Strengthening climate information and early warning systems for climate resilient development and adaptation to climate change in Guinea Bissau

Part I: Project Information

GEF ID
10105

Project Type
FSP

Type of Trust Fund
LDCF

CBIT/NGI
CBIT **No**
NGI **No**

Project Title
Strengthening climate information and early warning systems for climate resilient development and adaptation to climate change in Guinea Bissau

Countries
Guinea-Bissau

Agency(ies)
UNDP

Other Executing Partner(s)
National Institute of Meteorology (INM-GB)

Executing Partner Type
Government

GEF Focal Area
Climate Change

Taxonomy

Climate Change, Focal Areas, Climate Change Adaptation, Small Island Developing States, Least Developed Countries, Climate finance, Influencing models, Strengthen institutional capacity and decision-making, Gender Equality, Gender Mainstreaming, Gender-sensitive indicators, Beneficiaries, Women groups, Sex-disaggregated indicators, Gender results areas, Awareness Raising, Knowledge Generation and Exchange, Participation and leadership, Capacity Development, Capacity, Knowledge and Research, Knowledge Generation, Knowledge Exchange, Learning

Rio Markers

Climate Change Mitigation

Climate Change Mitigation 0

Climate Change Adaptation

Climate Change Adaptation 2

Submission Date

10/5/2018

Expected Implementation Start

1/1/2022

Expected Completion Date

12/31/2027

Duration

48In Months

Agency Fee($)

570,000.00

A. FOCAL/NON-FOCAL AREA ELEMENTS

Objectives/Programs	Focal Area Outcomes	Trust Fund	GEF Amount($)	Co-Fin Amount($)
CCA-1	Reduce vulnerability and increase resilience through innovation and technology transfer for climate change adaptation	LDCF	2,125,000.00	12,454,000.00
CCA-2	Mainstream climate change adaptation and resilience for systemic impact	LDCF	2,425,000.00	15,000,000.00
CCA-3	Foster enabling conditions for effective and integrated climate change adaptation	LDCF	1,450,000.00	5,146,000.00
		Total Project Cost($)	**6,000,000.00**	**32,600,000.00**

B. Project description summary

Project Objective

To strengthen the climate monitoring capabilities, early warning systems and information for responding to climate shocks and planning adaptation to climate change in Guinea Bissau

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
Transfer of technologies for climate monitoring infrastructure	Investment	1. Enhanced capacity of national hydro-meteorological (NHMS) and environmental institutions to monitor extreme weather and climate change	1.1 Installation or rehabilitation (as appropriate) of 15 Automatic Acoustic Limnigraphic stations (with data logger and telemetry)	LDCF	3,341,582.00	13,454,000.00
			1.2 Installation or rehabilitation (as appropriate) of 3 Automatic Acoustic Tidal Gauge Stations (with data logger and telemetry)			
			1.3 Installation or rehabilitation (as appropriate) of 10 Automatic Rain gauge Stations (with data logger and telemetry)			
			1.4 Installation of 10 Automatic Weather Stations (with data logger and telemetry)			
			1.5 Procurement			

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
Climate information integrated into priority development plans and early warning systems to support the NAP process	Technical Assistance	2. Efficient and effective use of hydro-meteorological and environmental information for decision-making early warnings and mainstreaming CC in the long-term development plans	2.1 Institutional strengthening of the institutional framework for collection of climate data, for the production and dissemination of climate information products and decision making for early warning of the national hydrology and meteorology services	LDCF	2,065,968.00	16,000,000.00
			2.2 Development of the National Framework for Climate Services to strengthen the integration of climate information into planning, including the Integration of climate risks into the GB 2025 development strategy and related operational programs in coordination with the NAP process			
			2.3 Development of a			

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
Monitoring, evaluation and knowledge management	Technical Assistance	3. Lessons learned by the project through participatory M&E, with special attention to gender mainstreaming, are made available to support the financial sustainability of the strategy	3.1. Project activities and impacts on global, national and local adaptation benefits of climate information and EWS are assessed and monitored.	LDCF	306,766.00	2,600,000.00
			3.2 Project lessons and knowledge codified and disseminated nationally and internationally			
			3.3 Wider public awareness of climate services available and the benefits of their use achieved through comprehensive multimedia outreach and education campaigns			
				Sub Total ($)	**5,714,316.00**	**32,054,000.00**

Project Management Cost (PMC)

Project Management Cost (PMC)		
LDCF	285,684.00	546,000.00
Sub Total($)	**285,684.00**	**546,000.00**
Total Project Cost($)	**6,000,000.00**	**32,600,000.00**

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

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount($)
Donor Agency	IFAD through PADES and REDE Projects	In-kind	Investment mobilized	14,000,000.00
Donor Agency	Gambia River Basin Organization (OMVG) Saltinho Hydroelectric project	Grant	Investment mobilized	10,000,000.00
Donor Agency	West African Development Bank (BOAD)	Grant	Investment mobilized	8,000,000.00
GEF Agency	UNDP	Grant	Investment mobilized	600,000.00
			Total Co-Financing($)	**32,600,000.00**

Describe how any "Investment Mobilized" was identified

UNDP TRAC Resources

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

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)
UNDP	LDCF	Guinea-Bissau	Climate Change	NA	6,000,000	570,000
				Total Grant Resources($)	**6,000,000.00**	**570,000.00**

E. Non Grant Instrument

NON-GRANT INSTRUMENT at CEO Endorsement

Includes Non grant instruments? **No**

Includes reflow to GEF? **No**

F. Project Preparation Grant (PPG)

PPG Required **false**

PPG Amount ($)

150,000

PPG Agency Fee ($)

14,250

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)
UNDP	LDCF	Guinea-Bissau	Climate Change	NA	150,000	14,250
				Total Project Costs($)	**150,000.00**	**14,250.00**

Meta Information - LDCF

LDCF true
SCCF-B (Window B) on technology transfer false
SCCF-A (Window-A) on climate Change adaptation false

Is this project LDCF SCCF challenge program?
false

This Project involves at least one small island developing State(SIDS). true

---

This Project involves at least one fragile and conflict affected state. true

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This Project will provide direct adaptation benefits to the private sector. false

---

This Project is explicitly related to the formulation and/or implementation of national adaptation plans (NAPs). true

---

This Project has an urban focus. false

This Project covers the following sector(s)[the total should be 100%]:*

Agriculture	**0.00%**
Natural resources management	**100.00%**
Climate information Services	**0.00%**
Costal zone management	**0.00%**
Water resources Management	**0.00%**
Disaster risk Management	**0.00%**
Other infrastructure	**0.00%**
Health	**0.00%**
Other (Please specify:)	**0.00%**
Total	**100%**

This Project targets the following Climate change Exacerbated/introduced challenges:*
Sea level rise true
Change in mean temperature true
Increased Climatic Variability true
Natural hazards true
Land degradation true
Costal and/or Coral reef degradation true
GroundWater quality/quantity true

To calculate the core indicators, please refer to Results Guidance

Core Indicators - LDCF

CORE INDICATOR 1	Total	Male	Female	% for Women
Total number of direct beneficiaries	100,000	52,000	48,000	48.00%

CORE INDICATOR 2	
Area of land managed for climate resilience (ha)	0.00

CORE INDICATOR 3	
Total no. of policies/plans that will mainstream climate resilience	6

CORE INDICATOR 4		Male	Female	% for Women
Total number of people trained	0	0	0	0%

OUTPUT 1.1.1

Physical and natural assets made more resilient to climate variability and change

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		Male	Female
Total number of direct beneficiaries from more resilient physical assets	**0**	**0**	**0**

Ha of agriculture land	Ha of urban landscape	Ha of rural landscape	No. of residential houses **0**
No. of public buildings **0**	No. of irrigation or water structures **0**	No. of fishery or aquaculture ponds **0**	No. of ports or landing sites **0**
Km of road	Km of riverban	Km of coast	Km of storm water drainage
Other **0**	Other(unit)	Comments	

OUTPUT 1.1.2

Livelihoods and sources of income of vulnerable populations diversified and strengthened

---

		Male	Female
Total number of direct beneficiaries with diversified and strengthened livelihoods and sources of income	**0**	**0**	**0**

Livelihoods and sources of incomes strengthened / introduced			
Agriculture	Agro-Processing	Pastoralism/diary	Enhanced access to markets
false	**false**	**false**	**false**
Fisheries /aquaculture	Tourism /ecotourism	Cottage industry	Reduced supply chain
false	**false**	**false**	**false**
Beekeeping	Enhanced opportunity to employment	Other	Comments
false	**false**	**false**	

OUTPUT 1.1.3

New/improved climate information systems deployed to reduce vulnerability to climatic hazards/variability

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		Male	Female
Total number of direct beneficiaries from the new/improved climatic information systems	**100,000**	**52,000**	**48,000**

Climate hazards addressed

Flood	Storm	Heatwave	Drought
false	**false**	**false**	**false**

Other	Comments
false	

Climate information system developed/strengthened

Downscaled Climate model	Weather/Hydromet station	Early warning system	Other
true	**true**	**true**	**false**

Comments

Climate related information collected

Temperature	Rainfall	Crop pest or disease	Human disease vectors
true	**true**	**false**	**false**

Other	Comments
false	

Mode of climate information disemination

Mobile phone apps	Community radio	Extension services	Televisions
true	**true**	**true**	**true**

Leaflets	Other	Comments
true	**false**	

OUTPUT 1.1.4

Vulnerable natural ecosystems strengthened in response to climate change impacts

Types of natural ecosystem

Desert **false**	Coastal **false**	Mountainous **false**	Grassland **false**
Forest **false**	Inland water **false**	Other **false**	Comments

OUTPUT 1.2.1

Incubators and accelerators introduced

	Male	Female
Total no. of entrepreneurs supported	**0**	

Comments

No. of incubators and accelerators supported

Comments

No. of adaptation technologies supported

OUTPUT 1.2.2

Financial instruments or models to enhance climate resilienced developed

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Financial instruments or models

PPP models	Cooperatives	Microfinance	Risk insurance
false	**false**	**false**	**false**

Equity	Loan	Other	Comments
false	**false**	**false**	

OUTPUT 2.1.1

Cross-sectoral policies and plans incorporate adaptation considerations

---

Will mainstream climate resilience	Of which no. of regional policies/plans	Of which no. of national policies/plan
0	**0**	**6**

Sectors

Agriculture	Fishery	Industry	Urban
true	**true**	**false**	**true**

Rural	Health	Water	Other
true	**true**	**true**	**false**

Comments

OUTPUT 2.1.2

Cross sectoral institutional partnerships established or expanded

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No. of institutional partnerships established or strengthened	**2**

Comments

OUTPUT 2.1.3

Systems and frameworks established for continuous monitoring, reporting and review of adaptation

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No. of systems and frameworks	**0**

Comments

OUTPUT 2.1.4

Systems and frameworks established for continuous monitoring, reporting and review of adaptation

---

No. of systems and frameworks **0**

Comments

OUTPUT 2.2.1

No. of institutions with increased ability to access and/or manage climate finance

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No. of institution(s)

Comments

OUTPUT 2.2.2

Institutional coordination mechanism created or strengthened to access and/or manage climate finance

No. of mechanism(s)

Comments

OUTPUT 2.2.3

Global/regional/national initiatives demonstrated and tested early concepts with high adaptation potential

No. of initiatives or technologies

Comments

OUTPUT 2.2.4

Public investment mobilized

Amount of investment
(US$)

Comments

OUTPUT 2.2.5

Private investment mobilized

Amount of investment
(US$)

Comments

OUTPUT 2.3.1

No. of people trained regarding climate change impacts and appropriate adaptation responses

---

		Male	Female
Total no. of people trained	**0**	**0**	**0**
		Male	Female
Of which total no. of people at line ministries	**0**	**0**	**0**
		Male	Female
Of which total no. of community/association	**0**	**0**	**0**
		Male	Female
Of which total no. of extension service officers	**0**	**0**	**0**
		Male	Female
Of which total no. of hydromet and disaster risk management agency staff	**0**	**0**	**0**
		Male	Female
Of which total no. of small private business owners	**0**	**0**	**0**
		Male	Female
Of which total no. school children, university students or teachers	**0**	**0**	**0**
Other	Comments		

OUTPUT 2.3.2

No. of people made aware of climate change impacts and appropriate adaptation responses

		Male	Female
No. of people with raised awareness	**4,000**	**2,400**	**1,600**

Please describe how their awareness was raised
Note - Aligned with Results Framework Indicator 11b

OUTPUT 3.1.1

National climate policies and plans enabled including NAP processes by stronger climate information decision-support services

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No. of national climate policies and plans

Comments

OUTPUT 3.1.2

Systems and frameworks established for continuous monitoring, reporting and review of adaptation

No. of systems and frameworks

Comments

OUTPUT 3.1.3

Vulnerability assessments conducted

No. of assessments conducted

Comments

OUTPUT 3.2.1

No. of institutions with increased ability to access and/or manage climate finance

No. of institution(s)

Comments

OUTPUT 3.2.2

Institutional coordination mechanism(s) created or strengthened to access and/or manage climate finance

---

No. of mechanism(s)

Comments

OUTPUT 3.2.3

Global/regional/national initiative(s) demonstrated and tested early concepts with high adaptation potential

---

No. of initiative(s) or technology(ies)

Comments

OUTPUT 3.3.1

No. of people trained regarding climate change impacts and appropriate adaptation responses

		Male	Female
Total no. of people trained	**0**	**0**	**0**
		Male	Female
Of which total no. of people at line ministries	**0**		
		Male	Female
Of which total no. of community/association	**0**		
		Male	Female
Of which total no. of extension service officers	**0**		
		Male	Female
Of which total no. of hydromet and disaster risk management agency staff	**0**		
		Male	Female
Of which total no. of small private business owners	**0**		
		Male	Female

Of which total no. school children, university students or teachers	**0**

Other	Comments

OUTPUT 3.3.2

No. of people made aware of climate change impacts and appropriate adaptation responses

---

		Male	Female
No. of people with raised awareness	**0**		
Please describe how their awareness was raised			

Part II. Project Justification

1a. Project Description

DESCRIBE ANY CHANGES IN ALIGNMENT WITH THE PROJECT DESIGN WITH THE ORIGINAL PIF

During the PPG stage (2019-2020), the PPG team took into account the current situation in the country, as well as observations made during the PPG?s inception mission, including the risk that equipment slated to be provided by the project would very likely be stolen, damaged or it would quickly deteriorate, if maintenance and security could not be sufficiently ensured. If the project strategy would focus primarily on the rapid purchase and installation of hydro-meteorological equipment, without the needed securing and capacity building action, it would likely enhance this risk and fail to meet its goals.

Early in the PPG stage, the mentioned risk had been classified as ?critical? (#7 in the Risk Matrix in Section 3). Through the present design of activities, which implied adjustments to certain elements of the strategy, the risk was downgraded to ?high?.

The project strategy was re-scoped at the level of outputs, project duration and implementation approach as a result of the PPG. The proposed changes to project design had, however, retained all of its core elements: the overall goal, the structure and the core concepts and intention behind the project, as they were expressed in the PIF that was approved by the GEF Council. The project?s objective, its components and outcomes remained unchanged.

The proposed strategy builds up on the approach, components and outcomes presented on the PIF, but with slight changes on the project?s outputs, based on pressing needs for the development of climate information services, which had been duly informed in Guinea-Bissau?s NAPA and other related documents, including National Communications to the UNFCCC:

1. Establish an observation network.
2. Implement data transmission systems (telemetry) and data processing/managing infrastructure.
3. Produce forecasts based on models.

4. Establish and produce specialized climate services, which may include early warning systems.

5. Develop response capacity. i.e. understanding and knowing how to make use of climate information products and take adequate actions.

These steps will be followed for the three main domains of weather/climate, hydrology and marine services. In each of these domains, topics as infrastructure, human resources, funding, institutional framework and operational strategy, procedures and protocols will have to be analyzed and defined and implemented by the project team. Based on this structure, the plan for implementing this project will minimize the risks and maximize the benefits the project will bring for the country by introducing the following changes:

? Extending the project duration to at least 6 years instead of 4;

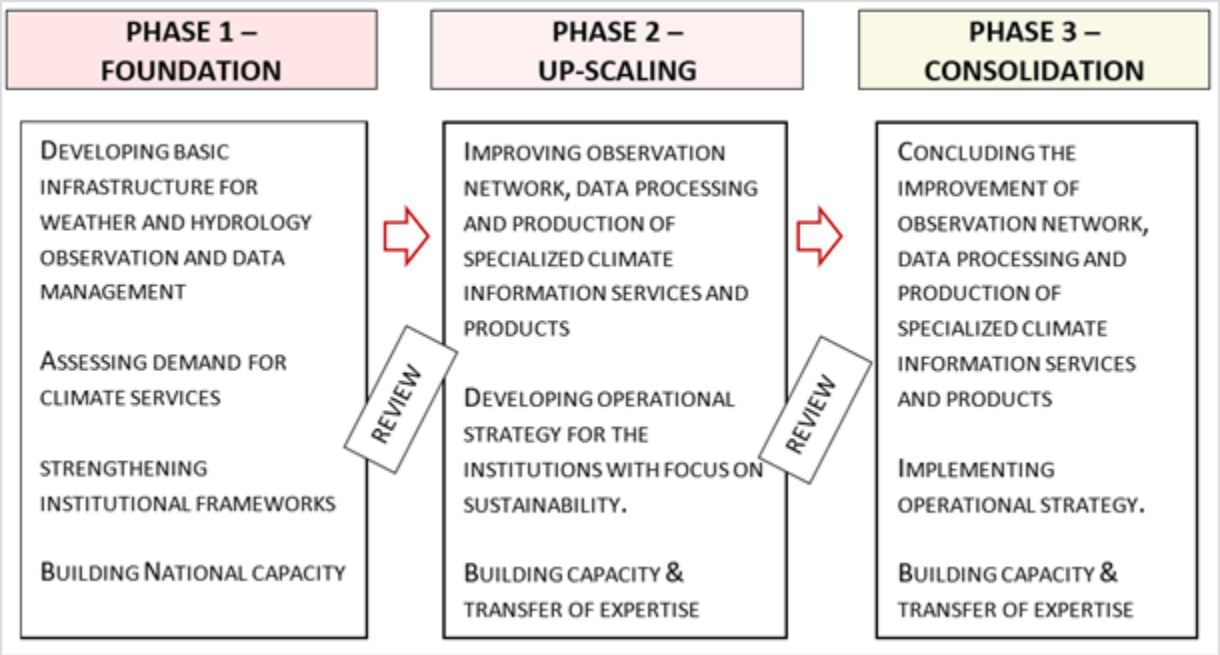
? Break the implementation strategy into 3 phases:

1. Foundation
2. Up-scaling
3. Consolidation

? Include 2 mid-term evaluations to assess the success of the project activities and give feedback on what can be improved between the 3 phases.

This approach will reduce the risks by first testing a specific approach in a reduced number of stations, before fully implementing the project activities in all the sites selected. It will include a solid stakeholder engagement strategy, as well as a strong institutional framework to ensure the governance of the project and proposals to guarantee its post-GEF project financial sustainability.

The three implementation phases are shown in PRODOC Figure 7. Summary of goals under each phase ? reproduced below:



1a. Project Description

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

Summary of Context, Scope and the Core Problem:

[Content from the UNDP PRODOC: SECTION II. DEVELOPMENT CHALLENGE]

As a least developed country (LDC) and small island developing state (SIDS), Guinea-Bissau is particularly vulnerable to climate change. The country is continually listed among the most vulnerable to climate change impacts in the world. In 2014, the Maplecroft Climate Change Vulnerability Index[1][1] ranked Guinea-Bissau as the second most vulnerable in the world, only behind Bangladesh.

The primary drivers of Guinea-Bissau?s climate vulnerability are its physical exposure and dependence on agriculture and fishing.

The climatic trends and their impacts observed during these last decades in the country will more likely be exacerbated, according to climate projections. The General circulation model (GCM) projects an increase in mean annual temperature between 1.1?C to 3.0?C by 2060[2][2]. The IPCC?s Fifth Assessment Report (AR5)[3][3] from the Intergovernmental Panel on Climate Change (IPCC) indicates that under a range of scenarios, the Sahel and West Africa are projected to be hotspots of climate change and unprecedented changes in climate will occur earliest in these regions. In addition, the AR5 projections points out that many global models indicate a wetter main rainy season with a small delay in the onset of the rainy season by the end of the 21st century. Regional modelling also suggests an increase in more intense and more frequent extreme rainfall events over the Guinea Highlands and Cameroon Mountains.

Climate variability and change thus constitute serious challenges for Guinea-Bissau?s economic growth and development that must be addressed in order for the country to pursue a sustainable and resilient development pathway.

