for the exposed population, but not living in the most at-risk area, through improvement of the drainage systems and construction of coastal protection, (2) ensuring that the to-be vacated areas are properly rehabilitated to ensure their long-term sustainability and avoid future re-settlements. In the four additional communities, where planned retreat is not possible due to lack of suitable expansion areas, physical interventions are needed to protect the communities from the threat of climate change and coastal risk, also through improvement of the drainage system and construction of small breakwaters, to protect settlement and boats.

28. The AF would also help to improve the early warning and safety at sea systems for artisanal fishermen, to ensure that lives can continue to be saved over the long-term. Principles of safety at sea have now been introduced amongst part of the coastal fishermen - with an immediate observable impact - but with uncertain sustainability due to the time required to change risk behavior. The AF will also expand the outreach and coverage of the safety at sea program from 1,750 to now 4,155 artisanal fishers (all identified artisanal fishermen in the country) and improve the early warning system component of the project by improving the communication and treatment of information between the different institutions involved in the system, complementing the weather forecast capacities with two additional marine meteorological stations and adapted numerical modeling, and building the capacity of the NMI.

29. Given that such activities represent a natural complement to the parent Project WACA-ResIP activities, AF seems the most appropriate option to maximize development outcomes. The project will enable a faster and more cost-effective response to the client's request to sustain and scale-up the results. The responsible agency, Directorate General of Environment, Ministry of infrastructures and Natural Resources, has demonstrated its strong commitment, and has proved to be a competent counterpart agency, as shown by the initial project's satisfactory track records.

30. The AF would contribute to Climate Change Adaptation (CCA) objectives "Reduce vulnerability and increase resilience through innovation and technology transfer for climate change adaptation" (CCA-1) of the GEF/LDCF Focal Areas. The AF would serve as a pilot case for the implementation of solutions tailored to the needs and the contexts of the Small Islands States, to adapt to climate change and build resilience to disaster risk in their coastal areas.

E. Context of COVID-19

31. In order to respond to the COVID-19² crisis, the government of São Tomé and Príncipe declared a situation of emergency on March 16, 2020 and then downgraded it to a situation of disaster on June 15, 2020. Borders were closed, meetings prevented, and circulation between villages forbidden. Since July 1, 2020, some restrictions have been lifted to also facilitate socio-economic recovery. The country has

¹ The eight communities included the four communities from the previous Adaptation project (P111669): Malanza, Santa Catarina, Ribeira Afonso and Praia Burra, as well as four new ones: Io Grande, Praia Melão, Micoló and Praia Abade. The additional financing will include also Pantufo, Praia Gamboa, Praia Lochinga and Praia Cruz.

² Coronavirus Disease 2019 (COVID-19)



adopted, with the support of World Bank and other international institutions, measures to increase its capacity to detect new cases and treat diagnostic people, to prevent the spread of the disease (through monitoring entrances in the country and provision of personal protective equipment) and to prepare for the recovery. As of November 8, 2020³, the country registered a total of 962 cases, including 16 deaths.

32. However, even if the sanitary condition is relatively under control (only 77 new cases registered in August, September and October 2020), the pandemic continues to have indirect impacts on the population. Two-thirds of the population was living in poverty before the pandemic – an additional 11 percent of the population is vulnerable to falling into poverty during the pandemic.

33. The World Bank’s program in STP has been adjusted dynamically in response to the evolving COVID-19 crisis. Prior to the COVID-19 crisis, the IDA program in STP was not active in the public health sector. In response to COVID-19, IDA support for the health sector was quickly mobilized through a COVID-19 emergency operation (P173783) of US\$2.5 million. Working closely with the World Health Organization, UN agencies present in STP and other partners was critical to provide rapid and effective support to the Government facing an escalating health crisis.

34. Several ongoing IDA projects already addressed structural issues that are critical to the government’s ability to respond to COVID-19. In response to the pandemic, these were adjusted to better respond to the crisis. This is the case for the social protection project, which mobilized additional financing for the temporary expansion of direct cash transfers. The power sector recovery project has been aligned to fund emergency network upgrades and back-up generation units to ensure improved and uninterrupted electricity supply to health facilities.

35. The proposed project as designed, will also contribute to the national and local efforts to avoid and mitigate the direct and indirect effects of the pandemic on the population, especially on the most vulnerable part, particularly given its focus on strengthening the resilience of targeted coastal communities and areas. The project is complementary to the other interventions in the country, by targeting specific coastal communities, often less connected, using the local systems already in place to extend the national systems.

36. The project will strengthen the capacities of the local risk committees in each of the coastal community, to disseminate preventive messages and raise awareness on the risk of the pandemic, with distribution of communication equipment and resources, and dedicated training coordinated with the ministry of Health. The project, through the activities planned under the AF and the parent project, will contribute to the improvement of the living conditions of beneficiaries in the targeted communities, especially the most vulnerable, the most at risk also to the COVID-19. Through better drainage systems, improvement of sanitary conditions (toilets, fresh water), provision of houses, the project would also contribute to the reduction of the morbidity in coastal communities. Some social activities, planned under the parent project, financed by IDA, will be slightly adapted, to also ensure that they could contribute to the rapid socio-economic relief efforts, providing cash-for-work for the most vulnerable ones, while still achieving their initial objectives.

37. The project will provide support for the multisectoral collaboration, especially between the Ministries of Environment, Health, and Interior (through the civil protection). Technical assistances are planned under the GEF LDCF to also contribute to the strengthening of the institutional and legal frameworks on disasters (including pandemics) prevention and response, through analyzing the current

³ source: <https://covid.ms.gov.st/st/>



arrangements, clarifying the responsibilities (and avoiding gaps and duplication, as existing in the current situation) and building capacity for institutions to improve collaboration and adoption of new structures.

II. DESCRIPTION OF ADDITIONAL FINANCING

38. The proposed AF will scale-up activities of the parent project in STP. Additional activities in STP, embedded in the structure of the parent project, would induce changes in the component costs and the final targets for results indicators. Thanks to this AF, the number of households directly protected from erosion and flooding will nearly double (passing for erosion from 210 households to 400, for flooding, from 306 to 816). These are the only modifications brought by the AF. Indeed, no other changes would be made in or to the other five countries or to the component on regional integration (component 1), nor to the implementation arrangements for STP. All arrangements regarding institutions and M&Es remain the same as in the parent project.

39. Fiduciary responsibilities (Financial management and procurement) will remain under AFAP which has been, since the approval of the Parent Project, established with the Decree-Law No. 10/2018 as an autonomous agency, under the supervision of the Ministry of Planning, Finance and Blue Economy.

40. The Parent Project PDO: “To strengthen the resilience of targeted communities and areas in coastal Western Africa” will remain the same. The closing date will be also kept as December 31, 2023.

41. The proposed AF is aligned with the Parent Project components: (i) Component 1- strengthening regional integration, (ii) Component 2- Strengthening the Policy and Institutional Framework, (iii) Component 3- Strengthening National Physical and Social Investments, and (iv) Component 4- National Coordination. The proposed AF of US\$6.0 million using LDCF resources will lend support to WACA components 2, 3 and 4, for national activities in STP only.

Table 2: Revised Project costs by components and sources of financing (excluding in-kind counterpart contribution)

	Parent project					Proposed AF	Updated estimate	
	IDA		GEF/ other funding		Counterpart financing	GEF/LDCF - AF	TOTAL	
	WACA overall Project	STP	WACA overall Project	STP		STP	WACA overall project	STP
Component 1	12.0	-	-	-	-	-	12.0	-
Component 2	26.9	1.3	6.1	0.75	5.8	2.0	40.8	4.05
Component 3	134.9	5.5	13.1	0.4	4.7	3.75	156.3	9.65
Component 4	16.3	1.2	1.0	0.0	1.0	0.25	18.6	1.45



TOTAL	190.0	8.0	20.2	1.15	11.7	6.0	227.7	15.15
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Component 1. Strengthening regional integration: No LDCF/AF support

Component 2. Strengthening the Policy and Institutional Framework (Parent - STP: US\$2.0 million, AF: US\$2.0 million)

42. Coastal Early Warning System (estimation US\$0.9 million). The AF would finance upgrades of and complements to the current Early Warning System to inform coastal communities and artisanal fishermen about coastal climate risks, but also upcoming adverse marine and coastal weather conditions. This would include:

- Specialized long-term training (6-12 months) for national meteorologists on marine weather, especially on storm surge modeling, at a center of global expertise. This expertise is becoming critically important due to the impact of the recent spring tides and storm surges on coastal communities, which will be further exacerbated by sea level rise. This training will also help the meteorological institute to improve the content and the format of the messages for the weather forecast bulletins.
- Building a platform for sharing coastal and marine climate data and information between different agencies involved early warning system and building their capacity;
- Installation and maintenance of two additional marine meteorology stations in the southern part of the São Tomé island and along the shoreline of the island of Príncipe to complete the coverage of the observation network for observation of change of waves and current conditions over the long term, storm surge monitoring and early warnings. The contract will include provision for warranty and maintenance. Also, dedicated staff of INM will be trained to maintain the network, to ensure sustainability of the stations.

43. Safety at Sea (US\$0.8 million). The AF would expand the scope of the Safety at Sea Program of the previous Sao Tome - Adaptation to Climate Change (P111669) project to cover the totality of the 4,155 artisanal fishers, with an emphasis on:

- Acquisition and distribution of safety, search and rescue equipment for artisanal fishermen. Based on the experience of the previous adaptation project, only the most useful and used equipment will be distributed, which include life-jacket, rain-coat, first-aid kits and water-proof pockets for cell phones. To ensure the sustainability of this action over time, activities will aim to ensure the creation of a sustainable structure of suppliers and promotion of fishermen associations for the management and maintenance of the safety devices, such as GPS;
- Installation of Automatic Identification System (AIS) transponders for boats going further at sea, based on registered fishing practices;
- On-going training and peer-to-peer exchanges amongst fishermen groups to showcase best practices, and encourage safer behaviors; as well as raising awareness on climate risks
- Reinforced M&E of safety at sea incidents and registration system for fishermen and canoes;
- Strengthen national regulations regarding safety at sea, and the capacity for their implementation, with consideration of impacts of climate change.



44. Marine Spatial Planning (US\$0.2 million). The AF will support the development of a climate-informed marine spatial planning to facilitate the coordination and integrated management of the coastal and marine areas, integrating future climate and disaster risk information. Both the coastal zone and marine master plans will consider impacts (negative but also positive) of climate change to inform the selections of the most appropriate activities in the different sectors to support the development of a resilient Blue economy.

45. Strengthening national monitoring system (US\$0.1 million). The AF will also support the strengthening of the national M&E framework for activities dedicated to adaptation on the coastal areas, with capacity building for all institutions involved.

Component 3. Strengthening National Physical and Social Investments (Parent: US\$5.9 million, AF US\$3.75 million)

46. The AF would expand the local scale adaptation process from eight to at least 12 communities supported by the project - Ribeira Afonso, Malanza, Santa Catarina, lô Grande, Morro Peixe, Praia Melão, Pantufo, Praia Gamboa, Praia Loxinga, Praia Cruz and Micoló in São Tomé Island, and Praia Burra and Praia Abade in Príncipe. Particular attention would be given to capacity transfer to national institutions and local authorities and institutionalization of the participatory adaptation processes carried out by the project. In addition to physical interventions in these 12 targeted coastal communities, all the 31 national coastal communities would benefit from awareness raising, dissemination of best practices, and improvement of connection with the social protection.

47. Activities would include:

- (a) Medium-scale coastal adaptation activities (development of drainage system, medium scale rock revetment, seawall and ecosystem-based approaches, plantation of mangrove or vegetation of exposed river berm);
- (b) Small-scale community-based adaptation (including maintenance of drainage and revegetation);
- (c) Capacity building in ecosystem-based approaches for adaptation to climate change and support to coastal ecosystem restorations to strengthen resilience;
- (d) Exchanges of experiences and dissemination of lessons learned extended to all
- (e) Restoration of vacated at-risk areas, to promote local and sustainable income generating initiatives, linked to road maintenance, tourism and social protection;
- (f) Strengthening the community outreach and awareness.

48. A M&E specialist will be dedicated to monitor those activities and assess their impacts to the population, especially on women and the most vulnerable.

49. No financing from the GEF grant will be used to support any civil work related to the planned retreat process, neither for the preparation of the expansion areas nor for the construction of the houses, but will complement the process through implementation of nature-based solutions for the liberated areas and the rest of the communities, as well as resilience building activities to provide alternative, climate-informed, livelihoods to the communities, especially the most vulnerable.



50. The participatory adaptation measures would be closely coordinated with the social protection program, also under implementation in STP, to gradually promote synergies between the two programs. Thus, adaptation works will seek to also maximize livelihood benefits, by promoting cash-for-works activities during the most at-risk season for fishers (higher risks due to weather conditions). The AF will complement the adaptation activities of the Parent Project by financing small-scale transformation of the most at-risk area into non-residential communal areas. In those areas, communities would have the opportunities to develop income generating activities, however only building light and moveable structures to minimize potential damages and losses in case of floods.

Component 4. National Coordination (Parent: US\$1.2 million, AF: US\$0.25 million)

51. The AF will use the Parent Project management systems. AF will be used to support the implementation of the additional activities.

Long-term Sustainability of Interventions

52. Activities are designed and planned with long-term sustainability in mind. The participatory approach is used for the identification of vulnerable households and consideration of risk perceptions by local population. Maintenance of works by local authorities is intended to ensure long-term sustainability. Regular consultations and involvement of local leaders and beneficiaries as well as national institutions help to create ownership of the project by local population as well as local and national institutions.

53. Local authorities are involved in the construction and maintenance of flood protection works ensuring longer durability of works. Local authorities and population will also be trained on maintenance techniques. Protection works will be built with local material and designs will be simple and easy to replicate. The expected in-kind contribution from the participating districts is to fund maintenance activities in the target communities and social infrastructure in the expansion areas. Evidence from the previous adaptation project indicates that this is already happening – in Malanza, for example, the Government installed electricity in the expansion area, while in Praia Abade, the Region managed to obtain the construction of a school in the safer area. In addition, STP has established community-based risk management committees in the targeted villages, whose role is to organize maintenance activities, as well as encourage adaptation and risk reduction behaviors.

54. The expected end result is that all districts in STP will have gained experience from incorporation of adaptation and risk-based management into participatory local development plans, and that the model would be mainstreamed nationwide.

55. Under the Early Warning and Safety at Sea Component, the last mile communication protocols designed under the parent project (radar detection, community radio, and FrontlineSMS), involve minimum costs, or have operation and maintenance already funded by national agencies (e.g. ICT companies, Coast Guard, Port Authority). Training of local staff for the maintenance and management of maritime weather forecasting stations will facilitate their maintenance.

56. The regular use of basic safety at sea equipment will be sustained by a mandatory decree, and through regular registration and marking of artisanal canoes (making it easier to identify unsafe practices). Furthermore, the project is aiming to train future trainers within the communities, so that safety at sea education can continue to be done locally. After ten years of implementation, and already visible results (in terms of lives saved), sustained changes of behavior are expected, allowing for the permanency of the safety at sea practices. Fishermen associations will be trained for the management and maintenance of safety-at-sea equipment.



Alignment with the Country Partnership Strategy (CPS) and National Strategies:

57. With this proposed AF, the project will continue to be fully aligned with the CPS objectives and Government’s development objectives, strategies and plans, including the Nationally Determined Contribution (NDC) under the UNFCCC (United Nations Framework Convention on Climate Change).

58. The current World Bank Group Country Partnership Strategy for São Tomé and Príncipe’s for FY2014-18 (Report No. 83144-ST) has been extended until FY20 with the Performance and Learning Review (Report No. 112944-STP, May 1, 2019). It has two themes of engagement: supporting macroeconomic stability and national competitiveness; and strengthening human capacity and reducing vulnerability. The proposed AF will contribute to strengthening the contribution of the project to Outcome 7 of the second theme “Increased adaptive capacity of coastal communities and reduced potential loss of assets and lives,” by protecting additional assets in coastal communities, but also reducing the potential loss of fishermen through a better safety-at-sea system. As the CPS already captured the need to the strengthening of human capacity, no change has been made to the CPS following COVID-19.

59. The STP Nationally Determined Contribution (NDC, September 2015) identifies the “protection of coastal communities and artisanal fishermen” as one of its two top adaptation priorities (amongst 27 identified). The NDC further states five short-to-medium term adaptation actions, of which action (II) “Reduce the number of people living in vulnerable areas at risk, by providing housing in safer areas” drives the design of Component 3; and actions (IV) “Introduce radar reflectors on board of all fishing vessels by 2025, reducing the number of accidents at sea” and (V) “Train and equip fishermen with means to enable safe fishing and train them in the proper use of fishing gear”, are reflected in the design of Component 2. The parent project already helped to inform STP’s Third National Communication on climate change (2019).

60. The project is also fully consistent with STPs National Development Plan (2017-21), which emphasizes mainstreaming of climate change issues in the countries’ policies as a key strategic action and specifically calls for the “rehabilitation of settlement exposed to risks of climate change (5.2.3.3.5)”, the “improvement of the network for meteorological observation, forecast and warning, as well as the dissemination system (5.5.1.3)” and “reduction of climate impacts on population, especially for the coastal communities at risk (5.5.1.5)”.

61. The Proposed AF addresses the top three priorities of the 2007 National Adaptation Programme of Action (i.e. Training and equipment for artisanal fishermen, Early warning climate alert system, and Communication action for behavior change), as well as Priorities 9 (Relocation of coastal communities at risk of floods and landfalls) and 10 (Construction of shelters for artisanal fishermen).

62. The AF is also aligned with the recently developed strategy for the Blue economy, which calls for a coordinated protection of coastal ecosystems, support for coastal fisheries and the resilience of coastal communities.

III. KEY RISKS

Risks	Risks rating for the Regional project	Residual risk ratings for the national activities in STP
Political and Governance	Substantial	Moderate
Macro-Economic	Moderate	Moderate



Sector Strategies and Policies	Substantial	Moderate
Technical Design of Project or Program	Substantial	Moderate
Institutional Capacity for Implementation and Sustainability	Substantial	Moderate
Fiduciary	Substantial	Substantial
Environment and Social	High	Substantial
Stakeholders	High	Moderate
Overall	High	Substantial

63. The overall risks of the regional WACA ResIP project in the six countries is high and the project has been rated category A for safeguards policies in view of its potential environmental and social impacts. For Sao Tome and Principe however, the overall risk rating is substantial and linked to the environmental and social aspect, the sector strategies and policies and the fiduciary risks (procurement and financial management). All other categories of residual risk are rated as moderate (see table above). Given that despite the implementation of some mitigation measures, residual risks remain but that the implementation of the parent project in STP has progressed in compliance with World Bank policies and procedures with no issues to date, the risk rating for the AF is also considered as substantial.

64. The activities proposed under this AF will not directly affect the risk rating of the overall regional parent project, as they will neither have direct impacts nor depend on the activities implemented in the other countries or on the regional components, which are assessed with higher risks.

