Empowered lives.
Resilient nations.

# United Nations Development Programme
# Government of Republic of Guinea-Bissau

**Project Document for nationally implemented projects financed by the Least Developed Countries Fund (LDCF)**

| | | |
|---|---|---|
| **Project title:** Strengthen the adaptive capacity and climate resilience of Guinea-Bissau vulnerable coastal communities to climate risks | | |
| **Country:** Republic of Guinea-Bissau | **Implementing Partner:** Ministry of Environment and Sustainable Development (MADS) | **Management Arrangements:** National Implementation Modality (NIM) |
| **UNDAF/Country Program Outcome***:* Outcome UNPAF 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. | | |
| **UNDP Strategic Plan Output:** Signature solution 3: Enhance prevention and recovery for resilient societies | | |
| **UNDP Social and Environmental Screening Category:** Medium Risk | **UNDP Gender Marker:** GEN2 *(It is designed to contribute significantly to gender equality. The different needs of women/girls and men/boys have been analyzed and integrated well in the activities and outcomes.)* | |
| **Atlas Project ID/Award ID number:** 00095375 | **Atlas Output ID/Project ID number:** 00099383 | |
| **UNDP-GEF PIMS ID number:** 4978 | **GEF ID number:** 6988 | |
| **Planned start date:** June 2018 | **Planned end date:** May 2023 | |
| **LPAC date:** Feb 14, 2019 | | |

**Brief project description:**

Sea-level rise for Guinea-Bissau (in comparison of 1995 level) is projected to reach 0.13m, 0.35m, 0.72m and 1.22m for the years 2025, 2050, 2075 and 2100, respectively. With a large and growing population in the coastal zone, coupled with a low adaptive capacity due to the national economy's low-income condition, Guinea-Bissau appears to be highly vulnerable to sea-level rise. Without adaptation, the physical, human and financial impacts will be significant. With a sea-level rise of 0.13m expected by 2025, some 77,800 people can be affected annually by flooding. By 2050, the sea-level would reach 0.35m, affecting as many as 179,800 persons per year. The total cost of sea-level rises for Guinea-Bissau, combining costs of forced migration, land loss, salinization, sea floods and river floods, will be around $8.0 million per year in 2025. These costs will increase to 29.9 million per year for 2050 and they are estimated at $361.8 million per year in 2100. Based on vetted climate change scenarios for the West Africa sub-region, the 2006 NAPA assessed the specific effects of climate changes on the coastal zone. They include: **(i) sea level rise**, as the most prominent effect; **(ii) irregular rainfall patterns and shorter rainy season**, which is likely to affect the agricultural sector; **(iii) shorter cool season**, which could negatively impact coastal and marine ecology; and **(iv) more frequent occurrence of extreme weather**, including longer drought spells, heat waves and not least also storms and storm surges, all of which are disaster events likely to increase the severity and frequency.

As a result, climate change will cause tangible impacts and increased hazard risks in terms of: **(i) coastal erosion**; **(ii) coastal**

**flooding**; **(iii) inland flooding**; **(iv) salt water intrusion**, affecting both surface and groundwater, and by extension the low-lying paddy rice fields. A few hundred thousand households within the coastal area depend on the productivity of paddies for a living. Also, under conditions of unusually high temperatures and low humidity**, (v) wildfires / forest fires** may become more frequent, even though they are a rare phenomenon in the coastal zone. Yet, coastal forests, cashew orchards and possibly also dwellings may be affected with sizable economic and possibly human loss. In addition, climate change is also predicted to have **(iv) a gradual, but adverse effect on fisheries** in Guinea-Bissau. Rising sea temperatures and changes in the oceans' other dynamics, such as acidification and loss of nursery areas, are predicted to reduce fish populations. In places with such rich fisheries such as Guinea-Bissau, coral bleaching and mangroves degradation are known to destroy fish spawning grounds, decreasing thereby the availability of mature fish for capture. This will limit the livelihood options of artisanal fisher-men and -women. All of these climate-driven phenomena undermine food security for coastal populations, for whom seafood and local rice are the main sources of protein and grain, respectively. In addition, fisheries and cashew exports play a vital role for Guinea-Bissau's government, with fees for fishing licenses, currently providing respectively 35% and 20% of government revenue.

This Project will:

- Support the establishment of an enabling political, institutional and administrative environment for advancing the management of the climate risk in the coastal zone;
- Finance additional investments in hard and soft coastal protection measures to help maintain critical economic and natural infrastructure in the face of sea level rise and coastal degradation. Those will include interventions in the agricultural and fisheries sectors, as well as relating to nature protection and restoration, for which the project will build on achievements from baseline interventions and work in close collaboration with co-financed ones; and
- Contribute to strengthening the climatic resilience by having livelihood options for the coastal communities with the special emphasis to most vulnerable groups such as women and youth.

| | |
|---|---|
| GEF, LDCF | USD 12,000,000 |
| UNDP TRAC | USD 500,000 |
| **(1) Total Budget administered by UNDP** | **USD 12,500,000** |
| **PARALLEL CO-FINANCING:** | |
| Ministry of Environment and Sustainable Development (MADS) | [in-kind, not monetized] |
| Ministry of Agriculture, Forests and Livestock, in connection with Project 'Global Alliance for Resilience (AGIR) - Sahel and West | USD 51,729,172 |
| Ministry of Agriculture, Forests and Livestock, in connection with AfDB's Rice Value Chains Project | USD 6,400,000 |
| | |
| **(2) Total co-financing** | **USD 58,129,172** |
| **(3) Grand-Total Project Financing (1) + (2)** | **USD 70,629,172** |

**SIGNATURES**

| | | |
|---|---|---|
| **Signature:** | **Agreed by Government** | **Date:** |
| **Signature:** | **Agreed by Implementing Partner – MADS** | **Date:** |
| **Signature:** | **Agreed by UNDP** | **Date:** |

# I. TABLE OF CONTENTS

***List of Tables***



***List of Figures***



***List of Boxes***

***List of Abbreviations***

| | |
|---|---|
| AAAC | Competent Environmental Assessment Authority (*Autoridade de Avaliação Ambiental Competente*) |
| AMAE | Association of Women of Economic Activity - *Associação das Mulheres com Actividades Económicas* |
| B&F | Baseline Study and Feasibility Assessment |
| CEATA | Center for Environmental Studies and Relevant Technology |
| CIPA | Artisanal Fisheries Research Center (*Centro de Investigação Pesqueira Aplicada*) |
| CSO | Civil Society Organization |
| ERC | Evaluation Resource Centre |
| FAO | Food and Agriculture Organization of the United Nations |
| FSP | Full Size Project |
| GEF | Global Environment Facility |
| GIS | Geographical Information System |
| GPC | Coastal Planning Office (*Gabinete de Planificação Costeira*) |
| HQ | Head Quarter |
| IBAP | Institute of Biodiversity and Protected Areas (*Instituto da Biodiversidade e Áreas Protegidas*) |
| ICZM | Integrated Coastal Zone Management |
| IEO | Independent Evaluation Office |
| INEP | National Institute of Research and Studies (*Instituto Nacional de Estudos e Pesquisas*) |
| INPA | National Institute of Agricultural Research (*Instituto Nacional de Pesquisas Agrárias*) |
| IUCN | International Union for the Conservation of Nature |
| M&E | Monitoring and Evaluation |
| MADS | Ministry of Environment and Sustainable Development (*Ministério do Ambiente e Desenvolvimento Sustentável*) |
| MOLOA | Regional Mission Observatory for the West African coast (*Mission d'observation du littoral ouest africain*) |
| MOU | Memorandum of Understanding |
| NAP/LD | National Action Programme to combat desertification (*Plano de Acção Nacional da Luta contra a Desertificação – PAN/LCD*) |
| NAPA | National Adaptation Plan of Action |
| NBSAP | National Biodiversity Strategy and Action Plan |
| NGO | Non-Government Organization |
| NIM | National Implementation |
| PA | Protected Area |
| PAFT | Tropical Forest Action Plan |
| PIF | Project Identification Form |
| PIR | Project Implementation Reports |
| PMU | Project Management Unit |
| PNGA | National Environmental Management Plan (*Plano Nacional de Gestão Ambiental*) |
| PPG | Project Preparation Grant |
| PPR | Project Progress Report |
| RTA | Regional Technical Advisor |
| SEA | Strategic Environmental Assessment |
| SDG | Sustainable Development Goal |
| SDG | Sustainable Development Goals |
| SDLAO | Master Plan for Coastal West Africa (*Schéma Directeur Littoral Afrique de l'Ouest*) |
| SESP | Social and Environmental and Screening Procedure |
| SSTrC | South-South and Triangular Cooperation |
| TE | Terminal Evaluation |
| TOC | Theory of Change |
| UEMOA | West African Economic and Monetary Union |
| UNDAF | United Nations Development Action Framework |
| UNDP | United Nations Development Program |
| UNDP -POPP | United Nations Development Program - Program and Operations Policies and Procedures |
| UNFCCC | United Nations Framework Convention on Climate Change |

# II. DEVELOPMENT CHALLENGE

## Context and the Core Problem

Guinea-Bissau is located in the West African north-western inter-tropical zone, bordered by Senegal to the north and Guinea to the south and east, with the Atlantic Ocean to its west. The climate is sub-humid with two marked seasons with rainfall displaying great variation from the northern part of the coastal zone to the south, and from the coast to the interior, where the lowest levels of rainfalls are observed. The country's surface area is 36,125 square kilometers, of which 22% is water, combining the territorial sea, major rivers and wetlands. An important feature in the coastal zone is the Bolama-Bijagós archipelago, which includes of over 88 islands and islets, many of which have no permanent settlements. Much of the archipelago is under conservation status. With approximately 10% of Guinea-Bissau's territory composed islands, the country is an integral part of the LDC-SIDS group and by default vulnerable to climate change.