The observation of recent climate extreme events and the meteorological records, from both Guinea-Bissau and the region, provide glaring evidence that climate change is happening in the country. The changes witnessed and described by communities consulted during the process of developing Guinea-Bissau?s National Program of Action of Adaptation to Climate Changes[4][4] include:

? Late onset of the rainy season (mid-June) compared to the usual (early May)

? Less regular distribution of rainfall than in the past

? Shortening of the mild temperatures period, often called the "cold season? (Guinea-Bissau?s ?winter"), which use to last for three months (December to February), to only two months (December to January) nowadays

? Warmer and drier environment

? Frequent dust clouds

? More frequent occurrence of high tides of greater magnitudes impacting on dikes and rice fields

? Decrease in water quality due to saline water intrusion and water point infestation by aquatic plants

? Reduction of the wetland areas and resettlement due to frequent drought episodes

The agricultural sector is the mainstay of Guinea-Bissau?s economy and source of income of 85% of the population. The cashew nut production, for example, plays an important role in both the governments? revenue as it is the country?s first export crop, and in the poverty reduction, as most of households rely on it for income. Rice is considered the country?s second strategic crop and staple food of more than 95% of the population, with its consumption estimated at 190,000 tons. Both crops use rudimentary and obsolete production techniques, and will be impacted by climate hazards such as droughts, extreme rainfalls events and sea-level rise. This can lead to significant losses in production and contribute to food insecurity in the country.

Climate change, therefore, represents a major challenge for Guinea-Bissau?s economy, geography and settlements as it will threaten livelihoods of those who depend on natural resources for a living.

Beyond the threats posed by climate change in Guinea-Bissau, the lack of adequate hydro-climatic information also represents a hindrance for the development of various economic sectors: transportation (air, land and water), agriculture, fisheries, infrastructure, education, health, water supply & sanitation (WATSAN), biodiversity conservation & ecosystem services ? to name a few. Monitoring climate change with hydro-meteorological services is key for the development of adequate adaptation measures within these sectors.

In addition, the impacts of climate change could be better mitigated through climate resilient planning and timely disaster preparedness measures.

However, inadequate or non-existing climate and weather information, forecasts and analyses create severe limitations for developing informed and climate-responsive decision-making and put the population under high-risk conditions related to climate induced hazards and extreme weather events.

For more details refer to PRODOC Section 1) Context and PRODOC Section 2) The climate-induced problem.

Refer also to PRODOC_Annex_X_Impacts_Covid_Recovery_041112.pdf. which has been uploaded to the Roadmap section of the GEF Portal (direct access can also be made via this link: https://gefportal.worldbank.org/api/spapi/LoadDocument?fileName=https%3A%2F%2Fworldbankgroup.sharepoint.com%2Fsites%2Fgefportal%2FGEFDocuments%2F8d05241d-83c8-e811-813e-3863bb2e1360%2FRoadmap%2F_PIMS%205443%20AnnexXImpactsCovidRecovery041112.pdf)

Barries that need to be addressed:

Significant policy, institutional, individual, financial, technological and informational barriers that prevent the desired situation from emerging. These barriers include:

> Significant gaps in weather and climate monitoring infrastructure:

Data and observation capacity with respect to climate change is very limited in Guinea-Bissau. Before the political-military conflict of 1998-1999, the country?s meteorological network counted only seven (7) synoptic stations, seven (7) agro-climatic stations that are not functioning and forty-five rainfall stations. Most of these facilities have been destroyed by the political-military conflict of 1998-1999. Today, there are only four operational meteorological stations (Bissau Airport, Bissau Centre, Bolama-Bijag?s, Bafat? e Gab?). Unfortunately, all of them are working with very limited capacity. Therefore, there is a critical need for modernizing and expanding the meteorological network to collect more accurate and reliable data, in real- or near-real-time. More information about the current baseline situation of hydro-meteorological stations in Guinea-Bissau are available in the Baseline Scenario section and in PRODOC Annex 15: Complete Baseline Assessments.

> Limited knowledge and capacity to effectively predict climatic events and assess their sector/area/community specific potential impacts:

The scientific and technical capabilities required to effectively identify climate induced hazards such as storms, flooding, droughts, sea surges and climate induced pest and disease outbreaks and forecast their potential impacts on all Guinea-Bissau?s vulnerable communities such as coastal communities, the farmers and fishermen and others are often weak. This is due to a lack of infrastructure, hardware and software, human capacity/skills to program and run the models code, or not effectively using forecasts that are available from regional and international centers. Running and interpretation of forecast models requires specialized education and training that is often lacking. Even when climate information is available (monitoring and forecasts), it is usually not translated into specific hazards experienced by different sectors and users e.g. heat units for agriculture or wave heights for managing coastal shipping. Without translation into information that can be easily understood by users, the information is difficult to use for particular operational decisions.

> Inconsistent use of different hydro-climatic information sources across and within country borders:

There is currently no clear legal mandate or protocol for the issuance of a public warnings relating to hydro-climatic dangers. As a result, with multiple sources of information, messages may be confusing and not acted upon. It is therefore necessary to have an official process for generating warnings that includes communication with sectoral ministries and communities, where e.g. disasters are experienced. Meanwhile, calculating risks for known vulnerabilities requires a comprehensive archive of information related to vulnerable communities, infrastructure, roads, shipping lines, access to markets, flood prone areas, cropping patterns etc. This information is currently held in disconnected databases or computers spread across different government departments and ministries. All the information required to assess vulnerability and calculate risks needs to be accessible, either through a central database/repository, or through an orderly distributed network of servers.

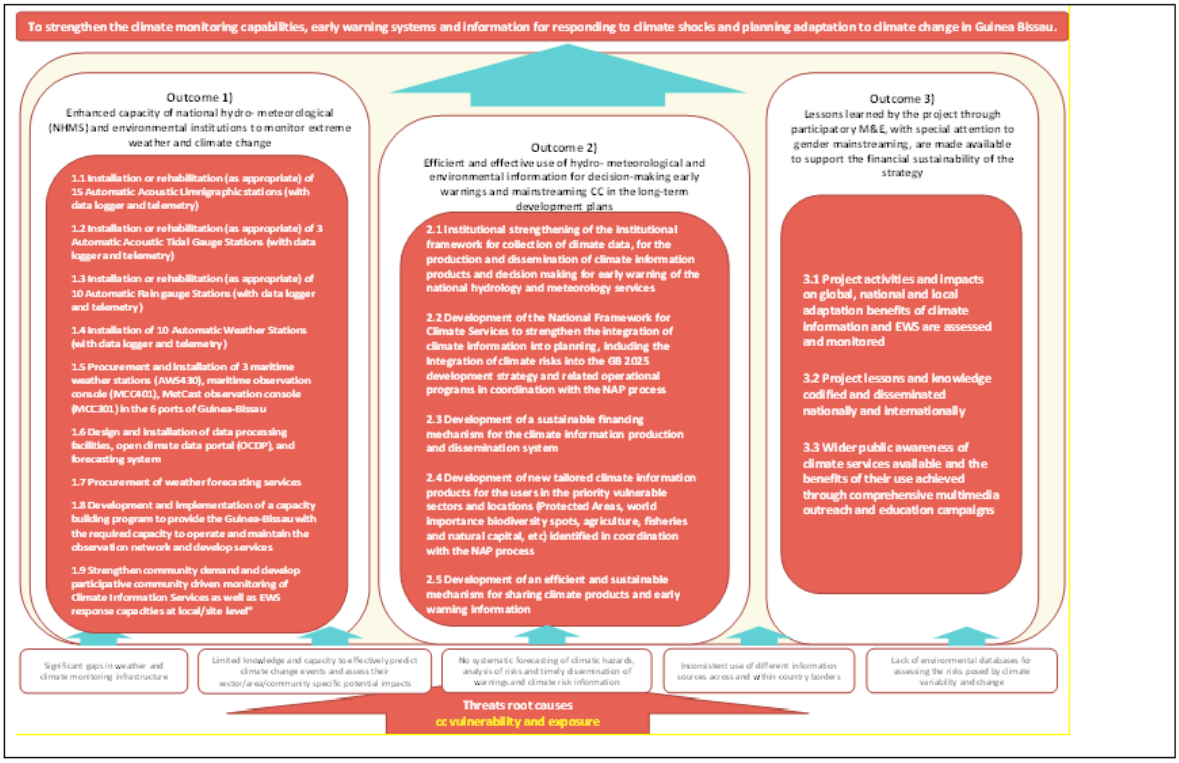
> No systematic forecasting of climate hazards, analysis of risks and timely dissemination of warnings and climate risk information:

Communication and data processing facilities for hydro-meteorological data and derived products are currently not available due to a lack of observing stations, computers and telecommunications equipment. Furthermore, weather and climate forecasts are not regularly produced within Guinea-Bissau nor do they take conditions specific to Guinea-Bissau into consideration (e.g. combining localized climate hazard information with information on localized vulnerability or environmental factors). Besides a lack of climate risk forecasts, there are no formal or official channels for the dissemination of these forecasts, associated warnings or response strategies that may be employed to mitigate any impacts.

> Lack of environmental databases for assessing the risks posed by climate variability and change:

The absence of a national environmental database reduces the potential to use weather, climate and hydrological information for decision-making in different sectors that make up the Bissau-Guinean economy. These include planning and investment decisions related to urban and rural development, infrastructure, health, transport, agriculture, and mining and water resources. The issue is less about ?environmental databases?, but rather the dysfunctionality of meteorological, hydrometric and maritime monitoring stations in Guinea-Bissau ? as it will be presented in Section 4 on the Baseline Scenario. The lack of a national environmental database reduces the potential for using meteorological and climate information for decision-making in the different economic sectors in Bissau-Guinea. These include planning and investment decisions related to urban and rural development, infrastructure, health, transport, agriculture, and mineral and water resources.

Refer to PRODOC Figure 8. Theory of Change for additional information.



2) The baseline scenario and any associated baseline projects

The meteorological observation network Guinea-Bissau is old, outdated, degraded and made up of diversified brands, it makes it difficult to ensure network connection and equipment maintenance. Today, there are only four Meteorological stations (Bissau Airport, Bissau Centre, Bolama-Bijag?s, Bafat? e Gab?) that are partially functional with very limited operational capacity. Indeed, because of budget constraints, the hydro-meteorological stations are no longer functioning properly.

Given the current economic difficulties facing the country, the National Meteorological Service has only very limited means of operation and a virtual absence of investment resources. Additionally, the local and decentralized institutions in charge of supporting the meteorological stations in the collection and analysis of climate change information do not have the necessary capacity and are not properly coordinated to formulate and disseminate relevant agro-meteorological information and advisories.

In addition, the lack of a national environmental database reduces the potential for using meteorological and climate information for decision-making in the different economic sectors in Bissau-Guinea. These include planning and investment decisions related to urban and rural development, infrastructure, health, transport, agriculture, and mineral and water resources.

To ensure effective efforts to improve early warning systems, Guinea-Bissau must overcome all of the above obstacles related to environmental and climate database, while taking into account the adaptive capacity of the country's most vulnerable population.

For more information about the current baseline of the hydro and meteorological stations refer to

PRODOC Section 4) Baseline Scenario and any associated baseline projects and

PRODOC ANNEX 15. Complete Baseline Assessments (In Portuguese).

Baseline finance

Various projects and programs compose the baseline for this project, to the extent that they are well aligned with the Project?s objective and can provide a platform for collaboration, technical integration and co-financing. Such initiatives are implemented by the government, academic and research institutions, and local and international partners

PRODOC TABLE 15 (reproduced below) provides, a comprehensive assessment of the baseline finance).

Refer in addition to PRODOC TABLE 14. Synergies, collaboration and partnerships for an overview and details on both past and on-going projects, including GEF-funded, and which are relevant to project (these do not constitute however a financial baseline for the project).

#	Acronym	Baseline Project / Program / Initiative	Objective / Focus Area / Relevance to the Project	Duration	Relevance for the project's Comp.	Baseline estimates $ million	Co-financing from baseline $M

#	Acronym	Baseline Project / Program / Initiative	Objective / Focus Area / Relevance to the Project	Duration	Relevance for the project's Comp.	Baseline estimates $ million	Co-financing from baseline $M
1	AfDB/ Ministry of Agriculture	AfDB: Rice Value Chain Development Project	Government Investment: Ministry of Agriculture and Rural Development through the Rice Value Chain Development Project (AfDB): the project aims at sustainable recovery of the rice value chain in two regions by improving productivity, strengthening infrastructure, ensuring resilience to climate change, managing natural agricultural resources in a sustainable manner and reducing gender inequality. Total funding is $6.13M, of which only $3.0M counts against the baseline finance, since the project is reaching its end in 2020. DEVELOPMENT SECTOR LINKAGE: *agriculture, food production and distribution, rural development, infrastructure*	2018-2020	1,2,3	$3.0	$0

#	Acronym	Baseline Project / Program / Initiative	Objective / Focus Area / Relevance to the Project	Duration	Relevance for the project's Comp.	Baseline estimates $ million	Co-financing from baseline $M
2	IFAD/ Ministry of Agriculture	PADES: Support for the start-up of economic development in the South - IFAD project (*Appui au d?marrage du projet d'appui au d?veloppement ?conomique du Sud-PADES*)	Government investment: Ministry of Agriculture and Rural Development through the Economic Development Project for the Southern Regions (IFAD). The project includes community development and microfinance activities, but its main focus is on infrastructure and promotion of rice production, including through the rehabilitation of mangrove swamps for the purpose of rice production. PADES aims to revitalize the rural economy and improve food security and poverty in the regions of Tombali, Quinara, Bolama and Bijagos. About 40 per cent of direct beneficiaries are women and 42 per cent are young people. Although not a second phase of the previous *Projet de R?habilitation Rurale et de D?veloppement Communautaire* (PRRDC), which closed in 2013, PADES draws on some of its activities ? including community development and microfinance. However, PADES has a stronger economic	2015-2021	2,3	$19.47	$2.0

#	Acronym	Baseline Project / Program / Initiative	Objective / Focus Area / Relevance to the Project	Duration	Relevance for the project's Comp.	Baseline estimates $ million	Co-financing from baseline $M
3	Project IFAD REDE	Project IFAD REDE: Agricultural Diversification, Integrated Markets, Nutrition and Climate Resilience Project (REDE)	Project IFAD REDE: Agricultural Diversification, Integrated Markets, Nutrition and Climate Resilience Project (REDE). The project will promote crop diversification to reduce the country?s dependence on a single crop production - rice or cashew. As the project areas have an arid Sahelian climate, climate change mitigation and adaption measures will be introduced, particularly by reducing brush fires and forest clearing, better lowland water management, by increasing organic content of cultivated soils and protecting and generating forests on plateau land. DEVELOPMENT SECTOR LINKAGE: *agriculture, food production and distribution, landscape level management, rural development, infrastructure*	2020-t.b.d.	1,2	$65.7	$12.0

#	Acronym	Baseline Project / Program / Initiative	Objective / Focus Area / Relevance to the Project	Duration	Relevance for the project's Comp.	Baseline estimates $ million	Co-financing from baseline $M
4	WB/ Directorate of Infrastructures	World Bank Rural Transport Project (RTP)	Government Investment: Directorate of Infrastructures through the World Bank Rural Transport Project (RTP). Investment in rural infrastructure to improve the physical access of the rural population to markets and essential services in selected areas, as well as, provide better responses in the event of crisis or emergencies. The project is envisaged to have a component focusing on transport infrastructure and another one on support to transport sector institutions. This project follows previous investments from donors and development banks in road rehabilitation and construction and can benefit from strong weather-based information and early warning. The first component, transport infrastructure improvement to enhance mobility in selected areas will mostly finance the rehabilitation and maintenance of about 110 km of unpaved trunk roads and connecting feeder roads in rural areas. The second component, support to transport sector	2019-2025	1,2,3	$10.0	$0

#	Acronym	Baseline Project / Program / Initiative	Objective / Focus Area / Relevance to the Project	Duration	Relevance for the project's Comp.	Baseline estimates $ million	Co-financing from baseline $M
5	Government of China	Alto do Bandim Fishing Port Project	Alto do Bandim Fishing Port Project, funded by the Government of China in collaboration with the Ministry of Fisheries. Construction started in March 2019. The port will have facilities for storing and processing fish, which would add value to the output of the fisheries industry. The port?s investment has been assessed at $26M, but the relevant baselines, in this in relation to Components 1 and 2, were considered at $20M only, given that the project has been under implementation for a while. DEVELOPMENT SECTOR LINKAGE: *fisheries, navigation, food production and distribution, infrastructure*	2018-2020	1,2	$20.0	$0

#	Acronym	Baseline Project / Program / Initiative	Objective / Focus Area / Relevance to the Project	Duration	Relevance for the project's Comp.	Baseline estimates $ million	Co-financing from baseline $M
6	CPLP Secretariat Water Res Mgt & Monit. in member Countries	Support for Water Resources Management and Monitoring in CPLP Countries	Support for Water Resources Management and Monitoring in CPLP Countries (Projeto ?Apoio ? Gest?o e ao Monitoramento de Recursos H?dricos nos Pa?ses da CPLP?) in collaboration with the General Directorate for Water Resources under the Ministry of Natural Resources and Energy. This project is funded by the Brazilian Cooperation Agency (ABC), which is currently being implemented by the Brazilian National Water Agency (ANA), and the CPLP Executive Secretariat in the member countries of the organization. The project aims to strengthen the capacities of member states to improve management and monitoring of water resources by conducting training / capacity building (in person and at a distance) to: 1- Technology transfer over hydrological monitoring networks and systems; 2. Training of technical staff of the member states in water resources management;	2018 - 2021	1	$0.350	$0

#	Acronym	Baseline Project / Program / Initiative	Objective / Focus Area / Relevance to the Project	Duration	Relevance for the project's Comp.	Baseline estimates $ million	Co-financing from baseline $M
7	Gambia River Basin Organization (OMVG)	Saltinho Hydroelectric Planning Project over Corubal River in Guinea-Bissau	In October 2019, the OMVG National Cell in Guinea - Bissau presented the technical feasibility study of the "Saltinho Dam Construction Project on the Corubal River". One of the components of the project is the rehabilitation of two hydropower stations initially cracked on the Corubal River course at Sintch? Canta (5.4 km upstream of the projected site for the saltinho dam) and Tche - Tche (located at 117 km upstream from the same town). Still without an overall assessed cost, including the rehabilitation component of the two above mentioned stations, according to the study in reference, the final version of the ToR for the physical works of the general works including the rehabilitation of the stations will be ready at the beginning. 2021. Leading potential funders include the AfDB (Sustainable Energy Found for Africa), private sector including banks. The project is executed by the Gambia River Basin Organization (OMVG) in collaboration with the General Directorate for	2020-t.b.d.	1,2	$10.0	$10.0

#	Acronym	Baseline Project / Program / Initiative	Objective / Focus Area / Relevance to the Project	Duration	Relevance for the project's Comp.	Baseline estimates $ million	Co-financing from baseline $M
8	Adaptation Fund / BOAD	Adaptation Fund/BOAD	The project ?Scaling up climate-smart agriculture in East Guinea-Bissau? aims at strengthening practices and capacities in climate-smart agriculture in the project region of dryland East Guinea-Bissau, and at institutional level. Key vulnerabilities in agriculture and water resources management are addressed; project will contribute to immediate and longer-term development and resilience needs of extremely vulnerable farmers, with a particular focus on extremely vulnerable groups: women, elderly and children. Through the project?s activities food security and livelihoods are planned to be strengthened at household level while simultaneously increasing capacities in climate risk management and adaptation planning at all levels of governance. Solidification and expansion of the activities of the LDCF-UNDP project ?Strengthening adaptive capacity and resilience to Climate Change in the Agrarian and	2020 - 2024	1,2,3	$1010M	$8.0

#	Acronym	Baseline Project / Program / Initiative	Objective / Focus Area / Relevance to the Project	Duration	Relevance for the project's Comp.	Baseline estimates $ million	Co-financing from baseline $M
9	Green Climate Fund/ BOAD	Green Climate Fund / BOAD	Project ?Enhancing livestock resilience to drought in Guinea-Bissau?, In Guinea-Bissau, livestock is one of the main activities of rural populations which can support food security and improve the living conditions of the population. However, this farming is the victim of the adverse effects of climate change with rising temperatures, a drop in rainfall, the intensification of drought, the early tarring of water points and a drop in fodder production. Conflicts over the management of natural resources are exacerbated between pastoralists and farmers, especially with no transhumance corridors. The project is initiated to strengthen livestock resilience to climate. It will be implemented by the departments in charge of livestock and the environment, mainly water management and grassing zones for transhumance pastoralists. Proposal, Regional, Approved Mar 2019, projected for a 20 year period. Funding amount refers to the Guinea-Bissau's inidicative	Concept Note, prepared in February 2018, Approval and start date unknown	1,2,3	$9.2M	0

#	Acronym	Baseline Project / Program / Initiative	Objective / Focus Area / Relevance to the Project	Duration	Relevance for the project's Comp.	Baseline estimates $ million	Co-financing from baseline $M
10	AfDB/EU	Project AGIR AfDB / EU / Ministry of Agriculture	Project AGIR AfDB / EU / Ministry of Agriculture. Launched in Ouagadougou in December 2012, AGIR is a framework that helps to foster improved synergy, coherence and effectiveness in support of resilience initiatives in the 17 West African and Sahelian countries. The Alliance is placed under the political and technical leadership of ECOWAS, UEMOA and the Permanent Interstate Committee for Drought Control in the Sahel (CILSS), and it is based on existing platforms and networks, in particular the *R?seau de pr?vention des crises alimentaires* (RPCA). Building on the ?Zero Hunger? target within the next 20 years, the Alliance is neither an initiative nor a policy. It is a policy tool aimed at channeling efforts of regional and international stakeholders towards a common results framework. A Regional Roadmap adopted in April 2013 specifies the objectives and main orientations of AGIR. One project under the RPCA was reported with	ending in 2020	2,3	$0.5 in residual funds only	$0

#	Acronym	Baseline Project / Program / Initiative	Objective / Focus Area / Relevance to the Project	Duration	Relevance for the project's Comp.	Baseline estimates $ million	Co-financing from baseline $M
	UNDP	TRAC	Leveraged co-financing for M&E support, PMU, direct project support				$0.6
			INDICATIVE SUM			**$148 M**	$32.6

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

Content from PRODOC Section III. Strategy and PRODOC IV. Results and Partnerships.