65. Many actors and institutions are intervening in coastal areas in STP, with all their respective strategies and policies, and sometimes overlapping mandates and opposing visions. This situation would pose a significant inherent risk to the implementation of the activities of the WACA Project in STP. This risk will be mitigated to a residual “moderate” risk after to the review and revision of the institutional framework for coastal area management to be conducted by this project.

66. The current limited human, financial and technical capacities of some institutions pose a substantial risk to the achievement of some project objectives, especially for the long-term, especially the NMI for the deployment of the marine weather forecast center, or CONPREC (*Conselho Nacional de preparação e Resposta as Catastrofes* - National Council for Disaster and Prevention) for the support to the local risk committees. The project will mitigate the risk through tailored training, to build the human and technical capacities of those institutions, with a combination of in-country, short courses, to raised knowledge and expertise of all the staff, but also with longer-term, dedicated classes, to have few in-house experts in the different institutions. Therefore, even if the inherent risks are estimated as substantial, the residual risk is moderate.

67. Environment and Social: Poorly designed interventions could exacerbate erosion, create new risks or be inefficient in reducing flood risks. Also, although the planned retreat has been discussed and agreed with the beneficiaries in each community, the process could cause disruptions in social conditions.

68. To mitigate social risks, a strong participatory approach is being implemented to make sure that communities are part of the decision-making process. Regular visits to the communities are done under the parent project to raise awareness and have on-going consultations. The location of safer zone to relocate have been discussed with all the communities and selected taking into consideration their needs in terms of access to livelihoods and social interests. Under the parent project, there is clear evidence to



show the grievance redress mechanism is working since it has received complaints and those have been resolved at local level. Environmental risks will be mitigated by ensuring a high quality of design, giving preference to comprehensive approaches by combining ecosystem-based solutions with, whenever needed, grey infrastructures, and regular monitoring of the implementation of works to ensure the respect of environmental high-quality standards, but as well as to monitor the consequence on erosion.

69. The Fiduciary risk is rated as substantial, especially because of potential risks related to procurement and financial management. Workload at AFAP has increased significantly and there is a significant number of small value contracts which attracts smaller bidders/suppliers, with limited capacity. To mitigate this risk, there will be a close follow-up of procurement plan and execution by the World Bank team in addition to capacity building on contract management. Also, AFAP will be trained to use key performance indicators to track procurement progress. The increase of workload at AFAP, and the existence of several beneficiaries and activities increase also the risk for financial management, as the project will have to deal with multiple small payments. AFAP capacities will be assessed on a biannual basis, to determine the need either to hire new staff, to build the capacities of existing staff or to have additional hands-on support from the Bank team.

70. The major risks posed by the COVID-19 to the project are due to travel restrictions and restrictions on public meetings, for stakeholders' consultation and community engagements. The scope of the proposed project will not be affected, as the proposed activities already contribute to the emerging priorities of the government in their response to the pandemic (sustain fisheries activities, building resilience of communities through better and more sustainable livelihoods), aligned with the recovery program. As activities are either moderately or not hindered by the COVID-19, the design of the project has not been altered, neither for the parent project, nor for GEF-LDCF activities as they remain strongly aligned with the needs of today. Stakeholders consultations both at coastal community levels and at centralized levels, for the project preparation and the validation of the proposed adaptation options were all completed before February 2020, prior to the restrictions caused by the COVID-19.

71. Regarding travel restriction, dispositions have been taken so that the Project Implementation Unit is equipped (laptop, personal modem) to be able to continue to work, even remotely, and also to be able to connect to videoconferences with international consultants who might be restricted from travelling. Each technical assistance activities were already designed so that an international expert would pair with a national expert (to combine international expertise, with local knowledge and access to stakeholders). Hence, collection of data and documents, consultations with key actors, could still happen, even if international experts could not travel.

72. Currently, the risk caused by COVID-19 to the project is considered moderate, as the potential impacts on activities would be moderate, and mitigation measures have been defined, prioritized and included in the project contingency plan.

IV. APPRAISAL SUMMARY

A. Economic and Financial (if applicable) Analysis

73. The proposed AF would increase the number of direct beneficiaries from physical investment of the parent project from 10,895 to 31,799 people, the equivalent of 14.2 percent of the total population (of which 49 percent are estimated as women). This would also lead to an increase in overall beneficiaries from 63,576 to about 130,000 (65 percent of the population), corresponding to the population living in



the coastal areas, who would benefit from the strengthening of the climate and weather forecasting system, combined with early warning capacities and better management of coastal areas. The maritime safety program would be extended to all artisanal fishermen (4,155).

74. The proposed AF is necessary to increase the impact of the parent project. Without it, STP would continue to support participatory coastal adaptation in eight communities, but with limited benefit of scale. Without the AF, the process of helping pilot communities move into safer areas would be reduced, thus leaving people at risk. The principles of safety at sea would have been introduced among coastal fishermen - with an immediate observable impact - but with uncertain sustainability due to the time needed to change risk behavior.

75. The proposed project would help to institutionalize early warning and safety at sea among artisanal fishers and thus ensure that lives can continue to be saved in the long term.

76. The project will also generate lessons learned and good practices related to planned retreat, flood protection measures, including using nature-based solutions, and the use of participatory approaches. Therefore, it will serve as a pilot case for the implementation of solutions adapted to the needs and contexts of the Small Island States to adapt to climate change and create resilience to disaster risk in their coastal areas.

77. The promotion of natural solutions for coastal protection and the use of accessible but sustainable materials to build new homes in the areas of expansion would reduce the costs of the different activities, while ensuring that the solutions could be replicated more easily in other communities, in Sao Tome and Principe, but also in other countries.

78. When evaluating the benefits of activities in monetary values in relation to the costs of climate change and disaster risks, the estimates are not easy. However, the proposed activities would provide long term benefits. For example, reducing risks for vulnerable populations will support efforts to reduce poverty on the long term, as it is known that the most affected in the aftermath of disasters are the poor⁴. With two thirds of the population living under the poverty line of US\$3.2 a day and a third being extreme poor (living on less than US\$1.9 a day), any disaster - whether the loss at sea of the person providing the income to the family, or the loss of animals or tools, such as canoes, or even full houses during major storms- can prevent them from leaving the poverty trap. The development of areas of expansion and improvement of living conditions (such as better sanitation) would also provide significant co-benefits in the different social sectors (access to social infrastructure such as schools), environment, but also the economy (with opportunities to develop small scale businesses around tourism and fisheries).

79. The project is economically profitable, with an internal rate of return of 12 percent, a net present value of US\$11.0 million and a benefit/cost ratio of 1.8.

B. Technical

80. The proposed AF will continue to adopt the ecosystem, community-based, approach used by the parent project toward the planning, development, and management of the coastal zones in a consultative manner that addresses the multiplicity of societal needs and environmental constraints. It aims to achieve its objective by reducing existing risk through financing green and grey infrastructure for coastal defense and coastal adaptation while also preventing future risk and promoting resilient development through strengthening spatial and land use planning.

⁴ Hallegatte S et al. Shock Waves Managing the Impact of Climate Change on Poverty, The World Bank, 2016.



81. Geomorphological and coastal dynamics analysis⁵ has already been carried out in the twelve communities and adaptation options discussed and defined with the communities. The options, which range from small to medium scale interventions, have been tested for different climate scenarios and for events of different return periods. The selection of the options to be implemented either under the parent project or with AF has been made by combining consideration of robustness of the proposed infrastructures, effectiveness of the reduction of risk (both in economic terms but also in terms of number of people protected), social acceptance and co-benefits, and impacts (positive or negative) to the environment.

C. Financial Management

82. The AFAP has the overall responsibility for project financial management (FM). The agency has been working to ensure compliance with the FM requirements in World Bank-funded operations, and there are no outstanding interim unaudited financial reports (IFRs) or audit report under this operation. AFAP has been submitting acceptable quarterly IFRs to the World Bank. The recent FM supervision and latest audit report did not reveal significant issues under the project. The FM performance of the project is deemed Satisfactory.

83. The FM and disbursement arrangements in place for the ongoing project will also apply for the AF. Further details can be found in Annex 3. Therefore, the project funds, expenditures, and resources will be accounted for using the existing automated accounting software and the accounting will be on cash basis. Disbursement of GEF funds will be done on transactions basis (Statements of Expenditures). A unique designated account will be used for both the parent project and the proposed AF. The project will make use of advances, direct payments, reimbursement, and special commitment methods for disbursements. AFAP will prepare quarterly IFRs and provide such reports to the World Bank within 45 days of the end of each calendar quarter. The project financial statements will be audited annually by the independent auditor in accordance with International Standards on Auditing as issued by the International Auditing and Assurance Standards Board within the International Federation of Accountants.

84. The project's FM arrangements have an overall residual FM risk rating of Substantial, which satisfy the World Bank's minimum FM requirements under the World Bank Policy and Directive for Investment Project Financing.

D. Procurement

85. The procurement activities of the project will continue to be implemented by AFAP. The agency is implementing the fiduciary aspects of the parent project and, with a team dedicated to procurement who has experience with the World Bank procurement process and policies. The procurement risk is maintained as Substantial. This is mainly due because workload at AFAP has increased significantly and there is a significant number of small value contracts which attract smaller bidders/suppliers, with limited capacity. The risk will be mitigated through regular reporting on the progress and implementation of fiduciary activities, World Bank supervision, World Bank procurement team hands-on support in-country when required, and further capacity building.

⁵ Deltares, 2019, Geomorphology studies and coastal dynamics and vegetative options for coastal protection. Geomorphological analysis aims to describe the coastal processes and the potential evolution of topography of the coastal system.



E. Social (including Safeguards)

86. **Safeguards.** The safeguard policies triggered by this operation are: OP/BP 4.01 (Environmental Assessment); OP/BP 4.04 (Natural Habitats); Physical Cultural Resources OP/BP 4.11 and Involuntary Resettlement OP/BP 4.12. As the Parent project is a category A for safeguards, the overall category would remain Category A. Potential adverse environmental and social impacts associated with the project investments proposed under the AF, will be avoided to the extent feasible and/or mitigated through provisions adopted during activities preparation and design. As such, no activities classified as Category A will be financed under the proposed AF. The Parent Project safeguards documentation (Environmental and Social Management Framework (ESMF) and Resettlement Policy Framework (RPF)) already accounted for the potential activities to be financed by the AF and these documents will continue to apply. The ESMF was disclosed in Sao Tome & Principe on November 15, 2017 and on the World Bank's website. The RPF was disclosed in the country on December 4, 2017 and on the World Bank website on December 5, 2017. The Project Information Document - Integrated Safeguard Data Sheet (PID-ISDS) has been disclosed on April 17, 2020.

87. Similarly, Resettlement Action Plans (RAP) will be prepared as necessary during project implementation. These will be reviewed and cleared by the World Bank and disclosed publicly in-country and on the World Bank's external website. No civil works will commence until the RAPs have been implemented.

88. This AF is processed to finance scale-up activities and Safeguards Policies will continue to apply. The environmental and social safeguard ratings are satisfactory as per the latest Implementation Status & Results Report, both for the overall project and the national activities in STP.

89. **Social impacts.** Empowering local communities to assess risks and identify feasible solutions is essential for establishing community support for mitigation measures and to build on autonomous risk management strategies. Coastal communities are dealing with localized, recurrent 'everyday' disasters that are the results of persistent poverty, environmental degradation, social marginalization, and other factors in addition to natural disasters. Meaningful community participation allows communities to play an active role in risk management, helping them understand their exposure and vulnerabilities to hazards, including flooding; recognize and accept certain risk mitigation measures and how those will be implemented; and contribute to a shared understanding of the responsibilities of each stakeholder in reducing the risk.

90. This project distinguishes between planned retreat of communities that have made the decision to move and any involuntary resettlement that may be required due to land acquisition as a result of infrastructure investments planned under the project. However, in both instances, RAPs will be prepared to ensure that the spirit of the OP 4.12 is followed, before people will start to relocate. For the project, abbreviated RAPs have already been prepared and disclosed, for the preparation of expansion areas in five communities. For decision making on the potential need for planned retreat in the longer term, community-driven resilience planning has been identified and used as a tool to engage those living in vulnerable areas to understand and address increasing risks due to environmental and climate change. Neither planned retreat, nor involuntary relocation would be directly supported by this AF; the support is provided for the dialogue on how to increase a community's resilience in a sustainable manner.

91. **Citizen engagement.** The AF will also explicitly seek to support the engagement of people living in and deriving their livelihood from the hot spots that are targeted for physical investments under the project. Engagement of target beneficiaries aligns to and supports the project's approach to demand-side social accountability. Through consultative processes, engagement in local-level planning and feedback



mechanisms, the approach to coastal resilience is assessed and adjusted. Feedback mechanisms, through community engagement and the grievance redress mechanism, have developed to ensure transparency, accountability, and learning as well as a continuous dialogue with target beneficiaries and other stakeholders. Annual surveys will be conducted to ensure the level of satisfaction of beneficiaries with the activities of the project, with an expected target of at least 75 percent of satisfaction at the end of the project.

92. Any option chosen to address spatial planning, fishery rights allocation, or planned retreat of communities will require management of the associated social risk. Social tension due to ineffective communication, perceived or real bias or injustice, or other grievances could prevent interventions from achieving the objectives of inclusive, resilient socioeconomic development. To manage such social risks, the decisions taken on the type of options to support will be based on a process of open dialogue with all stakeholders, including national and local governments, service providers, donors, neighboring communities/countries, and the private sector.

Gender

93. **Gender equality is emphasized in the national Constitution and reiterated across the various laws and legislation, but inequality persists.** STP is a signatory of all international conventions that promote gender equality and combat discrimination such as Committee on the Elimination of Discrimination against Women and Millennium Development Goals. However, in practice, the outcome of such policies and laws are still mixed. Gaps in access to education and health have been reduced and several women occupy high decision-making positions at the national level. While the difference in poverty levels between female and male headed households is small, the average income for female-headed households is lower than that of male-headed households. Also, women's participation in decision making at the local levels is marginal. Cultural attitudes seem to relegate women to more traditional roles, such as household and child care; while confining their access to economic opportunities primarily to (self) employment in the informal sector.

94. **Women are targeted beneficiaries of the project and will benefit from activities centered around reduction of their vulnerability and improvement of their livelihoods.** Representation and participation of women have been crucial during preparatory phases of this project, to assess risks the coastal communities are facing, but also to make sure that the selected adaptation options are suitable for women needs and that they will be involved in the implementation of those strategies. Interventions piloted during the previous adaptation project showed that they have been particularly beneficial to women. In addition to protecting their houses from the floods, the drainage systems also facilitated access for women to fresh water for their daily chores, reducing the burden of their everyday activities and allowing some time for income generating activities.

95. A country level gender assessment will be undertaken in STP in the first half of 2021 as part of the obligations under the WACA ResIP Project. WAEMU will promote a harmonized regional vision and plan of action for the promotion of gender equality, empowerment of women and girls, and gender mainstreaming in activities strengthening the resilience of coastal communities and coastal areas, taking into account WAEMU's gender strategy and those of the World Bank and IUCN. Based on the country level assessments, WAEMU will conduct a regional gender assessment that will inform the design of the regional Gender Action Plan. The Gender Action Plan will summarize country specific gaps as identified through the analysis and based on this provide a uniform approach for addressing gender gaps in coastal resilience efforts at country and regional levels. The proportion of women in decision making structures



will be monitored through the indicator on local level committees, to ensure that women voices are not only heard, but also taken into account in decisions which will guide the development of the communities for decades

F. Environment (including Safeguards)

96. The impacts of the program on the target coastal areas and populations are expected to be positive in terms of solutions to coastal erosion and livelihood problems but also in conservation of biodiversity. Nevertheless, it is also anticipated that project activities may result in negative environmental impacts. In STP, the Parent Project safeguards documentation ESMF and RPF already accounted for the potential activities to be financed by the AF, and their potential social impacts. Therefore, these documents will continue to apply. Additional ESIA's, including Environmental and Social Management Plans, ESMPs, will be prepared for some investment sub-projects prior to the commencement of civil works and reviewed by the World Bank.

97. To address the impacts of future activities whose location, number, and scale are unknown, the ESMF contain standards, methods, and procedures specifying how environmental and social issues will be systematically addressed. The ESMF lays out procedures for screening and mitigating impacts from construction and operations and includes the following: (a) checklists of potential environmental and social impacts and their sources; (b) procedures for participatory screening of proposed sites and activities and the environmental and social considerations; (c) procedures for assessing potential environmental and social impacts of the planned project activities; (d) institutional arrangements for preventing, mitigating, and managing the identified impacts; (e) typical environmental management planning process for addressing negative externalities in the course of project implementation; (f) a system for monitoring the implementation of mitigation measures; and (g) recommended capacity-building measures for environmental planning and monitoring of project activities.

98. There is adequate safeguards capacity within the Directorate General of Environment, with the presence of a dedicated safeguards focal point that has received training on Environmental and Social safeguards as well as the new Environmental and Social Framework (ESF) from the World Bank.

G. Other Safeguard Policies (if applicable)

99. Not applicable

V. WORLD BANK GRIEVANCE REDRESS

100. Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and World Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit <http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service>. For



information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org



VI. SUMMARY TABLE OF CHANGES

	Changed	Not Changed
Results Framework	✓	
Components and Cost	✓	
Implementing Agency		✓
Project's Development Objectives		✓
Loan Closing Date(s)		✓
Cancellations Proposed		✓
Reallocation between Disbursement Categories		✓
Disbursements Arrangements		✓
Safeguard Policies Triggered		✓
EA category		✓
Legal Covenants		✓
Institutional Arrangements		✓
Financial Management		✓
Procurement		✓
Implementation Schedule		✓
Other Change(s)		✓

VII. DETAILED CHANGE(S)

COMPONENTS

Current Component Name	Current Cost (US\$, millions)	Action	Proposed Component Name	Proposed Cost (US\$, millions)
Component 1: Strengthening Regional Integration	12.00	No Change	Component 1: Strengthening Regional Integration	12.00



Component 2: Strengthening the Policy and Institutional Framework	38.77	Revised	Component 2: Strengthening the Policy and Institutional Framework	40.77
Component 3: Strengthening National Physical and Social Investments	152.65	Revised	Component 3: Strengthening National Physical and Social Investments	156.40
Component 4: National Coordination	18.28	Revised	Component 4: National Coordination	18.53
TOTAL	221.70			227.70

Expected Disbursements (in US\$)

Fiscal Year	Annual	Cumulative
2018	0.00	0.00
2019	14,868,131.42	14,868,131.42
2020	9,023,132.96	23,891,264.38
2021	25,000,000.00	48,891,264.38
2022	65,000,000.00	113,891,264.38
2023	80,000,000.00	193,891,264.38
2024	22,356,344.62	216,247,609.00

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

Risk Category	Latest ISR Rating	Current Rating
Political and Governance	● Substantial	● Substantial
Macroeconomic	● Moderate	● Moderate
Sector Strategies and Policies	● Substantial	● Substantial
Technical Design of Project or Program	● Substantial	● Substantial
Institutional Capacity for Implementation and Sustainability	● Substantial	● Substantial
Fiduciary	● Substantial	● Substantial
Environment and Social	● High	● High
Stakeholders	● High	● High



Other		
Overall	● High	● High

LEGAL COVENANTS – Additional grant for West Africa Coastal Area Resilience Investment Project (P168908)

Sections and Description

No information available

Conditions

Type	Description
Disbursement	(Schedule II, Section III, B, 1.b) No withdrawal shall be made to finance expenditures for cash payments for compensation or other cash payments for assistance due to a Displaced Person or for the cost of land acquisition related to the activities to be carried out under the Project.