Most of Guinea-Bissau's continental land consists of estuaries, mangroves and coastal wetlands, interspersed with low-lying cropland fields, which have for generations provided sustenance to local communities. Over 19% of the country's land surface lies in areas where elevation is below 10 meters above sea level (islands included). In addition, the country's geography is such that coastal slopes rise softly inland, allowing tidal flooding to reach as far inland as 150 kilometers.[1] Furthermore, in spite of the country's relatively small land area, its coastal length is significant. WRI e.g. reported it to measure more than 3,000 kilometers.[2] In fact, Guinea-Bissau has probably the highest ratio of coastal length to land area among continental counties in Africa. For the same reason, the maritime influence in the Guinea-Bissau's geography is therefore significant and according to the Coastal Planning Office (GPC), the coastal zone covers almost two thirds of the country's territory.

Overall, it can be said that it is the natural geophysical conditions described herein that make Guinea-Bissau's coastal zone highly exposed to climate change impacts, in particular sea level rise. At the same time, the presence of a strong vegetation mesh of mangrove ecosystems can function, in certain locations and depending on conditions, as the first line of natural defense against sea-level rise. These elements function simultaneously as **vulnerabilities and assets** vis-à-vis climate change adaptation in Guinea-Bissau's coastal zone – as it will be explained.

**Climate change scenarios** for Guinea-Bissau have been assessed under this project, using the 2014 Fifth Assessment Report (AR5) by the Intergovernmental Panel on Climate Change (IPCC) and as well the country's 2006 National Adaptation Plan of Action (NAPA).[3] Both assessments point out to the entire coastal zone as a part of the country that is highly exposed to climate hazards, with the risks and costs gradually increasing over time. The coastal zone is also chiefly important in terms of human settlements and economic activities. Addressing expected climate change impacts in Guinea-Bissau's coastal zone is therefore a national adaptation priority. (Refer to Box 11. IPCC 5th Assessment Report remarks on sea level rise in West Africa in Annex X-1.5 for more details.)

**Demographics:** At least 70% of Guinea-Bissau's population, which tallies 1.8 million people, live within the coastal zone at average densities of almost 50 inhabitants per square kilometer.[4] With relatively high fertility levels[5], the population is growing at a 1.9% annual rate, adding significant pressure to coastal resources and to the economic burden of new generations. The capital Bissau is located on the Geba River estuary and off the Atlantic Ocean is the country's economic heartland. The city congregates half a million people in its urban and peri-urban areas and it is also vulnerable to climate change. Yet, the urban adaptation challenges of Bissau present issues that fall outside the scope of this project, which has a clear rural focus.

[1] With reference to tidal flooding that frequently reaches Bafatá, located some 150km from the sea.

[2] The World Resources Institute (WRI) reported Guinea-Bissau's coastal length as measuring 3,176 km (for an explanation on the measurement methodology, see e.g. Wikipedia, List of countries by length of coastline, accessed in Jan 2018). Using WRI's method for comparison among countries in Africa, Guinea-Bissau' coastal length to land area ratio would be surpassed only by insular African countries. Other sources report different figures for the country's coastal length: Sally et al. (2011) reported e.g. a coastal length of 1,227 km for Guinea-Bissau, but used a different method and based it on data from the DIVA is the 'Dynamic and Interactive Vulnerability Assessment' Tool, produced by the DINAS-COAST Consortium in 2006).

[3] See e.g. Box 11. IPCC 5th Assessment Report remarks on sea level rise in West Africa in Annex X-2.0.

[4] According to the 2009 Census data, extrapolated to 2016 (National Institute of Statistics - INE).

[5] Fertility Rate, measured as total births per woman: 5.0 for Bissau and 6.8 in rural areas. Source: AfDB / UN-Women (2015): Guinea-Bissau Country Gender Profile, cited in PPG Report 010 on Gender Mainstreaming (2018). [5] CIA Factbook, Guinea-Bissau (link), accessed in Jan 2018.

**Guinea-Bissau's economy** is primarily agrarian, based on cashew nut exports and revenue from fishing. It is characterized by low-income levels (GDP per capita was $1,582 in 2016 according to the WB). In terms of economic growth, there has been a marked upward trend since 2014. Real GDP growth reached of 5.1% per year in average in 2015 and 2016, rising from a mere 1% in 2014.[6] This is primarily due to sharp increases in the price of cashew nut kernels in the global market between 2012 and 2016[7], which pushed the total value Guinea-Bissau's raw cashew nuts exports by almost 30% in the same period. Other cash-earning sectors such as mining, oil & gas, and possibly coastal tourism, may to be emerging in near future. They can potentially come to play a role in Guinea-Bissau's coastal economy as it moves forward, but for now, the infrastructure needed for these sectors to thrive is not yet in place—neither is it climate proof. With a growing resident population living primarily in the coastal zone, it is clear that Guinea-Bissau's coastal livelihoods are highly vulnerable to climate change.

**Vulnerabilities & Assets:** In terms of governance, Guinea-Bissau's institutions have been recovering for the past few years from different governance crisis. With the mandate for managing the coastal zone dispersed among different entities, national institutions ill prepared both to deal with the diversification of the coastal economy, and even more so with the impacts of climate change.

Currently, more than 80% of Guinea-Bissau's population is engaged in subsistence farming and, according to the results of the Second Light Survey on Poverty Assessment of 2010 (ILAP II), 69.3% of Guineans are poor and 33% are extremely poor. According to UNDP, the country had a Human Development Index (HDI) of 0.424 in 2016 and ranked at 178th place among 188 countries. Development conditions of man and women in Guinea-Bissau show deep-seated disparities, as illustrated by key indicators such as the adult illiteracy rate: 28.0% for males and 51.5% for women (for 15-24 age and even higher for older age groups).[8]

These above described indicators are important for this project, because they refer to the country's low climate adaptive capacity. This is due to factors such as limited material wealth, worn down infrastructure and other challenging human and gender disparity development conditions. In fact, they contribute both to the country's general and its climatic vulnerability.

Against this general picture of challenging development conditions, Guinea-Bissau is a country **endowed with considerable natural capital**, which represents highly valuable asset in the fight against climate change. This contrast is well expressed in its 2015 INDC[9]:

> "[…] *significant water resources, translated into 130 km3/ year of surface water and 445 km3/year of groundwater, a vast and rich maritime territory (54,000 km2 in 270 km of coastline[10]), considerable biodiversity within West Africa. Nearly 10% of [Guinea-Bissau's] territory is covered by mangrove, perhaps the most significant proportion [in] the world. Currently about 15% of the country's land and maritime territory is a sanctuary for the preservation of biodiversity and this percentage is expected to increase to 26% in 2020.*"

In fact, a regional study on coastal zone management prepared in the framework of developing a Master Plan for the West Africa Coastal Zone had stressed **the capital importance of Guinea-Bissau's mangrove forests**, both for its essential role in the productivity of coastal fisheries (Guinea-Bissau's halieutic resources are considered one of highest in the sub-region), but also in terms of ensuring climatic resilience, due to the numerous ecosystem services that mangroves and rich fisheries play in coastal communities' livelihoods.[11]

**Current baseline / Point of departure**: Climate change is already affecting coastal farming communities through increased flooding and saltwater encroachment into rice paddies due to globally driven sea level rise. Evidence on it is discussed in official documents such as the NAPA, the National Communications to the UNFCCC (INC, 2NC) and in the INDC. This evidence is corroborated by Sally Brown et all. (2011) – an African-wide in-depth study on how sea level rise will specifically affect both coastal and insular countries in the continent.[12] The study projected e.g. that sea-level rise for Guinea-Bissau will reach 0.13m, 0.35m, 0.72m and 1.22m by 2025, 2050, 2075 and 2100, respectively, departing from the 1995 baseline reading. Along the