The project strategy, as presented herein, is slated to create ideal conditions for the project?s success and sustainability, because it will allow the project to gradually enhance investments, capitalizing on results achieved in a step-by-step manner, and by develop the associated capacity that is needed for operating and maintaining hydro-meteorological systems and equipment, both existing and new. The project will strive to create a culture of safeguarding and maintenance, which currently barely exists. Subsequently, the project will be able to produce beneficial climate information services and effectively contribute to adaptation planning, which is its ultimate goal, given the essential role of these services in climate change adaptation and disaster risk management.

The main elements in the present project?s strategy considered the best practices in the implementation of similar projects. It is based on the concepts of service provision, sustainability, capacity development and stakeholder engagement, including a focus in gender, in order to provide innovative/customized solutions to ensure the sustainability of the project.

Overall, the 3-phased implementation will pursue the project strategy along the three following tracks:

First, the project will work on strengthening the infrastructure and capacity of national hydro-meteorological and environmental institutions involved in the monitoring of climate change and extreme weather in Guinea-Bissau. The aim is to contribute to the expansion of a minimum national climate observation network density. This network will be capable of gather, process and analyze climate information, which is a pre-requisite to the development of climate information services, including early warning systems. The project will depart from the current baseline described in the previous sections and will have a realistic scope and outcomes to achieve. Success will be measured in terms of the project?s ability to consolidate a functioning, efficient and effective climate monitoring network and local capacity in Guinea-Bissau. In doing so, the project will address the barriers previously outlined to implementing a monitoring system and mainstreaming climate information in the country?s development and adaptation plans.

Second, the project will seek to develop climate information services, including EWS, with the purpose of supporting the development and adaptation plans in Guinea-Bissau. The integration of climate information into priority development plans and EWS systems to support the NAP process will be part of the institutional/governance activities under this component. The goal will be to reduce the national capacity gap regarding the analysis and development of climate information services.

Thirdly, the project will have a strong focus on monitoring, evaluation and knowledge management in order to guarantee that the project?s contributions to local, national and global adaptation benefits are monitored and assessed during its implementation. The appropriated tools and systems will be developed by the project team and the project records and lessons learned will be disseminated aiming for scaling-up its results and contributing to the development of similar projects.

The project is structured around three components and three implementation phases. The aim of component 1 is to modernize the hydro-meteorological monitoring network in Guinea-Bissau. The aim of component 2 is to add value to the improved monitoring network by building capacity to produce a range of weather and climate information services. Finally, component 3 aims to secure impact of the project by monitoring the project implementation process, evaluating outputs and outcomes, strengthening social inclusiveness, including the gender aspect of the project, and formulating adequate recommendations.

Because of the three-phased approach and an effective implementation period of at least 6 years (estimated from the moment when key recruitments start and a minimum project team is in place), this project foresees two mid-term reviews (MTR), one between Phase I and Phase II, and the second between Phase II and Phase III (as shown in PRODOC Figure 7 further up ?Summary of goals under each phase?).

More details are provided in PRODOC Table 7. Phases of project implementation (reproduced below):

Phase 1 ? Foundation	Phase 2 ? Up-scaling	Phase 3 ? Consolidation
Year 1 ? 2	Year 2-4	Year 4-6

Phase 1 ? Foundation Year 1 ? 2	Phase 2 ? Up-scaling Year 2-4	Phase 3 ? Consolidation Year 4-6
During the foundation phase, the project implementation team will work on defining and setting up the best methodology and structure for the delivering of the project. This will include the protocols, methods and frameworks related to all topics mentioned above, e.g. human resources, operational strategy, institutional frameworks, etc.	The up-scaling phase will focus on developing and improving the methodology and processes implemented during the first phase.	The consolidation will be final phase of the project implementation, where all the activities will be completed following the methodologies and process that were tested during the previous phases.
With a mid-term evaluation by the end of the first 2 years, the team will be able to see what the results are, the response from the community, as well as report on the good practices to be implemented and what should be corrected/improved during the next phases.	The results from the evaluation will help to make adjustments needed to the methodology and practices of implementing if necessary, relying on the lessons learnt from the previous phase.	The results from the second mid-term evaluation will be implemented during the third phase and aim at resolving any remain issue that still needs to be addressed.
During the first phase, the project activities will focus on a reduced number of stations of each domain (weather/climate, hydrology and marine), following the list of priorities set by the national authorities.	Phase 2 will extend the observation network for more stations in the country, following the plan and strategy developed by the project team based on the project document indications.	The consolidation phase will conclude the implementation of all project?s activities in all the stations defined during project inception phase.

Phase 1 ? Foundation Year 1 ? 2	Phase 2 ? Up-scaling Year 2-4	Phase 3 ? Consolidation Year 4-6
An important output of the first phase will be an assessment of development scenarios for the respective stakeholders taking into account information needs, operational requirements and funding models. These scenarios will indicate the priorities for the reaming phases.	Gaps in the institutional framework will be addressed as required to assure smooth coordination between the actors involved in the production and dissemination of climate services, and in managing the DRM cycle.	The observation network is fully operational, climate services are being produced in the country.
Basic climate information data will start to be recorded, analyzed and disseminated, supported by consultant.	Information products are developed in collaboration with consultants, with emphasis on capacity transfer.	The institutions can produce a range of climate services without relying on external experts.
A capacity building program will be designed and implemented including training of national experts on post-graduate level abroad.	Capacity building continues in-country and abroad.	Capacity building continues in-country and abroad.

Expected results:

The Project?s Objective (namely ?to strengthen the climate monitoring capabilities, early warning systems and information for responding to climate shocks and planning adaptation to climate change in Guinea-Bissau?) will be achieved through the implementation of its outcomes, which address the three key barriers mentioned above. These outcomes are:

Component 1

Outcome 1) Enhanced capacity of national hydro- meteorological (NHMS) and environmental institutions to monitor extreme weather and climate change

Under this component, the Government of Guinea-Bissau will be able to use LDCF resources to procure and install critical climate information infrastructure required to rehabilitate and/or modernize the observation network. In all equipment purchases, an assessment of existing equipment will be made, noting the manufacturer, status and critical gaps in density.[5][5]

The basic criteria for selection of locations of stations to rehabilitate or establish has been mentioned in the PRODOC Section II-2) Project Sites.

The actual selection of locations when implementing the project will need to be weighed against the costs of potentially cheaper solutions and the added costs of training personnel to service different products.

This component will build on the legacy of past interventions undertaken through the METAGRI, EMERMET. Those interventions served to minimally capacitate the INM prior to the approval of the present project. While important, those interventions did not include the provision of modern equipment.

Core outputs under Outcome 1:

Outputs list
Output 1.1) Installation or rehabilitation (as appropriate) of 15 Automatic Acoustic Limnigraphic stations (with data logger and telemetry)
Output 1.2) Installation or rehabilitation (as appropriate) of 3 Automatic Acoustic Tidal Gauge Stations (with data logger and telemetry)
Output 1.3) Installation or rehabilitation (as appropriate) of 10 Automatic Rain gauge Stations (with data logger and telemetry)
Output 1.4) Installation of 10 Automatic Weather Stations (with data logger and telemetry)

Outputs list
Output 1.5) Procurement and installation of 3 maritime weather stations (AWS430), maritime observation console (MCC401), MetCast observation console (MCC301) in the 6 ports of Guinea-Bissau
Output 1.6) Design and installation of data processing facilities, open climate data portal (OCDP), and forecasting system
Output 1.7) Procurement of weather forecasting services
Output 1.8) Development and implementation of a capacity building program to provide the Guinea-Bissau with the required capacity to operate and maintain the observation network and develop services
Output 1.9) Strengthen community demand and develop participative community driven monitoring of Climate Information Services as well as EWS response capacities at local/site level"

For a thorough description of the activities under this component, refer to PRODOC Subsection 1) Expected results, part of the PRODOC Section IV. Results and Partnerships.

Component 2

Outcome 2) Efficient and effective use of hydro- meteorological and environmental information for decision-making early warnings and mainstreaming CC in the long-term development plans

Whereas component 1 was focuses on collection of climate information in Guinea-Bissau by means of strengthening the climate observation network, Component 2 aims to build the necessary capacity to use the collected data and design a range of new climate information services or improvement of existing services.

In order to assure sustainability of the integration, the design and exploitation of climate information systems needs to rely on a demand driven strategy and be framed within a solid business plan. Both features involve a stepwise integration with explicit involvement of the private sector. Well-chosen climate information services will generate additional economic value (e.g. better planning of economic activities) and play a vital role in the design and implementation of climate change adaptation measures (early warning, design of protection schemes, design of water retention measures, etc.).

Core outputs under Outcome 2

Outputs

Outputs
Output 2.1) Institutional strengthening of the institutional framework for collection of climate data, for the production and dissemination of climate information products and decision making for early warning of the national hydrology and meteorology services
Output 2.2) Development of the National Framework for Climate Services to strengthen the integration of climate information into planning, including the Integration of climate risks into the GB 2025 development strategy and related operational programs in coordination with the NAP process
Output 2.3) Development of a sustainable financing mechanism for the climate information production and dissemination system
Output 2.4) Development of new tailored climate information products for the users in the priority vulnerable sectors and locations (Protected Areas, world importance biodiversity spots, agriculture, fisheries and natural capita, etc) identified in coordination with the NAP process
Output 2.5) Development of an efficient and sustainable mechanism for sharing climate products and early warning information

For a thorough description of the activities under this component, refer to PRODOC Subsection 1) Expected results, part of the PRODOC Section IV. Results and Partnerships.

Component 3

Outcome 3) Lessons learned by the project through participatory M&E, with special attention to gender mainstreaming, are made available to support the financial sustainability of the strategy

Under Component 3, the project will develop, implement and oversee a monitoring and evaluation (M&E) strategy to ensure that the climate resilient benefits (global, local and national) are monitored and assessed using appropriate tools and systems. This will provide the project with the opportunity to record and disseminate lessons learned for scaling-up to other similar development projects, both in Guinea-Bissau and abroad. A long-term monitoring and evaluation program will take place during the duration of the program and will ensure that the project?s objectives are being met during the different phases of implementation. In the case the specific project goals and indicators of each phase are not being met, the activities and strategy to achieve it can be modified and adapted during project implementation.

Monitoring activities will also ensure that there is gender-balanced participation in the design and implementation of the project?s activities and that gender equality is achieved within each outcome. Gender data will be surveyed in selected sites and gender mainstreaming strategy and complementary site level stakeholder engagement plan will be reviewed in order to provide advice to the Project Board with regards to the incorporation of gender indicators into project implementation.

Core outputs under Outcome 3:

Outputs
Output 3.1) Project activities and impacts on global, national and local adaptation benefits of climate information and EWS are assessed and monitored.
Output 3.2) Project lessons and knowledge codified and disseminated nationally and internationally
Output 3.3) Wider public awareness of climate services available and the benefits of their use achieved through comprehensive multimedia outreach and education campaigns.

For a thorough description of the activities under this component, refer to PRODOC Subsection 1) Expected results, part of the PRODOC Section IV. Results and Partnerships.

Refer to PRODOC ANNEX 2: Multi Year Workplan for a complete list of project activities and a 6-year chronogram. For a thorough description of activities, refer to the PRODOC, Section IV. RESULTS AND PARTNERSHIPS.

4) Alignment with GEF focal area and/or Impact Program strategies

This project is fully in line with the LDCF GEF-7 Adaptation strategy ?to strengthen resilience and reduce vulnerability to the adverse impacts of climate change in developing countries, and support their efforts to enhance adaptive capacity?. More specifically, it is aligned with climate change adaptation focal area?s objective 1 ?Reduce vulnerability and increase resilience through innovation and technology transfer for climate change adaptation? and objective 3 ?Foster enabling conditions for effective and integrated climate change adaptation?, and its outcomes, including technologies and

innovative solutions piloted or deployed to reduce climate-related risks and/or enhance resilience and Climate-resilient planning enabled by stronger climate information decision-support services, and other relevant analysis (aligned with PPCR and GCF).

5) Incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF,

LDCF, SCCF, and co-financing

+

6) Global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF);

Under Component 1, and referring to the climate monitoring infrastructure for the various sectors, the additional cost reasoning and expected contributions from the baseline are as follows:

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Without LDCF, it would be difficult to for agricultural, infrastructural, transport, energy or fisheries projects to reach their full potential. Sectoral stakeholder will be unable to accurately assess climate risk, and shocks. Therefore, key decision-making processes within those sectors, including and in particular those that require EWS, would totally lack essential data on weather, water and climate.

In the context of climate change and variability, access to and understanding of agro- and hydro-meteorological information is a prerequisite for disaster risk reduction, agriculture productivity and adaptive agro-sylvo-pastoral activities.

Although well supplied with funds, those baseline projects listed further up have not prioritized investments in the development of climate monitoring infrastructure. Such investments would simply otherwise not be made in the near foreseeable future in the baseline scenario.

> The baseline finance for Component 1 adds up to ***$56 million*** *and it comes from the following sources:*

#	Programs, Projects or Initiative relevant for Component 1 (C1)	C1 BASELINE FINANCE ($M)	Proposed Co-financing from the C1 baseline ($M)
1	AfDB/Ministry of Agriculture, D?veloppement des Chaines de Valeur Riz	$1.0	
2	IFAD - PADES	$0.9	$0.9
3	IFAD - REDE	$30.0	$4.0
4	WB Rural Transport Project (RTP)	$1.0	
5	Government of China, Alto do Bandim Fishing Port Project	$10.0	
6	CPLP Secretariat Water Res Mgt & Monit. in member Countries	$0.33	
7	OMVG Saltinho Hydroelectric Project	$5.0	$5.0
8	Adaptation Fund / West African Development Bank (BOAD)	$4.0	$3.5
9	Green Climate Fund/ West African Development Bank (BOAD)	$3.7	
10	Project AGIR AfDB / EU / Ministry of Agriculture	-	-
	TOTAL	**$56**	**$13.4**

> Of the above, $13.4 million are slated co-finance the Project through Component 1, in addition to leveraged funds from UNDP at $56K ? funds that would otherwise not be invested, was it not for the Project. UNDP funds will match those of GEF in na effort to minimally refurbishing essential small infrastructures with the purpose of protecting the new hydro-climatic equipment to be purchased, as of relevant activities under Component 1.

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> A total of $3.341 millon from LDCF has been allocated under for funding Component 1 interventions, which are described in detail in the UNDP GEF PRODOC.

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With LDCF funds, the basic conditions for the systematic production of climate data and information in Guinea-Bissau would be created. Project funds and UNDP co-financing will be used to procure and install appropriate infrastructure, to enable a minimum network density for improved observation,

generation of climate information and a functioning EWS. Targeted capacity building and technology transfer actions are also envisaged.

The hydro-meteorological monitoring network in Guinea-Bissau comprising automatic weather stations (AWS), tidal gauging stations (FGS), and hydrological gauging stations (HGS) are upgraded. The weather and climate monitoring network in Guinea-Bissau including tidal gauge stations, automatic weather stations and hydrological stations has been upgraded. The development or procurement of reasonably robust and nationally owned weather forecasts services will be accomplished within the project?s lifetime.

-

The equipment to be purchased and the capacity to be built with the resources channeled through the project under Component 1 will help to develop services such early warning of severe weather, agro and hydro-meteorological information and advisories. The identification of the required services will be demand-driven and is included as an output in Component 2.

Suited activities under this component will address risks identified in the baseline survey, in particularly the risks related to maintenance of the equipment. The procurement and installation of equipment will be done gradually over the 3 phases in the project. This will allow for learning and adjusting the approach throughout the duration of the project.

The selection of instruments, density of the network and locations of the monitoring sites will be based on a plan which will be regularly updated (at least one update in every phase of the project). The design of this plan will take into account 1) suitability of the instruments for the particular environment, 2) required human capacity to maintain and operate the instruments, 3) required (financial) resources to operation the instruments, 4) information services required. Cost considerations are made and included in PRODOC Table 11. Equipment price and service costs? estimates: AWS, FGS, HGS, plus maritime (Outputs 1.1 through 1.5) ? reproduced further down (in view of budgeting).

The equipment to be purchased is meant to support the National Meteorology Institute (INM) and the General Directorate of Water Resources (DGRH) to generate timely and quality hydro-meteorological information and services. The project team will ensure that the equipment purchased, and the services delivered will be connected complementing any coastal (terrestrial and maritime), weather measuring and forecasting equipment that may exist or be acquired by other partners or projects.

Where needed, the INM and DGRH will work with key project partners for the placement of equipment in secure location, e.g. with Guinea-Bissau Port Authority or the Institute for Biodiversity and Protected Areas (IBAP), which have delegates present on the Islands.

The participation of communities, in particular of women, in the operation and maintenance of the observation network equipment will be fostered, along with related activities concerning the development of climate services. The project will therefore ensure that a capacity building program to that effect is rolled out.

The EWS response capacities of community leaders, including women, will also be strengthened under this Component, so that they too can become protagonists in a wider national response to climate related risks.

As a result, targeted stakeholders in Guinea-Bissau will have the required capacity to operate and maintain equipment ? as well as systems -- within a reasonably robust and adequate hydro-meteorological observation network, to be gradually and sustainably installed in strategic locations across the country, along with the necessary technology transfer, and in view of producing useful climate information and feeding early warning systems with accurate data ? advancing thereby the CI & EWS agenda envisaged by Guinea-Bissau in its NAPA and similar documents.

PRODOC Table 11. Equipment price and service costs? estimates: AWS, FGS, HGS, plus maritime (Outputs 1.1 through 1.5)

The hydro-meteorological monitoring network in Guinea-Bissau comprising automatic weather stations (AWS), tidal gauging stations (FGS), and hydrological gauging stations (HGS) are upgraded. The weather and climate monitoring network in Guinea-Bissau including tidal gauge stations, automatic weather stations and hydrological stations has been upgraded				
Linkages to:	***Activities under Outputs 1.1 to 1.6 as below***	**Unit price $K**	**Quantity** *(approx.)*	**Total $K**
Std activity under Outputs 1.1 to 1.5	1.X.1) Design and optimization of the.... ... *[equipment as mentioned in the title of the output]*	Bulk	1	**75**
Std activity under Outputs 1.1 to 1.5	1.X.2) Site selection and community sensitization.	Bulk	1	**287**

The hydro-meteorological monitoring network in Guinea-Bissau comprising automatic weather stations (AWS), tidal gauging stations (FGS), and hydrological gauging stations (HGS) are upgraded. The weather and climate monitoring network in Guinea-Bissau including tidal gauge stations, automatic weather stations and hydrological stations has been upgraded				
Linkages to:	***Activities under Outputs 1.1 to 1.6 as below***	**Unit price $K**	**Quantity** *(approx.)*	**Total $K**
Std activity under Outputs 1.1 to 1.5	1.X.3) Site implementation and maintenance plan.	Bulk	1	**78**
Std activity under Outputs 1.1 to 1.5	1.X.4) Procurement and installation of ... *[equipment as mentioned in the title of the output]*	*[as below]*	*[as below]*	*[as below]*
Output: 1.1)	*Automatic Acoustic limnigraph*	5	15	**75**
Output: 1.2)	*Automatic Acoustic Tidal Gauge*	5	3	**15**
Output: 1.3)	*Automatic Rain gauge station*	3	10	**30**
Output: 1.4)	*Automatic Weather station*	24	10	**240**
Output: 1.5)	*Automatic Maritime Weather station*	3	25	**75**
Std activity under Outputs 1.1 to 1.5	1.X.5) Rehabilitation of infrastructure	Bulk	1	**108**
Std activity under Outputs 1.1 to 1.5	1.X.5) Commissioning and transfer	Bulk	1	**41**
	Total			**1,024**

Under Outputs 1.1 through 1.5 of the proposed project, LDCF resources will be used for the procurement and installation or rehabilitation (as appropriate) of equipment and protective infrastructure relevant to the hydro-meteorological monitoring network in Guinea-Bissau.