VIII. RESULTS FRAMEWORK AND MONITORING

Results Framework

COUNTRY: Western Africa

Additional grant for West Africa Coastal Area Resilience Investment Project

Project Development Objective(s)

To strengthen the resilience of targeted communities and areas in coastal Western Africa.

Project Development Objective Indicators by Objectives/ Outcomes

Indicator Name	PBC	Baseline	Intermediate Targets	End Target
			1	
To strengthen the resilience of targeted communities and areas in coastal Western Africa				
Households in targeted coastal areas with less exposure to erosion due to the project (disaggregated by country) (Number)		0.00	8,763.00	17,188.00
<i>Action: This indicator has been Revised</i>				
Benin (Number)		0.00		4,100.00
Côte d'Ivoire (Number)		0.00		1,711.00
Mauritania (Number)		0.00		4,879.00
São Tomé and Príncipe (Number)		0.00	100.00	400.00



Indicator Name	PBC	Baseline	Intermediate Targets	End Target
			1	
<i>Action: This indicator has been Revised</i>				
Senegal (Number)		0.00		1,500.00
Togo (Number)		0.00		4,598.00
Households in targeted coastal areas with less exposure to flooding due to the project (disaggregated by country) (Number)		0.00	30,207.00	53,888.00
<i>Action: This indicator has been Revised</i>				
Benin (Number)		0.00		1,600.00
Côte d'Ivoire (Number)		0.00		5,925.00
Mauritania (Number)		0.00		41,581.00
São Tomé and Príncipe (Number)		0.00	150.00	816.00
<i>Action: This indicator has been Revised</i>				
Senegal (Number)		0.00		900.00
Togo (Number)		0.00		3,066.00
Households in targeted coastal areas with less exposure to pollution due to the project (disaggregated by country) (Number)		0.00	8,635.00	12,277.00



Indicator Name	PBC	Baseline	Intermediate Targets	End Target
			1	
<i>Action: This indicator has been Revised</i>				
Benin (Number)		0.00		6,900.00
Côte d'Ivoire (Number)		0.00		0.00
Mauritania (Number)		0.00		0.00
São Tomé and Príncipe (Number)		0.00		306.00
Senegal (Number)		0.00		0.00
Togo (Number)		0.00		5,071.00
Share of target beneficiaries with rating 'Satisfied' or above on project interventions (disaggregated by country, sex) (Percentage)		0.00	42.00	72.00
<i>Action: This indicator has been Revised</i>				
Benin (Percentage)		0.00		65.00
Côte d'Ivoire (Percentage)		0.00		70.00
Mauritania (Percentage)		0.00		75.00
São Tomé and Príncipe (Percentage)		0.00		75.00
Senegal (Percentage)		0.00		75.00



Indicator Name	PBC	Baseline	Intermediate Targets	End Target
			1	
Togo (Percentage)		0.00		70.00
Regional integration score (Number)		0.00	12.00	16.00
<i>Action: This indicator has been Revised</i>				

Intermediate Results Indicators by Components

Indicator Name	PBC	Baseline	Intermediate Targets	End Target
			1	
Component 2: Strengthening the Policy and Institutional Framework				
Countries that timely submit datasets to the Regional Coastal Observatory (Number)		0.00	6.00	6.00
<i>Action: This indicator has been Revised</i>				
Countries with national Multi-Sector Investment Plans updated to integrate regional environmental considerations (Number)		0.00	0.00	6.00
<i>Action: This indicator has been Revised</i>				
Score on policy instruments and legal framework (disaggregated by country) (Number)		0.00	17.00	0.00
<i>Action: This indicator has been Revised</i>				



Indicator Name	PBC	Baseline	Intermediate Targets	End Target
			1	
Benin (Number)		0.00		5.00
Côte d'Ivoire (Number)		0.00		5.00
Mauritania (Number)		0.00		5.00
São Tomé and Príncipe (Number)		0.00		4.00
Senegal (Number)		0.00		2.00
Togo (Number)		0.00		5.00
Inter-Ministerial Coastal Zone established and operational (disaggregated by country) (Yes/No)		No	Yes	Yes
Action: This indicator has been Revised				
Benin (Yes/No)		No		Yes
Côte d'Ivoire (Yes/No)		No		Yes
Mauritania (Yes/No)		No		Yes
São Tomé and Príncipe (Yes/No)		No		Yes
Senegal (Yes/No)		No		Yes
Togo (Yes/No)		No		Yes



Indicator Name	PBC	Baseline	Intermediate Targets	End Target
			1	
National Early Warning System operational (Yes/No)		No	Yes	Yes
Action: This indicator has been Revised				
Benin (Yes/No)		No		No
Côte d'Ivoire (Yes/No)		No		Yes
Mauritania (Yes/No)		No		Yes
São Tomé and Príncipe (Yes/No)		No		Yes
Senegal (Yes/No)		No		Yes
Togo (Yes/No)		No		Yes
Component 3: Strengthening National Physical and Social Investments				
Targeted coastal area with flooding control measures (disaggregated by country) (Hectare(Ha))		0.00	11,602.00	26,353.00
Action: This indicator has been Revised				
Benin (Hectare(Ha))		0.00		400.00
Côte d'Ivoire (Hectare(Ha))		0.00		12,000.00
Mauritania (Hectare(Ha))		0.00		12,590.00



Indicator Name	PBC	Baseline	Intermediate Targets	End Target
			1	
São Tomé and Príncipe (Hectare(Ha))		0.00	30.00	250.00
Action: This indicator has been Revised				
Senegal (Hectare(Ha))		0.00		60.00
Togo (Hectare(Ha))		0.00		1,035.00
Shoreline with targeted coastal erosion control measures (disaggregated by country) (Kilometers)		0.00	67.50	114.30
Action: This indicator has been Revised				
Benin (Kilometers)		0.00		23.00
Côte d'Ivoire (Kilometers)		0.00		13.00
Mauritania (Kilometers)		0.00		51.50
São Tomé and Príncipe (Kilometers)		0.00		7.00
Action: This indicator has been Revised				
Senegal (Kilometers)		0.00		1.80
Togo (Kilometers)		0.00		18.00
Sites/zones with pollution control measures (disaggregated by country) (Number)		0.00	5.00	16.00



Indicator Name	PBC	Baseline	Intermediate Targets	End Target
			1	
<i>Action: This indicator has been Revised</i>				
Benin (Number)		0.00		1.00
Côte d'Ivoire (Number)		0.00		0.00
Mauritania (Number)		0.00		0.00
São Tomé and Príncipe (Number)		0.00		10.00
Senegal (Number)		0.00		0.00
Togo (Number)		0.00		5.00
Critical assets protected (Number)		0.00	1.00	2.00
<i>Action: This indicator has been Revised</i>				
Natural ecosystems conserved and/or restored (disaggregated by country) (Number)		0.00	28.00	42.00
<i>Action: This indicator has been Revised</i>				
Benin (Number)		0.00		8.00
Côte d'Ivoire (Number)		0.00		11.00
Mauritania (Number)		0.00		3.00



Indicator Name	PBC	Baseline	Intermediate Targets	End Target
			1	
São Tomé and Príncipe (Number)		0.00		11.00
Action: This indicator has been Revised				
Senegal (Number)		0.00		1.00
Togo (Number)		0.00		8.00
Coastal households with access to improved livelihood activities (disaggregated by country and by sex) (Number)		0.00	30,210.00	56,500.00
Action: This indicator has been Revised				
Benin (Number)		0.00		300.00
Côte d'Ivoire (Number)		0.00		2,200.00
Mauritania (Number)		0.00		44,000.00
São Tomé and Príncipe (Number)		0.00		4,500.00
Action: This indicator has been Revised				
Senegal (Number)		0.00		500.00
Togo (Number)		0.00		5,000.00
Local level planning committees in coastal resilience with female representation of 40% or		0.00	6.00	23.00



Indicator Name	PBC	Baseline	Intermediate Targets	End Target
			1	
more (Number)				
<i>Action: This indicator has been Revised</i>				

Monitoring & Evaluation Plan: PDO Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Households in targeted coastal areas with less exposure to erosion due to the project (disaggregated by country)	<p>The indicator measures resilience to erosion by design through infrastructure solutions, nature-based solutions and/or planned relocation. It captures absorptive capacity of resilience due to the protection provided against erosion, and transformative capacity due to the planned relocation and creation of new livelihood opportunities.</p> <p>Definition of a household varies slightly between the</p>	Annually	Field survey	Field survey carried out during the impact studies of the works to be carried out, the impact studies of protective infrastructures carried out by the project. The studies must determine : (i) the extent of the areas protected against coastal erosion thanks to the infrastructures and investments made and (ii) the number of households located in these areas .	Regional Implementation Support Unit M&E function



	<p>six participating countries. In general, a household consists of one or more people who reside in the same dwelling and also share meals or living accommodation. A household may consist of a single family or some other grouping of people.</p> <p>Less exposure to erosion means reduction in the danger of damage over the lifetime of the project to dwellings and other immovable assets from the action of surface processes (such as water flow and/or wind) that remove soil, rock, or dissolved material from one location to another.</p> <p>Targeted coast areas and specific activities to reduce danger of erosion are: Benin Targeted areas: Hillacondji – Grand Popo Activities: beach nourishment. Cote Ivoire:</p>				
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	<p>Targeted areas: Lahou-Kpanda to Groguida strip Activities: fixation of the river mouth through sand filling, opening of a new mouth in another place and improved channeling of the water from the river.</p> <p>Mauritania: Targeted areas: El Mina, Ndiago, beni Chab Activities: mangrove rehabilitation, and dunes fixation (mechanical and biological).</p> <p>Sao Tome: Targeted areas: Santa Catarina, Micoló, Praia Melao, lo Grande, Malanza, Praia Burra and Praia Abade Activities: beach nourishment, vegetation (mangroves, palm trees, grass planting) and rocks revetments; support of planned relocation.</p> <p>Senegal: Targeted areas: slope stabilization for the Corniches de Dakar, rock revetment in île de Gorée.</p> <p>Togo: Agbodrafo-Aného-border (Togo/Bénin)-</p>				
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	groins and breakwaters (rehabilitation and building), beach nourishment Cumulative targets.				
Benin					
Côte d'Ivoire					
Mauritania					
São Tomé and Príncipe					
Senegal					
Togo					
Households in targeted coastal areas with less exposure to flooding due to the project (disaggregated by country)	The indicator measures resilience by design to flooding through infrastructure solutions, nature-based solutions and/or planned relocation. It captures absorptive capacity of resilience due to the protection provided against flooding, and transformative capacity due to the planned relocation and creation of new livelihood	Annually	Field survey	Field survey carried out during the impact studies of the works to be carried out, the impact studies of protective infrastructures carried out by the project. The studies must determine : (i) the extent of the areas protected against floods thanks to the infrastructures and investments made and	Regional Implementation Support Unit M&E function



	<p>opportunities.</p> <p>Less exposure to flooding means decreased likelihood and intensity of flooding, due to project-related investments for houses and other immovable assets. Flooding is defined as a general and temporary condition of partial or complete inundation of normally dry land areas from overflow of inland or tidal waters from the unusual and rapid accumulation or runoff of surface waters from any source.</p> <p>Targeted coast areas and specific activities to reduce danger of flooding are: Benin: Targeted areas: Gbékon, Mono Lagoon. Activities: periodic opening of the river mouth, and others. Cote Ivoire: Targeted areas: Grand-Lahou. Activities: drainage system on the Plateau.</p>			<p>(ii) the number of households located in these areas.</p>	
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	<p>Mauritania: Targeted areas: Sebkha, El Mina, Tevragh Zeina, N'Diago, Nouadhibou. Activities: Dikes rehabilitation and extension, improved drainage, early warning systems. Sao Tome: Targeted areas: Santa Catarina, Micolo, Pantufo, Praia Melao, Ribeira Afonso, Io Grande, Malanza, Praia Burra and Praia Abade. Activities: drainage and earthwork, protection form (vegetation, walls); support of planned relocation. Senegal: N/A. Togo: Targeted areas: Prefectures of Lacs and Vo. Activities: improved drainage, water retention structures, dikes stabilization, as well as dredging, improved drainage for transport infrastructure, installed a lock under the bridge of the Aného Lagoon to regulate the dynamics of the mouth of Lake Togo.</p>				
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	Cumulative targets.				
Benin					
Côte d’Ivoire					
Mauritania					
São Tomé and Príncipe					
Senegal					
Togo					
Households in targeted coastal areas with less exposure to pollution due to the project (disaggregated by country)	<p>The indicator measures resilience by design to pollution through infrastructure solutions and/or nature-based solutions. It captures the absorptive capacity of resilience due to the protection against pollution provided as well as the adaptive capacity due to change in behavior e.g. waste collection, planting and biological pollution control.</p> <p>Pollution is defined as the introduction of chemical</p>	Annually	Field survey	Field survey carried out during the impact studies of the works to be carried out, the impact studies of protective infrastructures carried out by the project (quick studies). The studies must determine : - The extent of the areas protected against pollution thanks to the infrastructures and investments carried out; - the number of households located in these areas.	Regional Implementation Support Unit M&E function



	<p>substances into the natural environment that cause adverse change.</p> <p>Less exposure to pollution means reduction in the danger of damage over the lifetime of the project to human health, dwellings and other immovable assets from the introduction of chemical substances into the natural environment that cause adverse change.</p> <p>Targeted coast areas and specific activities to reduce danger of flooding are: Benin: Targeted areas: Gbaga channel. Activities: planting along canals, biological pollution control, awareness raising on environmentally friendly practice. Cote Ivoire: N/A Mauritania: N/A. Sao Tome: N/A Senegal: N/A Togo: Targeted areas: Prefectures of Golfe and Lacs Activities: treatment</p>				
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	of polluted water, beach clean up, household waste collection, biological pollution control. Cumulative targets.				
Benin					
Côte d'Ivoire					
Mauritania					
São Tomé and Príncipe					
Senegal					
Togo					
Share of target beneficiaries with rating 'Satisfied' or above on project interventions (disaggregated by country, sex)	The indicator on satisfaction with the totality of project interventions captures demand-side social accountability and serves as citizen engagement (corporate requirement). Focus in perception survey will be on: environmental benefits, livelihoods aspects and participation. The total is calculated as a simple average. The indicator is a proxy measurement of resilience	Biennial	Perception survey	Perception survey conducted among project beneficiaries. The value of the indicator corresponds to the percentage of interviewees who find the project's interventions "satisfactory" or "very satisfactory". The questionnaire will propose four assessment options: "Unsatisfactory"; "Unsatisfactory"; "Satisfactory" and "Very	Regional Implementation Support Unit M&E function



	<p>in coastal areas and captures absorptive capacity through target beneficiaries' perception of improved protection, preparedness and/or recovery; adaptive capacity through the target beneficiaries' perception of change in systems, planning and behaviors; and transformative capacity through target beneficiaries' perception of creation of new systems for instance relocation and creation of new livelihoods.</p> <p>Annual targets.</p>			Satisfactory".	
Benin					
Côte d'Ivoire					
Mauritania					
São Tomé and Príncipe					
Senegal					
Togo					



Regional integration score	<p>Score = A + B + C + D, as per the following:</p> <p>A: Collaborative Agreement between WAEMU, CSE, and ABC for Coastal Zone Management in place. Scoring: 1 = No legal agreement/cooperation framework in place; 2 = Regional legal agreement negotiated but not yet signed; 3 = Institutions signed legal agreement; 4 = Legal agreement ratified by the three institutions and entered into force;</p> <p>B: Regional Strategic Action Plan (RSAP) commitments adopted into Multi-Sectoral Investment Plans: Scoring: 1 = RSAP not developed; 2 = RSAP developed including targets, commitments, and time frames addressing transboundary coastal erosion, flooding, and pollution concerns; 3 = RSAP endorsed by all participating countries at</p>			<p>A: Legal Agreement B: PARSI and PIM or National Sectoral Plans, monitoring reports submitted by countries to IUCN C: Documents on the modalities of operation of the monitoring mechanisms, monitoring reports submitted by the countries to IUCN D : Legal Foundations of the Observatory, SSC Monitoring Report submitted to IUCN</p>	
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	<p>ministerial level; 4 = RSAP commitments adopted in MSIPs and/or RSAP commitments incorporated within national sectoral plans of all participating countries.</p> <p>C: Mechanisms in place to monitor Coastal Erosion, Flooding, and Pollution (CEFP) reduction measures. Scoring: 1 = No mechanisms in place to monitor and report change; 2 = Basic national and/or regional monitoring mechanisms in place but not satisfying CEFP reduction measures; 3 = Monitoring mechanisms in place for a subset of CEFP reduction measures; 4 = Monitoring mechanisms in place for long-term monitoring of CEFP reduction measures at national and regional levels.</p> <p>D. The regional</p>				
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	<p>observatory, i.e. MOLOA, is established and operational. Scoring: 1 = legal foundation for MOLOA drafted; 2 = MOLOA legally established and supported with infrastructure; 3 = MOLOA receiving and processing data; 4 = MOLOA shares data on public platform.</p> <p>The indicator on regional integration is an indirect measurement of absorptive, adaptive and transformative capacity by providing a legal, institutional, planning and monitoring base to strengthen resilience in coastal areas.</p>				
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Monitoring & Evaluation Plan: Intermediate Results Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Countries that timely submit datasets to the Regional Coastal Observatory	Datasets will be determined through agreement protocols	Annually	Review of entry data	National dataset and analysis of regional observatory data	Regional Implementation Support Unit M&E function