[6] CIA Factbook, Guinea-Bissau (link), accessed in Jan 2018.
[7] According to industry sources (see Link), the value of Guinea-Bissau's exports to India, which purchases 80-90% of the African country's raw cashew production, went from $120 million in 2012 to $200 million in 2016, while the corresponding export tonnage remained basically unchanged for the same period (it even showed a slight decrease from 125,000 tons in 2012 to 120,000 tons in 2016).
[8] AfDB / UN-Women (2015), cited in PPG Report 010 on Gender Mainstreaming (2018), and noting that the concept of 'adult illiteracy rate' here actually covers ages 15-24. Else, data for all age classes is not reliable and it could reach up to 90% of women in rural areas.
[9] Republic of Guinea-Bissau (2015), Intended Nationally Determined Contributions (INDC), as submitted for the United Nations Framework Convention on Climate Change (UNFCCC). Note: The coastline length referred to in INDC
[10] The coastline length referred to in INDC was measured as a straight line from the northernmost point to the southernmost. It therefore differs from the ~3,000 km figure referred to further up.
[11] See UEMOA (2010) referring to the Schéma Directeur du Littoral d'Afrique de l'Ouest (SDLAO).
[12] Sally Brown et all. (2011).

same line, the IPCC AR5 Report also points out to worrying projections for sea-level rise and its aggravating consequences. **Without adaptation**—the Africa-wide assessment projected—the physical, human and financial impacts of the sea level rise in Guinea-Bissau will be significant. Projections indicate that, with a sea-level rise of 0.13 m by 2025, approximately 77,800 people will be flooded per year; while with a sea-level rise of 0.35 m in 2050, as many as 179,800. The total costs of climate-driven sea-level rise in Guinea-Bissau were indirectly assessed by combining the costs of forced migration, land loss, salinization, sea floods and river floods. **Without adaptation**, such costs could reach approximately $8.0 million per year by 2025, $29.9 million per year for 2050 and $361.8 million per year in 2100.

It is therefore **urgent** in the next few years to build strategies and experiences with coastal protection, ensure climate proofing of future investments through sound programs and measures, including herein a precautionary approach to both coastal pollution and the degradation of natural assets. It is equally important to strengthen the resilience of local livelihoods.

*|For additional information on context and the baseline for coastal zone management refer to* Annex X-1.
*For different maps of Guinea-Bissau highlighting the level of exposure of the coastal zone to climate hazards refer to The Project' Atlas in* Annex X-5*./*

## *The Climate Problem*

A 2017 global assessment that ranks countries according to a climate change vulnerability index (CCVI) placed Guinea-Bissau between High Risk and Extreme Risk.[13] The conditions of change from vulnerable to resilient, both nationally and in specific locations within Guinea-Bissau's coastal zone, are at the core of the problem that this project addresses (a problem that is discussed more in-depth in Section III 'Strategy').

In order to characterize **the climate problem** that underpins the project justification, concepts such as **'vulnerability'**, **'resilience'**, **'climate impacts'**, **'climate risk'** and **'exposure'** were discussed and considered within the project's Theory of Change as the drivers behind the climate problem. The analysis is presented in Annex X-1.5 and it is used in the development of the overall strategy.[16]

In sum, CLIMATE RISK is herein considered a function of:
HAZARD, VULNERABILITY and EXPOSURE to climate change-driven impacts.

More specifically, the level of **climate risks** affecting Guinea-Bissau's coastal livelihoods is marked by three elements, which may evolve according to the severity of climate change and development conditions for the country. They are: **(i) high levels of exposure to climatic hazards** (discussed further down); and **(ii) a generalized situation of vulnerability (social, economic and physical)** – including herein a limited capacity to adapt to such hazards, which in turn translates into **(iii) low levels of resilience**. Across all these elements, it is important to analyze gender elements, opportunities for young people and to outline the project strategy accordingly, taking into account coastal assets such as mangroves, wetlands and the traditional resilience of coastal rice cultivation.

Based on vetted climate change scenarios for the West Africa sub-region, both the Second National Communication on Climate Change of 2011 and the 2006 NAPA assessed the specific **effects** of climate changes on the coastal zone. These include:

- **sea level rise**, as the most prominent;
- **irregular rainfall patterns and shorter rainy season**, likely to affect the agricultural sector;
- **shorter cool season**, which could negatively impact coastal and marine ecology; and
- **more frequent occurrence of extreme weather**, including longer drought spells, heat waves and not least also storms and storm surges, all of which are likely to increase the severity and frequency of disaster events.

As a result of the expected impacts from climate change, the risks will notably increase, according to the severity impacts and exposure for: **(i) coastal erosion**; affecting e.g. the tourism potential of beach areas; **(ii) coastal flooding**; **(iii) inland flooding**, which may affect urbanized areas; **(iv) salt water intrusion**, affecting both surface and groundwater, and by extension the low-lying paddy rice fields. A few hundred thousand households within the coastal area depend on the productivity of paddies for a living. Also, under conditions of unusually high temperatures and low humidity**, (v) wildfires / forest fires** may become more frequent, even though they are a rare phenomenon in the coastal zone. Yet, coastal forests, cashew orchards and possibly also dwellings may be affected by wild fires, with sizable economic and possibly human loss.

[13] According to Maplecroft (2017), the countries with the most risk are characterized by high levels of poverty, dense populations, exposure to climate-related events; and their reliance on flood and drought prone agricultural land. See: https://maplecroft.com/about/news/ccvi.html (accessed on 07 Dec 2017).

The five above-mentioned manifestations of climate risks in the coastal zone are considered the more immediate and certain ones, with respect to time scale and probability. However, climate change is additionally predicted to have **(iv) an adverse effect on fisheries** in Guinea-Bissau. Although this effect may take longer to manifest itself, when compared to the afore-mentioned five, and although there is a degree of uncertainty in today's science on the expected impact of climate change on fisheries, caution would be warranted.

Ultimately, the combined effects of climate change on Guinea-Bissau's coastal zone will undermine the food security for the entire coastal population, for whom seafood is the main source of protein and rice the only staple food. Also, fisheries play a vital role in Guinea-Bissau's government revenue, with fees from fishing licenses currently providing up to 35% of this revenue. Cashew exports contributes in turn with at least 20%, although this may be changing as prices evolve. Furthermore, national rice production is very important for the rural poor. Its serves both subsistence and cultural purposes in most households, but also "insurance" and "savings". It is essential for coastal communities 'grain security', even though locally produced rice currently represents only 3 to 4 months of grain supplies for across the country. Rice imports fulfil otherwise market demand for the remaining 7-9 months.

Furthermore, it should be stressed that **coastal communities are highly dependent on mangrove stands**, not only for the provision of timber and non-timber forest products, and as an open-access habitat for useful species – but also as the first line of coastal defense against erosion, floods, storms, wave surges and their consequences. Similar to mangroves, several coastal wetlands also render essential ecosystem services to local communities, providing fish, purifying water and recycling sediment – in addition to representing a potentially attractive tourism asset.

Finally, coastal risks such as coastal flooding, inland flooding and wildfires are relevant, not only within a framework of adaptation, which is the project's core focus, but they should be equally be considered within a broader **Disaster Risk Reduction and Management (DRRM)** strategy for Guinea-Bissau. This is because at times, the hazards behind these risks strike with a **sudden onset** (as opposed to slow onset hazards and risks). DRRM is mainstreamed into this project, but its scope is otherwise restricted to the 'prevention' and 'preparedness' elements of the coastal zone DRRM (see Figure 8 in Annex X-1.0 for the implications of these considerations).

## *Framing the Problem*

According to Guinea-Bissau's 2006 NAPA, the primary drivers of the climate vulnerability affecting coastal communities are physical exposure and dependence on agriculture and fishing as main livelihood options. Coastal governance challenges, imply a gradual transition towards frameworks of **Integrated Coastal Zone Management (ICZM)**, but where climate change adaptation is, in addition, fully taken into account. The specific analytical framework for vulnerability within Guinea-Bissau's coastal zone revolves around the following elements: the **'coastal geography'**, **'natural assets'**, **'demographics & land-use'** and **'infrastructure and emerging coastal sectors'**.

Because the management of the coastal zone touches upon **various sectors**, the relevant governance frameworks for the coastal zone is **complex and multi-faceted**. At a more basic level, these frameworks can be said to cover two key aspects: (1) **economic sectors** and (2) **management frameworks for the coastal space**. These aspects will be further explained and taken into consideration in the development of adaptation solutions proposed for this project.