Equipment to be purchased, as per Table 11 and Table 12	***Quantity****
Automatic Acoustic Limnigraph	10-15
Automatic Acoustic Tidal Gauge	3
Automatic Rain gauge station	10
Automatic Weather station	10

Automatic Maritime Weather station	25

* Quantities are indicative, as prices may vary.

Stations will be fully automatic and will be equipped with data loggers and telemetry for transmitting of data.

[Refer to PRODOC for more information]

> The financial outlook for the additionality under Component 1 is as follows:

-

Intervention #	**For the Additionality Calculus - Component 1**	**Amounts in $M**
Baseline #2 + #3 / Co-financing	IFAD - PADES + IFAD - REDE	$4.9
Baseline #7 / Co-financing	OMVG Saltinho Hydroelectric Project	$5.0
Baseline #8 / Co-financing	Adaptation Fund / West African Development Bank (BOAD)	$3.5
	TOTAL Co-financing from the Baseline ($M)	**$13.4**
Leveraged co-financing	UNDP TRAC	$0.054M
This project	**LDCF**	$3.342M
	TOTAL PROJECT COST under C1	**$16.8M**

> The adaptive scenario: Essential climate information is generated

-

Adaptation and other benefits expected to be generated: The key Outcome under Component 1 of this LDCF project is focused on enhancing the capacity of national hydro-meteorological services in Guinea-Bissau. As service providers operating on mostly on a demand-driven basis, these institutions will be equipped and capacitated to better face climatic challenges. Various groups, who are ?consumers? or ?users? of CI & EWS, including farmers, herders, fishermen, sailors, health workers, along with stakeholders from the construction, transport and mining industries, will be able to make

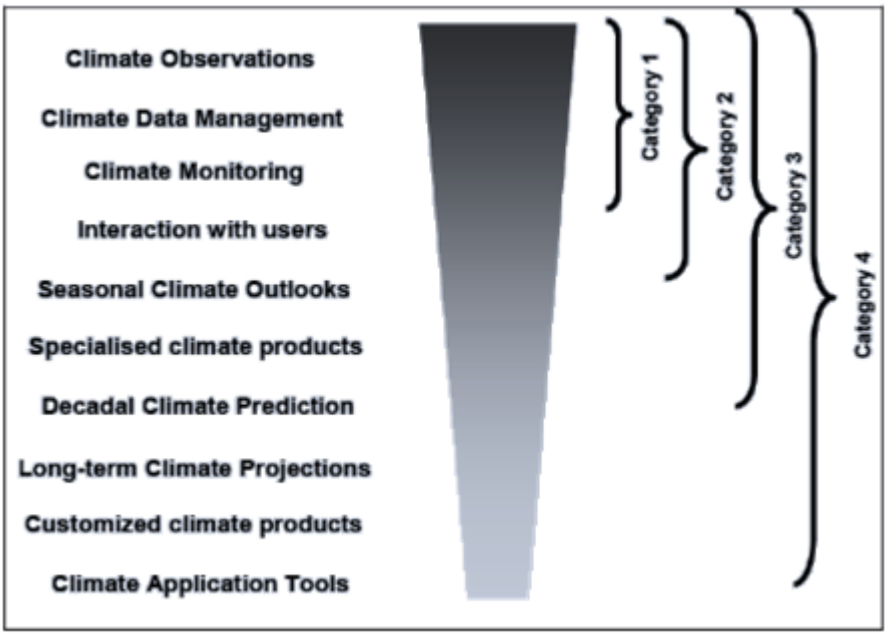
climate-informed decision-making and averting climate risk ? among them, several women, whose plight for equality will be prioritized, safeguarding as well the needs of vulnerable groups, so that ?no one is left behind?.

Under Component 2, and referring to climate change mainstreaming into development sectors:

Without LDCF, a suite of development process linked to planning, strategizing and mobilizing finance to build people?s resilience, as well as the country will have visible gaps. The financial, institutional, human capacity and State building baseline in Guinea-Bissau has many weakness.

With climate change, these weakness, the inherent fragility and vulnerability and will be amplified. Without LDCF, it will not be possible for the hydro-meteorological services to reach a slightly higher level in the hierarchy of national climate services ? e.g. Category 2 which corresponds to ?the ability to deliver a basic range of climate services and products, as well as, to provide climate predictions.? (refer to PRODOC Figure 6. Hierarchy of national climate services, reproduced below)

PRODOC Figure 6. Hierarchy of national climate services[6][6]



Category 2 organizations are those that also ?participate in climate forums, interact with end-users from different sectors, and gather feedback on the information that end-users provide.? While this is not an unachievable goal for Guinea-Bissau, the fact that hydro-meteorological services are yet to reach this level is a sign of significant weaknesses in the baseline scenario.

There are significant investments in the baseline that relates to Component 2, which more than $60M in sectoral investments. However, more is needed for these sectors to actually embrace the change in Guinea-Bissau and to have a solid basis from which to develop plans. Not all of those baseline projects listed further up as the financial baseline for Component 2 effectively include climate change as an important factor in their planning and implementation.

Under the project?s first component, access to of agro- and hydro-meteorological information will be facilitated. Still, to reach an understanding of its implications and opportunities will require a differentiated approach.

Also, without LDCF, there will be little to no innovation in the hydro-meteorological sector in Guinea-Bissau and very few knowledge exchange instances for a selected few. The few services that are

rendered will continue to be supply-driven, with little regard for what clients, need, expect and at times demand.

*> The baseline finance for Component 2 adds up to **$66.6 million** and it comes from the following sources:*

-

#	**Programs, Projects or Initiative relevant for Component 2 (C2)**	**C2 BASELINE FINANCE ($M)**	**Proposed Co-financing from the C2 baseline ($M)**
1	AfDB/Ministry of Agriculture, D?veloppement des Chaines de Valeur Riz	$1.0	
2	IFAD - PADES	$1.0	$1.0
3	IFAD - REDE	$33.7	$6.0
4	WB Rural Transport Project (RTP)	$8.0	
5	Government of China, Alto do Bandim Fishing Port Project	$10.0	
6	CPLP Secretariat Water Res Mgt & Monit. in member Countries		
7	OMVG Saltinho Hydroelectric Project	$5.0	$5.0
8	Adaptation Fund / West African Development Bank (BOAD)	$4.0	$4.0
9	Green Climate Fund/ West African Development Bank (BOAD)	$3.7	
10	Project AGIR AfDB / EU / Ministry of Agriculture	$0.2	
	TOTAL	**$66.6**	**$16.0**

> Of the above, $16.0 million are slated co-finance the Project through Component 2.

> A total of $2.065 millon from LDCF has been allocated under for funding Component 2 interventions, which are described in detail in the UNDP GEF PRODOC.

With LDCF funds, it will be possible to secure the much needed strengthening of the institutional framework for climate services. This includes the collection of climate data, for the production and dissemination of climate information products, for risk-informed decision making within sectors and for early warning linked to climatic hazards.

The pathway to capacity building and systemic change takes time. The project favored a phased approach over 6 years.

In Phase I of the project, priority will be given to strengthening of institutions, building capacity, creating awareness for climate information services, mapping demand and developing business cases for climate information services in Guinea-Bissau. This will include development of strategies for integrating climate information, developing adequate funding mechanisms and addressing policy gaps or introducing innovative policies.

In Phase II, the focus will be on improving existing weather and climate information products such as daily weather bulletins, agro-met bulletins, and the design of new services will be initiated. This stage to large extent will still depend on consultants as local staff will be in training.

In Phase III, the last phase of the project will be focusing on delivery of new services, and gradual transfer of tasks form the project team and consultants to the local staff.

As a result of the implementation of these phases, systemic capacity to render hydro-climatic services on a demand-driven basis (for the most) would have been created. It is quite possible that, by project end, a few climate services may have been developed commercially and explored by through innovation and technical expertise. In addition, service provision will have more quality, diversity and more client satisfaction.

It is possible that a few application of climate information systems and information will be able to be explored commercially and eventually generate some revenue. But is not expected that the revenue will be sufficient to cover costs of the rendering the services within only six years of institutional development, given the currently low baseline. Hydro-meteorological services will still need to be subsidized. Still, *with LDCF*, the institutions responsible for rendering those services would have taken

some steps towards a more financially balanced stance with financial sustainability as an inspirational goal to be pursued.

Regardless, it is important that early warning messages on climate-driven catastrophes can be effectively delivered free charge and reach vulnerable groups and most remote communities when they are at risk.

> The financial outlook for the additionality under Component 2 is as follows:

Intervention #	For the Additionality Calculus - Component 2	Amounts in $M
Baseline #2 + #3 / Co-financing	IFAD - PADES + IFAD - REDE	$7.0
Baseline #7 / Co-financing	OMVG Saltinho Hydroelectric Project	$5.0
Baseline #8 / Co-financing	Adaptation Fund / West African Development Bank (BOAD)	$4.0
	TOTAL Co-financing from the Baseline ($M)	**$16.0**
Leveraged co-financing	UNDP TRAC	--
This project	LDCF	$2.065
	TOTAL PROJECT COST under C2	**$18.1M**

> The adaptive scenario: Functional Climate Services for adaptation planning and EWS

-

Adaptation and other benefits expected to be generated: The key Outcome under Component 2 of this LDCF project is the strengthening of key planning process within the country?s sectors by fully taking climate change into account. This will put Guinea-Bissau in a better position to face its climatic challenges. By Project end, and if the project can minimally achieve its goals, Guinea-Bissau should be able to develop and explore at least some of the applications listed in the PRODOC table below.

PRODOC Table 13. Specific applications of whether and climate information systems and information

Count	*Applications that are likely within reach for Guinea-Bissau, if the project is successful*
(i)	an early warning system for severe weather;
(ii)	real-time weather and hydrological monitoring
(iii)	weather forecasting capabilities (Numerical Weather Prediction)
(iv)	agro-meteorological information and services (including integrated crop and pest management);
(v)	applications related to building and management of infrastructure
(vi)	tailored products for the mining planning and management
(vii)	risk informed land, air and maritime transport management
(viii)	integrated water resources management
(ix)	adaptive coastal zone and land management
(x)	adaptation planning and policy making processes
	Refer to PRODOC Section 3) LONG-TERM SOLUTION AND BARRIERS TO ACHIEVING IT > The Solution.

> The adaptive scenario: The Project reaches its goals and this is adequately documented

-

The present outcome is 100% additional (or full cost), to the extent that it would not make sense ?without LDCF?. The same applies to the project management costs (PMC). Nevertheless, a few baseline initiatives are well aligned with it and provide some co-financing, as follows:

The financial outlook for the additionality under Component 3 (plus PMC) is as follows:

Intervention #	**For the Additionality Calculus - Component 3 + PMC**	**Amounts in $M**

Intervention #	For the Additionality Calculus - Component 3 + PMC	Amounts in $M
Baseline #2 + #3 / Co-financing	IFAD - PADES + IFAD - REDE	$2.1
Baseline #7 / Co-financing	OMVG Saltinho Hydroelectric Project	$2.0
Baseline #8 / Co-financing	Adaptation Fund / West African Development Bank (BOAD)	$0.5
	TOTAL Co-financing from the Baseline ($M)	**$2.6**
Leveraged co-financing	UNDP TRAC for Project Management Costs (PMC)	$0.592
This project	LDCF (Component 3 and PMC)	$0.546
	TOTAL PROJECT COST under C3 + PMC	**$3.74M**

7) Innovativeness, sustainability and potential for scaling up

Ensure the innovativeness of the project?s implementation strategy and activities is important to leverage greater results and promote new technologies, approaches and concepts that will help the deployment of solutions to many development?s most pressing needs. Therefore, coming up with out of the box ideas and concepts was an important factor considered during the PPG?s project design process. One of the outcomes was the innovative implementation strategy divided in 3 phases, with two mid-term reviews and a close monitoring plan. This approach will contribute to reducing the risks identified during the project design and that can challenge the project implementation and outcome achievement.

Moreover, the project?s activities will help the local institutions to implement a demand-driven approach to the development of climate information services. This is a new perspective for the institutions in Guinea-Bissau and will promote a shift on the current strategy for developing products in the country. With this approach, the future climate information services and products produced by the national institutions will be based on the needs of the potential clients, making it tailored and facilitating the commercialization. Additionally, the project outputs and activities foreseen the support for start-ups working with climate information services. Working with young, driven and entrepreneur

people will promote the innovation and creative solutions for climate monitoring, information services and ultimately, climate change adaptation measures.

Regarding its sustainability, the project will ensure it by investing in capacity building at all levels, with a special emphasis on gender matters, participation and replication of successful models and interventions, improving and strengthening knowledge and understanding of medium to long-term climate-related disaster risks to local communities. The project will then bring knowledge and experience to the climate change observation network and climate information services in Guinea-Bissau, helping to ensure its potential for scaling up through a strong community engagement.

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[1] Maplecroft. *Climate Change Vulnerability Index 2014.*Available at:

<
https://reliefweb.int/sites/reliefweb.int/files/resources/Climate_Change_Vulnerability_Index_%202014_Map_0.pdf>

[2] Secretary of State for Environment and Sustainable Development ? Environment Directoriat. *Second National Communication on Climate Changes in Guinea-Bissau.* February, 2011.

[3] Niang, I., O.C. Ruppel, M.A. Abdrabo, A. Essel, C. Lennard, J. Padgham, and P. Urquhart, 2014: Africa. In: Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Barros, V.R., C.B. Field, D.J. Dokken, M.D. Mastrandrea, K.J. Mach, T.E. Bilir, M. Chatterjee, K.L. Ebi, Y.O. Estrada, R.C. Genova, B. Girma, E.S. Kissel, A.N. Levy, S. MacCracken, P.R. Mastrandrea, and L.L.White (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 1199-1265. Available at: <
https://www.ipcc.ch/site/assets/uploads/2018/02/WGIIAR5-Chap22_FINAL.pdf>

[4] Ministry of Natural Resources and Environment, Government of Guinea-Bissau. *National Programme of Action of Adaptation to Climate Change.* December 2006.

[5] ?Density? here refers to the distance between stations so as to ensure adequate coverage for the measurements. The optimal spatial distribution

of stations in any given geography can be initially determined through modelling software on a map. What is optimal for Guinea-Bissau needs though to considers other parameters, such as funds? availability and security.

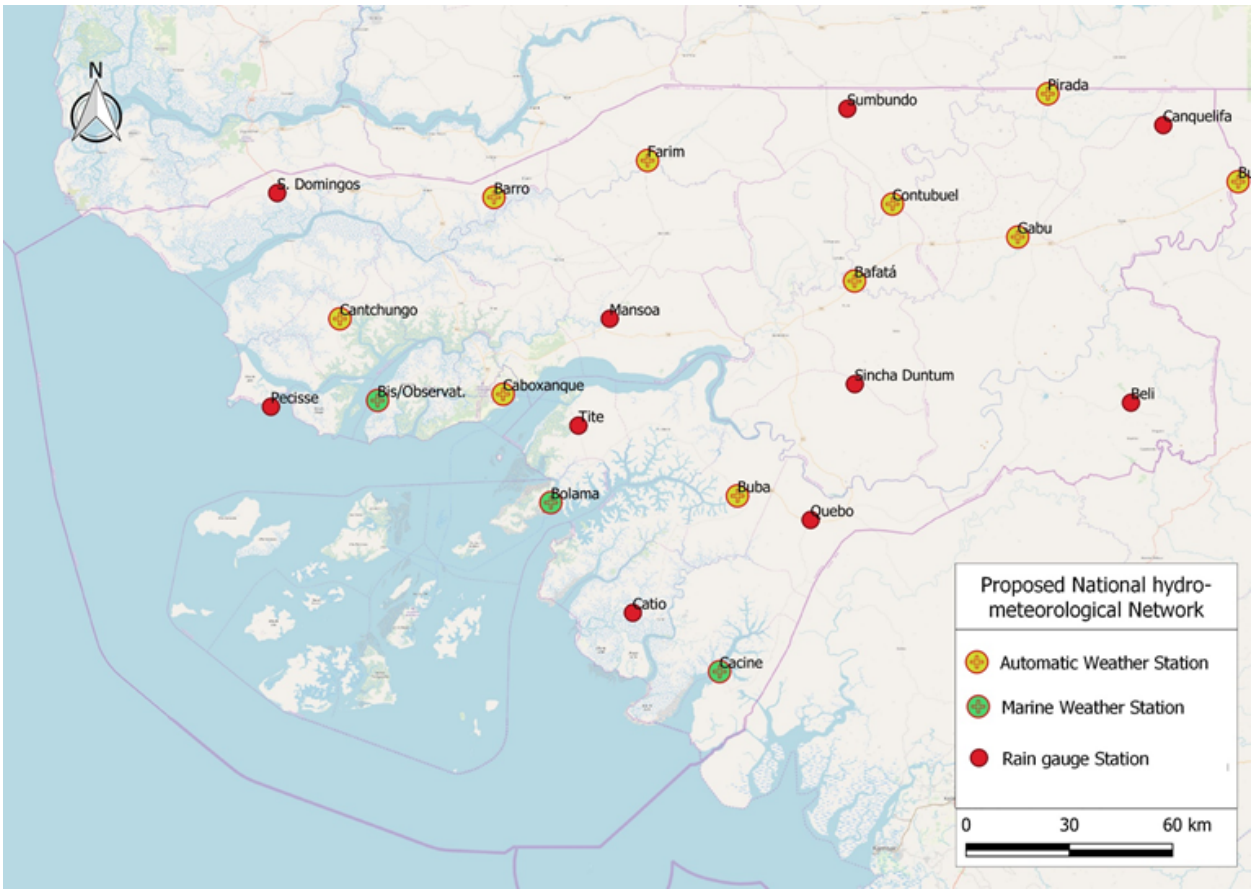
[6] World Meteorological Organization. Guidelines on Frameworks for Climate Services at the National Level, 2012. Available at:
<https://gfcs.wmo.int/sites/default/files/events/Regional%20Workshop%20on%20Climate%20Services

%20at%20the%20National%20Level%20for%20the%20LDCs%20in%20Asia/GuidetoClimateServicesattheNationalLevelFinalOctober2012.pdf>

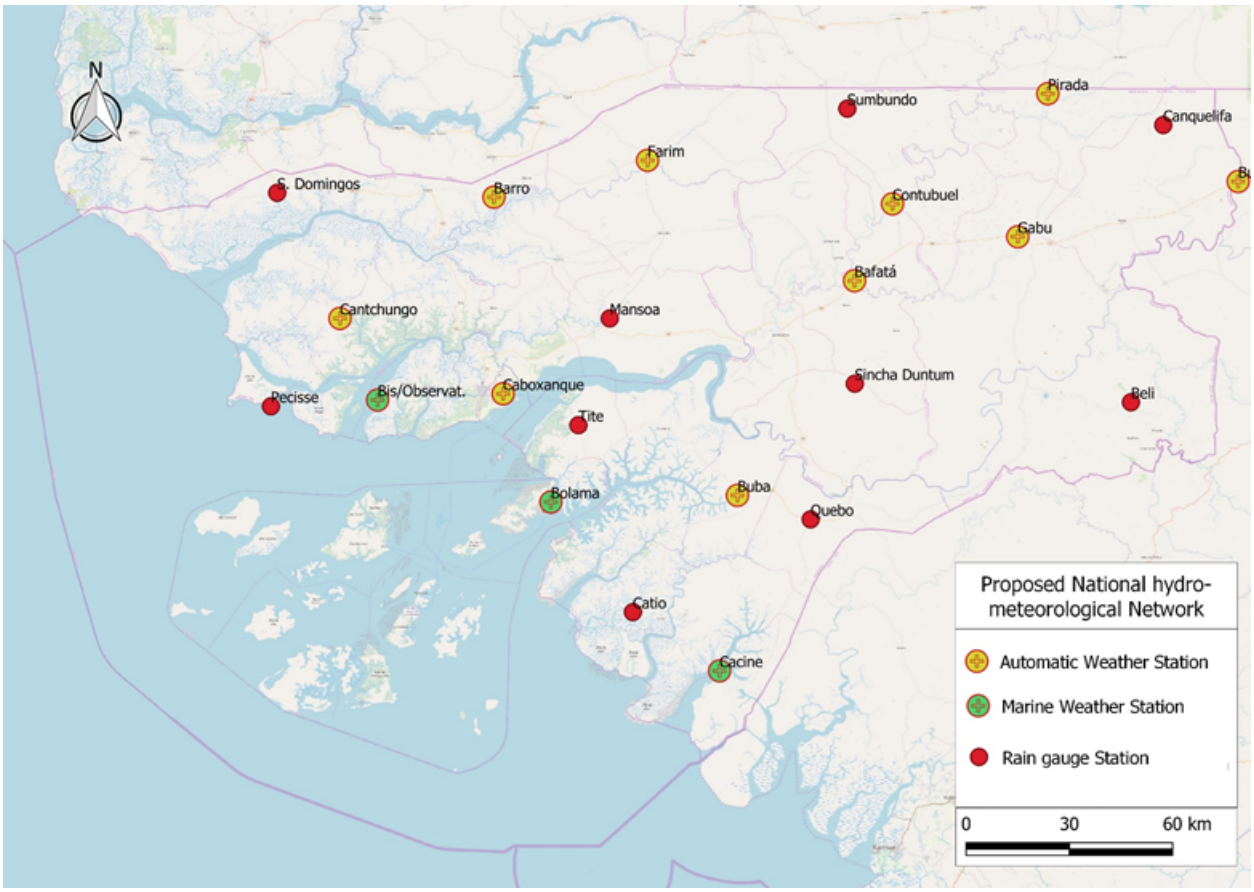
1b. Project Map and Coordinates

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

1. Proposed Automatic and Marine Weather and Rain Gauge Stations



2. Proposed Acoustic Limnigraph and Tidal Gauge Stations



1c. Child Project?