	<p>signed between the regional center and the national antennas. The indicator links to the indicator on the regional coastal observatory and is thus an indirect measurement of strengthened capacity in resilience through provision of data on long-term trends and ecosystems health.</p> <p>Annual targets.</p>				
<p>Countries with national Multi-Sector Investment Plans updated to integrate regional environmental considerations</p>	<p>The indicator measures the number of countries that update their national MSIPs to include regional considerations, i.e. coastal area investments in one country will take account of and mitigate potential negative environmental in neighboring countries. The indicator is an indirect measurement of strengthened capacity (absorptive, adaptive and transformative) in resilience through</p>	<p>Annually</p>	<p>Review of national Multi-Sectoral Investment Plans</p>	<p>Review of revised National Multisectoral Investment Plans.</p>	<p>Regional Implementation Support Unit M&E function</p>



	improved planning for resilience in coastal areas. Cumulative targets.				
Score on policy instruments and legal framework (disaggregated by country)		Annually	Policy and legal review	Review of different national legal and policy instruments, including available institutional reports	Regional Implementation Support Unit M&E function
Benin					
Côte d'Ivoire					
Mauritania					
São Tomé and Príncipe					
Senegal					
Togo					
Inter-Ministerial Coastal Zone established and operational (disaggregated by country)	The indicator is an indirect measurement of strengthened capacity (absorptive, adaptive and transformative) in resilience through improved coordination. The Committees will be considered established through legal promulgation and operational if meetings	Annually	Institutional assessment	Decree (or equivalent document) for the creation of committees Minutes of meetings, reports or decisions produced by committees	Regional Implementation Support Unit M&E function



	are regularly held, minutes produced and decisions monitored and evaluated. The constitution of the committees can vary between the six participating countries and could also include NGOs, research institutions and other stakeholders. For Togo and Benin, a committee comprising both countries will be established. Annual targets.				
Benin					
Côte d'Ivoire					
Mauritania					
São Tomé and Príncipe					
Senegal					
Togo					
National Early Warning System operational	National early warning systems include Hydromet. The indicator measures absorptive capacity of	Annually	Institutional assessment	Evaluation according to the criteria defined on the basis of the organic texts establishing the	Regional Implementation Support Unit M&E function



	<p>resilience through preparation for negative impacts of hazards and to save essential assets and lives</p> <p>Defined criteria: 1. Target population identified 2. Early Warning System technically established including IT and parameters 3. Dissemination and communication channels established 4. Response mechanism designed.</p> <p>Annual targets.</p>			EWS, minutes of meetings, national contingency plans.	
Benin					
Côte d'Ivoire					
Mauritania					
São Tomé and Príncipe					
Senegal					
Togo					
Targeted coastal area with flooding control measures (disaggregated by	The indicator links to PDO indicator #2 and measures	Annually	Technical review upon	Impact studies of the works to be carried out,	Regional Implementation Support



country)	absorptive capacity of resilience due to the protection provided against flooding. The specific flooding control measures differ between the six participating countries – see PDO indicator #2. Cumulative targets.		completion of works	impact studies of protection infrastructures carried out by the project (quick studies). The value of the indicator is the sum of the surfaces of the spaces of the littoral having benefited from the measures of fight against the flooding.	Unit M&E function
Benin					
Côte d’Ivoire					
Mauritania					
São Tomé and Príncipe					
Senegal					
Togo					
Shoreline with targeted coastal erosion control measures (disaggregated by country)	The indicator links to PDO indicator #1 and measures absorptive capacity of resilience due to the protection provided against erosion. The specific erosion control measures differ between the six participating countries –	Annually	Technical review upon completion of works	The number of kilometers will be determined from the review of the technical reports of the work.	Regional Implementation Support Unit M&E function



	see PDO indicator #1. Cumulative targets.				
Benin					
Côte d'Ivoire					
Mauritania					
São Tomé and Príncipe					
Senegal					
Togo					
Sites/zones with pollution control measures (disaggregated by country)	<p>The indicator links to PDO indicator #3 and measures absorptive and adaptive capacity of resilience. The specific pollution control measures may differ between the six participating countries – see PDO indicator #3.</p> <p>The indicator aligns with GEF IW 3 Program 6 indicator 6.1.1 "Indicator 6.1.1: Adoption and implementation of ICM plans and reforms to protect coastal zones in</p>	Annually	Technical review upon completion of works	Technical review on completion of work, use of project activity reports	Regional Implementation Support Unit M&E function



	<p>LMEs (% of country coastline under ICM, # of countries adopting and applying ICM) as reported in GEF IW tracking tool score card." In Benin target site is Seme Oil Field, where risk of oil spill from abandoned platforms will be reduced.</p> <p>Cumulative targets.</p>				
Benin					
Côte d'Ivoire					
Mauritania					
São Tomé and Príncipe					
Senegal					
Togo					
Critical assets protected	<p>The indicator measures critical assets protected because of the project. It concerns Senegal where (1) 1.8 km of urban road located on the Corniche in Dakar and (2) critical cultural infrastructure will</p>			<p>Technical review at the completion of the work, exploitation of the project activity reports.</p>	



	be protected on the Ile de Goree, an island close to Dakar and on UNESCO's World Heritage List.				
Natural ecosystems conserved and/or restored (disaggregated by country)	<p>The indicator counts the number of ecosystems, for instance a wetland, a mangrove forest, that have been conserved and/or restored because of the project. It measures the adaptive capacity of resilience as modification and change in the ecosystem.</p> <p>The indicator aligns with GEF LD3 Program 4 (Indicator 3.2: Application of integrated natural resource management (INRM) practices in wider landscapes); LD2 Program 3 (Indicator 2.2: Land area under sustainable forest management and/or restoration practices); BD4 Program 9 (Indicator 9.1 Production landscapes and seascapes that integrate biodiversity conservation</p>	Annually	Field survey	Enumeration of ecosystems restored and conserved by the project through the revision of management plans, review of activity reports and mapped field surveys	Regional Implementation Support Unit M&E function



	<p>and sustainable use into their management preferably demonstrated by meeting national or international third-party certification that incorporates biodiversity considerations (e.g. FSC, MSC) or supported by other objective data); IW3 Program 6 (Indicator 6.1.1 "Indicator 6.1.1: Adoption and implementation of ICM plans and reforms to protect coastal zones in LMEs (% of country coastline under ICM, # of countries adopting and applying ICM) as reported in GEF IW tracking tool score card)</p> <p>Ecosystems, and the specific measures in conservation and restoration, may differ between the six participating countries. The surface area covered are: Benin 250 ha, Cote d'Ivoire (to be determined),</p>				
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	Mauretania 617,170 ha, Sao Tome 5 ha. For Togo:170,110 ha under biodiversity conservation, 500 ha mangrove reforestation, 8,000 ha shoreline reforestation and/or restoration. Cumulative targets.				
Benin					
Côte d'Ivoire					
Mauritania					
São Tomé and Príncipe					
Senegal					
Togo					
Coastal households with access to improved livelihood activities (disaggregated by country and by sex)	The indicator covers the social investments in communities under the project. It measures the transformative capacity of resilience as new livelihood options will be created. The improved livelihood activities cover those improvements in existing	Annually	Field survey	Specific study, field survey listing the number of households in the targeted areas benefiting from micro-projects and review of project activity reports.	Regional Implementation Support Unit M&E function



	<p>livelihood activities as well as alternative livelihood activities, and could also include livelihood activities in new settlements (linked to planned relocation).</p> <p>The indicator aligns with GEF indicator LD-2 Program 3 (Indicator 2.3: Value of resources flowing to SFM from diverse sources (e.g. PES, small credit schemes, voluntary carbon market).</p> <p>Cumulative targets.</p>				
Benin					
Côte d'Ivoire					
Mauritania					
São Tomé and Príncipe					
Senegal					
Togo					
Local level planning committees in coastal resilience with female representation of 40% or more				Use of minutes of committee meetings, lists of committee	



				members and any reports produced by Local Committees	
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Annex 1: Contexts

a. Country Context

1. The Democratic Republic of STP is an archipelago comprised of two main islands and four islets located in the Gulf of Guinea 350 km off the west coast of Africa. The country is one of Africa's smallest nations with a total area of 1,001 km² and a population size of 211,028 (2018). The country's Gross National Income per capita is US\$1,960 (2019). STP ranked 137/188 in the 2018 UNDP Human Development Index.

2. STP's economy is fragile and has suffered considerably from the food, energy and financial crises that have exacerbated inflation and negatively affected household incomes especially among the most vulnerable population groups – in particular Angolares artisanal fishers, descendants from runaway Angolan slaves who have inhabited São Tomé since 1540, and have preserved their distinct attachment to the sea. The nation's limited productive base has substantially increased the country's vulnerability to exogenous shocks, and constrains its adaptation capacity. In view of its small size, isolation, limited capacity to achieve sustainable development, Least Developed Country, and Small Island Developing State status, STP is considered to be highly vulnerable to the effects of climate variability, climate change and sea level rise by both the United Nations Framework Convention on Climate Change (UNFCCC) and the Intergovernmental Panel on Climate Change's (IPCC).

b. Sector Context

3. **Fisheries:** The archipelago is of volcanic origin, with an uneven sea floor. As such, most fishing areas are distant from the coast. Within the artisanal, 12-mile zone, fishers travel often a considerable distance from the coast. Fishing is practiced by artisanal fishermen using techniques adopted 50 years ago: using dug-out canoes of which two-thirds are paddled or have makeshift sails limiting fish catches to coastal areas. The small fleet of motored fishing boats which allows for mid-range coastal fishing was hit hard by the fuel price increase, thus affecting the price of fish which provide 70 percent of protein intake in the country. The fishing industry is considered key to poverty alleviation and essential to the nation's health and welfare. Current estimates indicate that artisanal fisheries employ 20 percent of the nation's workforce and represent one of the main employment opportunities in rural areas. There are approximately 8,000 people working directly in the fisheries sector with an additional 18,000 indirectly.

4. **Exposures of coastal communities:** Rising abruptly from the seafloor, the coast of São Tomé is particularly vulnerable to coastal erosion. In the past, most pressures seem to have been caused by anthropogenic factors such as cultural practices (e.g. the Angolares' habit of constructing close to the seashore), weak spatial planning and uncontrolled coastal development, and sand mining. However, in recent times, the Government has banned sand mining, and through outcomes of pilot project, community awareness has increased in certain Angolares communities (e.g. Ribeira Afonso, Sta. Catarina, Malanza). The risk has increased due to a combination of flash river flooding, more intense coastal storms, and persistent cultural habits.

5. STP's Third National Communication to the UNFCCC forecasts increases in temperature from 2.5 °C (Representative Concentration Pathway - RCP 4.5) to 3°C (RCP 8.5) by 2050. Scenarios for annual precipitation are divergent, with predicted increase (around +10 percent) under RCP4.5 but decrease (15-20 percent) under scenario RCP 8.5. IPCC scenarios also predict an increase in temperature of up to 2°C



by the middle of the 21st Century for the STP region, with increased variation in precipitation patterns, longer dry seasons, increased flooding and dry fog.

c. Predicted Climate Change and Impacts

Temperature and precipitations

6. Projections for climate change have been downscaled⁶ from a regional model to a 4km grid providing a better resolution for Sao Tome and Principe. Under two climate change scenarios (Low emission scenario RCP⁷ 4.5 and high emission scenario RCP 8.5), the temperature is expected to increase all along the year. The simulations indicate greater climatic changes in the central part of São Tomé Island, where the highest altitudes are found. Changes in temperature reach about 3°C in the month of February for RCP 4.5 climate scenario (Figure 1.1). This increase in temperature is even more prominent in the RCP8.5 emission scenario, especially in the central part of the Island (Figure 1.2). This increase will also be reflected in the extreme value, with the annual maximum temperature increasing by more than 5°C in certain part of the island.

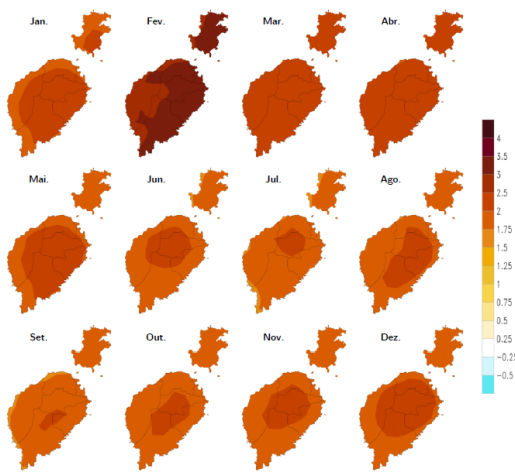


Figure 1.1: Change in monthly average temperature at 2 m above ground (°C) predicted by the Eta-4km model for the period 2041-2070 with the scenario RCP 4.5 in comparison to the reference period 1971-2000

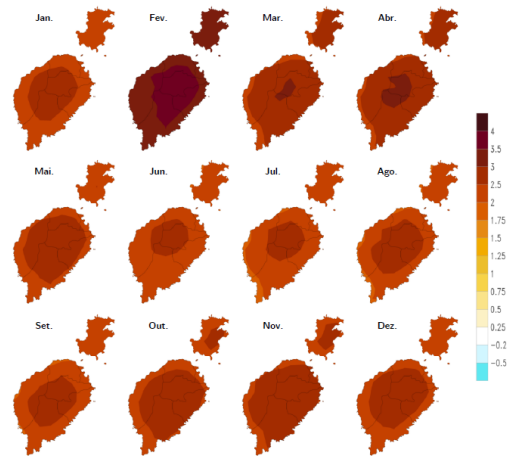


Figure 1.2: Change in monthly average temperature at 2 m above ground (°C) predicted by the Eta-4km model for the period 2041-2070 with the scenario RCP 8.5 in comparison to the reference period 1971-2000

7. The predictions for precipitations patterns are more nuanced, as total annual precipitation present opposite trends, however extreme events in rainfall patterns are expected to increase in both scenarios. In the RCP4.5 scenario, projections of changes in precipitation indicate higher rainfall increases in the months of December through March, being more prominent in the south-southwest part where there are already higher rainfall totals. On the other hand, the projections indicate reductions of total volume of rainfall to occur between the months of May to August. In the RCP8.5 scenario, the projections indicate a strong reduction of rainfall across the country for ten months of the year. According to both climate scenarios, there should be an increase in extreme precipitation events, with an increase in annual maximum 1-day and 5-day precipitation. This might impact the ability of the drainage system to evacuate the future rainfall after heavy rainfall in the future, if no upgrade of the system is performed.

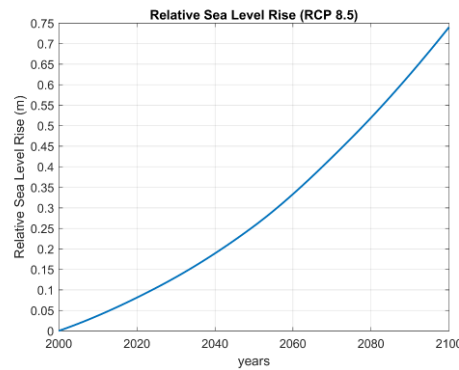
⁶ Source of information is from STP’s 3rd national communication on Climate Change to the IPCC.

⁷ RCP= Representative Concentration Pathways.



Impacts of climate change on coastal conditions

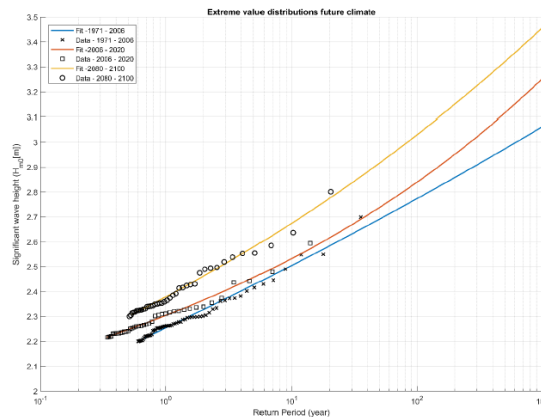
Figure 1.3: Scenario of Sea Level Rise according to IPCC for the RCP 8.5 scenario



8. Based on the RCP 8.5 scenario, the sea-level rise rate is expected to increase over the century, with a mean sea level expected to be 0.74 cm higher in 2100 compared to its level in 2000. Based on the analysis of the wave climate and its evolution (CDR et al. 2018 Vulnerability analysis), the relative increase of the wave height is expected to be higher for the higher waves compared to the lower waves. For example, the height of the waves in the months October and November would increase by 6 percent in 2100 compared to 2000, while the yearly average would increase by only 3 percent.

9. The extreme wave height would also become higher, with an increase of the 100-year return period wave of 10 percent from current period to the end of the 21st century.

Figure 1. 4: Evolution of extreme value of significant wave height (based on ERA-interim data)



Impacts on project beneficiaries

10. It should be noted that irregular storm surges and wave action have intensified over the last decade over the coast of São Tomé leading to loss of houses and fishing assets for communities where adaptation actions had not yet taken place.



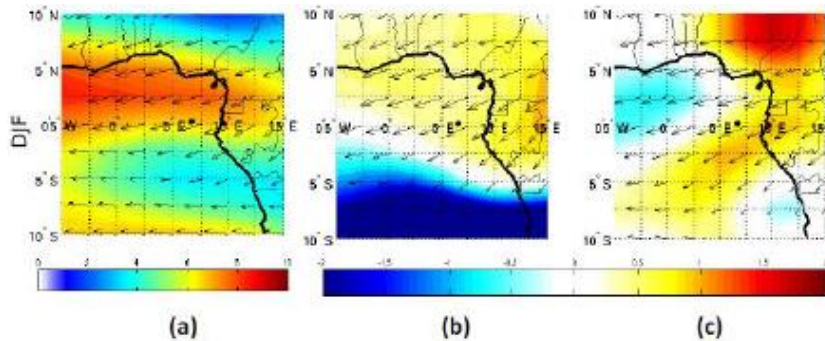
11. The STP Nationally Determined Contribution estimates that with sea level rise of 0.13-0.43 m, various houses would be regularly inundated as shown in the table below. The geomorphological analysis for STP indicates impacts of similar magnitudes, with the proportion of population affected by annual flooding ranging from 9 to 61 percent in the eight additional communities, under projected sea level rise and storm surges conditions for 2050.

Table 1.3: Expected percentage of the population in the different communities affected annually by a fluvial and/or coastal flood depth greater than 0.1m, respectively 0.5m, by 2050, without interventions

	Exposure (>0.1m)	Exposure (>0.5 m)
Praia Gamboa	53%	32%
Praia Lochinga	61%	30%
Praia Cruz	54%	28%
Micolo	34%	1%
Praia Abade	43%	10%
Pantufo	9%	2%
Praia Melao	14%	4%
Io Grande	25%	2%

12. Also, based on the climate projections and the expected increase in aerosol concentration, more fog, and windy conditions are expected, increasing the risks for coastal fishermen. Stronger wind trends are likely to increase the transport of aerosols from mainland Africa, causing potential increase of atmospheric moisture near the surface, and also a lower temperature near the surface compared with the one in altitude, causing humidity to accumulate in surface layers.