## *The Solution*

**The preferred situation** is for Guinea Bissau to have the capacity at national, regional and local levels to develop, plan and implement coastal management measures that increase resilience of coastal communities' livelihoods and economic activities to climate change induced risks. This would imply that the climate change risks and relevant adaptation options be mainstreamed in the coastal development policies, strategies and initiatives and the decision makers and technical staffs of the line sectors. This would also mean that the coastal communities have the required institutional support and technical and economic capacity to gradually and sustainably transform their structures, functioning, social organization and economy, in order to increase their capacity to absorb shocks as well as slowly manifestation changes that undermine economic development.

*/ For a summary of the analysis of the underlying causes of vulnerability linked to these elements, refer to Box 7. Elements of coastal vulnerability in Guinea-Bissau and underlying causes in Annex X-2.0 /*
*|For a thorough analysis of coastal governance challenges and the respective sectoral context for fisheries, infrastructures and rice production, refer to Annex X-1 and to PPG Reports |*

## *Fit to National Policies, NAPA Priorities and SDGs*

### *Policies & Priorities*

The proposed interventions build on—and are closely aligned with—the recommendations of the first (2005) and second (2011) national communications and the NAPA (2006), which identified and ranked **six priority sectors** for Guinea-Bissau. Of these, coastal/marine ecosystems, food security and cross-cutting as priorities relating to education and capacity building, are catered for within this project (refer to Table 24 in Annex X-1.1).

Indeed, the project will contribute to strengthening the capacity of Guinea-Bissau to face to the current and long-term climate induced coastal issues by enhancing the policy, regulatory and institutional framework for managing the climate drivers of coastal degradation, as well as improving the knowledge and understanding of climate change and its coastal impacts. It aims also at strengthening the climate resilience of the communities' livelihoods and assets against climate induced coastal issues.

These priority adaptation options and measures equally take into account the policy guidance contained in the (i) Intended Nationally Determined Contributions (INDC), submitted to the United Nations Framework Convention on Climate Change (UNFCCC) in 2015; Guinea-Bissau's PAN/LCD (2012) regarding land degradation; and the National Biodiversity Strategy and Action Plan (NBSAP), particularly those related to livelihood production in coastal agricultural communities, to the protection of coastal ecosystems and natural resources.

Moreover, adaptation options have been chosen in synergy with Guinea-Bissau PRSP 2 and other development strategies and plans. More importantly, it is also in line with new orientations emanating from the 2015-2025 "Terra Ranka" Program, which was presented by the Government at the Donor Roundtable in March 2015, setting out the broad guidelines for the development of Guinea-Bissau. Under the "Terra Ranka" Program, the government prioritized, among other topics, to make a significant contribution to improving environmental governance at the national level by: (i) Promoting governance at the service of the citizen; and (ii) Ensuring sustainable management of natural capital and preserve biodiversity. Climate change issues are mentioned as an important concern in the "Terra Ranka" Program, but it lacks specificity, as many of the important interventions within the topic were still being developed when the Program was launched.

Several policy and legal instruments have otherwise been developed by successive governments with the aim of protecting the environment and implementing international environmental conventions signed by the Guinea-Bissau. Besides those mentioned further up, two are still relevant for the project: The Tropical Forest Action Plan (PAFT) and the National Environmental Management Plan (PNGA).

*|Refer to Annex X-1.1 (Governance frameworks for Coastal Zone Management) for an outline of the relevant legal and policy frameworks, as well as the assessment of capacity of relevant institutions that either use or manage the coastal zone. For a yet more thorough analysis of these frameworks, refer to PPG Report 009a. |*

Despite the challenges, Guinea-Bissau has been striving to adapt to climate change impacts by building national capacity for it through institutions, legal and policy frameworks and by capacitating individuals in climate change related matters. This implies programs that help understand the causes and effects of climate change, gauging its impact in different sectors, and propose measures and interventions that address those impacts. [14]

The different subject matters that need to be mastered by national agencies in order to promote adaptation measures and address the causes of vulnerability at the national level are varied and complex — they are also multi-faceted, as referred to further up – and, for the coastal zone more specifically, the sectors and governance frameworks encompassed touch upon the following:

1) **The various economic sectors** among them infrastructure, agriculture, fisheries, transport, mining, oil & gas, tourism; and
2) **Distinct and specialized management frameworks for the coastal space,** including among them environmental protection, natural resource management, meteorology, civil defense, disaster risk reduction and management (DRRM), border defense and, not least also planning, including coastal spatial planning.

[14] An overview of individual, institutional and systemic capacity development initiatives benefitting Guinea-Bissau were described in PPG Report 009a for Component 1 (2018): Baseline Assessment & Feasibility Study (B&F) Report 009a: Capacities, Policies & Practices for an Adaptive Integrated Coastal Zone Management (ICZM).

Of the above, **the most relevant frameworks for coastal zone adaptation** were assessed during the PPG and the corresponding **financial baseline** analysis updated (see Table 5 for the calculus). The following themes were covered in **Baseline Studies and Feasibility Assessments (B&F)** conducted during the PPG phase:

- Fisheries
- Coastal infrastructures
- Low-land Rice Cultivation
- Mangrove and Wetlands Restoration
- Gender
- Geographically-based vulnerability.

*|Refer to Annex X-1 for a summary and Annex Y for the list of PPG Studies.|*

### *Sustainable Development Goals (SDGs) & the Project*

The project's alignment with SDGs is herein presented graphically (see Box below). **The alignment exercise prioritized SDGs 13, 14, 9 and 15 – in this order.**

***Box 1. Overview of the project's SDG alignment***

| CORE SDG ALIGNMENT FOR THIS PROJECT |
|---|
| ***SDG 13)*** *Take urgent action to combat climate change and its impacts,* and under it*,* ***SDG 13b)*** *Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities.* This is thus justified:<br>• **[Target 13.1]** The project integrates the strengthening of resilience and adaptive capacity of local communities to climate-related hazards.<br>• **[Target 13.2]** It seeks to integrate climate change measures into national policies, strategies and planning relevant for the coastal zone by developing frameworks for ICZM and taking climate into account in them.<br>• **[Target 13.3]** It will strive to improve human and institutional capacity on climate change adaptation in relevant entities and communities in Guinea-Bissau.<br><br>***SDG 9)*** *+* ***SDG 9b)*** *Support domestic technology development, research and innovation in developing countries, including by ensuring a conducive policy environment for, inter alia, industrial diversification and value addition to commodities* – as follows:<br>• **[Target 9.3]** The project will facilitate the access of small-scale industrial and other enterprises, in particular in developing countries, to financial services, including affordable credit, and their integration into value chains and markets.<br>***SDG 15)*** *Protect, restore and promote sustainable use of terrestrial ecosystems that are part of the coastal zone, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss:*<br>• **[Target 15.1]** The project will promote the restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular wetlands, in line with obligations under international agreements.<br>• **[Target 15.2]** By considering that mangrove stands constitute a forest, he project will contribute to promote the implementation of sustainable management in various sites across the coast of Guinea-Bissau that contain forests, including in transition forest from mangroves to relict dense forests in the south of the country through afforestation and reforestation, as applicable.<br><br>**Additionally, the project also contributes to SGD 5 on gender equality and women's empowerment** through specific gender mainstreaming actions. |

## Barriers to Adaptation

There are **six interrelated issues** that are linked to either **(1) coastal governance, (2) coastal protection or (3) coastal livelihoods**, which represent the project's three core themes. Together, they constitute **barriers** for Guinea-Bissau's successful adaptation to climate change within the coastal zone, implying the adoption of relevant strategies, management frameworks and measures that would gradually help the coastal communities adapt to climate change. The six issues relate to the barriers as follows:

***Table 1. Summary of Project Barriers***

| *Barrier 1) Linked to coastal governance* | *Barrier 2) Barrier 2) Linked to coastal protection* | *Barrier 3) Linked to coastal livelihoods* |
|---|---|---|
| • *Issue #1 Limited understanding amongst decision-makers and technical staff of key institutions in charge of coastal management about climate change and its impacts on the coast, including on coastal dynamics and economics.*<br>• *Issue #2 The sectoral approach to coastal zone planning, management and risk monitoring is fragmented and it does not integrate climate change.*<br>• *Issue #3 Limited capacity at the national level for integrating climate change into coastal management.*<br>• *Issue #4 Limited availability of financial resources within the public sector.* | • *Issue #5 Incipient mastery of techniques and know-how that could help coastal sectors develop sustainably and adapt to climate change.*<br>• *Issue 6# Ecosystem restoration in tropical biomes looks promising as a cost-effective adaptation measure, but it is still somewhat experimental.* | • *Issue #7 There is little integration among productive sectors and limited investment in strategic development.*<br>• *Issue #8 Limited organizational, technical and financial capacity at the communities' level.* |

## *Barrier 1) Linked to coastal governance*

BARRIER #1 STATEMENT: Coastal planning, management and monitoring is neither coordinated, nor effective, and it does not take climate challenges into account.