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

N/A

2. Stakeholders

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

Civil Society Organizations Yes

Indigenous Peoples and Local Communities

Private Sector Entities

If none of the above, please explain why:

PRODOC Section 4) Stakeholders and ANNEX 4: Stakeholder Engagement Plan covers all the content related to stakeholder engagement and makes reference to the stakeholder consultations during the PPG process. Additionally, refer to ANNEX 14: Results from Communities Consultations inside the Project Document (ProDoc)

Please provide the Stakeholder Engagement Plan or equivalent assessment.

Please see ANNEX 4: Stakeholder Engagement Plan which has been uploaded to GEF Portal and can be accessed directly via this link: https://gefportal.worldbank.org/api/spapi/LoadDocument?fileName=https%3A%2F%2Fworldbankgroup.sharepoint.com%2Fsites%2Fgefportal%2FGEFDocuments%2F8d05241d-83c8-e811-813e-3863bb2e1360%2Fceoendorsement%2F_PIMS%205443%20ANNEX%204%20STAKEHOLDER%20ENGAGEMENT%20PLAN.docx

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

Please see ANNEX 4: Stakeholder Engagement Plan which has been uploaded to GEF Portal and can be accessed directly via this link: https://gefportal.worldbank.org/api/spapi/LoadDocument?fileName=https%3A%2F%2Fworldbankgroup.sharepoint.com%2Fsites%2Fgefportal%2FGEFDocuments%2F8d05241d-83c8-e811-813e-3863bb2e1360%2Fceoendorsement%2F_PIMS%205443%20ANNEX%204%20STAKEHOLDER%20ENGAGEMENT%20PLAN.docx

Select what role civil society will play in the project:

Consulted only;

Member of Advisory Body; Contractor; Yes

Co-financier;

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

Executor or co-executor;

Other (Please explain)

3. Gender Equality and Women's Empowerment

Provide the gender analysis or equivalent socio-economic assesment.

From PRODOC Section 5) GENDER EQUALITY AND WOMAN?S EMPOWERMENT.

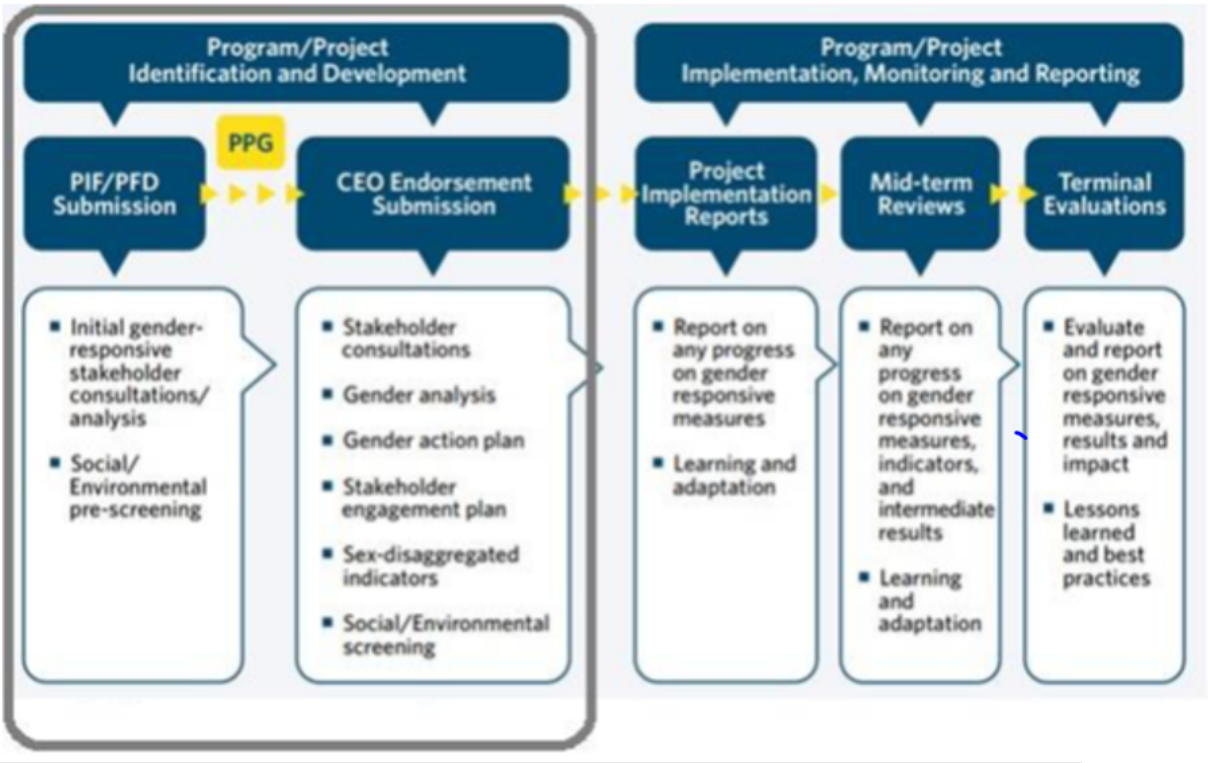
The impacts of climate change on human life in Guinea-Bissau are severe and therefore it has become urgent to focus on people-oriented climate change solutions. The gender dimension of resilience and adaptation strategies to climate change, including extreme weather events, early warning and disaster management must be given particular attention.

As women play an essential role in Guinea-Bissau`s society and make up a large number of the poor communities that depend on natural resources for their livelihood, they face higher risks and burdens from climate change impacts, such as hazards and extreme weather conditions. Gender inequalities may be exacerbated by climate change and women will have a higher time, stress and work burden than men. Therefore, any measure to foster climate resilient development needs to be gender-responsive and include women?s active involvement in planning, implementation and monitoring to achieve more efficient and sustainable results.

During the project preparation phase, gender related vulnerability assessments have been conducted in urban and rural communities in four (4) project areas (Cacheu, Bafata, Gabu and Oio regions) in order to point out specific climate information needs, risk knowledge and disaster preparedness of communities as well as engendered power relations in Guinea-Bissau`s society.

A detailed **Gender Mainstreaming Plan** (included in the PRODOC in Annex 9: Gender Analysis and Gender Action Plan) was developed to ensure gender mainstreaming in the project. The results of the assessment have informed the identification and development of gender-sensitive adaptation measures and strategies to be supported by this LDCF project in order to address the gender-related climate risks and vulnerabilities of the project sites. The required actions to address gender gaps are organized and planned in a budgeted gender action plan that will be incorporated in the project implementation plan and detailed in the total budget. Specific gender goal indicators include the collection of gender-disaggregated data and a strong monitoring and evaluation mechanism to regularly monitor and assess the achievement of the gender based expected results and advance gender mainstreaming and social equity (based on GEF Core Gender Indicators).

PRODOC Figure 11 shows the process of gender mainstreaming and how GEF guidance applies.



Note: Adapted from a GEF publication: GEF Secretariat (2017): Guidance to Advance Gender Equality in GEF projects and programs

For specific gender-sensitive indicators, see Gender Action Plan in the PRODOC (Annex 9). The document has been uploaded to GEF Portal and can also be accessed directly via this link: https://gefportal.worldbank.org/api/spapi/LoadDocument?fileName=https%3A%2F%2Fworldbankgroup.sharepoint.com%2Fsites%2Fgefportal%2FGEFDocuments%2F8d05241d-83c8-e811-813e-3863bb2e1360%2Fceoendorsement%2F_ANNEX%209%20-GENDER%20ANALYSIS%20AND%20GENDER%20ACTION%20PLAN%20.docx

Gender M&E indicators, were included in the project?s Logical Framework in order to assess the project?s progress on promoting gender equality and improvements in women?s participation in decision-making process, as follows: Several gender sensitive indicators were included in the Logical Framework, which has 11 indicators and 3 sub-indicators, or 14 in total. Of the 11 indicators, 2 include explicit gender disaggregation. Of the 3 indicators and sub-indicators, 1 is suitable to monitor gender. The above is a strong token of gender mainstreaming for a project tagged as ?G2a? for its gender mark

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

Yes

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

Improving women's participation and decision making Yes

Generating socio-economic benefits or services or women No

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

Yes

4. Private sector engagement

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

The project aims to provide an important boost to the climate and early warning systems, which will inform decisions made by the government for early advice and planning, but also support the private sector, encompassing the Civil Society Organisations and Community Based Organisations. Private actors increasingly rely on climate information to guide their business, investment and expansion plans. Those private actors are an important recipient of some of the activities, but are also seen as key for ensuring the long-term sustainability of the project.

Developments on the meteorological network implemented in the past were not able to sustain their operation in the long term. Learning from those experiences and to avoid this situation, the project will, from the onset, look at various option for sustainable financing of operations by involving the private sector. This could be achieved through service agreements, tailoring of sector-specific advisory for planning, and public-private partnership.

The needs assessment to be conducted will determine whether current needs are being met, what are the gaps, but also seek to determine opportunities for private partnerships and the willingness and ability to pay for certain services, or find solutions to remove barriers to using those services, including capacity development. The project will conduct a number of awareness activities, some of them targeting the private sector to make sure that they are informed on the available climate services and the benefits of using them.

5. Risks to Achieving Project Objectives

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

From PRODOC Section 3) Risks. For more information refer to PRODOC ANNEX 5: UNDP Risk Log and ANNEX 8: Social and Environmental Screening Procedure (SESP)

-

As per UNDP requirements, the Project Manager will monitor risks quarterly and report on the status of risks to the UNDP Country Office. The UNDP Country Office will record progress in the UNDP ATLAS risk log. Management responses to critical risks will also be reported to the GEF in the annual PIR.

Number of risks identified: A total of 9 project level risks apply to the project at CEO Endorsement stage:

? At PIF stage: 6 risks had been identified, all of which were validated with the responses (i.e. the risk mitigation measures) either strengthened and/or re-contextualized at PPG stage, given the time elapsed since PIF approval.

? At PPG stage, 3 new risks were added to the project?s risk table

#	Risk	Type	Risk Identification and validation	Impact, Likelihood, Risk Level	Mitigation
1	Unavailability of requisite human resources and data	Technical	Identified at PIF stage and validated at PPG stage, but the impact rating was adjusted.	Likelihood - 3 Impact ? 3 Level - Moderate	The issue of the unavailability of requisite human resources will be mitigated by recruitment of international consultants who will work closely with in-country counterparts and by targeted capacity building activities. Where possible, the acquisition of services, rather than complicated systems requiring high levels of IT capacity will be prioritized. Training activities of local personnel will also be part of all aspects of the work and the relevant institutions will be encouraged to expand the staff base if it is weak in particular areas, this includes support for learning and scholarship programs to help build the cadre of trained technical expertise.

#	Risk	Type	Risk Identification and validation	Impact, Likelihood, Risk Level	Mitigation
2	Local IT, telecommunications and technical infrastructure are weak e.g. international bandwidth and local mobile telecommunications networks	Technical	Identified at PIF stage and validated at PPG stage, but the impact rating was adjusted.	Likelihood - 3 Impact ? 3 Level - Moderate	The use of the mobile telecommunications network for observation network implementation will be prioritized since that infrastructure will, over time, provide the most robust power, communications, and security setup for the network hardware. Cloud-based services will also be used for computing systems to minimize this risk at the local, computer room level.

#	Risk	Type	Risk Identification and validation	Impact, Likelihood, Risk Level	Mitigation
3	Insufficient institutional support and political commitments can affect the implementation of the project by destabilizing institutions and creating barriers towards a more collaborative framework for climate services and EWS	Political	Identified at PIF stage and validated and updated at PPG stage, but the impact rating was adjusted.	Likelihood - 2 Impact ? 3 Level - Moderate	The proposed project is strongly supported by Government and other key stakeholders and development partners. The project, in conjunction with UNDP, will therefore take advantage of this opportunity to seek substantial support from the Governments and forge strong partnership with other development partners. Direct linkages to existing and planned baseline development activities implemented by Government, securing of the necessary co-financing, as well as local buy-in will also minimize this risk. It will also be important to establish buy-in from all government departments early as the project will utilize data and information from a wide range of departments. During the PPG process, a strong effort was made to engage and raise awareness of key stakeholders and national institutions that could benefit from the project. The response was very positive, and the representatives of these institutions were very open about their willingness to cooperate and contribute to the project implementation. The inputs gathered during the interviews and both workshops were included in the project design, so their views could be reflected, contributing to create a more consolidated institutional framework.

#	Risk	Type	Risk Identification and validation	Impact, Likelihood, Risk Level	Mitigation
4	Work progresses in a compartmentalized fashion and there is little integration e.g. government departments refuse to share data and information	Political	Identified at PIF stage and validated at PPG stage, but the impact rating was adjusted.	Likelihood - 2 Impact ? 3 Level - Moderate	By ensuring that sensitization on the impact of climate change on sectors and related capacity building across a range of sectors, as well as through the development of tailored climate products (e.g developing products based on internationally available data), these issues can be mitigated. Project activities focused on creating institutional integration and a collaborative framework have been defined and will be implemented by the project in order to mitigate this risk.
5	Non-compliance by primary proponents for the successful implementation of this project	Political	Identified at PIF stage and validated at PPG stage, but the impact rating was adjusted.	Likelihood - 2 Impact ? 3 Level - Moderate	Ensuring that the project is designed and implemented in a participatory and inclusive manner, following established UNDP procedures, will mitigate the risk. Since the activities correspond to urgent needs as expressed by the primary proponents the risk of non-compliance should be reduced. The Project Board is a means to approve of and apply adaptive management measures related to management arrangements in case there are critical challenges.

#	Risk	Type	Risk Identification and validation	Impact, Likelihood, Risk Level	Mitigation
6	Climate shock occurring during the design and implementation phase of the Project	Environmental	Identified at PIF stage and validated at PPG stage, but the impact rating was adjusted.	Likelihood - 2 Impact ? 3 Level - Moderate	Government priorities may have to temporarily adjust to respond to shocks. And as a result there may be some delays as more urgent priorities need to be addressed by stakeholders (e.g. disaster risk management services, government preparedness/response measures to the COVID-19 pandemic) Related to extreme weather events, timing of equipment installation will be informed by seasons - minimizing impact. Regarding COVID-19, uncertainties persist particularly on the African continent and Guinea-Bissau has a concerning number of cases relative to its population. UNDP will fully adhere to Government guidelines to contain the spread of the virus, in planning its activities. To the extent possible, the project will employ virtual means for consultations with government and capacity building.

#	Risk	Type	Risk Identification and validation	Impact, Likelihood, Risk Level	Mitigation
7	Sustainability of investment due to inadequate security and O&M	Technical	Identified at PPG stage	Likelihood - 3 Impact ? 4 Level - Substantial	This risk will be mitigated through the proposed phased approach related to equipment and installation under Component 1, as well as specific activities aimed at creating awareness and a sense of ownership within the communities where the equipment will be located. The project will have a step-by-step development of protocols for successfully engaging local communities and awareness raising about the importance of caretaking and maintaining the equipment. A robust stakeholder and local community?s engagement plan implemented will also mitigate risk. Importantly, site selection will be contingent on a costed O&M plan with roles and responsibilities clearly defined.
8	The project?s capacity building investment will likely have very limited impact in the provision of climatic / early warning services, due to the very low absorptive capacity of individuals and institutions in Guinea-Bissau, and the important capacity gap to be bridged.	Technical	Identified at PPG stage	Likelihood - 3 Impact ? 4 Level - Substantial	Several activities designed for the project will focus on capacity building and knowledge sharing, including sending out capable individuals to study abroad and obtain post-graduate degrees in relevant areas for the project. This will aim at reducing the capacity gap and build national capacity to ensure the sustainability of the project.

#	Risk	Type	Risk Identification and validation	Impact, Likelihood, Risk Level	Mitigation
9	Technical institutions are not well-prepared for implementing a demand-driven approach to their core and potential services.	Organizational	Identified at PPG stage	Likelihood - 3 Impact ? 4 Level - Substantial	As the project proposes a demand-driven approach for the establishment of climate information services, the institutions might not be prepared to implement it. This risk will be mitigated through the project design, with activities of capacity-building, engagement of stakeholders and knowledge sharing, to introduce the concept and help its implementation.
10	Unavailability of requisite human resources/capacity and data could lead to unintended social and/or environmental impacts.	Identified at PPG stage	Social and Environmental	Likelihood = 3 Impact = 3 Level - Moderate	The issue of the unavailability of requisite human resources will be mitigated by recruitment of international consultants who will work closely with in-country counterparts through targeted capacity building activities; this has been built into the project?s design. Where possible, the acquisition of services, rather than complicated systems requiring high levels of IT capacity will be prioritized. The project was also designed such that training activities of local personnel will be part of all aspects of the work and the relevant institutions will be encouraged to expand the staff base if it is weak in particular areas, this includes support for learning and scholarship programmes to help build the cadre of trained technical expertise.

#	Risk	Type	Risk Identification and validation	Impact, Likelihood, Risk Level	Mitigation
11	In the selection of pilot intervention areas, the project might unintentionally cause inequitable or discriminatory adverse impacts on affected populations.	Identified at PPG stage	Social and Environmental	Likelihood = 2 Impact = 3 Level - Moderate	This risk will be managed through the Stakeholder Engagement Plan developed during the PPG (ProDoc Annex 4). Site-level Stakeholder Engagement Plans will be prepared during project implementation, as noted in the ProDoc. EWS communication strategies and comprehensive local disaster management will be developed hand in hand with stakeholders to avoid that no one is left behind. The project will showcase and pilot the proper installation of EWS communication and local DRR. However, its scope is limited, and it is recommended that a dedicated DRR project is designed as soon as funding is available, building on the early results of this project.
12	The particular challenges faced by women might not be effectively incorporated into the EWS or adaptation planning.	Identified at PPG stage	Social and Environmental	Likelihood = 2 Impact = 3 Level - Moderate	Specific study on gender needs and gender differentiated conditions in climate events and EWS was carried out during the PPG, and a Gender Mainstream Action Plan designed and included in this project for risk mitigation. The project design includes strong awareness raising components which will enable both, men and women to better understand the impact of extreme weather on their livelihood and security and gender specific needs. It was also designed to enhance female participation in all stages of EWS to overcome the limited victim role towards active community engagement and decision making by and for women (including quotas).

#	Risk	Type	Risk Identification and validation	Impact, Likelihood, Risk Level	Mitigation
13	Construction at sites, once selected, might have localized negative impacts (social and/or environmental), e.g. debris resulting from installation of equipment, and/or OHS risks.	Identified at PPG stage	Social and Environmental	Likelihood = 1 Impact = 4 Level - Low	The site selection process will include SES considerations (e.g. with exclusionary criteria), and procedures for screening site-specific potential social/environmental impacts will be conducted for each site after its selection. These measures will be integrated into the ProDoc (in forthcoming revisions). A project-wide ESMF was determined to be unnecessary, though site-specific (targeted) management plans might be necessary for SES compliance, based on the findings of the screening that are carried out during implementation.
14	The adaptation planning supported by the project (including the national development plans under output 2.2) might unintentionally lead to downstream impacts on people or the environment.	Identified at PPG stage	Social and Environmental	Likelihood = 1 Impact = 4 Level - Low	The process for selecting the plans/policies will include SES considerations (e.g. with exclusionary criteria), and procedures for screening the potential asocial/environmental impacts will be conducted for each selected plan/policy. These measures will be integrated into the ProDoc (in forthcoming revisions). The need for targeted/scoped SESA will be confirmed during the screening of each plan/policy supported by the project.

#	Risk	Type	Risk Identification and validation	Impact, Likelihood, Risk Level	Mitigation
15	Climate or other (ie COVID) occurring during the implementation phase of the Project	Identified at PPG stage	Social and Environmental	Likelihood = 2 Impact = 3 Level - Moderate	Related to extreme weather events, timing of equipment installation will be informed by seasons, minimizing impact. Regarding COVID-19, uncertainties persist particularly on the African continent and Guinea-Bissau has a concerning number of cases relative to its population. UNDP will fully adhere to Government guidelines to contain the spread of the virus, in planning its activities. To the extent possible, the project will employ virtual means for consultations with government and capacity building.