Figure 1.5: Seasonal Average Winds at 700hPa for the 1980s, 1990s and 2000s. Colors indicate wind speed and difference in wind speed between current and previous decade. Arrows indicate average wind speed and direction for that decade, from the first adaptation project



13. Without efficient safety at sea system, losses of lives at sea have coincided with the January to March season, where decadal changes in wind and aerosol concentrations have been observed. This analysis shows that most of the losses at sea could be related to bad weather conditions,



Annex 2: Activities by components and source of financing

	IDA (parent project)	GEF/International Water (Parent Project)	GEF/LDCF (Proposed AF)
<i>Component 2: Strengthening the Policy and Institutional Framework</i>			
Sub-component 2.1 (Institutions and governance)	<ul style="list-style-type: none"> • Capacity building of Civil Protection (CONPREC) (equipment and training) • Capacity building of coast guards to support enforcement of local laws (equipment and training) • Capacity building of the National committee for climate change • Knowledge exchange with other countries 	<ul style="list-style-type: none"> • Support of the local risk committees (equipment and training) • Experience sharing on best practices between coastal communities 	
Sub-component 2.2 law and coastal policies		<ul style="list-style-type: none"> • Review and harmonization of the national laws on coastal zone management • Revision of the national laws on disaster risk management • Revision of the law on use of aggregates (to support the ban on use of beach sand) 	<ul style="list-style-type: none"> • Revision of the legal framework for safety at sea
Sub-component 2.3: spatial and multi-sectoral coastal planning	<ul style="list-style-type: none"> • Preparation of participatory risk mapping to inform investments 		<ul style="list-style-type: none"> • Marine Spatial Planning
Sub-component 2.4 coastal observation		<ul style="list-style-type: none"> • Deployment of the coastal observatory • Capacity building for data providers and animation of the platform of the coastal observatory 	



Sub-component 2.5.1: Early Warning system	Study to identify best locations for marine stations		<ul style="list-style-type: none"> • Installation and maintenance of 2 additional marine weather stations • Development of forecasting models for marine weather and storm surges • Capacity building of national institutions • Improvement of warning dissemination
Sub-component 2.5.2 Safety at sea	<ul style="list-style-type: none"> • Capacity building of national institution for search and rescue • Update of the fishermen and boats registries 		<ul style="list-style-type: none"> • Revision of the national safety at sea strategy • Acquisition of safety at sea equipment for 2500 fishermen • Acquisition of GPS and support to structure fishermen association to manage the GPS • Training on safety at sea for artisanal fishermen • Maintenance of lighthouses
Sub component 2.5.3 studies	<ul style="list-style-type: none"> • Geomorphological analysis for the eight communities • Technical and socio-economic studies for alternatives to sand for construction 		
<i>Component 3: Strengthening the physical and social investment</i>			
Ribeira Afonso	<ul style="list-style-type: none"> • Preparation of the safer expansion areas • Social infrastructure as attraction pole for the safer expansion areas Community-based constructions of 30 houses for the planned retreat 	<ul style="list-style-type: none"> • Restauration of mangroves (including liberated at risk areas) 	
Santa Catarina	<ul style="list-style-type: none"> • Preparation of the safer expansion areas 		<ul style="list-style-type: none"> • Construction of sea wall • Restoration of the at-risk area



	<ul style="list-style-type: none">• Social infrastructure as attraction pole for the safer expansion areas• Community-based constructions of 42 houses for the planned retreat		
Malanza	<ul style="list-style-type: none">• Preparation of the safer expansion areas• Social infrastructure as attraction pole for the safer expansion areas• Community-based constructions of 31 houses for the planned retreat		
Praia Burra	<ul style="list-style-type: none">• Preparation of the safer expansion areas• Social infrastructure as attraction pole for the safer expansion areas• Community-based constructions of 36 houses for the planned retreat		
Praia Abade	<ul style="list-style-type: none">• Preparation of the safer expansion areas• Social infrastructure as attraction pole for the safer expansion areas• Community-based constructions of 21 houses for the planned retreat	<ul style="list-style-type: none">• Restauration of ecosystem	<ul style="list-style-type: none">• Drainage system• Restoration of the at-risk area
Praia Micoló	<ul style="list-style-type: none">• Preparation of the safer expansion areas• Social infrastructure as attraction pole for the safer expansion areas• Community-based constructions of 42 houses for the planned retreat	<ul style="list-style-type: none">• Vegetation of the berm• Restauration of mangrove	<ul style="list-style-type: none">• Restoration of the at-risk area• Drainage system
lo Grande	<ul style="list-style-type: none">• Preparation of the safer expansion areas• Social infrastructure as attraction pole for the safer expansion areas• Community-based constructions of 12 houses for the planned retreat	<ul style="list-style-type: none">• Restauration of ecosystem	<ul style="list-style-type: none">• Drainage• Restoration of the at-risk area



Praia Melão			<ul style="list-style-type: none">• Drainage system• Sea wall
Praia Gamboa/Cruz/Lochinga	<ul style="list-style-type: none">• Construction of a marina to protect fishermen boats		<ul style="list-style-type: none">• Filling of the water pond• Berm revetment• Vegetation of the berm
Pantufo			<ul style="list-style-type: none">• Urban Drainage system• Rock berm to protect the road• Boat ramps• Small marina
All 31 coastal communities		<ul style="list-style-type: none">• Support to Trash collection and recycling• Awareness campaigns on coastal pollution	<ul style="list-style-type: none">• Support to ensure the link with social protection programs• Exchange of experiences between communities



Annex 3. Implementation arrangement for São Tomé and Príncipe

A. Institutional arrangement

1. **No change will be made to the design of the implementation arrangement from the parent project**

2. In STP, the project is technically implemented by the minister in charge of environment, with fiduciary responsibilities managed by AFAP. The technical Project Implementation Unit (t-PIU) is responsible for carrying out the daily activities, overall supervision and coordination of the project implementation at all levels.

3. Since the approval of the Parent Project, the Decree-Law No. 10/2018 established AFAP as an autonomous agency, under the supervision of the Ministry of Planning, Finance and Blue Economy.

4. **National Project Steering committee.** The national project steering committee is composed of the ministries in charge of finance, of environment, of internal administration and of fisheries, as well as the project coordinator and the director of AFAP, acting as secretary for this committee. They meet twice a year, the project coordinator acts as a secretary and contributes on technical and operational issues to these meetings. The main functions of the National Steering committee mandate include the following: (a) provide policy guidance and define the project orientations; (b) review and clear the annual technical and financial reports and annual work plans and budgets.

5. **Technical Implementation Group.** The project coordination, including the project management unit (PMU), is under the Directorate General of environment (DGE). All implementing agencies (DGE, Directorate of fisheries, Coast Guards, National Institute of Meteorology, CONPREC, NGO MARAPA) are represented in the technical implementation group, which meets regularly to assess progress, discuss challenges, propose solutions and define future action plans.

6. **Technical advisory committee.** The National Climate Change Committee (NCCC) is the technical advisory committee for the project. Twice a year, the NCCC meets to analyze the annual progress report and the proposed action plan for the following year. The NCCC provides advice on future activities and, as it is composed of the main actors working on adaptation, ensures alignment and transparency with and among the other projects implemented in STP dealing with the resilience agenda.

B. Financial Management

7. **Financial Management.** AFAP has overall responsibility for project financial management and the agency has been working to ensure compliance with FM requirements in World Bank-funded operations. AFAP has submitted acceptable quarterly interim unaudited financial reports (IFRs) to the World Bank. No ineligible expenditures were noted from successive supervision missions and external audit opinion is unqualified. The FM performance of the parent project is deemed Satisfactory.

8. AFAP will continue to prepare the annual budget based on the Annual Work Plan and Budget agreed with the Ministry of Infrastructures and Natural Resources and will submit to the World Bank for no-objection no later than November 30 of each year. The AFAP is responsible for producing variance analysis reports comparing planned with actual expenditures on a quarterly basis. The periodic variance analysis enables the timely identification of deviations from the budget. These quarterly variance analysis reports will be part of the Interim Financial Reports (IFRs) that will continue to be submitted to the World Bank on a quarterly basis. The budget preparation and monitoring of budget execution are described in the existing Financial Procedures Manual, and formats for annual budget and monitoring reports are included as annexes of the manual.

9. **Internal control.** The General Inspectorate of Finance (*Inspeção Geral das Finanças*, IGF) would normally conduct internal audit reviews of the activities of this project because its mandate is to carry out



internal audit reviews of the entire government entities. However, the project activities may not be subject to internal audit review by the IGF due to its limited capacity and some constraints on their work program. For this project, regular supervision through desk reviews (quarterly review of IFRs) and field visits (at least once a year) will continue to be carried out by the World Bank to ensure that the implementing agency is maintaining adequate systems of internal controls and key procedures are complied with. The finance and administrative procedures to be employed by the agency in the implementation of the project are documented in the existing FM Procedures Manual.

10. **Accounting.** The AFAP will account for funds, expenditures, and resources of the proposed project using the existing accounting software. This accounting software is adequate because it can produce reliable financial reports required to monitor and manage effectively the progress of the project. The accounting software maintains separate records and ledger accounts for the proposed project and allow preparation of financial reports required to monitor and manage the project effectively. The overall responsibility of the project FM matters rests with the AFAP financial manager reporting to the coordinator and supported by an accountant and financial assistant. The AFAP finance team has experience in handling FM and disbursement matters of World Bank-financed operations and is capable of performing its duties and responsibilities. The FM staffing arrangements are adequate.

11. **Financial Report.** The AFAP is producing regular quarterly progress reports for the ongoing projects, and these include financial reports. For the proposed project, this agency will produce and submit IFRs to the World Bank within 45 days after the end of the calendar quarter. The contents of these reports should at minimum include a statement showing for the period and cumulatively actual and planned receipts and payments by main income and expenditures categories (comparing budget and actual expenditures) and beginning and ending cash balances of the project. The AFAP will continue to also produce annual project financial statements in accordance with Cash Basis International Public Sector Accounting Standards, which will at a minimum include (i) a statement of sources and uses of funds/cash receipts and payments, which recognizes all cash receipts, cash payments, and cash balances controlled by the entity for this project and separately identifies all payments by third parties on behalf of the agency; (ii) the accounting policies adopted and explanatory notes - presented in a systematic manner with items on the statement of cash receipts and payments being cross-referenced to related information in the notes such as a summary of fixed assets by category of assets; and (iii) a management assertion that GEF funds have been expended in accordance with the intended purposes as specified in the relevant World Bank financing agreement.

12. **Auditing.** AFAP will continue to submit audited project financial statements satisfactory to the World Bank every year within six months after closure of the fiscal year. The external audit will be conducted by an independent auditor with qualifications and experience acceptable to the World Bank. A single opinion on the audited project financial statements in compliance with the International Standards on Auditing issued the International Federation of Accountants and a Management Letter will be required. The Management Letter will contain auditor observations and comments and recommendations for improvements in accounting records, systems, controls, and compliance with financial covenants in the financing agreement. The report will also include specific controls such as compliance with procurement procedures and financial reporting requirements and consistency between financial statements and management reports as well as findings of field visits (for example, physical controls). The audit report will thus refer to any incidence of noncompliance and ineligible expenditures and mis procurement identified during the audit mission. The project will comply with the World Bank Access to Information Policy regarding disclosure of audit reports and place the information provided on the official website within two months of the report being accepted as final by the World Bank.



Funds Flow Arrangements

13. **Designated Account (DA).** The AF will use the same designated account as the parent project. In STP, the U.S. dollar denominated DA has been opened in a commercial bank (BGFI Bank) and a project account opened in local currency (Dobras). The funds will continue to be released to the project account. The project account is managed in line with the FM Manual. All withdrawals from the project account will be authorized respectively by the Project Coordinator and the project’s FM Specialist and in line with the accounting manual. The account is set up to fund eligible expenditures based on the approved annual activity plans. The combined ceiling for the DA for approximately four months of expenditures has been determined as follow (total ceiling US\$1,050,000: IDA Grant [Parent Project] - US\$600,000 , GEF IW [Parent Project] - US\$100,000 and GEF LDCF [AF] - US\$350,000).

14. **Disbursements.** Disbursements will be made in line with the Disbursement Guidelines for Investment Project Financing issued in February 2017. Transaction-based disbursements will be used. The project will finance 100 percent of eligible expenditures inclusive of taxes. An initial advance up to the ceiling of the DA will be made to the DA, and subsequent disbursements will be made against the submission of the SOE reporting on the use of the initial/previous advance. The option to disburse against submission of quarterly unaudited IFRs (also known as report-based disbursements) could be considered, as soon as the project meets the criteria. Other methods of disbursing the funds (reimbursement, direct payment, and special commitment) will also be available to the project. The minimum value of applications for these methods is 20 percent of the DA ceiling. The authorized signatories will sign and submit Withdrawal Applications electronically through the World Bank’s Client Connection website.

Figure 3.1: Funds Flow Diagram

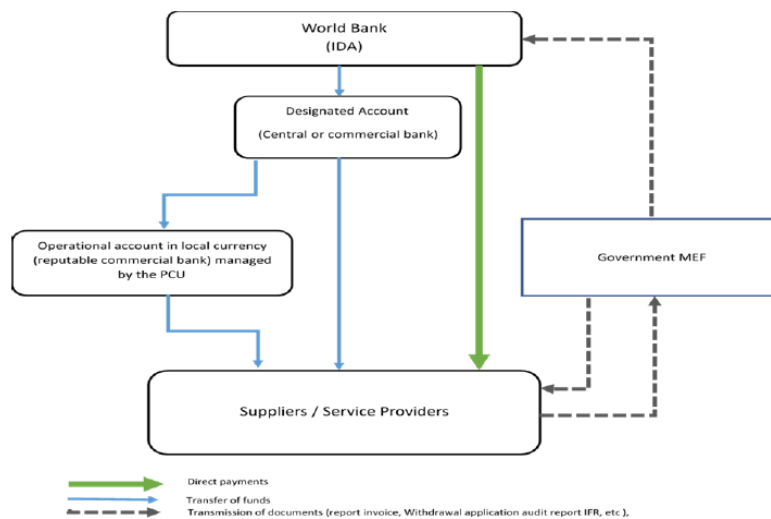




Table 3.1. FM Implementation Support Plan

FM Activity	Frequency
Desk reviews	
IFRs’ review	Quarterly
Audit report review of the program	Annually
Review of other relevant information such as interim internal control systems reports	Continuous, as they become available
On-site visits	
Review of overall operation of the FM system (Implementation Support Mission)	Every six months for Substantial risk
Monitoring of actions taken on issues highlighted in audit reports, auditors’ Management Letters, internal audits, and other reports	As needed
Transaction reviews	As needed
Capacity-building support	
FM training sessions	During implementation as needed

C. Procurement

15. **Procurement.** AFAP has also overall responsibility for procurement of the project in São Tome and Príncipe. The Procurement performance in STP under the project is deemed Satisfactory. Overall, procedures are respected and contract management acceptable, despite significant delays in the supply of equipment. The Systematic Tracking of Exchanges in Procurement (STEP) system is used satisfactorily, and the filing is regular. AFAP is adequately staffed to handle procurement matters for the project.

16. **Applicable procedures.** The Borrower will continue to carry out procurement under the proposed project in accordance with the World Bank’s “Procurement Regulations for IPF Borrowers” (Procurement Regulations) dated July 2016 and revised in November 2017 and August 2018 under the New Procurement Framework (NPF), and the “Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants”, dated July 1, 2016, and other provisions stipulated in the Financing Agreements.

17. The Procurement Plan will be managed through the World Bank’s tracking system, STEP.

18. **Review by the World Bank of procurement decisions.** The Table below indicates the initial values for prior Review by the World Bank. Unless otherwise indicated in related Procurement Plan, all activities estimated to cost below these amounts shall be treated as post review and will be reviewed by the World Bank during the Implementation Support Mission under a post procurement review exercise. Direct Contracting/Single Source Selection will be subject to prior review. The World Bank may, from time to time, review the amounts, based on the performance of the project implementing entities.

Table 3.2 Thresholds, Procurement Methods, and Prior Review

No.	Expenditure Category	Contract (C) Value Threshold ^a (equivalent US\$)	Procurement Method	Contracts Subject to Prior Review (equivalent US\$)
1	Works	C ≥ 3,000,000	Open Competition International Market Approach and Direct Contracting	C ≥ 5,000,000



No.	Expenditure Category	Contract (C) Value Threshold ^a (equivalent US\$)	Procurement Method	Contracts Subject to Prior Review (equivalent US\$)
		C < 3,000,000	Open Competition National Market Approach	None
		C ≤ 200,000	RFQ	None
2	Goods, IT, and non-consulting services	C ≥ 500,000	Open Competition International Market Approach and Direct Contracting	C ≥ 1,500,000
		C < 500,000	Open Competition National Market Approach	None
		C ≤ 100,000	RFQ	None
3	National shortlist for selection of consultant firms	C < 100,000	For consulting services	None
		C ≤ 300,000	For engineering and construction supervision	None
4	International shortlist for selection of consultant firms	C ≥ 100,000	For consulting services	≥ 500,000
		C > 300,000	For engineering and construction supervision	≥ 500,000
5	Selection of individual consultants	All values	All approaches	≥ 200,000
6	Direct contracting	All values		all
7	Training, workshops, and study tours	All values	Based on approved AWPBs	AWPBs

Note: The thresholds will be revised periodically based on reassessment of risks. All contracts not subject to prior review will be post-reviewed.

19. **Assessment of National Procedures.** A Procurement Law (Law 8/2009 of August 26, 2009) enacted a Procurement Regulation and the creation of a Procurement supervisory body, the Procurement and Coordination and Supervision Office (COSSIL). The COSSIL is a body mandated to centralize procurement information, assist the decentralized procurement units, and ensure uniformity and quality across government procuring units. However, the STP procurement law, since it was enacted, has not been revised or updated to incorporate lessons learned or adopt the latest international best practices.

20. **Limited resources and capacity constraints are affecting negatively the functions of the supervisory body.** Despite the procurement law, limited progress has been achieved with its implementation, mainly due to the limited allocation of resources for the functioning of COSSIL, since its inception to date. Furthermore, the training delivered to public servants appears to have been limited in terms of its quality, frequency and scope and not conducive to the establishment of a critical official in procurement. As a result, the ability for the country or of the procurement practitioners to grow over time has also been limited.

21. **Country's Regulations** are generally consistent with international best practice for the following reasons: (a) there is adequate advertising in national media; (b) the procurement is generally open to eligible firms from any country; (c) contracts documents have an appropriate allocation of responsibilities, risks, and liabilities; (d) it requires publication of contract award information in local newspapers of wide circulation; (e) the national regulations do not preclude the World Bank from its rights to review procurement documentation and activities under the financing; (f) there is an acceptable complaints mechanism; and (g) maintenance of records of the procurement process.



22. However, the request for bids/request for proposals document shall require that bidders/proposers submitting bids/proposals present a signed acceptance at the time of bidding, to be incorporated in any resulting contracts, confirming application of, and compliance with, the World Bank’s Anti-Corruption Guidelines, including without limitation the World Bank’s right to sanction and the World Bank’s inspection and audit rights.

23. **Procurement risk rating.** The project procurement risk for national activities (both under parent project and AF) is Substantial. The risk can be reduced upon consideration of successful implementation of the mitigation measures. The risks and mitigation measures are provided in the table below.