### *Issue #1 Limited understanding amongst decision-makers and technical staff of key institutions in charge of coastal management about climate change and its impacts on the coast, including on coastal dynamics and economics.*

Various laws, regulations and policies serve as governing instruments for managing the coastal zone covering various aspects of the coastal economy, as well as the zone's natural assets. These relate to human settlements, transport, trade, fisheries, agriculture, forest management and protected areas, in addition to emerging or potential economic activities mining, offshore oil and gas, costal tourism. They also relate to environmental assessments and monitoring, spatial planning, enforcement of maritime borders and the protection of important coastal resources. Any reasonable ICZM framework for a country featuring an economically important coastal zone should assess the opportunities, challenges, but also the risks and vulnerabilities related to these sectors and human activities, including climatic risks and vulnerabilities. This is not necessarily happening in today's Guinea-Bissau.

Different entities have different mandates in terms of managing and overseeing their respective sectors.[15] Very few of them have a good understanding of how climate change is will affect the coastal economy and none of them are well positioned to respond to the complex governance challenges that are associated with it.

The Ministry of Environment and Sustainable Development MADS is responsible for policies and strategies for the environmental sector. It was only since 2017 that the Government of Guinea-Bissau had established a specific ministry dedicated to the environmental portfolio. Prior to that, environmental affairs were handled by a State Secretariat. Although this was a positive development, it will be a while before the new ministerial organization can pitch key climatic issues affecting the coast to the remainder of Cabinet Ministers.

Of relevance, it should be mentioned that a dedicated entity with focus on coastal zone, the Coastal Planning Office (GPC), has existed since 1994, when it operated under the auspices of a GEF Biodiversity Project. The core GPC's initial mandate focused on the development of an initial, but comprehensive management program for the coastal zone.[16] The GPC is now integrated into MADS and formally, it continues to be nominally responsible for the coastal zone, although it lacks a clear and dedicated

[15] Refer to Annex X-1.1 for relevant background information on the governance frameworks for the coastal zone, including institutions, the legal and regulatory and capacity aspects.
[16] See e.g. , in Annex X-1.1, under 'Capacity Needs Assessment' for a brief discussion on lessons-learned from the WB GEF Coastal and Biodiversity Management Project.

legal instrument for the purpose. In addition, the GPC's program of work remains chronically underfunded and limited in scope: e.g. building on the relevance of its current projects[17], the GPC is currently focusing its activities on coastal wetlands ecosystems, but mostly due to its role in implementing a project funded by Wetlands International. The GPC maintains a GIS Lab that holds interesting data for the management coastal zone. At the same time, data from GPC's GIS Lab is not being put to use for managing or monitoring the coastal zone. If it should do so, it would require a much more consistent investment towards updating the core data, ensuring, data security, access control and GIS lab maintenance. The PPG capacity assessment concluded that, in spite of its legacy, the GPC currently lacks a strong and legally-binding mandate to coordinate action within the coastal zone and, above all, it lacks the human and financial means to do so.

The Institute of Biodiversity and Protected Areas (IBAP) is also an offspring from a previous GEF project, and it is currently integrated into MADS. IBAP has a clear conservation mandate (including legally). IBAP it is responsible for the management of all marine and coastal protected areas within the coastal zone. IBAP has a reasonable level of financial decision-making autonomy for pursuing this mandate. Over the years, IBAP managed to accumulate a relevant portfolio of projects and experience with biodiversity management and protected areas – not least also by working with local communities in the participatory management of sites. IBAP is however, only beginning to build its own capacity for climate change management, and more specifically, for ecosystem-based adaptation.

### *Issue #2 The sectoral approach to coastal zone planning, management and risk monitoring is fragmented and it does not integrate climate change.*

While several entities may intervene in the coastal zone within its sector or mandate, each agency will develop and implement programs and projects without necessarily coordinating implementation among players. **The coastal assessments developed by GPC under the WB GEF Coastal Biodiversity Project had a long-term vision**, which was based on several studies. The implementation of the county's first approaches towards managing the coastal zone progressed, primarily with the achievement of conservation results as the main goal. At the same time, a balanced approach, which allowed for the optimal and sustainable development of economic sectors was part and parcel of the coastal zone program.

The frameworks conceived by the mentioned WB GEF Project, as well as and the results in terms of coastal zone planning, would have led to the gradual development of a comprehensive ICZM program for Guinea-Bissau. However, this did not follow through for a variety of reasons, many of which were linked to the political crises that ensued, in particular between 2009 and 2012. The crises have left a legacy of institutional weaknesses, which are only beginning to be addressed by the current government.

Given the progress made towards embracing ICZM, but in particular the set-backs, it can be said that the current legal, policy and administrative frameworks for the management of the coastal zone has various weaknesses. One of them that is relevant for this project is that these frameworks are not necessarily conducive to an integrated and coordinated approach vis-à-vis the effective management of climate related risks and impacts. Neither do they take the specific climatic vulnerabilities on the coastal zone into consideration. In fact, it can be said that, today, coastal zone planning is not being actively used as a modality of governance for the coastal space or for coastal sectors in Guinea-Bissau. That is: planning exercises, assessments and related interventions that may have been carried out in the past are outdated and the legacy of previous coastal zone projects is not in effect today.

While this represents a low baseline for planning and governing the coastal zone, it also creates opportunities for integrating climate change adaptation into new frameworks and for developing these through integrated, coordinated and adaptive approaches.

### *Issue #3 Limited capacity at the national level for integrating climate change into coastal management*

There is, in particular, a critical shortage of scientific and engineering capacity needed to identify, plan, design, assess economically important works, as well as to prioritize and implement and monitor coastal defense measures. While this problem is systemic and it also applies to every other sector in Guinea-Bissau, a focused project targeting coastal zone adaptation can make a difference, if adequately scoped.

Shortage of information and data, particularly with regards to coastal processes, forecasts on sea level rise, meteorological conditions, as well as the more complex tasks of running and analyzing climate change scenario, also constitutes an additional challenge. There has been no systematic approach to data collection for almost two decades. The meteorological stations network has been destroyed during the political-military conflict of 1998/1999 and never reestablished. The lack of reliable

[17] The GPC is currently implementing a project by the NGO Wetlands International.

information, and the access to it, makes it very difficult for national agencies to set priorities and develop guidelines and standards.

MADS's leadership (and in previous mandates, the State Secretariat for the Environment) have been investing in a core cadre of technically qualified staff, who have experience and solid skills within climate change matters.[18] Yet, this cadre is mostly at director level. The decentralized structures of MADS are not yet operational.

Also, the process of building the capacity of the national cadre to understand and tackle climate change is a gradual one, including due to the complexity of themes. In Guinea-Bissau, the development of national capacity for climate risk management has happened mostly through projects. To date, as many as 46 initiatives benefitting Guinea-Bissau have been registered.[19] Of these, none of them are recent and only four (04) are directly relevant to the subject matter of this project. In addition, all the relevant initiatives have been either short-term training opportunities or desk-based support from a regional or global project.

### *Issue #4 Limited availability of financial resources within the public sector*

Currently, public administration in Guinea-Bissau faces many challenges. Tax revenues remains insufficient for covering the high costs of coastal protection that meet minimal standards – let alone 'climate proofing' standards.

Guinea-Bissau remains a heavily indebted LDC with chronic fiscal deficit and with many social needs to meet through governmental service delivery. Government revenue is also quite dependent on foreign aid, whose support covered 15% to 28% of total government expenditure between 2011 and 2015, including debt service.

Given this low material wealth situation, Guinea-Bissau is eligible to facilitated grants from development assistance partners, but such programs have been, at times, subject to severe restrictions. Overall, donor programs are not a stable or sustainable source of revenue to the public sector – in particular, not in the same way that well-structured and effective taxation-based revenue would be.

At the same time, various coastal sectors hold potential for a more equitable taxation regime.[20] These sectors include maritime transport, trade, port management and commercial fisheries. Taxing them adequately would not necessarily be a hindrance to coastal business competitiveness. **A strategic approach for guiding coastal sectors's taxation and investments** is, in any case, lacking.

Issues #1, 2, 3 and 4, in sum: There is currently no consistent program under effective implementation that bear the traits of ICZM. Attempts to do so started around the mid 1990's to early 2000's driven by a GEF biodiversity project. These attempts were hampered by the 1998/1999 political crisis. In fact, every new politically motivated crisis in Guinea-Bissau – and the country has had quite a few in the 2000's -- represented a set-back in terms of development results for Guinea-Bissau, as well as decreased investment appetite.