6. Institutional Arrangement and Coordination

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

Refer to PRODOC Section VII. GOVERNANCE AND MANAGEMENT ARRANGEMENTS for all details.

The coordinating role of the Ministry of Transport and Telecommunications in the project, in particular of the National Institute of Meteorology (INM), which will lead the project from the part of government, as well as of the General Directorate of Water Resources, which will play an essential role as both beneficiary and main responsible party.

The National Project Director will chair the PSC to ensure government ownership and engagement of national authorities in the project?s business.

7. Consistency with National Priorities

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

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

The project strategy and proposed outputs are consistent with national development priorities, and have close substantive and institutional links and complementarities with the primary national and international development strategies and plans.

Refer to PRODOC Section 5) FIT TO NATIONAL POLICIES, NAPA PRIORITIES AND SDGS, where the following policies, plans and strategies are mentioned, along with their consistency with the project:

- The First (2005), Second (2011) and Third (2018) National Communications to the UNFCCC
- The NAPA (2006),
- The Intended Nationally Determined Contributions (2015)
- Disaster Risk Reduction Strategy (2013)
- The Guinea-Bissau National Poverty Reduction Strategy Document 2 (DENARP II)
- "Terra Ranka" Program 2015-2025
- United Nations Development Assistance Framework (UNDAF, 2016-2020)

8. Knowledge Management

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

The UNDP and the GEF LDCF are supporting a set of NIM Climate Information and Early Warning System projects (12 at total) and a coordinating regional component (CIRDA) which has the objectives to enhance coordination among the 12 NIM projects, increase cost effectiveness and, most importantly, provide the 12 coutry projects with a regional network of technologies, a cohort of technical advisors and efficient knowledge management mechanism for experience and lessons exchange. As described in the component 3, This project will be linked to the regional coordinating program (CIRDA), and through the knowledge management (KM) mechanism established by the CIRDA, will benefit from lessons and experiences from the 12 Country projects which are at a very advanced state of implementation.

This KM mechanism will also allow this project to assess and document in a user-friendly form and share best and successful practices and lessons with relevant stakeholders and the other relevant initiatives in the region. Furthemore, the project will seek to establish effective feedback mechanisms and knowledge management structures to deliver the optimum messaging to reduce people?s exposure to risk and threats. This will also help ensure that resources are used most-cost effectively and that inefficient vehicles are not promoted throughout the project term?rather that the project activities can continually be re-adapted to serve the greatest number of people through the most effective messaging and delivery possible.

Moreover, the project?s component 3 has a focus developing knowledge management mechanisms and specific activities that will ensure the assessment, documentation and sharing of best and successful practices and lessons learned with key stakeholders and other relevant initiatives in the region.

9. Monitoring and Evaluation

Describe the budgeted M and E plan

Refer to PRODOC Section VI. MONITORING AND EVALUATION (M&E) PLAN and ANNEX 3: Monitoring Plan, where the monitoring and evaluation plan is described. A summary is reproduced below from PRODOC Table 18.

PRODOC Table 18: Mandatory GEF M&E Requirements and M&E Budget

GEF M&E requirements	**Primary responsibility**	**Indicative costs to be charged to the Project Budget[1] (US$)**		**Time frame**
		GEF grant	**Co-financing (UNDP)**	
Inception Workshop	UNDP Country Office	USD 10,766	Needs to be assessed in due course	Within two months of project document signature
Inception Report	Project Manager. Project M&E Officer, funded from UNDP TRAC	None	None	Within two weeks of inception workshop
Standard UNDP monitoring and reporting requirements as outlined in the UNDP POPP	UNDP Country Office, Project M&E Officer, funded from UNDP TRAC	None	Pro-rata contribution of the M&E Officer	Quarterly, annually
Risk management	Project Manager Country Office	None	None	Quarterly, annually

GEF M&E requirements	Primary responsibility	Indicative costs to be charged to the Project Budget[1] (US$)		Time frame
		GEF grant	Co-financing (UNDP)	
Monitoring of indicators in project results framework (in collaboration with the National Institute of Meteorology and the General Directorate of Water Resources)	Project Manager, CTA, Project M&E Officer, funded from UNDP TRAC	Approx. per year: USD 5,000 ($25K in total)	Pro-rata contribution of the M&E Officer	Annually before PIR
GEF Project Implementation Report (PIR)	Project Manager, Project M&E Officer, funded from UNDP TRAC, CTA and UNDP Country Office and UNDP-GEF team	None	Pro-rata contribution of the M&E Officer	Annually
NIM Audit as per UNDP audit policies	UNDP Country Office	USD 5,000/year	Pro-rata contribution of the M&E Officer	Annually or other frequency as per UNDP Audit policies
Lessons learned and knowledge generation	Project Manager, CTA, Project M&E Officer, funded from UNDP TRAC	None	Pro-rata contribution of the M&E Officer	Annually
Monitoring of environmental and social risks, and corresponding management plans as relevant	Project Manager, CTA, Project M&E Officer, funded from UNDP TRAC UNDP Country Office	USD 20,000	Pro-rata contribution of the M&E Officer	On-going
Gender Action Plan	Project Manager, CTA, Project M&E Officer, funded from UNDP TRAC UNDP Country Office	Part of Output 1.9 and others funded under those.	Pro-rata contribution of the M&E Officer	On-going

GEF M&E requirements	Primary responsibility	Indicative costs to be charged to the Project Budget[1] (US$)		Time frame
		GEF grant	Co-financing (UNDP)	
Addressing environmental and social grievances	Project Manager, CTA, Project M&E Officer, funded from UNDP TRAC UNDP Country Office	Not needed at this stage.	None at this stage	On-going
Project Board meetings	Project Manager, CTA, Project M&E Officer, funded from UNDP TRAC UNDP Country Office	Part of M&E budget under C3	Pro-rata contribution of the M&E Officer	At minimum annually
Supervision missions	UNDP Country Office	None[2]	Travel costs funded by UNDP	Annually
Oversight missions	UNDP-GEF team	None	Pro-rata contribution of the M&E Officer + Travel funded by UNDP	Troubleshooting as needed
GEF Secretariat learning missions/site visits	UNDP Country Office and Project Manager and UNDP-GEF team	None foreseen	None foreseen	To be determined.
Mid-term GEF Tracking Tool	Project Manager, CTA, Project M&E Officer, funded from UNDP TRAC	Included below	Pro-rata contribution of the M&E Officer	Before mid-term review mission takes place.
Mid-term Reviews (MTR) and management responses (x2)	UNDP Country Office and Project team and UNDP-GEF team	USD 70,000	NA	Between 2nd and 3rd PIR and 4th and 5th PIR.
Two assessments during project to view condition and functionality of equipment	UNDP Country Office and Project team and UNDP-GEF team	USD 6,500 each	N/A	Between 2nd and 3rd PIR and 4th and 5th PIR.

GEF M&E requirements	Primary responsibility	Indicative costs to be charged to the Project Budget[1] (US$)		Time frame
		GEF grant	Co-financing (UNDP)	
Terminal GEF Tracking Tool	Project Manager, CTA, Project M&E Officer, funded from UNDP TRAC	Included below	Pro-rata contribution of the M&E Officer	Before terminal evaluation mission takes place
Independent Terminal Evaluation (TE) included in UNDP evaluation plan, and management response	Project Manager, CTA, Project M&E Officer, funded from UNDP TRAC	USD 40,000	NA	At least three months before operational closure
Translation of MTR and TE reports into English	UNDP Country Office	Included in the lines dedicated to the preparation of the reports	Only if needed	As required. GEF will only accept reports in English.
TOTAL indicative COST Excluding project team staff time, and UNDP staff and travel expenses		Approximately USD 208,776.	Approximately $ 175k	

[1] Excluding project team staff time and UNDP staff time and travel expenses.

[2] The costs of UNDP Country Office and UNDP-GEF Unit?s participation and time are charged to the GEF Agency Fee.

10. Benefits

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

The objective of this project is to strengthen the climate monitoring capabilities, early warning systems and information for responding to climate shocks and planning adaptation to climate change in Guinea-Bissau. All components of the project are expected to bring about significant socioeconomic benefits to the country, particularly component 1 and 2.

The outcome of Component 1 is enhanced capacity of national hydro-meteorological (NHMS) and environmental institutions to monitor extreme weather and climate change. In this context, this LDCF intervention will finance additional investments in hydro-meteorological equipments to help improve the climate monitoring network in Guinea-Bissau, building upon the investments supported by the baseline projects in climate monitoring and related issues. The establishment and maintenance of the climate monitoring network in Guinea-Bissau is essential for the country to develop its own capacity to analyse and produce climate information, which will contribute to several socioeconomic benefits.

The outcome related to Component 2 is ?efficient and effective use of hydro- meteorological and environmental information for decision-making early warnings and mainstreaming CC in the long-term development plans?. This is to be achieved by supporting a diverse set of initiatives that will work on building national capacity and mechanisms to develop and maintain climate information products in a sustainable manner, as well as promoting the mainstreaming of the climate information produced.

Moreover, the project will be able to support and enhance technology transfer through different opportunities of south-south and triangular cooperation. Different projects, institutions and countries can be seen as potential partners of the project and will help the achievement of the project?s objective and outcomes.

11. Environmental and Social Safeguard (ESS) Risks

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

Overall Project/Program Risk Classification*

PIF	CEO Endorsement/Approval	MTR	TE
	Medium/Moderate		

Measures to address identified risks and impacts

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

Please see the full Social and Environmental Screening Report uploaded to the GEF Portal.

Risk Description	*Impact and Probability (1-5)*	*Significance (Low, Moderate, High)*	*Comments*	*Description of assessment and management measures as reflected in the Project design. If ESIA or SESA is required note that the assessment should consider all potential impacts and risks.*

Risk Description	*Impact and Probability (1-5)*	*Significance (Low, Moderate, High)*	*Comments*	*Description of assessment and management measures as reflected in the Project design. If ESIA or SESA is required note that the assessment should consider all potential impacts and risks.*
Risk 1: Unavailability of requisite human resources/capacity and data could lead to unintended social and/or environmental impacts.	Impact ? 3, Probability - 3	Moderate	This is related to Principle 1, q5 and q6	The issue of the unavailability of requisite human resources will be mitigated by recruitment of international consultants who will work closely with in-country counterparts and by targeted capacity building activities; this has been built into the project?s design. Where possible, the acquisition of services, rather than complicated systems requiring high levels of IT capacity will be prioritized. The project was also designed such that training activities of local personnel will be part of all aspects of the work and the relevant institutions will be encouraged to expand the staff base if it is weak in particular areas, this includes support for learning and scholarship programmes to help build the cadre of trained technical expertise.

Risk Description	*Impact and Probability (1-5)*	*Significance (Low, Moderate, High)*	*Comments*	*Description of assessment and management measures as reflected in the Project design. If ESIA or SESA is required note that the assessment should consider all potential impacts and risks.*
Risk 2: In the selection of pilot intervention areas, the project might unintentionally cause inequitable or discriminatory adverse impacts on affected populations.	Impact ? 3, Probability - 2	Moderate	Principle 1, q2 and q4 Extreme weather events affect communities nearly everywhere. Therefore, pilot intervention areas will be defined at project start, leading to the need to prioritize some communities, likely at the expense of others. The project will not be able to cover the entire country with early warning activities with the necessary intensity.	This risk will be managed through the Stakeholder Engagement Plan developed during the PPG (ProDoc Annex 4). Site-level Stakeholder Engagement Plans will be prepared during project implementation, as noted in the ProDoc. EWS communication strategies and comprehensive local disaster management will be developed hand in hand with the stakeholders to avoid that no one is left behind. The project will highlight showcases and pilot the proper installation of EWS communication and local DRR. However, its scope is limited, and it is recommended that a dedicated DRR project is designed as soon as funding is available and building on the early results of this one.

Risk Description	*Impact and Probability (1-5)*	*Significance (Low, Moderate, High)*	*Comments*	*Description of assessment and management measures as reflected in the Project design. If ESIA or SESA is required note that the assessment should consider all potential impacts and risks.*
Risk 3: The particular challenges faced by women might not be effectively incorporated into the EWS or adaptation planning.	Impact ? 3, Probability - 2	Moderate	Principle 2, Risk 2 and Risk 3 Women in some community consultations were worried about discrimination, lack of understanding of their specific gender needs and feelings of being left alone by men in the case of disaster situations.	Specific study on gender needs and gender differentiated conditions in climate events and EWS was carried out during the PPG, and a Gender Mainstream Action Plan designed and included in this project for risk mitigation. The project design includes strong awareness raising components which will enable both, men and women, to better understand the impact of extreme weather on their livelihood and security and gender specific needs. It was also designed to enhance women participation in all stages of EWS to overcome the limited victim role towards active community engagement and decision making by and for women (including quotes).

Risk Description	*Impact and Probability (1-5)*	*Significance (Low, Moderate, High)*	*Comments*	*Description of assessment and management measures as reflected in the Project design. If ESIA or SESA is required note that the assessment should consider all potential impacts and risks.*
Risk 4: Construction at sites, once selected, might have localized negative impacts (social and/or environmental), e.g. debris resulting from installation of equipment, and/or OHS risks.	I = 4 P = 1	Moderate	Standard 1, q1.1 and q1.2 Standard 3, q3.1, 3.7 Standard 7, q7.2 The selection of the sites for construction/repair of equipment will be made during project implementation and therefore the site-specific potential impacts are not fully known at this stage.	The site selection process will include SES considerations (e.g. with exclusionary criteria), and procedures for screening site-specific potential social/environmental impacts will be conducted for each site after its selection. These measures will be integrated into the ProDoc (in forthcoming revisions). A project-wide ESMF was determined to be unnecessary, though site-specific (targeted) management plans might be necessary for SES compliance, based on the findings of the screening that are carried out during implementation.
Risk 5: The adaptation planning supported by the project (including the national development plans under output 2.2) might unintentionally lead to downstream impacts on people or the environment.	I = 4 P = 1	Moderate	Standard 1, q1.11 The plans/policies to be support by the project ? some of which might be related to risky sectors like mining ? will be selected during project implementation and therefore the specific potential impacts are not fully known at this stage.	The process for selecting the plans/policies will include SES considerations (e.g. with exclusionary criteria), and procedures for screening the potential asocial/environmental impacts will be conducted for each selected plan/policy. These measures will be integrated into the ProDoc (in forthcoming revisions). The need for targeted/scoped SESA will be confirmed during the screening of each plan/policy supported by the project.

Risk Description	*Impact and Probability (1-5)*	*Significance (Low, Moderate, High)*	*Comments*	*Description of assessment and management measures as reflected in the Project design. If ESIA or SESA is required note that the assessment should consider all potential impacts and risks.*
Risk 6: Climate or other (ie COVID) shocks occurring during the implementation phase of the Project	I = 3 P = 2	Moderate	Standard 2, q2.2 Standard 3, q3.6	Related to extreme weather events, timing of equipment installation will be informed by seasons - minimizing impact. Regarding COVID-19, uncertainties persist particularly on the African continent and Guinea Bissau has a concerning number of cases relative to its population. UNDP will fully adhere to Government guidelines to contain the spread of the virus, in planning its activities. To the extent possible, the project will employ virtual means for consultations with government and capacity building.

Supporting Documents

Upload available ESS supporting documents.

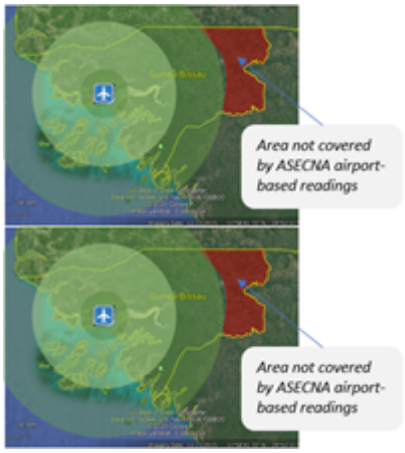
Title	Module	Submitted
PIMS 5443 Guinea-Bissau_SESP_ProDoc Annex 8_16Dec2020_clean	**CEO Endorsement ESS**	

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

This project will contribute to the following Sustainable Development Goal (s): *SDG 1, 2, 3, 5, 6, 9, 11, 13, 14 and 15*
This project will contribute to the following country outcome (UNDAF/CPD, RPD, GPD): **Outcome UNDAP 4)** Public institutions, civil society organizations, and the private sector promote the preservation and development of biodiversity, and the prevention and management of disaster risks (from UNDAF, 2016-2020). **> Linkages to UNDP's Strategic Plans**, the outgoing one (2018-2021) and the one under development (2022-2025), with a core focus on ?Building resilience?: strengthening the capacity of countries, institutions and people to prevent, mitigate and respond to diverse risks including crisis, conflict, natural disasters, climate and social and economic shocks.

	Objective and Outcome Indicators	**Baseline**	**Mid-term Target**	**End of Project Target**
Project Objective: **To strengthen the climate monitoring capabilities, early warning systems and information for responding to climate shocks and planning adaptation to climate change in Guinea-Bissau.**	***Mandatory*** *Indicator 1: # direct project beneficiaries disaggregated by gender (individual people)*	*TOTAL: 234 people:* *109 women* *125 men* *(corresponding to those directly consulted by the project during the PPG)*	*TOTAL: Approx. 50,000* *26,000 women (based on the current demographic sex ratio)* *24,000 men* *(corresponding to half of the estimated number of potential clients for improved weather and climate monitoring information in specific applications)*	*TOTAL: Approx. 100,000 people* *52,000 women (based on the current demographic sex ratio)* *48,000 men* *(corresponding to the estimated number of potential clients for improved weather and climate monitoring information in specific applications)*

	Objective and Outcome Indicators	Baseline	Mid-term Target	End of Project Target
	Mandatory *Indicator 2: # indirect project beneficiaries disaggregated by gender (individual people)* -	*TOTAL: 4,260 people:* *3,190 women* *1,070 men* *(corresponding to those indirectly consulted by the project during the PPG)*	*TOTAL: At least 700,000 people:* *364,000 women (or 52%, based on the current demographic sex ratio)* *336,000 men* *(corresponding to those with access to climate information being broadcasted through radios by Phase II)*	*TOTAL: 1,63 million indirect beneficiaries (or 89% of the population)* *0.85 million women (or 52%, based on the current demographic sex ratio)* *0.78 million men* *(corresponding to those with access to community and private radios[1])*

	Objective and Outcome Indicators	Baseline	Mid-term Target	End of Project Target
	Mandatory *GEF Core Indicators 3: Area of landscapes under improved practices (hectares; excluding protected areas)*	*Approx. 3.0 million hectares (or approx. 80% of the country?s surface)* *(corresponding to the country?s surface currently covered by minimally accurate meteorological observations based on ASECNA airport based reading as of 2019)* 	*3.6125 million hectares* *(corresponding to the country?s surface, including a 20% maritime surface)*	*3.6125 million hectares of land plus the bulk of the EEZ* *(corresponding to the country?s surface and its maritime area)*
Project component 1	**Transfer of technologies for climate monitoring infrastructure**			

	Objective and Outcome Indicators	Baseline	Mid-term Target	End of Project Target
<u>Project Outcome 1)</u> Enhanced capacity of national hydro-meteorological (NHMS) and environmental institutions to monitor extreme weather and climate change	*Indicator 4: Number of hydro-meteorological stations upgraded and functioning*	*0 Automatic Acoustic Limnigraphic stations* *0 Automatic Acoustic Tidal Gauge Stations* *0 Automatic Rain gauge Stations* *0 Automatic Weather Stations* *0 maritime weather stations (AWS430)* *MetCast observation console (MCC301) in the 0 ports of Guinea-Bissau*	*6 Automatic Acoustic Limnigraphic stations* *1 Automatic Acoustic Tidal Gauge Stations* *5 Automatic Rain gauge Stations* *5 Automatic Weather Stations* *1 maritime weather stations (AWS430)* *MetCast observation console (MCC301) in the 3 ports of Guinea-Bissau*	*15 Automatic Acoustic Limnigraphic stations* *3 Automatic Acoustic Tidal Gauge Stations* *10 Automatic Rain gauge Stations* *10 Automatic Weather Stations* *3 maritime weather stations (AWS430)* *MetCast observation console (MCC301) in the 6 ports of Guinea-Bissau*
	Indicator 5: Number of local observers and maintenance staff trained and participating in Summer and Master courses	*0 candidates selected for Master courses* *0 participants in summer courses*	*Up to 5 candidates selected for Master courses* *20 participants in summer courses*	*Up to 10 candidates selected for Master courses* *40 participants in summer courses*

	Objective and Outcome Indicators	Baseline	Mid-term Target	End of Project Target
	Indicator 6: % of the equipment installed by the project still functioning at the end of the project	*Not applicable* *(project not started)*	*100%* *(by mid-term all equipment is installed and new)*	*85%* *(with the status quo of difficult maintenance of equipment, it is likely that some equipment may be malfunctioning, but the aim is to do better that other projects, where approx. 50% is already malfunctioning by project end)*