Table 3.3 Procurement Risk Assessment and Mitigation Action Plan

Procurement Risks	Mitigation Measures	Responsibility/Deadline
Lack of availability of goods in stock may delay contract execution.	Allow enough time in the procurement process and anticipate reasonable time for supply.	Borrower/ As needed during project life
Availability of individual consultants due to a large number of assignments	Ensure advertisement in local newspapers and internationally through STEP/UNDB and be proactive to identify potential consultants (ask reference/long lists to the World Bank, contact other Lusophone countries, and so on).	Borrower /As needed during project life
Both DGA and AFAP will have responsibilities in procurement activities (shared responsibility between the technical and fiduciary entities).	Ensure an effective communication mechanism between DGA and AFAP.	Borrower/During project implementation

24. **Legal covenants.** The Government of STP is in full compliance with the legal covenants under the Parent Project. An external auditor was recruited; the PIU is fully staffed between AFAP and the technical coordination unit as requested per the Association; the National Steering and technical Committees and are in place and meet regularly.

Table 3.4 Legal covenant compliance

The Recipient shall, [...] establish, [...] and thereafter maintain throughout Project implementation, the National Steering Committee [...]	Complied with
The Recipient shall, [...] appoint, recruit, or designate to the PIU to assist the National Project Coordinator: (i) an institutional development specialist; (ii) a communication specialist; (iii) a M&E specialist; (iv) an environmental and safeguards specialist; (v) a social development, safeguards, and gender specialist; and (vi) a procurement specialist [...]	Complied with
The Recipient shall, [...] maintain throughout Project implementation, a Technical Committee comprising the representatives of the sectors and entities concerned with coastal management and involved in Project implementation to ensure smooth technical coordination among them.	Complied with
The Recipient shall, [...] ensure that the AFAP recruit, [...] an external auditor, under terms of reference and with qualifications and experience satisfactory to the Association, to oversee the accounting functions of the PIU.	Complied with
The Recipient shall: (i) prepare, [...], on or about November 15, 2021, a report integrating the results	Not yet due



of the M&E activities and setting out the measures recommended to ensure the efficient carrying [...]; and (ii) review with the Association, on or about January 15, 2022, [...] the aforementioned report and, thereafter, take all measures required [...]	
The Recipient shall take all action required on its behalf to establish, [...] and thereafter maintain and operate, a functional grievance handling mechanism for Parts 2, 3 and 4 of the Project, with adequate staffing and processes [...].	Complied with

25. **Safeguards.** The safeguard policies triggered by this operation are: OP/BP 4.01 (Environmental Assessment); OP/BP 4.04 (Natural Habitats); Physical Cultural Resources OP/BP 4.11 and Involuntary Resettlement OP/BP 4.12. Implementation of safeguards is rated satisfactory for the national activities of STP.

26. This AF is processed to finance scale-up activities and Safeguards Policies will continue to apply. The environmental and social safeguard ratings are satisfactory as per the latest ISR, both for the overall project and the national activities in STP

D. Results Monitoring and Evaluation Arrangements

27. M&E in the WACA ResIP has been developed as

(a) A tool for results-based management and to ensure that data and information of the progress of the project—or lack of progress—toward achievement of the outcomes under the PDO feed into management and that corrective measures can be taken in time if necessary;

(b) A framework for accountability of progress toward national and regional development objectives attributable to interventions and regional actions and national governments implementing the WACA ResIP;

(c) An approach to monitor performance of participating countries in the WACA ResIP to ensure a certain level of regional performance and more or less even contribution from the six countries to regional objectives;

(d) A means to enable communication of results of the project and benefits generated for coastal communities and societies; and

(e) A means to inform the World Bank’s routine reporting requirements, that is, the six-monthly ISRs developed for the project and publicly disclosed by the World Bank, and data and information requirements for the midterm review (MTR) of the project.

28. The WACA ResIP also supports the long-term environmental monitoring of the coastal regions for the six participating countries through the strengthening of the Regional Observatory.

29. Design of results framework. The peculiarities of the coastal areas and weak government capacity have been taken into account in the design of the M&E of the WACA ResIP and especially in the number and selection of indicators and data sources and methodologies for data collection. The main instrument for M&E in the WACA ResIP is the Results Framework (Annex I), which is common to all countries and will be reported in the ISRs. It consists of the PDO statement and five PDO indicators and twelve intermediate indicators.



30. The results framework, chapter VIII, identifies results indicators for the entire project as well as for each of its components. The project implementing entities through the Project M&E Specialist, will be responsible for collecting and verifying data and will consolidate the information and submit progress reports to the World Bank and RISU at a minimum on an annual basis for all indicators. Additional reporting will be provided as needed for supervision purposes.

31. M&E arrangements. M&E in the WACA ResIP will be undertaken at two levels: (a) at the regional level by the RISU, and possibly other regional agencies, especially the CSE, and (b) by the six participating countries through the respective PIUs.

32. M&E at regional level. The RISU has the overall regional coordinating role of the M&E function of the WACA ResIP and will ensure that data and information from all countries are produced on time and are of sufficient and necessary quality. The RISU has designed and implements data collection efforts, which are best done at the regional level. The RISU provides technical backstopping to the countries, and so for STP, on M&E, through a data quality assurance mechanism and encourages cross-country learning.

33. M&E for STP. To ensure smooth and regular collection of information, t-PIU (under DGE) and INAE will rely on counterparts from the technical Working Group to support data collection and provide necessary inputs. AFAP and t-PIU will have overall responsibility for reporting to the Government, specifically, AFAP to the Ministry in charge of finance and t-PIU to the MINR. T-PIU, in collaboration with AFAP, will put together a M&E report on a semiannual basis that will include the updated results framework and an action table, listing any corrective actions to be implemented with deadlines and persons responsible clearly identified.

34. The technical Project Implementation Unit (t-PIU) through its M&E Officer, will also monitor beneficiary feedback through the project's grievance redress mechanism (GRM), which will uptake information requests and queries. The assistance will be provided to beneficiaries/project affected peoples as well as to the public through focal points in local administrations.

35. A mid-term review of the Project will take place in November 2021. Its principal objectives will be to: (i) review progress in project implementation, (ii) review the project's results framework and make necessary adjustments, and (iii) review overall progress and determine if a further assistance is required to implement the recommendations of the different studies, in which case it will also determine sources of financing to support the next steps. For each of these objectives, t-PIU and AFAP, through the M&E officer, will prepare reports as appropriate to guide discussions during the mid-term review.

Table 3.5 Detailed M&E budget under the proposed AF

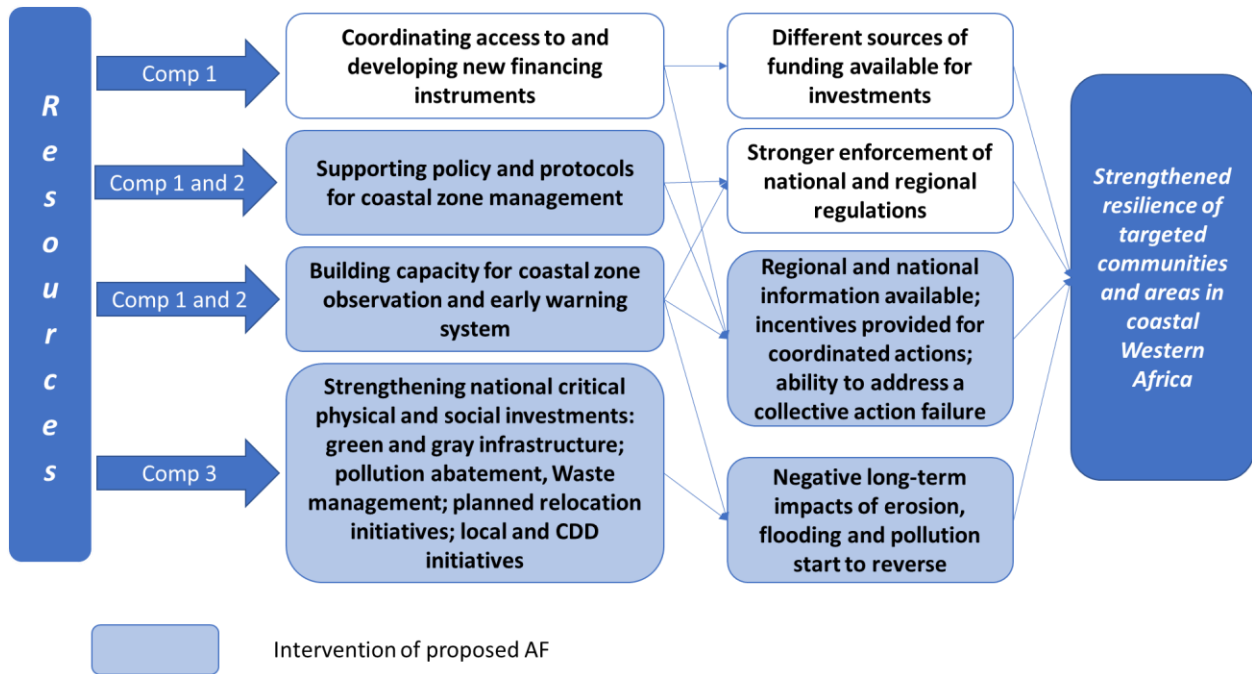
<i>Activities</i>	<i>budget</i>
Salary of the M&E specialist (under component 3)	US\$112,800
Capacity building of project partners on the M&E framework and revision of the M&E manual after 1 year of implementation to reflect local practice (under comp 2)	US\$50,000
Support to missions to collect data (under component 3)	US\$40,000
Part of the equipment and support to the observatory to contribute to the M&E (under component 2)	US\$50,000
TA to improve monitoring of the safety-at-sea system (under component 2)	US\$35,000
project completion and mid-term review (under component 2)	US\$60,000
TOTAL	US\$347,800



Annex 4. Theory of change and Summary of Changes in the Results Framework

36. Theory of change and results chains. The AF will continue to rely on the Results Framework of the parent project, which has been developed based on the theory of change of a regional project with synergy and complementarity between interventions of the participating countries. The results chains include clear statements on medium-term outcomes stated in the PDO as well as statements on short-term outcomes, outputs and activities, and interventions in the six countries. The framework serves as a management tool to help countries, the World Bank, and other relevant stakeholders to assess progress toward the PDO and to adjust the course when necessary during implementation.

37. The Theory of change for this AF is embedded in the theory developed for the parent project. The AF will finance activities which will contribute to the changes highlighted in blue in the graph below.





38. **Changes in the Results Framework.** As the AF will allow to scale up some activities some of the targets in the Result Framework indicators are modified as indicated in the below table.

Original Outcome/Output Indicator	Original WACA overall Target (P162337)	Original Target for STP	Cumulative Target for STP	Specific for AF - STP	Overall WACA overall Cumulative target	
PDO: To strengthen the resilience of targeted communities and areas in coastal Western Africa						No change
PDO Indicator 1 Households in targeted coastal areas with less exposure to erosion due to the project (disaggregated by country)	16,998	210	400	190	17,188	Target Revised
PDO Indicator 2. Households in targeted coastal areas with less exposure to flooding due to the project (disaggregated by country)	53,378	306	816	510	53,888	Target Revised
PDO Indicator 3. Households in targeted coastal areas with less exposure to pollution due to the project (disaggregated by country)	12,277	306	306	-	12,277	No activity under this AF
PDO Indicator 4. Share of target beneficiaries with rating 'Satisfied' or above on project interventions (disaggregated by country, sex) (Percentage)	72	75	75	75	75	No change
PDO Indicator 5. Regional integration score	16	n/A	N/A	n/A		No activity under this AF
Intermediate indicators						
Component 2: Strengthening the Policy and Institutional Framework						
IR Indicator 2.1. Countries that timely submit datasets to the Regional Coastal Observatory	6	1	1	-	6	No change
IR Indicator 2.2. Countries with national Multi-Sector Investment Plans updated to integrate regional environmental considerations	6	1	1	-	6	No change
IR Indicator 2.3. Score on policy instruments and legal framework (disaggregated by country)	25	3	4	1	26	Target Revised
IR Indicator 2.4. Inter-Ministerial Coastal Zone Committee established and operational (disaggregated by country)	Yes	Yes	-	-	Yes	No activity under this AF
IR Indicator 2.5. National Early Warning System operational	No	No	Yes	Yes		Revised
Component 3: Strengthening Physical and Social Investment						
IR Indicator 3.1. Targeted coastal area with flooding control	26,110	25	250	225	26,335	Target



Original Outcome/Output Indicator	Original WACA overall Target (P162337)	Original Target for STP	Cumulative Target for STP	Specific for AF - STP	Overall WACA overall Cumulative target	
measures (disaggregated by country) (ha)						Revised
IR Indicator 3.2. Shoreline with targeted coastal erosion control measures (disaggregated by country)	110.8	3.5	7.0	3.5	114.3	Target Revised
IR Indicator 3.3. Sites/zones with pollution control measures (disaggregated by country)	16	10	10	0		No activity under this AF
IR Indicator 3.4 Critical assets protected	2	0	0	0	2	No activity in STP
IR Indicator 3.5. Natural ecosystems conserved and/or restored (disaggregated by country)	38	7	11	4	42	Revised
IR Indicator 3.6. Coastal households with access to improved livelihood activities (disaggregated by country)	53,860	1,860	4,500	2,740	56,500	Revised
IR Indicator 3.7. Local level planning committees in coastal resilience with female representation of 40% or more (Number)	20	7	10	3	23	Revised



Annex 5: Description of Intervention sites, Stakeholders’ Engagement and coordination

a. Risk and Vulnerability Profiles of Selected Communities Supported by the AF.

1. Sao Tome and Principe has typical characteristics of small island developing states with high social vulnerabilities mainly due to high poverty rates, small economies sensitive to external economic shocks and highly depend on foreign aid. STP is also exposed to multi-hazards: floods, droughts, coastal erosion, storm surges, and sea level rise. Climate change is exacerbating weather related events. Modeled projections for various scenarios indicate an increase of the extremes for precipitations and droughts for the low- and high-emission scenarios (RCP 4.5 and RCP 8.5 respectively). Temperatures will increase between 2 and 3 degree Celsius for the RCP 4.5 scenario and up to 5 degrees for the RCP 8.5 scenario. Average sea level rise is predicted to increase up to 0.74 cm by the end of the century. Coastal erosion has already caused beaches retreat and sea level rise will increase erosion rates. In this context, extreme and chronic events, mainly river and coastal flooding as well as coastal erosion, will severely impact already vulnerable populations.

2. The number of people below the poverty line has grown consistently between 1984 and 2001: from 36 percent of the total population in 1984 to almost 54 percent in 2001 (Monteiro Fortes, 2011⁸) and 66 percent in 2009 (Central Intelligence Agency World Fact Book). The poverty is unequally distributed, meaning that in some parts of the country the number of people below the poverty line is much more than 66 percent. Knowing and understanding the local poverty situation is essential when looking into local problems and solutions related to extreme meteorological events and climate change. Unemployment is difficult to measure and probably runs at about 50 percent (Becker 2008⁹).

3. Most vulnerable communities are located along the coast. Some communities, such as Santa Catarina, Praia Cruz, Gambôa, Lochinga, Pantufo e Praia Melao have features more characteristics to urban locations with bigger populations and a more diversified economic activities, with a share of the population working in the capital of Sao Tome. The other communities are more rural in nature, with higher poverty levels and with livelihoods depending mainly on fishery activities, which makes them more vulnerable to the impacts of climate change.

4. Table 5.1 provides some basic population statistics for some of the communities.

Table 5.1: Population of some communities for year 2012, population according to the project terms of reference (year 2012), and projected population for year 2018 based on the 2012 and 2016 data

Community	Population INE Census (2012)	Population TOR (2016)	Population Projected (2018)	Approx Area (ha)
Iô Grande	234	270	291	2
Praia Melão	2,669	3,096	3,336	7
Pantufo	1,836	2,108	2,264	5
Praia Lochinga	1,231	1,803	2,181	8
Praia Gambôa	1,118	1,230	1,288	14
Praia Cruz	1,652	1,720	1,753	10
Micoló	1,404	1,557	1,643	12
Praia Abade	232	255	267	3

Note. In the last column, the estimated extension of each community is shown.

5. To select the communities of the project, a participatory approach has been undertaken combined with information from past events and available risk maps. The selected communities are the

⁸ Monteiro Fortes, José Alexandre., (2011). Projecto de Adaptação às Mudanças Climáticas. Marco de Gestão Ambiental e Social do Projecto.

⁹ Becker, Kathleen (2008). “São Tomé and Príncipe. The Bradt Travel Guide.” 232 p.



ones with higher levels of exposure to floods and with the most vulnerable communities. The AF would allow to expand the support from eight communities to 12 through construction of small to medium flood protection structures including green infrastructure.

6. The section below describes more in detail the characteristics of some communities and their risk profile. The case of Iô Grande presents a more detail description than the others showing a summary of information available for all communities. For more details for the other communities refer to the study of Deltares, 2019¹⁰.

b. Iô Grande

Site description and aerial view

7. Iô Grande is a small village in the southeast corner of São Tomé Island, in the Caué District. Photo 1 depicts the waterfront area at this small site. Figure 2 zooms in and marks important facilities and infrastructure, areas particularly susceptible to natural hazards, and areas of ecological and cultural importance.

8. The village is only accessible from the N2 main road, running north-south, followed by an unpaved road. Characteristic features in the village are the primary school near the beach. There are three permanent small kiosks where the community can buy daily household essentials, one healthcare center providing basic attention and first aid, and a small catholic church.

9. The population is estimated at 291 people in 2018. This agrees with the estimate provided by the leader of the community (280).



Photo 1 Aerial view of Iô Grande, facing southwest. The community also continues inland, to the right of the photo. Drone image by J. Pronker, CDR International.



Figure 5.1 Site Map: Iô Grande

10. Photo 2 shows the typical houses in Iô Grande. In general, all houses have minimum 40 - 50 cm of elevation in poles.

¹⁰ Geomorphology, coastal dynamics, and adaptation options for eight coastal communities in São Tomé and Príncipe, Detailed Study Report, Deltares, 2019.



Photo 2: (Left) Typical ground-level houses near the coast and (Right) raised wooden houses further inland, in Iô Grande. Photos by B. Ottow.

Hazards description

Flooding

11. The flood maps in Figure 5.2 show that the estimated flood depth and extent increases along the small river in the western part of the community. In addition, the southwestern corner experiences an increase in water depth, while the southern part of the community experiences more widespread flooding.