With important institutional challenges, limited public funding that is dependent on donor funding rather than sustainable taxation, coupled with systemic capacity weaknesses, the frameworks for governing the coastal zone in Guinea-Bissau are not conducive towards ICZM – let alone to the mainstreaming of climate risks into these frameworks. Also, current frameworks lack cohesion, specificity and a suitable coordination mechanism. Much more would be needed for facing the impacts of climatic challenges in this economically crucial part of the country, which the coastal zone represents.

## *Barrier 2) Linked to coastal protection*

BARRIER #2 STATEMENT: Coastal protection and investments in productive sectors remain non-strategic and essential infrastructures not climate proof. At the same time, the natural ability of coastal ecosystems (such as mangroves and coastal wetlands) to help people adapt to climate change is not sufficiently explored.

[18] An overview of individual, institutional and systemic capacity development initiatives benefitting Guinea-Bissau were described in PPG Report 009a for Component 1 (2018): Baseline Assessment & Feasibility Study (B&F) Report 009a: Capacities, Policies & Practices for an Adaptive Integrated Coastal Zone Management (ICZM).

[19] Refer to Table 4 and Figure 2 of PPG Report 009a for Component 1 (2018).

[20] According to the Business Dictionary, basic concepts by which a government is meant to be guided in designing and implementing an equitable taxation regime include: (1) Adequacy; (2) Broad Basing; (3) Compatibility; and (4) Convenience. (see further info in: http://www.businessdictionary.com/definition/taxation-principles.html, accessed on 19 Jan 2018)

## *Issue #5 Incipient mastery of techniques and know-how that could help coastal sectors develop sustainably and adapt to climate change.*

The state of maintenance for coastal infrastructures assessed during the PPG showed that the large majority of fishery wharfs, bridges, roads, coastal hotels and public buildings are run down.[21] The majority of fishing units in the country were found not to be equipped with any type of infrastructures to support the sustainable development of fishing activity, leading both the sub-optimal use of rich fishery resources and to massive wastage of good protein. This has bearing on food security in Guinea-Bissau and, given the country's vulnerabilities, it also represents a lost opportunity to build resilience to climate change.

Quoting the relevant PPG Report (#009b B&F on 'Fisheries and Infrastructures'): *"Landing of small fishing boats is mostly done on natural beaches, coastal areas in the rivers and channels between the islands. This scenario forces fishermen to land their catch on muddy banks, with the possible consequence of disease transmission to the population, given the unsanitary way fish is handled along under these conditions. Developing better conditions for the artisanal fishing sector by providing adequate infrastructures that improve landing conditions for local fishermen (e.g. small wharfs and ramps), as well as facilities to storage and process products and road infrastructures, would directly generate an added value to the products, create jobs and stimulate the sector. Above all, it would create resilience to coastal communities that depend on fish resources either as a source of revenue or of protein – or both."*

The foregone income and resilience opportunities is one aspect. The other one is that all fishery wharfs that were directly assessed during the PPG are vulnerable to climate change. With sea level rise and the expected frequency and intensity of storm and wave surges, these coastal infrastructures will not withstand the impacts of climate change. Adaptation, in this respect, implies ensuring that small fishery wharfs **meet climate proofing standards, which none of the small wharfs assessed do**.

Similarly, the state of management for rice paddy infrastructures were assessed in PPG Report 009b on low-land rice cultivation' (or 'mangrove swamp rice', as also called), alongside other aspects of this important economic activity for coastal communities. A key conclusion is that **all anti-salt dikes are equally vulnerable** to progressive and regressive erosion, needing reinforcement and periodical maintenance, otherwise they can be easily destroyed by the tidal action or accumulating fresh water when the drainage system is underestimated. The main anti-salt dike can also be easily destroyed when inadequate traditional drainage tools are used. In certain places, dikes should be strategically built because the storm surge and coastal flooding of rice fields are already a reality. They are an early sign of climate change impacts and risks that remained unaddressed.

PPG **Reports #009b and #009c** also present the fact that coastal rice cultivation is apparently declining and mangroves slowly expanding.[22] This is an indication that the traditional waterworks that sustain mangrove rice may be under stress from additional saline intrusion and, due to the labor costs, the traditional paddies are undergoing insufficient maintenance and being systematically abandoned.

Climate proofing of both fishery wharfs and the network of anti-salt dikes within a coastal landscape would require additional investment and specific ("smarter") techniques that are adapted to the local reality, as well as affordable, implying some degree of innovation vis-à-vis current practices. The techniques and measures that are needed for meeting climate proofing criteria are not immediately available to local governments along the coast (in the case of fisheries infrastructures) or to local farmers (in the case of rice paddies):

- **For the fishery wharfs**, such measures would include: i.e. structural elevation of platforms and the extension of ramps in fishery wharfs, as well as the, reinforcement of their foundations, increasing thereby their wave protection.
- **As for the mangrove rice cultivation systems**, it could imply either the construction of an improved system' or a smarter way of maintaining the dike and sluice system that keeps low-land paddies productive and protected from saline intrusion – e.g. by using a small tractor. In turn, an improved system implies the construction of the protective dike with claylike soil (lateric), combined with well gauged sluices, made of cement and reinforced with iron, plus a few PCV tubes.

Overall, the status quo of management and operations of coastal infrastructures is one of **chronic lack of investments** in crucial sectors and specific infrastructures—a situation that has been extending over several years. The costs of maintenance are generally high, but they will increase significantly with climate change, especially if the work of maintaining the relevant infrastructures is not undertaken in a timely or adequate manner.

[21] Refer to Annex X-1.2, under 'Fisheries' as well as to PPG Report: B&F Report 009b (2018): 'Coastal Sector: Fisheries and Agricultural Infrastructures'.

[22] See e.g. 'Box 10. Mangrove swamp-rice: Complex agro-ecological dynamics, now at risk from climate change' in Annex X-1.2.

## *Issue #6 Ecosystem restoration in tropical biomes looks promising as a cost-effective adaptation measure, but it is still somewhat experimental.*

With respect to the **'natural infrastructures'** in the coastal zone, there are two types terrestrial ecosystems that stand out**: mangroves and wetlands.**[23]

While the ecological function and the biodiversity value of mangroves and wetlands are well established in the literature, their role in fighting climate change is relatively new to the scientific community and not sufficiently studied. A new generation of projects and initiatives throughout the world are now increasingly advocating in favor of these ecosystems functioning as a 'natural coastal defense wall' or a 'natural freshwater filtration mechanism'. If wetlands and mangrove ecosystems are healthy and not excessively fragmented, they are able to yield those ecosystem services. Consequently, those projects promote the restoration of mangrove and wetlands ecosystems for their ecological and coastal defense value. In addition, some of the afore-mentioned projects may be betting on the carbon sequestration capacity of mangroves e.g., or in a mix of functions that contribute simultaneously to carbon sequestration, climate change adaptation and biodiversity conservation -- or on any combination of such benefits.

These new approaches have consequently increased the investments in the implementation of ecosystem-based adaptation and mitigation projects, with ecosystem restoration and rehabilitation undertakings as their core activity. Such initiatives are often of large-scale and implemented through well-funded projects that apply a variety of techniques, according to location, to the specificity of ecosystems and of local stakeholders.

As it has been observed and reported upon in scientific reviews of coastal ecosystem restoration projects[24], it is noticeable that there was little or no consensus among practitioners and scientists on key parameters, including for the measurement of success. Among them we have: (i) cost coefficients per unit area; (i) the standardization and quantification of benefits; and (iii) the minimum scale of ecosystem restoration needed for producing tangible benefits. With respect to adaptation, this lack of consensus on parameter is nothing by a token of **the experimental nature of ecosystem-based adaptation projects** – it does not necessarily disqualify them.

In addition, ecosystem-based adaptation projects/initiatives are considered as 'no-regret' adaptation measures because, often, biodiversity benefits would be generated through ecosystem restoration measures, even without fully achieving the stated goal in terms of climate change benefit.

Yet, issues of 'permanence', which are typical of REDD projects that also promote ecosystem restoration (e.g. whether trees and associated resources in areas restored would not be reaped by "free-rider" individuals)[25] apply, as well as possible socio-environmental risks different nature. Also similar to REDD projects, issues of to land tenure and ownership often apply. These may become a barrier to the success of ecosystem restoration undertakings, unless, the sites selected for this type of work are either in protected areas or other types of public lands. Alternatively, communal lands may also offer a solution, but with due considerations drawn on how potential benefits are shared among land users and 'community members'.