	Objective and Outcome Indicators	Baseline	Mid-term Target	End of Project Target
Outputs to achieve Outcome 1	Output 1.1) Installation or rehabilitation (as appropriate) of 15 Automatic Acoustic Limnigraphic stations (with data logger and telemetry) Output 1.2) Installation or rehabilitation (as appropriate) of 3 Automatic Acoustic Tidal Gauge Stations (with data logger and telemetry) Output 1.3) Installation or rehabilitation (as appropriate) of 10 Automatic Rain gauge Stations (with data logger and telemetry) Output 1.4) Installation of 10 Automatic Weather Stations (with data logger and telemetry) Output 1.5) Procurement and installation of 3 maritime weather stations (AWS430), maritime observation console (MCC401), MetCast observation console (MCC301) in the 6 ports of Guinea-Bissau Output 1.6) Design and installation of data processing facilities, open climate data portal (OCDP), and forecasting system Output 1.7) Procurement of weather forecasting services Output 1.8) Development and implementation of a capacity building program to provide the Guinea-Bissau with the required capacity to operate and maintain the observation network and develop services Output 1.9) Strengthen community demand and develop participative community driven monitoring of Climate Information Services as well as EWS response capacities at local/site level			
Project component 2	**Climate information integrated into priority development plans and early warning systems to support the NAP process**			

	Objective and Outcome Indicators	Baseline	Mid-term Target	End of Project Target
<u>Outcome 2)</u> **Efficient and effective use of hydro-meteorological and environmental information for decision-making, early warnings and mainstreaming CC in the long-term development plans**	*Indicator 7: Number of national, sectoral and sub-national plans informed by accurate and up-to-date climate information*	*No plans informed by accurate and up-to-date climate information*	*At least 3* *(considering that at least the national development plan and 1 or 2 subsidiary plans will be updated in the next 3-4 years)*	*At least 4, ideally 6.* *(considering the following as the most likely to be updated in the next 5-6 years: National development plan, Environmental Management, NBSAP, Agricultural strategy/plan, and Water resources plan, coastal zone planning)*
	Indicator 8: Number of tailored climate information products developed	*An agro-hydro-meteorological bulletin is provided by the Multidisciplinary Working Group / National Meteorology Institute and hydrological bulletins are provided by the DGRH*	*At least 3* *(considering that some of the specific applications of whether and climate information systems mentioned further up, counting 10, will be developed by Phase II)*	*At least 5* *(or approximately half of the specific applications of whether and climate information systems)*

	Objective and Outcome Indicators	Baseline	Mid-term Target	End of Project Target
	Indicator 9: A efficient and sustainable mechanism for sharing climate information products and early warning information is created	*0 mechanism for sharing climate information products and early warning information is created*	*A mechanism climate information products and early warning information is created*	*A mechanism climate information products and early warning information is functioning*
Outputs to achieve Outcome 2	Output 2.1) Institutional strengthening the institutional framework for collection of climate data, for the production and dissemination of climate information products and decision making for early warning of the national hydrology and meteorology services Output 2.2) Development of the National Framework for Climate Services to strengthen the integration of climate information into planning, including the Integration of climate risks into the GB 2025 development strategy and related operational programs in coordination with the NAP process Output 2.3) Development of a sustainable financing mechanism for the climate information production and dissemination systems Output 2.4) Development of new tailored climate information products for the users in the priority vulnerable sectors and locations (Protected Areas, world importance biodiversity spots, agriculture, fisheries and natural capital,?) identified in coordination with the NAP process Output 2.5) Development of an efficient and sustainable mechanism for sharing climate products and early warning information			
Project component 3	**Monitoring, evaluation and Knowledge management.**			

	Objective and Outcome Indicators	Baseline	Mid-term Target	End of Project Target
<u>Outcome 3)</u> **Lessons learned by the project through participatory M&E, with special attention to gender mainstreaming, are made available to support the financial sustainability of the strategy**	*Indicator 10: Number and type of targeted institutions with increased capacity to assimilate and forecast climate and environmental information*	*0* *(project not started)*	*Up to 2* *(Institutions such as the National Meteorological Institute and the DGHR have the capacity to assimilate climate and environmental information and will be directly benefitting from the project by then)*	*Up to 5* *(considering a broader range of national and potentially also sub-national institutions)*

	Objective and Outcome Indicators	Baseline	Mid-term Target	End of Project Target
	Indicator 11: Wider public awareness: *(a) number of awareness and education campaigns* *(b) number of people participating in the awareness-raising activities* *(c) Number of products developed for disseminating project lessons and knowledge*	*(a) 0 (project not started)* *(b) 125 directly consulted men* *109 directly consulted women* *(c) 0 (project not started))*	*(a) 2* *(b) 2000 (ratio 60/40)* *(c) 1* *(Each campaign includes ten communities at least, each community 100 people=* *2x10x100 = 2000* *Ratio: 60% men, 40% women is considered a viable parity indicator given the baseline)* *(a) 2* *(b) 2000 (ratio 60/40)* *(c) 1* *(Each campaign includes ten communities at least, each community 100 people=* *2x10x100 = 2000* *Ratio: 60% men, 40% women is a good parity indicator)*	*(a) 4* *(b) 4000 (ratio 60/40)* *(c) 2* *(Each campaign includes ten communities at least, each community 100 people=* *4x10x100 = 4000)*

	Objective and Outcome Indicators	Baseline	Mid-term Target	End of Project Target
Outputs to achieve Outcome 3	3.1. Project activities and impacts on global, national and local adaptation benefits of climate information and EWS are assessed and monitored. 3.2. Project lessons and knowledge codified and disseminated nationally and internationally 3.3. Wider public awareness of climate services available and the benefits of their use achieved through comprehensive multimedia outreach and education campaigns			

[1] According to the National Regulatory Authority for Information Technology and Communication, in 2012 community and private radios reach 89% of the population.

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

Comments from Council Members and Responses

Germany Council member comments at work program, 25th Council Meeting	Response

Germany welcomes the proposal, which aims to strengthen climate monitoring capabilities, early warning systems and information for responding to climate shocks and planning adaptation to climate change in Guinea Bissau. Germany particularly welcomes that the project contributes to respond to the climate information needs identified through the NAPA and that will set solid foundations for the successful implementation of several priorities of the INDC and Guinea Bissau 2025 development strategy. <u>Germany would like to make the following recommendations on how the project proposal document could be further refined:</u> Germany welcomes the **distinct focus of the proposal on the private sector**. As the proposal outlines, the **private sector will benefit from improved access to climate and weather data**. The private sector is also meant to contribute financially to the provisioning of such services, thereby enabling the emergence of a market for climate services in Guinea Bissau that will help to generate consequent revenues to support the sustainability of the climate information and early warning system. However, Germany would welcome that it is **described more clearly which private entities are able and willing to pay for such services**, and that it becomes more **clear whether sufficient resources can be mobilized to ensure sustainability of climate services.** This matter should be addressed under ?risks?.	The project will explore different applications of climate information systems. and information for commercial or private sector use during implementation, which could generate revenue for met services the generation of tailored climate products. In section 3 (The Long-term solution and Barriers to achieving it), examples of applications are mentioned. Beyond food security and Early Warning Systems (EWS) for managing climate-induced disasters ? which would be the primarily focus of the grant -- the following income-earning sectors can also eventually benefit from climate information and have been considered: commercial agriculture; building and management of infrastructure; mining and oil & gas operations; land, air and maritime transport management; integrated water resources management; and certain aspects of coastal zone and land management. However, it will take a while before these sectors are sufficiently developed in Guinea-Bissau, and before they can come to demand climate information services and effectively pay for them. We stress that is the long-term perspective. Currently, the climate services are fully public. We expect that a minimum of 10 to 15 years of development would be needed before a sufficient resources can be mobilized from climate service users and some level of cost-offsetting can be achieved. Financial sustainability targets of for climate services in a country like Guinea-Bissau should be very modest because of the low baseline. In section ?The State climate information services?, we outline the typical pathway that countries pursue when developing national climate services. A figure is included in the mentioned section to illustrate the hierarchy of levels of services according to categories. Given the poor state of the state of the hydrology and meteorology observation and monitoring network in Guinea-Bissau, and the data processing capabilities at the hydrology and the meteorology institutes in Guinea-Bissau, we stress that the baseline scenario in the country is not yet sufficiently advanced to fully comply with CATEGORY 1, which corresponds to the ability to deliver a basic range of climate data and products, to participate in regional climate forums, and to engage in limited interactions with end-users. The level of service that includes specialized climate products that may be interesting to the private sector belong to CATEGORY 4. There is a long way to go for Guinea-Bissau. At the same time, the implementation strategy is divided in 3 phases, with two mid-term reviews and a close monitoring plan. This approach will contribute to reducing the risks related to long term O&M of investments that can challenge the

Germany recommends that the project proposal describes how **newly installed equipment can be protected against damage or being stolen.** This matter can be addressed under ?risks?. Building ownership among local communities can be one promising approach in this context.	Risk 7 of the project is ?Sustainability of investment due to inadequate security and Operations & Maintenance [O&M]. This risk will be mitigated through the proposed phased approach related to equipment and installation under Component 1, as well as specific activities aimed at creating awareness and a sense of ownership within the communities where the equipment will be located. The project will have a step-by-step development of protocols for successfully engaging local communities and awareness raising about the importance of caretaking and maintaining the equipment. With a robust plan for engaging stakeholders and local communities in implementation, it is expected that the mentioned risk will be mitigated. More importantly, site selection will be contingent on a costed O&M plan with roles and responsibilities clearly defined. Activities that develop institutional capacity also includes those under Output 2.5. They mention: ?early warning: communication and outreach implies that a set of stakeholder-focused activities for integrating climate information in early warning by means of customized messaging and dissemination are developed.? The mentioned output focuses the decision-making process at all levels from the individuals at remote communities to the policymakers. Activities related to the communication strategy that includes advocacy, partnership and mediation and conflict resolution tools, such as with local communities, will also contribute to sustainability of the equipments as part of their monitoring and maintenance beyond the project life cycle.

Regarding the **capacity building activities** Germany recommends that the proposal specifies the concrete target audience (types and approximate number of institutions and stakeholders) to be trained under subcomponents 1.7, 2.1 and 2.2 of the project, also noting that and how women will be addressed by trainings.	Training activities have been further elaborated including types of training and target audiences. These include for example technical training for O&M, development of tailored products, and application of climate information. Women are viewed as key actors of proactive engagement in the Early Warning Systems and disaster management. A Gender Assessment and Action Plan for the project has been development and is included in the submission package. It seeks engagement of women in training activities and integrates the economic activities (small scale farmers, subsistence economy) and social role (caretaking of household, children, elderly) of women, mainly in rural/ semi-urban communities into the core EWS program and activities for Guinea-Bissau, following recent best practice from other countries in the region and beyond. Related gender disaggregated indicators and targets are also captured in the logframe.

Belgium Council member comments at work program inclusion	**Response**

1. Belgium: Beginning next year EU will invest in early warning systems for agriculture and the proposal seems rather expensive in comparison ? Please justify	This is noted. UNDP started coordinating with EU already. A meeting was held with EU Guinea Bissau in February 2021 to inform about the ongoing projects including the pipeline and information was shared. A second meeting was held the same month with a specific research project ?DeSIRA? funded by the EU, which aiming at installing a network of tide gauges and the development of a marine and coastal observation system. UNDP will continue exchanging with all the relevant stakeholders, inducing EU on agriculture, to seek complementarity. The project will also engage with other sectors such as mining and transportation. During the project development phase, an assessment was conducted as to the needs of government related to EWS equipment and capacity building, the project description has been carefully elaborated concerning details on the types of equipment and support to be provided during implementation. In addition, it should be stressed that the LDCF project does not have a narrow focus on EWS, but a much broader focus on raising the level of climate information and early warning systems involving the meteorological and hydrological services, and by considering the very low baseline that the current services find themselves in. Descriptions in PRODOC section 4 (Baseline scenario and any associated baseline projects) have been revised to better explain what this means for both water and meteorology services and institutions.

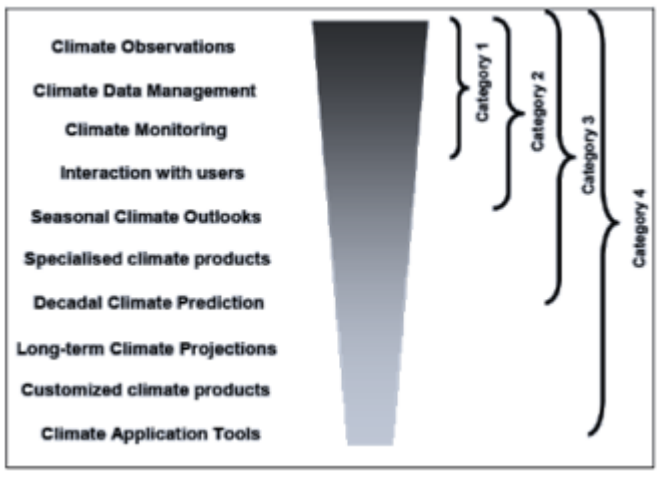
2. Belgium: Is our impression correct that the co-financing would come from other projects (agriculture, fisheries, rice) that would profit from the EWS and don?t we need co-financing for the meteorological systems themselves? ? Please advise	Co-financing has been provided by the Ministerio de Agricultura e Desenvolvimento Rural (IFAD through PADES and REDE Projects), Secretaria de Estado do Ambiente e Biodiversidade, Ministerio dos Recursos Naturais e Ambiente and UNDP. Indeed, co-financing is largely related to the sectors benefiting from the EWS. The Ministry of Transport and Telecommunications ? National Institute of Meteorology, however, is the Implementing Partner for the project and therefore has an integral role. There are technical and financial challenges that the project will seek to address with the partner, which can strengthen its capacity in its role going forward.

3. The sustainability of the systems doesn?t look very well secured ? Please elaborate on sustainability considerations	Sustainability was an important consideration in the development of the project, and it is cross cutting alongside the 3 components with very specific actions for the upscaling and sustainability in the component 3. The sustainability strategy of the project includes a phased approach related to equipment and installation under Component 1, as well as specific activities aimed at creating awareness and a sense of ownership within the communities where the equipment will be located. The project will have a step-by-step development of protocols for successfully engaging local communities and awareness raising about the importance of caretaking and maintaining the equipment. These steps include: 1. Establish an observation network, with operations and maintenance (O&M) and financing plan 2. Implement data transmission systems (telemetry) and data processing/managing infrastructure. 3. Produce forecasts based on models. 4. Establish and produce specialized climate services, which may include early warning systems. 5. Develop response capacity. i.e. understanding and knowing how to make use of climate information products and take adequate actions. These steps will be followed for the three main domains of weather/climate, hydrology and marine services. In each of these domains, topics such as infrastructure, human resources, funding, institutional framework and operational strategy, procedures and protocols will have to be analyzed and specific plans more closely defined and implemented by the project team. This requires capacity that is currently not in place in Guinea-Bissau. Therefore, there is an important role for technical assistance in this project. In addition, a gradual approach to capacity development will ensure that technology uptake and stakeholder engagement will have the best chances of success. With a robust stakeholder and local community?s engagement plan implemented with the project, the risk will be mitigated. Importantly, site selection will be contingent on a costed O&M plan with roles and responsibilities clearly defined.

Comments at PIF Stage

1a) STAP Comments at PIF Stage and UNDP?s response

STAP Comments	Responses	Document references
STAP Scientific and Technical screening of the Project Identification Form (PIF), dtd. 18 May 2018		
Overall STAP assessment at PIF stage: <u>Minor issues to be considered during project design</u>		

STAP Comments	Responses	Document references
STAP Scientific and Technical screening of the Project Identification Form (PIF), dtd. 18 May 2018		
[GENERAL] STAP welcomes the UNDP proposal "Strengthening climate information and early warning systems for climate resilient development and adaptation to climate change in Guinea".	**Response to Point #1)** The different areas of application of climate information were duly considered in the PRODOC, as well as the needs and demands that this represents for different decisionmaking contexts, sectors etc. However, the state of development of Guinea-Bissau?s climate services is still very incipient and therefore, more basic needs are to be attended to first, before a segmentation of and sophistication of climate services can be considered. In connection with it, we make reference to PRODOC Figure reproduced below, in which Category 1 corresponds to the ability to deliver a basic range of climate data and products, to participate in regional climate forums, and to engage in limited interactions with end-users. ***PRODOC Figure 6.*** ***Hierarchy of national climate services***  Source: World Meteorological Organization. Guidelines on Frameworks for Climate Services at the National Level, 2012. Available at: <https://gfcs.wmo.int/sites/default/files/events/Regional%20Workshop%20on%20Climate%20Services%20at%20the%20National%20Level%20for%20the%20LDCs%20in%20Asia/GuidetoClimateServicesattheNationalLevelFinalOctober2012.pdf> Given the poor state of the state of the hydrology and meteorology observation and monitoring	*PRODOC Figure 6:* PRODOC Section 4) BASELINE SCENARIO AND ANY ASSOCIATED BASELINE PROJECTS > *State climate information services* - - - PRODOC Section IV. RES

STAP Comments	Responses	Document references
STAP Scientific and Technical screening of the Project Identification Form (PIF), dtd. 18 May 2018		
[#2] With regard to early warning systems, it is important in include education and communication of vulnerable communities so that their ability to interpret, and confidence in warning information is enhanced.	**Response to Point #2)** Stakeholders have been duly integrated in the development process of the project. Refer to Section 2 in this document for all relevant references. It is also worth mentioning that filed level consultations were carried out during the PPG and the team covered approximately 80% of all locations where current observation stations exist (functional or not) and they consulted local stakeholders, women included with a gender equality mainstreaming approach in view. Local communities, including women, will be involved in the project as recipients of climate information, as caretakers of equipment and, where possible also, as innovators with respect climate information services and EWS. Refer to standard Activity 6 under Outputs 1.1 through 1.6: *Activity 1.X.6) Commissioning and transfer: ?[...]Especial attention will be given to train local operators and developers in the management and use of the systems. Therefore this activity will be related and carried out in coordination to activity 2.5.2.* *The ownership of the station will pass to the community after succesfull tests during oficial inauguration in the presence of the community. A ceremony will be organized, and a memorandum will be signed between the institutions and the hosting community. Caretakers will be elected who will be maintaining the site. ?* We also highlight the following Outputs and, in particular, the set of activities foreseen under them: *Output 1.9) Strengthen community demand and develop participative community driven monitoring of Climate Information Services as well as EWS response capacities at local/site level* *Output 2.4) Development of new tailored climate information products for the users in the priority vulnerable sectors and locations (Protected Areas, world importance biodiversity spots, agriculture, fisheries and natural capital,,?) identified in coordination with the NAP process*	- PRODOC Section IV. RESULTS AND PARTNERSHIPS > 1) EXPECTED RESULTS - Description of Outputs 1.8 and 1.9

STAP Comments	Responses	Document references
STAP Scientific and Technical screening of the Project Identification Form (PIF), dtd. 18 May 2018		
[#3] With regard to the use of climate information to support long-term planning and resilience interventions, it would be useful to draw upon the recent literature that describes robust conclusions	**Response to Point #3)** Recent investigation on the impact of climate change in the climate zones of West Africa indicate a significant climate shift towards more semi arid and arid conditions (Sylla, Mouhamadou & Elguindi, Nellie & Giorgi, Filippo & Wisser, Dominik. (2015). Projected robust shift of climate zones over West Africa in response to anthropogenic climate change for the late 21st century. Climatic Change. 134. 10.1007/s10584-015-1522-z.) Land owners using weather and climate information, based on experience, tradition and intuition, perceive that this is no longer a reliable approach. Incorporating climate information on long term planning has been demonstrated with success and is becoming mainstream in developing countries (Coughlan, K.J. & Huda, Samsul. (2008). Use of weather and climate information for agricultural planning and decision making. Journal of agrometeorology. 249-260.). A recent study focusing on farmers in Burkina Faso showed that farmers who received climate information, coupled with agricultural advices, showed a great understanding on how such information can be translated into adaptation strategies (Refer to Lugen M., Diaz J., Sanfo S. & Salack S. (2018),Using climate information and services to strengthen resilience in agriculture: The APTE-21 project in Burkina Faso, KLIMOS Working Paper n?15, KLIMOS-ACROPOLIS, Brussels, Belgium.). The proposed approach in the Outcome 2 takes into account these conclusions and the proposed project design has relied on the robust recomendations emerging from previous experiences.	

STAP Comments	Responses	Document references
STAP Scientific and Technical screening of the Project Identification Form (PIF), dtd. 18 May 2018		
[#4] STAP commends the forward-thinking approach of this project to ensure the greatest penetration of rural areas through the use of cell-phones. A number of projects across Africa are underway to	**Response to Point #4)** Activity 2.5.3) Develop communication and diffusion is focused on ensuring penetration in rural areas relying on suficient cell phone coverage. This approach follows the succesfull experiences in East and West Africa applying GSM technologies for warning pests, diseases, and floods.	