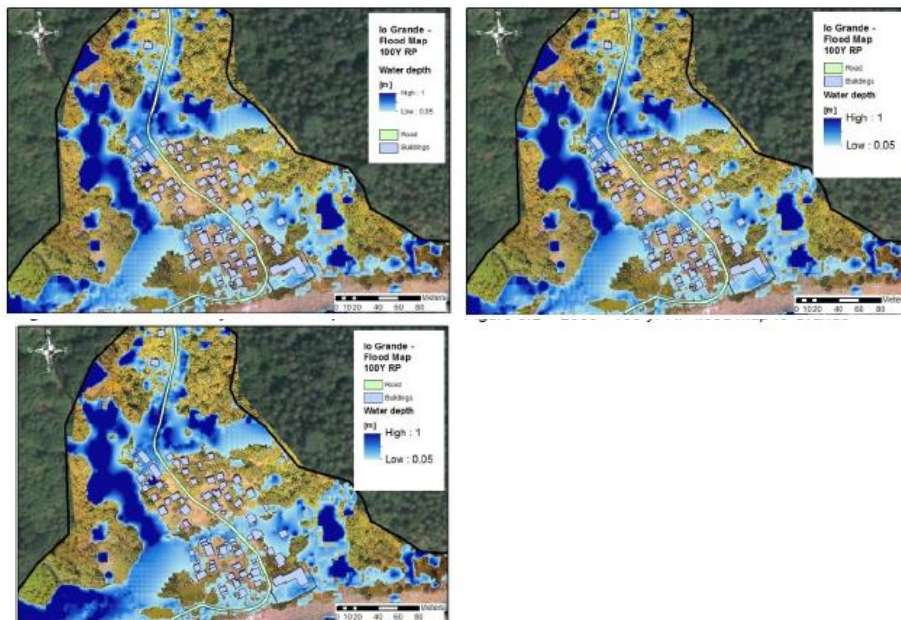


Figure 5. 2: (Above left) Present - 100-yr RP flood map Iô Grande, (above right) 2050 - 100-yr RP flood map Iô Grande, (below left) 2100 - 100 yr RP flood map for Iô Grande.

12. Figure 5.3 shows the risk (Estimated Annual Average Losses - EAAL) per household, per time horizon (present, 2050 and 2100) for Iô Grande, as well as an estimate of the total risk from flooding for the all community. Risks are defined as losses (in STN) per year per household, within different areas characterized by similar hazards (e.g. coastal flooding/rainfall) and/or separated by specific features (e.g. the presence of a road). In the figure direct damages only are shown.



Figure 5.3: Total EAAL and EAAL per household in Iô Grande, due to direct economic damages only, from pluvial and coastal flooding

The community was divided into 5 regions, using the access road as a dividing line. Risk is computed in 2018 STD and does not take into account socio-economic changes over time.

Combined coastal erosion and flood risk, including socio-economic changes

13. Expected annual average losses for Iô Grande range from Euro 18,800 to Euro 101,600 per year. Table 5.2 show the total combined risk in Iô Grande due to coastal flooding, pluvial flooding and coastal erosion, including climate change and socio-economic growth. Damages are expected to increase with both climate change (increase in hazard) and socioeconomic growth (increase in vulnerability) independently, but especially when both occur simultaneously.

14. The increase in damages from the present situation to the 2100 situation is of about a factor four when only changes in hazard are considered (scenario 1). When only socio-economic growth is considered, the increase is of a factor 12 (scenario 2), and when both factors are taken into account (socio-economics and climate change) the factor can be up to 50 times.

Table 5.2: Expected annual average losses (EAAL) due to erosion and flooding (coastal and pluvial) in Iô Grande in the present situation, 2050, and 2100, accounting for different scenarios¹¹

Time Horizon	Scenario [1]:		Scenario [2]		Scenario [3]	
	EAAL (2018STD/ yr)	EAAL (2018 €/ yr)	EAAL (2018 STD/ yr)	EAAL (2018 €/ yr)	EAAL (2018 STD/ yr)	EAAL (2018 €/ yr)
present	143,000	5,800	143,000	5,800	143,000	5,800
2050	461,000	18,800	772,000	31,500	2,489,000	101,600
2100	554,000	22,600	1,716,000	70,000	6,648,000	271,300

¹¹ Scenario 1: Risks including change in hazards due to climate change but excluding socio-economic growth, Scenario 2: Risk including socio-economic growth but excluding change in hazards due to climate change and Scenario 3: Risk including both change in hazards due to climate change and socio-economic growth



c. Praia Melão

Site description and aerial view

15. Praia Melão is located south of the communities of Ghanda and Pantufo and is part of the district of Mé-Zóchi. The village is located in the northeast corner of São Tomé Island, 4.5 km south of the capital. Characteristic features of the village are the football field, the association of fishermen, and the church in the southern part of the village. Photo 3 show aerial views of the community and Figure 5 is a site map, which marks important facilities and infrastructure, areas particularly susceptible to natural hazards, and areas of ecological or cultural importance.

16. Praia Melão is located along the secondary road EE103 (INAE). Praia Melão is the most populous of the 12 project sites, with approximately 3096 residents in 2016. With an estimated average annual growth rate of 8 percent the population in 2018 correspond to a population estimated at 3336. According to women living in the area, woman have 4 to 8 children, so families have approximately 6-10 members who normally live together in the same house (see Photo 4).



Photo 3: Aerial view of Praia Melão, facing southeast.
Drone image by J. Pronker, CDR International.



Figure 5.4: Site Map: Praia Melão

Hazards description

Combined coastal erosion and flood risk, including socio-economic changes

17. Table 5.3 shows the total combined risk to Praia Melão due to coastal flooding, pluvial flooding and coastal erosion, including climate change and socio-economic growth. Damages are expected to increase with both climate change (increase in hazard) and socio-economic growth (increase in vulnerability) independently, but especially when both occur simultaneously.

18. The increase in damages from the present situation to the 2100 situation is of about a factor 2.5 when only changes in hazard are analyzed (scenario 1). When only socio-economic growth is considered, the increase in risk is a factor 12 (scenario 2), and when both factors are taken into account (socio-economics and climate change) the factor can be up to 28 times.



Table 5.3 Expected annual average losses (EAAL) due to erosion and flooding (coastal and pluvial) in Praia Melao in the present situation, 2050, and 2100, accounting for different scenarios¹²

Time Horizon	Scenario [1]:		Scenario [2]		Scenario [3]	
	EAAL (2018 STD/ yr)	EAAL (2018 €/ yr)	EAAL (2018 STD/ yr)	EAAL (2018 €/ yr)	EAAL (2018 STD/ yr)	EAAL (2018 €/ yr)
present	4,903,000	200,100	4,903,000	200,100	4,903,000	200,100
2050	6,242,000	254,800	26,476,000	1,080,700	33,707,000	1,375,800
2100	11,478,000	468,500	58,836,000	2,401,500	137,736,000	5,621,900

d. Pantufo

Site description and aerial view

19. Pantufo is located just south of the city of São Tomé, in Água Grande District, on the northeast coast of São Tomé Island. Photo 5 show an aerial view of Pantufo, facing north while Figure 6 is a site map, which marks important facilities and infrastructure, areas particularly susceptible to hazards, and areas of ecological and cultural importance. The population of the village is estimate to be of 2264 residents in 2018.

20. Pantufo is located along the secondary road EE103 (INAE). This road runs parallel to the beach and reconnects with NE2 further to the south. The town is defined by a large square in front of the Catholic church. The town school is located further south, on the landward side of the road, at the border with Praia Melão (outside the borders of the site map).

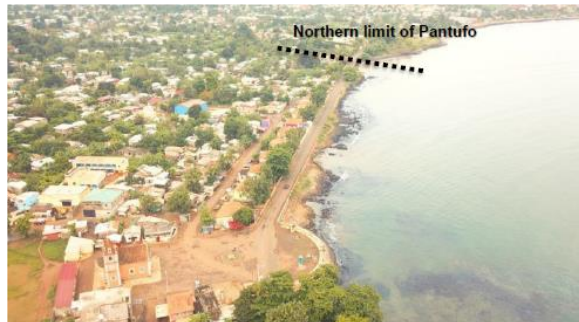


Photo 4: Aerial view of Pantufo, facing north. Drone image by J. Pronker, CDR International.



Figure 5.5: Site Map: Pantufo

Hazards description

Combined coastal erosion and flood risk, including socio-economic changes

21. Table 5.4 shows the total combined risk to Pantufo due to coastal flooding, pluvial flooding and coastal erosion, including climate change and socio-economic growth. Damages are expected to increase with both climate change (increase in hazard) and socioeconomic growth (increase in vulnerability) independently, but especially when both occur simultaneously.

22. The increase in risk from the present situation to the 2100 situation is of about a factor 3.5 when only changes in hazard are analyzed (scenario 1). When only socio-economic growth is considered, the

¹² Scenario 1 Risks including change in hazards due to climate change but excluding socio-economic growth, Scenario 2: Risk including socio-economic growth but excluding change in hazards due to climate change and Scenario 3: Risk including both change in hazards due to climate change and socio-economic growth



increase in risk is a factor 12 (scenario 2), and when both factors are taken into account (socio-economics and climate change) the factor can be up to 40 times.

Table 5.4: Expected annual average losses (EAAL) due to erosion and flooding (coastal and pluvial) in Pantufo in the present situation, 2050, and 2100, accounting for different scenarios¹³

Time Horizon	Scenario [1]:		Scenario [2]		Scenario [3]	
	EAAL (2018STD/ yr)	EAAL (2018€/yr)	EAAL (2018STD/ yr)	EAAL (2018€/yr)	EAAL (2018STD/ yr)	EAAL (2018€/yr)
present	1,869,000	76,300	1,869,000	76,300	1,869,000	76,300
2050	3,247,000	132,500	10,093,000	412,000	17,534,000	715,700
2100	6,232,000	254,400	22,428,000	915,400	74,784,000	3,052,400

e. Praia Lochinga, Gamboa, and Cruz

Site description and aerial view

23. Praia Cruz, Gambôa and Lochinga are three adjacent coastal communities between the São Tomé International Airport and the north coast, in Água Grande District. Photo 5 shows two views of the beach. Figure 5.6 is a site map, which marks important facilities and infrastructure, areas particularly susceptible to natural hazards, and areas of ecological and cultural importance.

24. The estimated population in 2018 for all three communities is 5222. The population is skewed young, with women having on average five to eight children, starting at age 15.

25. Praia Lochinga (sometimes spelled Loxinga) is the easternmost community, densely developed in the narrow strip of land (~100 m) between the São Tomé International Airport and the sea. There is only one access road (same to access the airport), which ends in Lochinga. Most of the housing is between the road and the sea, while some houses were constructed between the airport wall and the road.

26. Praia Gambôa is the community between Praia Cruz and Praia Lochinga. The strip of houses between the main road and the airport is much broader at Praia Gambôa than in Lochinga. At the border between Lochinga and Gambôa, there is a stagnant pond, with an adjacent functioning laundry facility. On the other side of the road are the Pentecostal and Adventist churches. The latter is mainly frequented by people from Lochinga. In the center of Gambôa is a catholic church. Most of the fish from all three communities arrives at Praia Gambôa. The fish market “SãoPaulo” is located next to the beach where the fishermen return with their catch. The fishermen association is located along the main road.

27. Praia Cruz is the westernmost of the three communities. The most conspicuous element is the large football field at the west side of the village (Figure 5.6). Further south is the primary school for all 651 children in the three communities (and Diogo Nunes). All the children (100 percent) attend school, in two shifts each day. Next to the school is the health centre, which serves all four communities. Praia Cruz has its own beach, which is much steeper than the one at Gambôa. At the west end of the community there is a large pond that a Chinese project attempted to use for fish breeding.

¹³ Scenario 1: Risks including change in hazards due to climate change but excluding socio-economic growth, Scenario 2: Risk including socio-economic growth but excluding change in hazards due to climate change and Scenario 3: Risk including both change in hazards due to climate change and socio-economic growth



Photo 5: The beaches of Lochinga (top) and Gambôa (low).



Figure 5.6: Site Map of Praia Cruz, Gambôa, and Lochinga, with drone image courtesy of CONPREC, OLA, and SNPCB (2018).

Hazards description

Combined coastal erosion and flood risk, including socio-economic changes

28. Table 5.5 shows the total combined risk to the Airport region due to coastal flooding, pluvial flooding and coastal erosion, including climate change and socio-economic growth. Damages are expected to increase with both climate change (increase in hazard) and socio-economic growth (increase in vulnerability) independently, but especially when both occur simultaneously.

29. The increase in damages from the present situation to the 2100 situation is of about a factor 2 when only changes in hazard are analyzed (scenario 1). When only socio-economic growth is considered, the increase in risk is a factor 12 (scenario 2), and when both factors are taken into account (socio-economics and climate change) the factor can be up to 26 times.

30.

Table 5.5: Expected annual average losses due to erosion and flooding (coastal and pluvial) in the Airport region in the present situation, 2050, and 2100, accounting for different scenarios¹⁴

Time Horizon	Scenario [1]:		Scenario [2]		Scenario [3]	
	EAAL (2018 STD/ yr)	EAAL (2018 €/yr)	EAAL (2018 STD/ yr)	EAAL (2018 €/ yr)	EAAL (2018 STD/ yr)	EAAL (2018 €/yr)
present	6,578,000	268,500	6,578,000	268,500	6,578,000	268,500
2050	8,299,000	388,700	35,521,000	1,449,800	44,815,000	1,829,000
2100	14,194,000	579,300	78,936,000	3,221,900	170,328,000	6,952,200

f. Micoló

Site description and aerial view

31. Micoló is a town on the north coast of São Tomé Island, in the Lobata District. Photo 6 show two aerial views of the community. Figure 5.7 is a site map which marks important facilities and infrastructure, areas particularly susceptible to natural hazards, and areas of ecological and cultural importance.

¹⁴ Scenario 1: Risks including change in hazards due to climate change but excluding socio-economic growth, Scenario 2: Risk including socio-economic growth but excluding change in hazards due to climate change and Scenario 3: Risk including both change in hazards due to climate change and socio-economic growth



Photo 6: Aerial view of Micoló, facing west. Drone image by J. Pronker, CDR International.



Figure 5.7: Site Map: Micoló

32. In 2012, the population of Micoló was 1404 people plus 431 people living in the area of Micoló Recta (INE, 2012). The estimated population for 2018 is of more than 2000. Households have between 4 and 10 members. Women normally start having children around the age of 16. The general perception of the population establishes that there are more women than men (60 percent women and 40 percent men).

Hazards description

33. Table 5.6 shows the total combined risk to Micoló due to coastal flooding, pluvial flooding and coastal erosion, including climate change and socio-economic growth. Damages are expected to increase with both climate change (increase in hazard) and socioeconomic growth (increase in vulnerability) independently, but especially when both occur simultaneously.

34. The increase in damages from the present situation to the 2100 situation is of about a factor four when only changes in hazard are analysed (scenario 1). When only socio-economic growth is considered, the increase in risk is a factor 12 (scenario 2), and when both factors are taken into account (socio-economics and climate change) the factor can be up to 50 times.



Table 5.6: Expected annual average losses due to erosion and flooding (coastal and pluvial) in Micoló in the present situation, 2050, and 2100, accounting for different scenarios¹⁵

Time Horizon	Scenario [1]:		Scenario [2]:		Scenario [3]:	
	EAAL (2018 STD/ yr)	EAAL (2018 €/ yr)	EAAL (2018 STD/ yr)	EAAL (2018 €/ yr)	EAAL (2018 STD/ yr)	EAAL (2018 €/ yr)
present	1,745,000	71,200	1,745,000	71,200	1,745,000	71,200
2050	2,323,000	94,800	9,423,000	384,600	12,544,000	512,000
2100	7,165,000	292,400	20,940,000	854,700	85,980,000	3,509,400

g. Praia Abade

Site description and aerial view

35. Praia Abade is located in the Autonomous Region of Príncipe on the east side of the island, 7 km from the capital, in a small pocket beach in a very sheltered cove. Photo 7 captures the coastline of the community. Figure 5.8 is a site map, which marks important facilities and infrastructure, areas particularly susceptible to natural hazards, and areas of ecological and cultural importance.

36. The community has only one dirt access road, which is currently undergoing upgrades. There are few houses between the beach and the road. The majority of the population lives on the landward side of the road (including the health care center, kindergarten, and school).

37. Population estimates indicate approximately 268 residents in 2018. In this region, households have six to ten members. The general perception of the population establishes that there are more men than women (60 percent men and 40 percent women).



Photo 7: Aerial view of Praia Abade, facing east. Drone image by J. Pronker, CDR International.



Figure 5.8 Site Map: Praia Abade

Hazards description

38. Table 7 shows the total combined risk to Praia Abade due to coastal flooding, pluvial flooding and coastal erosion, including climate change and socio-economic growth. Damages are expected to increase with both climate change (increase in hazard) and socio-economic growth (increase in vulnerability) independently, but especially when both occur simultaneously.

¹⁵ Scenario 1: Risks including change in hazards due to climate change but excluding socio-economic growth, Scenario 2: Risk including socio-economic growth but excluding change in hazards due to climate change and Scenario 3: Risk including both change in hazards due to climate change and socio-economic growth



39. The increase in damages from the present situation to the 2100 situation is of about a factor 2 when only changes in hazard are analyzed (scenario 1). When only socio-economic growth is considered, the increase in risk is a factor 12 (scenario 2), and when both factors are taken into account (socio-economics and climate change) the factor can be up to 24 times.

Table 5.7: Expected annual average losses due to erosion and flooding (coastal and pluvial) in Praia Abade in the present situation, 2050, and 2100, accounting for different scenarios¹⁶

Time Horizon	Scenario [1]:		Scenario [2]		Scenario [3]	
	EAAL (2018 STD/ yr)	EAAL (2018 €/ yr)	EAAL (2018 STD/ yr)	EAAL (2018 €/ yr)	EAAL (2018 STD/ yr)	EAAL (2018 €/yr)
present	1,125,000	45,900	1,125,000	45,900	1,125,000	45,900
2050	1,470,000	60,000	6,075,000	248,000	7,938,000	324,100
2100	2,232,000	91,100	13,500,000	551,000	26,784,000	1,093,000

Stakeholder consultations

40. The participatory approaches the project undertakes includes regular consultations to develop activities and strategies, validate studies and results, and received guidance for activities’ preparation and implementation through various mechanism:

- Consultations with local communities: from design to implementation, activities are consulted with local communities. Communities are involved in studies and reports’ validation and in overall decision taking to ensure local communities remain engaged. Communities are also regularly visited to inform them about the project’s progress and ensure activities are progressing taking into consideration local needs.
- Engagement with institutions: consultation and working sessions with relevant national institutions occur on regular basis to plan activities and follow up on progress. Institutions include national institutions such as CONPREC, NGOs such as MARAPA, and others.
- Engagement through official committees: a national steering committee has been created and is led by the Ministry of Infrastructure and Natural Resources. It provides overall guidance to the project and meet bi-annually. A Technical Advisory committee has also been created and is led by the National Committee for Climate Change. This committee also meets bi-annually, or more if necessary, to assess progress and provide inputs to the strategic committee.
- Grievance redress mechanism: this mechanism collects beneficiaries complains anonymously. Each community disposes of a “grievance box” accessible 24/7.