Beyond these issues, the key barriers vis-à-vis ecosystem restoration activities are highly technical and are linked to lack of data and incipient experience with such projects. They may include the following:

- The need to understand the normal hydrological patterns and other stress factors that control the distribution and establishment and successful growth of selected mangrove species – or with respect to the water recharge rates, when dealing with wetlands.
- The need to evaluate the modifications of the previous mangrove / wetland environment, which currently prevents natural secondary succession, including hydrological modifications and any additional stresses.
- Quite importantly: the fact that there is much uncertainty about costs of ecosystem restoration per unit area (assumed to be high, but dependent on a number of factors). This hinders the development of cost coefficients, which would help the planning and the assessment of results from mangrove / wetland restoration activities.
- Finally, establishing cost coefficients and asserting the cost effectiveness of ecosystem restoration activities implies the practical comparison between different techniques (passive vs. active ecosystem restoration), comparing costs and results. Given the highly contextual and experimental nature of ecosystem restoration/rehabilitation measures, it takes time and it

[23] A relevant caveat in ecosystems' classification here is that the caveat that mangroves are also wetland ecosystems, but in particular those whose water is brackish of saltwater

[24] See e.g. Bayraktarov et al. (2016).

[25] Permanence is a term used in REDD contexts, regarding the durability of results, or – "inverting the coin" – regarding the risk of the restored mangrove being e.g. cleared sometime after by disgruntled stakeholders and due to weak governance over land and resources.

may be difficult to maintain a useful dataset that can keep track of costs and also measure outcomes. The major drawback here is the time and scale needed for the methods to show results that are amenable to comparison and extrapolation.

Issues #5 and 6 in sum: While the LDCF project cannot address 'maladaptation' issues that may hinder local development, a positive approach—and even a 'no regrets' approach—to both infrastructural development and ecosystem restoration in the coastal zone of Guinea-Bissau should be retained for this project.

The LDCF project can certainly invest in priority projects and ideas, as indicated by official national policy documents such as the NAPA and where climate proofing, the resilience of people and assets, as well as ecosystem-based adaptation are important elements to be addressed and implemented. The project will work side-by-side with co-related baseline projects for maximum positive impact and, in this way, address where possible the underlying causes of maladaptation, or at least its most pernicious impacts on people's resilience and development conditions.

## *Barrier 3) Linked to coastal livelihoods*

BARRIER #3 STATEMENT: Local communities have limited access to technologies and know-how for resilience, as well as viable finance.

### *Issue #7 There is little integration among productive sectors and limited investment in strategic development.*

**Integrated local value chains** imply that the focal economic activity is not based on one product, exposed to price variation and subject to supply problems. Rather, the focal economic activity at the local level has strong and varied linkages to: (i) other value chains and economic activities; (ii) science-based research & development; and (iii) the service sector within the coastal zone, and whose development will be fostered through 'integration'.

The baseline analysis and field assessments for this project were carried out between August 2017 and October 2017. The results are presented in PPG Reports 007 through 011, which confirm the statements of limited sectoral and cross-sectoral integration and of a narrow vision, as both interpreted by planners and investors.

The same issue of **post-harvesting wastage** that is experienced in the fisheries sector also applies to the rice cultivation segment along the coast and to cashew production. In addition, there are no incentives for creating **economies of scales**, or for developing **collaborative ways of working**, for sharing resources, or even for pulling forces together towards upgrading the network of public and social infrastructures.

From the various **B&Fs** prepared in connection with the PPG, a few **solutions** were conceived:

- With respect to **mangrove swamp rice**, the crop has historically covered most the country's needs for grain –Mangrove rice growing is very popular within the coastal communities because of its interesting potentialities with yields of 3 to 4 tonnes per hectare without fertilizer against 500 kg at 2.5t for the others. Rice growing systems. Historically, local production has already reached 80% of national grain needs. However, due to lack of repair and maintenance of infrastructure coupled with the impacts of sea level rice, domestic rice production has diminished and currently accounts for less than 25% of the country's needs.[26] Mangrove rice is flood-fed and not a rain-fed rainfed rice cultivation implemented in the coastal plains and lower estuaries subject to submersion of high tides. The technique of mangrove rice cultivation (highly mastered by coastal communities in normal climate conditions) is based on an alternating management of sea water and fresh water. First, it requires the protection of plots against tidal during cultivation with protective dikes (with the mud for most of the poor farmers) while allowing seawater to enter in the rice plots in the dry season to prevent acidification of the soil, keep the dikes wet and prevent them from splitting deeply, fight against weeds and especially bring alluvium that will fertilize the land (to allow a high productivity without the need to use fertilizer inputs). Then, it requires fine management of fresh water in the rainy season through: (i) using the first rains to wash the soils to eliminate the toxic components which are formed during the dry season, (ii) to master the water slide at the transplanting, (iii) at the end of the cycle, a good regulation system must allow sufficient conservation of fresh water to supply the plant at the critical moment of heading. The efficient implementation of this system is becoming increasingly difficult. Because of sea

[26] See PPG Report 009b (2018): 'Coastal Sector: Low-Land Rice Cultivation'.

level rise, the coastal plains are regularly affected by increasingly frequent and strong tides exceeding the height of the existing protective dykes leading to undesired and longer submersions of rice fields. This combined with the rainfall disturbance (reduction and delayed rains), is leading to permanent salt water flooding and degradation of the mangrove rice plains.

- **PPG Studies equally concluded that**, in theory, the downward trend in local rice production can be reverted with the protection of coastal rice plains against the impacts of more frequent and intense tidal submersions, and the mangrove forests constitute an efficient and sustainable option.

Diversifying away from the current cashew nut value chain may be pursued through the development of **agro-forestry systems and/or small agroindustry development** at the local level. Along the same lines, the **strengthening the cultivation a staple food crops such as mangrove-rice**, which is essential for food security, should be supported with investment and improved technologies (or re-discovered ones). Such changes would be instrumental for creating resilience among local communities and for a more fluid stream of income to these communities throughout the year.

### *Issue #8 Limited organizational, technical and financial capacity at the communities' level.*

The strengthening of coastal communities' resilience through a livelihoods development program requires a consistent approach to identifying needs, reaching out to community members and then negotiating interventions and getting them financed. Thereafter, interventions can be treated as projects (large or small) and managed as such. In the design of interventions benefitting local communities, there are basically two approaches – either a 'top-down' approach, where sites are pre-selected on the basis of a certain number of criteria, either by the project owner or the financing entity. Then there is the bottom-up approach. In the latter, which is the approach prioritized by the project under Component 3, coastal communities would be informed about the availability of funds and about what constitutes adaptation measures in their specific context, along with which the modalities are possible. The choice is theirs. As long as community leaders -- or a representative organization designated by them – are able to adequately formulate the ideas and plans proposed by community members, and if these ideas and plans fit into the requirements for funding, a micro-project can then be approved.

At the same time, UNDP's experience with grant-making shows that the above-described process may face some barriers and challenges. There may be typical operational difficulties that relate availing funding to beneficiaries in remote areas of the country, where 'financial infrastructures' are barely existent (e.g. in the absence of commercial banks). At the same time, funding mechanisms such as the SGP or UNCDF have now acquired a wealth of experience with rolling out micro-projects in LDCs, so that those difficulties are no longer a hindrance. Beyond that, a typical pitfall has been a tendency of project proponents to replicate previous projects, rather than conceive new ideas and ways of working.

Another key barrier is **the exclusion of women and youth from decision-making** and fund management at the local level. In the past e.g., IBAP accumulated experience with the roll out of micro-projects favoring in connection with the WB GEF Coastal Zone Management Project, which was instrumental in terms of contributing to the resilience of coastal communities, not least also by expanding their adaptation options through the protection of ecosystem services and access to natural resources on a sustainable basis. However, **adaptation to climate change requires much more**. It requires communities to be well-organized and work together in a collaborative fashion, with a high degree of trust among themselves.

Unfortunately, traditional consultative and decision-making mechanisms no longer function effectively, and this tends to undermine the operation and maintenance of community investments. Quite **often communities are not organized to face modern challenges** (formation of local cooperatives, dwellers' associations and organized interest groups etc.) – climate change included. Or when they are, **social organization** tends to run along ethnical or gender dividing lines, which again may favor the marginalization of vulnerable groups (women and youth included).

There is also **a general gap in basic capacity at the local** level that hinder local communities in articulating their needs and being able to implement simple projects. This gap includes issues of **literacy**, including mathematical literacy), **access to essential information for local development** (e.g. market information, such as the point price of rice or cashew, and where to procure improved seeds, distance to etc.). At the local level, individuals with agronomic or veterinary skills are rare.

Hence, rolling out **small-grants** for local development and adaptation without local a positive gender & youth bias or without building the capacity to conceive projects, execute the grants and report upon them would lead to past mistakes being repeated.

Issues #7 and 8 in sum: Innovation, technology and improved know-how applied to local agro-ecological practices and value chain development in view of climatic resilience hold the promise of improved income and better living standards—and, possibly also, more equitable gender-based relations at community level. Adapting to climate change also requires

transformative investments at the individual and community levels that can leverage economic opportunities and have catalytic impacts on people's livelihoods and coastal ecosystems. At the same time, coastal communities in Guinea-Bissau barely have the required technical and financial capacity. Local capacity is an important, but not an unsurmountable barrier.