STAP Comments	Responses	Document references
STAP Scientific and Technical screening of the Project Identification Form (PIF), dtd. 18 May 2018		
[#5] A number of new hydrological monitoring stations and automatic weather stations are planned to be constructed. While it has been mentioned that personnel will be trained to operate these, it will be	**Response to Point #5)** The inception mission and the field-level consultation mission during the PPG revealed that one of the critical success factors is to ensure full community engagement, a sense of ownership vis-?-vis equipment entrusted to community members and a bottom up approach that considers the needs of communities and climate information clients. Several sites that were visited during the field mission confirmed that the failure to ensure these elements would lead to total deterioration and vandalization of donated infrastructure. These observations lead to specifically define output 1.9 as a customized community approach model and protocol to be developed. This proposed approach and innerent protocol will create the best conditions possible so that communities develop a sense of ownership of both equipment and products and act following a beneficiary and client-based aproach instead of a project-based approach.	

1b) GEF Secretariat Review at PIF Stage and UNDP?s response

GEF Secretariat Comments to the PIF, 18 Dec 2018.	Responses	Document references
Review item 2 under PartII, pertaining to the baseline scenario, should be addressed in further detail by CEO endorsement. As indicated, by CEO Endorsement, the Secretariat would appreciate further details and further development of the rationale linking the proposed LDCF initiative to the two infrastructure projects, as well as elaboration on the adaptation benefits delivered by this project specifically relating to these baseline investments.	This is addressed in the PRODOC. Refer also to relevant sections reproduced herein in Part I, Sections 2, 5 and 6.	PRODOC Section 4) BASELINE SCENARIO AND ANY ASSOCIATED BASELINE PROJECTS > Baseline finance

ANNEX C: Status of Utilization of Project Preparation Grant (PPG). (Provide detailed funding amount of the PPG activities financing status in the table below:

PPG Grant Approved at PIF: **150,000**			
Project Preparation Activities Implemented	***GETF/LDCF/SCCF Amount ($)***		
	Budgeted Amount	***Amount Spent To date***	***Amount Committed***
Technical assistance (design technical elements as well as all the required financial and administrative components of the project), Conducting missions to the project sites, Stakeholder consultation and validation workshop	**150,000**	**149,934**	**66**

ANNEX D: Project Map(s) and Coordinates

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

Please See 1b or PRODOC Annex 1: Project Map and Geospatial Coordinates of project sites.

ANNEX E: Project Budget Table

Please attach a project budget table.

Expenditure Category	**Detailed Description**	**Component (USDeq.)**						**Total (USDeq.)**	Responsible Entity
		Component 1	***Component 2***	***Component 3***	***Sub-Total***	***M&E***	***PMC***		(Executing Entity receiving funds from the GEF Agency) [1]

Equipment	Costs of acquisition of equipment needed by the PMU e.g. computers, phones, sdt office software, etc. Detailed procurement plans to be prepared during the project?s first months.				-		25,000	25,000	MTTNIM
Grants	Call for proposals in connection with Activity 2.4.7) Development of Prototypes. Refer to PRODOC for relevant descriptions. UNDP may choose to use the services of the SGP for carrying out the call and selecting viable candidates. All activities under Output 2.4) Development of new tailored climate information products for the users in the priority vulnerable sectors and locations (Protected Areas, world importance biodiversity spots, agriculture, fisheries and natural capital, etc) identified in coordination with the NAP process will be screened for gender sensitivity and will be participatory and locally adapted. Refer to PRODOC descriptions where a coordinated approach to activities and the use of their respective budgets is described.		90,000		90,000			90,000	MTTNIM

Grants	Incentives in the form of grants will be provided to innovators for implementing mini projects in connection with Activity 2.4.7) Customized applied Research in Phases II and III. All activities under Output 2.4 (especially the grant-making one) will be screened for gender sensitivity and will be participatory and locally adapted. Refer to PRODOC descriptions where a coordinated approach to activities and the use of their respective budgets is described. Following POPP guidance on low value grants.	190,000			190,000			190,000	MTTNIM
Grants	Payment of tuition and other expenses in connection with Activity 1.8.5) Summer school & selection of candidates; Activity 1.8.6) Master courses. To be implemented through govt programme, or following UNDP POPP guidance related to micro capital grants or low value grants.	300,000			300,000			300,000	MTTNIM

Grants	This budget line corresponds to the grant-making mechanism described in the PRODOC under Activity 2.3.6) Setup a support platform. An inter-institutional arrangement is expected to be settled though a MoU for the purposes of grant-making. Incentives in the form of grants will be provided to innovators for implementing mini projects in connection with Activity 2.3.6) Set-up a support platform in Phases II and III. All activities under Output 2.3) Setup a support platform will be screened for gender sensitivity and will be participatory and locally adapted. Refer to PRODOC descriptions where a coordinated approach to activities and the use of their respective budgets is described. Following POPP guidance on low value grants.		60,000		60,000			60,000	MTTNIM

Contractual services-Individual	PROJECT CORE TEAM: Chief Technical Advisor specialized in EWS and DRM. Remuneration for the project team (rounded-off proforma figures and pro-rata across at least 2 output, budgeted for at least 48 months, to be adjusted before recruitment and during project implementation). The remuneration level herein included is for budgeting purposes. The actual remuneration will follow the contracting entity?s policies, procedures and remuneration scales. Also, for the purposes of budgeting, a coefficient for remuneration increase at approx. 3% per year has been inbuilt in the calculus.		403,968		403,968			403,968	MTTNIM

Contractual services-Individual	PROJECT CORE TEAM: National Technical Officer specialized in community engagement and Gender. The budget line covers the remuneration for the project team member, is for budgeting purposes only, rounded-off and as proforma figures, budgeted for at least 64 months (max. 68, depending on conditions), to be adjusted before recruitment. The actual remuneration will follow the contracting entity?s policies, procedures and remuneration scales. Also, for the purposes of budgeting, a coefficient for remuneration increase at approx. 3% per year has been inbuilt in the calculus.	117,791			117,791			117,791	MTTNIM

Contractual services-Individual	PROJECT CORE TEAM: National Technical Officer specialized in Water Resources. The budget line covers the remuneration for the project team member, is for budgeting purposes only, rounded-off and as proforma figures, budgeted for at least 64 months (max. 68, depending on conditions), to be adjusted before recruitment. The actual remuneration will follow the contracting entity?s policies, procedures and remuneration scales. Also, for the purposes of budgeting, a coefficient for remuneration increase at approx. 3% per year has been inbuilt in the calculus	117,791			117,791			117,791	MTTNIM

Contractual services-Individual	PROJECT CORE TEAM: Project Manager (MANAGERIAL TASKS). Amount pro-rata. Remuneration for the project team (rounded-off proforma figures technical/managerial, budgeted for at least 72 months, to be adjusted before recruitment and during project implementation). The remuneration level herein included is for budgeting purposes. The actual remuneration will follow the contracting entities policies the contracting entity?s policies, procedures and remuneration scales. Also, for the purposes of budgeting, a coefficient for remuneration increase at approx. 3% per year has been inbuilt in the calculus.				-		170,084	170,084	MTTNIM

Contractual services-Company	Blended national / international teams of consultancy in Phases I, II and II in connection with Activities 1.9.1 through 1.9.7 -- that is, all activities under Output 1.9) Strengthen community demand and develop participative community driven monitoring of Climate Information Services as well as EWS response capacities at local/site level. The different consultancies and the training of trainers that are involved may be broken-down into more than one lot to be tendered out. All activities will be screened for gender sensitivity and will be participatory and locally adapted.	283,000			283,000			283,000	MTTNIM

Contractual services-Company	Blended national / international teams of consultancy in Phases I, II and II in connection with Activities 2.2.1 through 2.2.6 -- that is, all activities under Output 2.2) Development of the National Framework for Climate Services to strengthen the integration of climate information into planning, including the Integration of climate risks into the GB 2025 development strategy and related operational programs in coordination with the NAP process. The different consultancies, and the embedded training / capacity development, may be broken-down in more than one lot to be tendered out. All activities will be screened for gender sensitivity and will be participatory and locally adapted.		60,000		60,000			60,000	MTTNIM

Contractual services-Company	Blended national / international teams of consultancy in Phases I, II and II in connection with Activities 2.3.1 through 2.3.6 -- that is, all activities under Output 2.3) Development of a sustainable financing mechanism for the climate information production and dissemination system. Activity 2.3.1 proposes assessments and the guided process of developing a business plan -- and doing it regularly. It may me done separately by individual consultants. The different consultancies may come with embedded training / capacity development, may be broken-down in more than one lot to be tendered out. All activities will be screened for gender sensitivity and will be participatory and locally adapted.		65,000		6 5,000			65,000	MTTNIM

Contractual services-Company	Blended national / international teams of consultancy in Phases I, II and III of the project in connection with Activities 2.1.1 and 2.1.5 -- that is, all activities under Output 2.1) Institutional strengthening of the institutional framework for collection of climate data, for the production and dissemination of climate information products and decision making for early warning of the national hydrology and meteorology services. All activities will be screened for gender sensitivity and will be participatory and locally adapted. Refer to PRODOC descriptions where a coordinated approach to activities and the use of their respective budgets is described.		160,000		160,000			160,000	MTTNIM

Contractual services-Company	Blended national / international teams of consultancy in Phases II and III, in connection with Activities 2.4.1) Develop localized methodologies for climate hazard mapping; 2.4.2) Investigate local practices on hazard reduction; and 2.4.4) Agenda for the future. All activities will be screened for gender sensitivity and will be participatory and locally adapted. Refer to PRODOC descriptions where a coordinated approach to activities and the use of their respective budgets is described.		750,000		750,000			750,000	MTTNIM
Contractual services-Company	First and second project midterm reviews (MTR) to assess the implementation and impacts of project activities and following established practices and procedures. Official UNDP GEF Guidelines for (MTR) will be followed. The second exercise will be lighter than the usual scope of a MTR.			70,000	70,000			70,000	MTTNIM

Contractual services-Company	International teams of consultancy in Phase I, II and II in connection with Activities under Output 1.7) Development or procurement of weather forecasts services. All activities will be screened for gender sensitivity and will be participatory and locally adapted.	66,000			66,000			66,000	MTTNIM
Contractual services-Company	National technical assistance consultancy in connection with Output 1.9) Strengthen community demand and develop participative community driven monitoring of Climate Information Services as well as EWS response capacities at local/site level. The aim is to develop community actions to assess the demand for climate information services and involve communities in the design and testing of information products. Implementation during Phases I, II and III.	100,000			100,000			100,000	MTTNIM

Contractual services-Company	O&M Costs. While a costed O&M plan is expected prior to site selection, a provision for O&M is provided to ensure sustainability of investments and to allow time for mitigation measures. These funds if not utilized can be reprogrammed to other activities.	200,000			200,000			200,000	MTTNIM
Contractual services-Company	PROCUREMENT OF HIGH VALUE GOODS & SERVICES in connection with Output 1.1) Installation or rehabilitation (as appropriate) of 12 Automatic Acoustic Limnigraphic stations (with data logger and telemetry) | UNDP will provide technical and administrative support for the success of the national procurement process, ensuring that international standards of fairness, competitiveness and transparency are upheld.	260,000			260,000			260,000	MTTNIM

Contractual services-Company	PROCUREMENT OF HIGH VALUE GOODS & SERVICES in connection with Output 1.2) Installation or rehabilitation (as appropriate) of 3 Automatic Acoustic Tidal Gauge Stations (with data logger and telemetry) | UNDP will provide technical and administrative support for the success of the national procurement process, ensuring that international standards of fairness, competitiveness and transparency are upheld.	61,500			61,500			61,500	MTTNIM
Contractual services-Company	PROCUREMENT OF HIGH VALUE GOODS & SERVICES in connection with Output 1.3) Installation or rehabilitation (as appropriate) of 10 Automatic Rain gauge Stations (with data logger and telemetry) | UNDP will provide technical and administrative support for the success of the national procurement process, ensuring that international standards of fairness, competitiveness and transparency are upheld.	155,000			155,000			155,000	MTTNIM

Contractual services-Company	PROCUREMENT OF HIGH VALUE GOODS & SERVICES in connection with Output 1.4) Installation of 10 Automatic Weather Stations (with data logger and telemetry) | UNDP will provide technical and administrative support for the success of the national procurement process, ensuring that international standards of fairness, competitiveness and transparency are upheld.	375,000			375,000			375,000	MTTNIM
Contractual services-Company	PROCUREMENT OF HIGH VALUE GOODS & SERVICES in connection with Output 1.5) Procurement and installation of 3 maritime weather stations (with data logger and telemetry) | UNDP will provide technical and administrative support for the success of the national procurement process, ensuring that international standards of fairness, competitiveness and transparency are upheld.	118,500			118,500			118,500	MTTNIM

Contractual services-Company	PROCUREMENT OF HIGH VALUE GOODS & SERVICES in connection with Output 1.6) Design and installation of data processing facilities, open climate data portal (OCDP), and forecasting system | UNDP will provide technical and administrative support for the success of the national procurement process, ensuring that international standards of fairness, competitiveness and transparency are upheld.	525,000			525,000			525,000	MTTNIM
Contractual services-Company	PROCUREMENT OF HIGH VALUE SERVICES: Blended national / international teams of consultancy in Phases I, II and II in connection with Activities under Output 1.8) Development and implementation of a capacity building program to provide the Guinea-Bissau with the required capacity to operate and maintain the observation network and develop services. All activities will be screened for gender sensitivity and will be participatory and locally adapted.	340,000			340,000			340,000	MTTNIM

Contractual services-Company	Project initiation consultancy aimed at implementing Activities 3.1.2) Design of project monitoring system and review of monitoring indicators and team detailed planning and team building. Funds also be used to specific M& Activity titled "Monitoring of environmental and social risks, and corresponding management plans as relevant".			20,000	20,000			20,000	MTTNIM
Contractual services-Company	Project initiation consultancy aimed at implementing Activities 3.1.3) Review of gender mainstreaming strategy, stakeholder engagement approach and plan and the logical framework with indicators (+ development of specific TORs, review budget allocations, detailed workplanning, etc.)			18,000	18,000			18,000	MTTNIM
Contractual services-Company	Terminal evaluation (TE) following established practices and procedures. Official UNDP GEF Guidelines for TE will be followed.			40,000	40,000			40,000	MTTNIM

International Consultants	National or international consultancy (t.b.d. according to availability of qualified facilitators) in connection with Activity 2.3.5) Business planning and 2.3.4) Assessment of funding instruments (national and external), both under Output 2.3) Development of a sustainable financing mechanism for the climate information production and dissemination system. It is expected that the business planning activity will become a regular in the work planning of national institutions such as the National Institute of Meteorology and the National Directorate of Water Resources.		55,000		55,000			55,000	MTTNIM

International Consultants	Technical international consultancies in Phases I and II, in connection with Activities 2.4.1 through 2.4.6 more broadly, under Output 2.4) Development of new tailored climate information products for the users in the priority vulnerable sectors and locations (Protected Areas, world importance biodiversity spots, agriculture, fisheries and natural capital,,?) identified in coordination with the NAP process. Refer to PRODOC for full descriptions. Travel may be inbuilt in the costs as budgeted.		193,000		193,000			193,000	MTTNIM
Local Consultants	Assessments of working condition of stations and adequacy/effectiveness of O&M plan, and general monitoring			13,000	13,000			13,000	MTTNIM
Local Consultants	Collection and dissemination of project results and analyses. The consultant(s) will develop a detailed workplan.			25,000	25,000			25,000	MTTNIM
Local Consultants	Costs of appointing a local / regional consultant in connection with Activity 2.1.5) Regional integration.		40,000		40,000			40,000	MTTNIM

Training, Workshops, Meetings	Closure workshop with all involved stakeholders for discussing "lessons-learned", follow-up initiatives and the project?s sustainability strategy: Budget reserve for all event related activities and purchases (including domestic travel and catering if needed).			10,000	10,000			10,000	MTTNIM
Training, Workshops, Meetings	National Inception workshop: Budget reserve for all event related activities and purchases			10,766	10,766			10,766	MTTNIM
Training, Workshops, Meetings	Workshops and other public meetings in connection with Activity 2.4.6) National call for the guided development, plus other related activities under Output 2.4) Development of new tailored climate information products for the users in the priority vulnerable sectors and locations (Protected Areas, world importance biodiversity spots, agriculture, fisheries and natural capital, etc) identified in coordination with the NAP process.		30,000		30,000			30,000	MTTNIM

Training, Workshops, Meetings	Workshops and other public meetings in connection with Output 2.2) Development of the National Framework for Climate Services to strengthen the integration of climate information into planning, including the Integration of climate risks into the GB 2025 development strategy and related operational programs in coordination with the NAP process. The project will organize a technical workshop for the establishment of the NFCS presented under this output should/will be combined with other activities listed in the PRODOC. Stakeholders will be brought together to present the purpose, a blueprint and roadmap for the establishment of the NFCS (as documented in the WMO guide No. 1206: Step-by-step Guidelines for Establishing a National Framework for Climate Services).		20,000		20,000			20,000	MTTNIM

Training, Workshops, Meetings	Workshops and other public meetings in connection with Output 2.3) Development of a sustainable financing mechanism for the climate information production and dissemination system.		20,000		20,000			20,000	MTTNIM
Travel	Travel costs directly linked to the managerial activities of the Project Management Unit.				-		24,600	24,600	MTTNIM
Travel	Travel in connection with other technical activities under Component 2 (besides Output 2.5).		21,000		21,000			21,000	MTTNIM
Travel	Travel in connection with technical activities under Component 1.	18,000			18,000			18,000	MTTNIM
Travel	Travel reserve in connection with Output 1.8 (on Capacity building, more broadly), but in particular 1.8.5) Summer school & selection of candidates, Activity 1.8.6) Master courses and also Activity 1.8.3) Training of trainers.	100,000			100,000			100,000	MTTNIM
Office Supplies	Supplies and materials costs linked to the Project Management Unit -- including Covid-19 protective equipment.				-		36,000	36,000	MTTNIM
Other Operating Costs	Annual audits ($5000/year)				-		30,000	30,000	MTTNIM

Other Operating Costs	Costs of different types of short term professional services under Output 2.4 Technical Prototyping and product testing, with focus on: (1) providing: legal and juridical assistance to the project in connection with the preparation of cooperation agreements for prototype development of projects and capacity building; and (2) media and editorial services for preparing materials (electronic or other) in connection relevant activities under the output.		28,000		28,000			28,000	MTTNIM

Other Operating Costs	Costs of legal advisory professional services under Activities 2.1.1 and 2.1.5 -- that is, all activities under Output 2.1) Institutional strengthening of the institutional framework for collection of climate data, for the production and dissemination of climate information products and decision making for early warning of the national hydrology and meteorology services. The focus on proposing changes to the legal and policy frameworks and the negotiation of collaboration MoUs with relevant entities. This will be implemented together with Activity 1.6.5) Design the open climate data portal (OCDP) -- with respect to data sharing frameworks and policies.		30,000		30,000			30,000	MTTNIM

Other Operating Costs	Costs of legal advisory professional services under Output 2.2) Development of the National Framework for Climate Services to strengthen the integration of climate information into planning, including the Integration of climate risks into the GB 2025 development strategy and related operational programs in coordination with the NAP process. The focus on proposing changes to the legal and policy frameworks and the negotiation of collaboration MoUs with relevant entities. This will be implemented together with Activity 1.6.5) Design the open climate data portal (OCDP) -- with respect to data sharing frameworks and policies.		20,000		20,000			20,000	MTTNIM

Other Operating Costs	Legal support for outlining an interinstitutional MoU in connection with design the open climate data portal (OCDP) -- with respect to data sharing frameworks and policies, procurement of weather forecasts services; and legal and technical support for outlining an interinstitutional MoU in connection with Activity 1.7.1) Development of forecasts as a service -- including with respect to data sharing frameworks and policies. This is in view of the quick start-up character of this activity. The professional services required may be carried out together with those required under Activity 1.6.5) Design the open climate data portal (OCDP).	14,000			14,000			14,000	MTTNIM
Other Operating Costs	Public awareness activities/Communications support. The consultant(s) will develop a detailed workplan and work closely with UNDP's communications teams to ensure maximum visibility and donor recognition. Funds may also be used for hiring translation services.			100,000	100,000			100,000	MTTNIM

Other Operating Costs	Web and data platform in connection with Output 2.3) Activity 2.6.1) Design the open climate data portal (OCDP). Development and maintenance foreseen during the project's lifetime.		20,000		20,000			20,000	MTTNIM
		3,341,582	**2,065,968**	**306,766**	**5,714,316**	**-**	**285,684**	**6,000,000**	

ANNEX F: (For NGI only) Termsheet

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

ANNEX G: (For NGI only) Reflows

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

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

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