41. The summary table below details about all project stakeholders and their contributions to the project.

¹⁶ Scenario 1: Risks including change in hazards due to climate change but excluding socio-economic growth, Scenario 2: Risk including socio-economic growth but excluding change in hazards due to climate change and Scenario 3: Risk including both change in hazards due to climate change and socio-economic growth



Table. 5.8. Summary table with information about all project stakeholders

Stakeholder	Roles and Responsibilities
Ministry of Planning, Finance and Blue Economy (MoF)	MoF will sign the grant agreement with the World Bank. As a member of the national steering committee, MoF oversees project implementation with other stakeholders. Also, in charge of the development of the Blue Economy, the MoF has developed a national Blue economy strategy and is supervising its implementation, which will provide orientation to the development of activities in coastal areas to be carried out with this project.
Ministry of Infrastructure and Natural Resources (MIRN)	The MIRN is the executing agency of both the parent project and the proposed AF. It is responsible for project implementation and supervises the project jointly with other stakeholders. It reviews and considers policy recommendations of the project on future national and state level environmental management programs. It leads the national steering committee and is the technical secretariat of the Technical Advisory Committee. The MIRN manages several institutions, including DGE, DNR and INM, and is involved in the development and implementation of several donor-funded projects, so plays a key role in coordinating and aligning activities.
Directorate General of Environment (DGE)	As part of the MIRN, the Directorate General of Environment (DGE), is responsible for the coordination of environmental-related activities, plans, strategies and policies, both at national and local levels. The Director of DGE Serves as GEF focal point to determine country priorities for GEF funding. DGE oversees the compliance of the projects with international and national environmental regulations. The DGE hosts the Technical cell of the Project Management Unit. The Environmental Observatory is managed by the DGE. Its mandate includes the development, maintenance and dissemination to all stakeholders of a database for environmentally related activities and projects. For the proposed project, it will play a key role for the development of a module, part of its own database, to serve as the coastal observatory (component 2), and also to monitor and evaluate project indicators.
<i>Agência Fiduciária de Administração de Projectos</i> Fiduciary Agency of Projects' Administration (AFAP)	AFAP is in charge of the fiduciary aspect of all World Bank financed projects in STP.
National Climate Change Committee (NCCC)	The National Climate Change Committee, created in 2012, is in charge of coordinating national activities related to climate mitigation or adaptation. Comprised of representatives of all sectors, it will serve as the technical advisory committee for the project. NCCC provides advice on planned activities of this project and ensures alignment and transparency with and among the other projects implemented in STP. Capacities of the NCCC will be enhanced by this project through training and strengthening of its institutional role. The NCCC leads the Technical Advisory Committee.
World Bank	Administers GEF grants and supervises WACA ResIP on behalf of IDA and GEF, avails technical support on regular basis.



Stakeholder	Roles and Responsibilities
Regional Implementation Support Unit (RISU)	Supports the overall WACA ResIP in term of capacity building in different fields and provision of technical expertise to assist in the national project implementation in the 6 countries of the WACA ResIP. RISU is also in charge of coordinating and aggregating reporting activities for the regional project.
Directorate of Fisheries	The Directorate of Fisheries is in charge of all plans and strategies in fisheries, related to either industrial, semi-industrial or artisanal fisheries. For this project, the Directorate of Fisheries is involved, with the support of the NGO MARAPA, in the development and implementation of activities related to safety at sea.
National Institute of Meteorology	The NIM, under the MIRM, is responsible to collect, analyse and disseminate weather and climate related information. It has also the responsibilities to prepare forecasts needed for early warning. Key institution for the development of the early warning system for safety-at-sea (component 2), it will benefit from capacities building (training and equipment) and to be able to host of marine weather forecast center.
Directorate of Natural Resource	The Direction of Geology, under the Directorate of Natural Resources, is in charge of the studies on suitable alternatives for sand mining.
Port authorities	The Port Authority is responsible for supervising the Ports and the National Coastal Zone. This entity is in charge of the registration of boats and awareness raising in fisher communities. The Coast Guard is the National institution responsible for providing various maritime services, under the responsibility of military force, has powers of police authority and is responsible for maritime search and rescue. For the project, this institution is in charge of controlling illegal sand mining from beaches and safety and rescue.
CONPREC (National Council for Disaster and Prevention)	CONPREC is a national entity for the coordination of disaster risk management, under the tutelage of the Minister of Internal Administration. For the project CONPREC is in charge of safety at sea activities, early warning and management of Local Disaster Risk committees. Local committees are in charge of drainage maintenance and will also maintain protection mitigation measures constructed during the project.
Directorate of Forestry	The Directorate of Forestry is in charge of the tree nursery to replace the wood used for the new houses in save areas. This institution is also in charge of supporting restauration of mangroves and green infrastructure for coastal protection.
Local Disaster Risk committee	Local Disaster Risk committees have been created along CONPREC to raise risk awareness in communities, carry out small works to reduce risks and cleaning of channels. They also report disaster events to CONPRE. All activities undertaken by these local committees are supported by the project.
Fishermen Associations	Fishermen Associations are in charge of management and maintenance of the safety at sea equipment.
NGOs	Various NGOs are consulted and some also support national institutions in their activities under the project. For example, MARAPA supports safety at sea activities including distribution of equipment. OIKOS is consulted regarding nature based activities.
UN Agencies & Development Projects	Coordination, networking and platforms for sharing experiences and knowledge management in disaster risk management practices.



Identified contributing activities

42. While the AF will be processed linked to the baseline WACA project, it will leverage new and additional financing. A substantial part of the contributing parallel financing (estimated at US\$200,000 per district, or a total of US\$1.4 million) is expected through in-kind counterpart contribution from the seven participating districts, to fund maintenance activities in the target communities and social developments in the expansion areas. Evidence from the first project indicates that this is already happening – in Malanza, for example, the Government installed electricity in the expansion area and is planning the construction of a new school. In addition, STP has established community-based risk management committees in the targeted villages, whose role is to organize maintenance activities, as well as encourage adaptation and risk reduction. The expected end result is that all districts in STP will have gained experience from incorporation of adaptation and risk-based management into participatory local development plans, and that the model can then mainstreamed nationwide.

43. A US\$300,000 readiness proposal for access to the Green Climate Funds (GCF) is under implementation since 2017, requested and managed by AFAP, the agency with the fiduciary responsibilities for the WACA Project, to build the capacity of key institutions to access adaptation funds, especially GCF. Collaboration between this readiness proposal and the GEF proposal (and the broader WACA) is facilitated through the common entity, AFAP.

44. To complement and continue the readiness efforts, a US\$3.0 million readiness proposal from the UN Environment, was approved in April 2020, to support, over 42 months, the Directorate General of Environment to conduct a National Adaptation Planning (NAP) process that will produce a costed adaptation strategy for the country and provide the tools, mechanisms, system and information with which to replicate the NAP process at regular intervals and mainstream adaptation into existing and future policies, programmes and activities across levels and sectors. The WACA project was prepared in parallel and in collaboration with the preparation of the proposal, to identify the synergies and avoid duplication, as both projects will have capacity building activities for NCCC, for National Institute of Meteorology and for the Environmental Observatory. The current WACA project coordinator, former Director General of Environment, and as such, responsible also to oversee the design of both proposals, has played an important role in this repartition of efforts. The coordination will continue during project implementation, through the NCCC but also with bilateral regular meetings with UN Environment.

45. In Agua Grande District, a Euro 30.0 million- infrastructure project, jointly financed the Dutch cooperation program DRIVE and the European Investment Bank, will build coastal protection works (sea wall, rock revetment and beach nourishment) for an estimated amount around US\$6.0 million, between the proposed project intervention sites from Praia Gamboa (airport) to Pantufo. These activities provide geographical complementarity and contiguity in the measures taken for coastal protection and strengthening to link the rural and urban coastal segments. LDCF support will cover the green infrastructure elements in synergy with the IDA supported grey infrastructure investments. The project is also implemented by the DG Environment; therefore coordination will be ensured both at project implementation and at technical level.

46. The government of STP, with support from IDA, is implementing a project to develop the transport sector, (Transport Sector Development and Coastal Protection Project - P161842) with a special focus on strengthening its resilience to climate change and protecting the transport from coastal risk. The project



will train staff of the national Institute for road, as well as the community-led maintenance groups (“GIMEs”), to monitor and implement, coastal protections, using locally available material and equipment.

Project coordination with other LDCF supported activities

47. In addition to the WACA baseline project of this proposal, several GEF-LDCF financed projects dedicated to the building of climate resilience in STP are currently under implementation or under preparation as below.

- Enhancing capacities of rural communities to pursue climate resilient livelihood options in the Sao Tome and Principe districts of Caué, Me-Zochi, Principe, Lemba, Cantagalo, and Lobata (CMPLCL) (GEF ID: 5184, UNDP) – on-going
- Strengthening Resilience and Adaptive Capacity to Climate Change in STP’s Agricultural and Fisheries Sectors’ (GEF ID: 9113, AfDB) – on-going
- Landscape Restoration for Ecosystem Functionality and Climate Change Mitigation in the Republic of Sao Tome e Principe (GEF ID: 9517, Food and Agriculture Organization - FAO) – project approved
- Enhancing Biodiversity Conservation and Sustainable Land and Natural Resource Management (GEF ID:10007, UNDP) - Concept Approved

48. Even if the first UNDP-implemented (GEF ID: 5184) project in the list focuses on in-land communities, the WACA ResIP, will benefit from its experience. Due to this geographical distribution, there will be no overlapping of activities, but the successful experience to enhance capacities of rural communities will be considered in the development of the at-risk areas, to promote activities for the communities which will help their development while ensuring that the at-risk areas are occupied in a sustainable and resilient way.

49. AfDB-implemented project (GEF ID: 9113) focuses on fisheries infrastructure development and reinforcement and is thus complementary to the proposed project. The proposed project will draw synergies with these ongoing activities. A coordination mechanism has been established, though the implementing agencies (D. Fisheries and Ngo MARAPA) to align the construction of their infrastructures with the adaptation plans developed by the communities for the WACA ResIP project. Also, data on fishermen and canoes are shared, and the plan to distribute equipment (safety at sea for WACA ResIP, and fishery for AfDB project) and train the fishermen are coordinated.

50. The FAO-implemented project (GEF ID: 9517) has started recently. It aims to restore different ecosystems in STP, to capture carbon, but also to build the resilience of the islands to the impacts of climate change. In particular, they will pilot and expand efforts to restore and manage mangroves (both in Principe and in São Tomé), which will protect, from coastal erosion and flooding, coastal zones not covered by the WACA ResIP project. The projects will collaborate, especially through the directorate of forest, to make sure that ecosystem restoration in both projects benefit from each other, both through geographical connection and repartition, but also through experience sharing and capacity built.

51. The last UNDP-implemented project (GEF ID:10007), under preparation, will have a significant positive impact on the proposed WACA ResIP project. They aim to develop the first marine protected area, which will help to structure the management of the coastal zone in São Tomé and Principe. Collaboration will be crucial, through common executing agencies (D. Fisheries, D. Environment, IMAP), to ensure



alignment between the spatial marine plan to be supported by this proposed project and the definition of the marine protected areas.

52. The project is aligned and coordinated with these different initiatives to ensure the most appropriate synergies and avoid duplication. Having the National Committee for Climate Change, as the technical advisor committee for the WACA ResIP project, but also involved in the different initiatives, ensures the transfer and exchange of information with the other initiatives. The NCCC has a dashboard to report on the progress of the different initiatives.

Knowledge management

53. A dedicated M&E expert has been recruited for the WACA project in STP. His terms of reference include the tracking of the result frameworks, but also the collection and reporting of experience (including what didn't work as planned) and the knowledge acquired during the implementation of the project. This information, including studies and analytical works, will be transferred at the national level, to the national observatory of environment, so that it could be available to everyone through their online library. Budget has been allocated also to the translation of the major studies or report, to make sure that the important documents are accessible both in Portuguese, for the national audience, as well as in English, for the international community. But, also, an important aspect of the knowledge to be produced by the WACA project, is the involvement and appropriation of the adaptation techniques by the coastal communities.

54. Regular inter-community exchange visits will be organized (at least three times per year), so that best practices (on safety-at-sea, communication and understanding of weather information and warning, maintenance and rehabilitation of eco-systems, as well as small-scale adaptation measures and alternative income generating structure) could be shared directly between end-users, in local language and with technical language most appropriate. A focal point for community engagement, from the coastal communities, is also part of the team, and is responsible for animating these exchanges and collecting this practical knowledge and experience, through small reports.

55. Awareness campaigns, including broadcasting of TV spots and radio podcasts, are part of the communication plan for the project, to disseminate knowledge and best practices to virtually all the coastal population. Attention will be given for some of the messages to be targeted to children and women, as experience from the first GEF-LDCF adaptation project has proven, especially for coastal communities in STP, that both groups are critical to enable behaviors to change.

56. The national activities of WACA in STP will benefit from the regional initiatives of the WACA program for knowledge production and sharing. Two regional actors have a specific role on knowledge management: (i) the secretariat of the Abidjan Convention is setting up a knowledge center for coastal zone management, to collect and curate all existing knowledge and (ii) the *Centre de Suivi Écologique* - Center for Ecological Monitoring, based in Dakar, will host the regional coastal observatory to harmonize data, gather plans and share technical experience.

57. Communities of practices (CoP) have also been created between practitioners from the six countries receiving financial support from WACA ResIP (Mauritania, Senegal, Cote d'Ivoire, Togo, Benin and STP), on spatial marine planning, mangrove restoration, planned retreat, management of marine protected areas. The International Union for the Conservancy of Nature is in charge of animating these CoPs, bringing also other relevant partners to contribute to the such as the Réseau des Aires Marines Protégées d'Afrique de l'Ouest (RAMPAO) and the Regional Partnership for Coastal and Marine



Conservation (PRCM), to contribute to the knowledge exchanges. Dedicated conferences on topics such as nature-based solutions or marine spatial planning will be organized annually.

58. A “state of the coast” report will be produced twice during the lifetime of the project to report major achievement, but also to reflect on the persisting challenges for the adaptation of the coastal areas to climate change.

59. Through these CoPs, São Tomé and Príncipe will be able to share knowledge and benefit from the experience of countries facing similar issues with relatively similar capacities.

Gender -focused interventions

60. The WACA program includes a strong emphasis on addressing gender dimensions and promoting gender equality. WACA aims to address the differential vulnerabilities of men and women by ensuring that women are actively engaged and/or lead community-level risk assessments and community-driven resilience activities. Moreover, it aims to promote women’s empowerment both at the community level through the risk management and livelihoods activities and at the national level by ensuring that the country and regional project implementation units make concerted efforts to recruit or appoint qualified women to promote gender balanced management and decision making. There is mounting evidence at the country level that improving gender equality contributes to policy choices that lead to better environmental governance, whether through increased representation and voice of women within their communities, in their governments, and through increased labor force participation. Research has also identified women’s empowerment as an important approach to building broader community resilience.

61. The project is aligned with the World Bank Group’s gender strategy for FY16-23 (2015), which proposes a stronger focus on the frontier areas of more and better jobs as well as ownership and control over key financial and physical assets, and recognizes that closing the remaining gender gaps in endowments, enhancing voice and agency, and engaging men and boys are all critical to reducing poverty and boosting shared prosperity. The project will contribute to reducing gender gaps as they relate to jobs and enhancing women’s voice and agency, particularly as they relate to strengthening local level resilience and managing climate and disaster risk.

62. A country level gender assessment will be undertaken in STP for the country wide coastal resilience as part of the commitments under the WACA Regional Investment Project (ResIP). WAEMU will promote a harmonized regional vision and plan of action for the promotion of gender equality, empowerment of women and girls, and gender mainstreaming in strengthening the resilience of coastal communities and coastal areas, taking into account WAEMU’s gender strategy and those of the World Bank and IUCN. Based on the country level assessments, WAEMU will conduct a regional gender assessment that will inform the design of the regional Gender Action Plan. The Gender Action Plan (GAP) will summarize country specific gaps as identified through the analysis and based on this provide a uniform approach for addressing gender gaps in coastal resilience efforts at country and regional levels.

63. For the country level gender analysis, regional and national stakeholders will be engaged to develop a harmonized methodology. National level assessments will be coordinated to guide strategic planning. The resulting regional assessment and Gender Action Plan will be validated through a workshop to reflect national and regional needs for coastal resilience that promotes gender equality. The country level and regional level gender analyses and GAP will be developed over a 6-8 month period, with the final GAP to be delivered by March 2021.



64. At the operational level, the analysis could be done through situational diagnosis by country to inform access and control, the differentiated needs of men and women, the impact and the benefit. Among other variables of analysis, the gender analysis for São Tome and Príncipe will examine:

- types of activities that women and men engage in;
- access and control of resources between men and women;
- the differential impact of these floods and erosion on women and men;
- the specific needs in terms of urgency and development for men and women.

Gender-targeted activities

65. Women are targeted beneficiaries of the project and will benefit from the activities centered around reduction of their vulnerability and improvement of their livelihoods. Representation and participation of women have been crucial during preparatory phases of this project, to assess risks the coastal communities are facing, but also to make sure that the selected adaptation options are suitable for women needs and that they will be involved in the implementation of those strategies. Interventions piloted during the previous GEF-LDCF financed adaptation project showed that they have been particularly beneficial to women. In addition to protecting their houses from the floods, the drainage systems also facilitated access for women to fresh water for their daily chores, reducing the burden of their everyday activities and allowing them to develop additional income generating activities.

66. During project preparation, a socio-economic assessment has been carried-out in each of the 12 target coastal communities, to identify the structure of the communities, but also to assess specific vulnerabilities. Most of women in the coastal communities are “palaies”, selling fishes and therefore rely mostly on fishers and fish captures for their incomes. Women have been a targeted focus group during consultations, to ensure that the proposed adaptation options (i) address their needs to reduce their specific vulnerabilities, (ii) don’t disrupt their livelihood activities, and (iii) provide co-benefits to them (employment opportunities, better living conditions...). Based on this assessment, appropriate measures, agreed by the whole community, were defined, such as priority and support for planned retreat, location of their houses closer to social services. Experiences show also that most of the time, in coastal communities women are expected to do the voluntary works (such as regular maintenance), while men confiscate all paid-labors (civil works). Sub-projects will have to ensure that paid workforces would be at least half women for income-generating activities (such as surveillance of ecosystem based interventions and maintenance of drainage system), employment in community led activities (cooperatives and other donor funded initiatives have been built in the existing expansion areas, and it was agreed to employ the most vulnerable). And the project will be working with the social protection system (especially the new IDA financed project) to ensure that the most vulnerable have access to this support.

67. Participation of women in local risk committees have also been encouraged, and they now represent between 40 to 60 percent of the committees’ members. Women are also key to trigger behavioral changes in communities, so awareness campaigns and communications are designed to have specific operations targeted to women.



Annex 6: Map of communities

The map below shows the location of communities supported by the WACA ResIP including the AF.