Overall, it would take time for economic diversification, rural extension and a more equitable access to local finance from a gender point of view. Yet, it is the currently assumed pathway for bringing a wider multiplication societal benefits, as well as resilience, to the coastal economy and local populations.

## Theory of Change (ToC)

In articulating the project's strategy and entry points, concepts such as **'vulnerability'**, **'resilience'**, **'climate impacts'**, **'climate risk'** and **'exposure'** were amply explored and their applicable to the project's ToC established (see more details in 'Box 5. Concepts adopted: risk and vulnerability' in Annex X-1.0.) The project's ToC was developed. It is then summarized both in Figure 1 (further down) and in the following statement:

*If* a climate adaptive management framework is in place for Guinea-Bissau's coastal zone, including the strengthened of necessary governmental policies, regulations and institutions mandated, as well as key individuals and groups who will be capacitated,

and

*… if* the effectiveness of investments in coastal protection measures, focusing on both man-made and natural infrastructures, are successfully demonstrated,

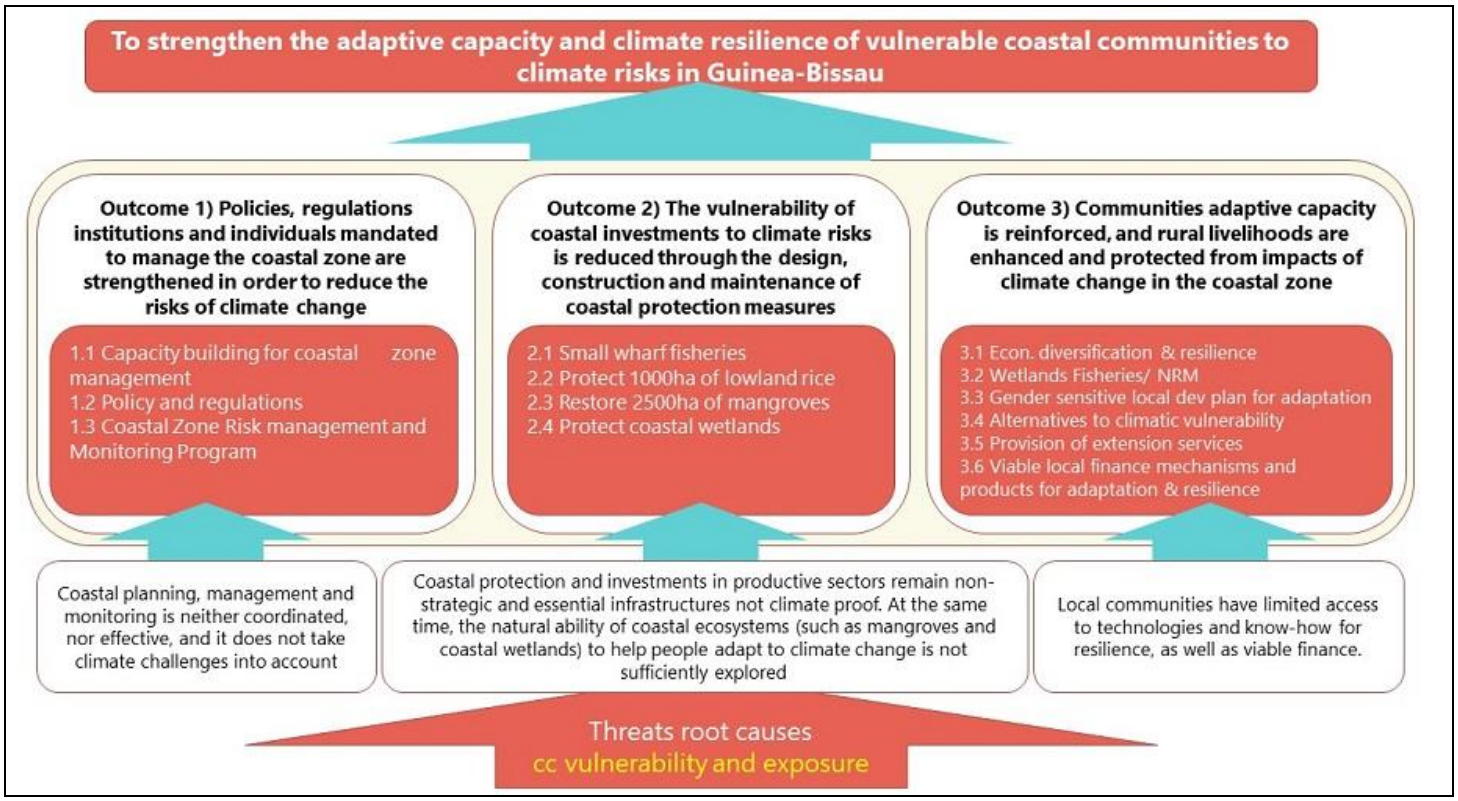
and

*… if* rural coastal communities that are highly vulnerable to climate risks and hazards are also helped and capacitated to achieve more resilient livelihoods,

*then*

coastal dwellers in Guinea-Bissau will be better positioned to face climate risks and hazards affecting the coastal zone, as well as prevent damage to their assets caused by these phenomena.

*Figure 1. Theory of Change diagram*



# III. STRATEGY

## General Strategy

The Guinea-Bissau is seeking the LDCF resources to sustainably remove urgent and immediate barriers linked to policy, institutional, individual, financial aspects of its current coastal zone management framework, as well as to improve stakeholders' overall knowledge and capacity related to effective climate risk management and climate resilient development in its coastal zone. In this perspective, this LDCF full project will pursue its strategy along three tracks[27]:

**First,** the project will strengthen policies, regulations, institutions and individuals that either have a bearing on the health of the coastal zone or a mandate to manage it in different ways. The aim of these actions is to reduce the risks of climate change. Hence, the project will need to depart from the current baseline, work with related institutions and be realistic in terms of the type of change that it is able to bring about. Success will be measured in terms of the project's ability to consolidate an effective **Climate Adaptive and Integrated Coastal Zone Monitoring Framework (CA-ICZM).**

Priority CA-ICZM frameworks will include **(a)** a system for climate risk management in the coastal zone, geographically-based and managed by MADS[28]; **(b)** the conduct of at least one strategic assessment for the coastal zone[29]; **(c)** the formation of a Forum for Coastal Stakeholders, which will function as a broad-based consultative and gender-responsive national body, dedicated to gathering all relevant stakeholders from central, regional and local governments in selected localities, members of the academic segment, civil society organizations, private sector and development partners/donors; **(d)** the fostering of relevant coastal research, promoting the interest of young researchers in development, **(e)** a Climate Proof coastal investment plan; **(f)** a Coastal Risk Monitoring Program, which will look into the longer-term CA-ICZM perspective and set up, in a participatory fashion, mechanisms of coastal adaptation that will make actions more sustainable, gradually transferring the responsibility of "users" (those who use the coastal land- and seascapes.

**Second**, the project will seek reduce the vulnerability of coastal investments vis-a-vis climate risks, through two complementary modalities of coastal protection interventions: (i) implementing adaptation measures that focus on hard infrastructures (i.e. climate-proofing piers, dykes and other essential man-made coastal structures); and (ii) improving ecosystem adaptation services (i.e. "nature-based" solutions). As for the protection of physical infrastructures and the project has selected Cacheu harbor to be serve as a "demonstration" or "show-case" of how a small wharf (including the pier area and the associated infrastructure) can be climate proof "from A to Z". In turn, the rehabilitation of agricultural land (paddy-rice fields in the coastal zones) can be said to represent a "middle-ground" with respect to the two modalities of coastal protection interventions mentioned further up. Among the nature-based ones (or EBA, standing for 'ecosystem-based adaptation'), the proposal is for implementing restoration and/or rehabilitation of 2,500 ha of mangroves and 1,500 ha of wetlands. The project will use both passive and active techniques of ecosystem restoration/rehabilitation, as these have been tested before in Guinea-Bissau. Prioritized sites are all located in protected areas and, if outside protected areas, they will be in the vicinity of these, as well as in public lands. This should address a barrier raised in connection with issues linked to permanence, land tenure and ownership that are typical of ecosystem restoration projects.[30]

**Thirdly**, the project will reinforce local communities' adaptive capacity by enhancing and protecting rural livelihoods in from impacts of climate change in the coastal zone. This will imply focusing on access to finance (grants), capacity building through extension and technology transfer. Competitive bidding will be the main form of assigning and distributing funding to micro-project proponents. The "bottom-up" push for promoting the diversification of economic activities will be flagship activities that will help realize adaptive livelihoods goals for local communities and with specific focus on gender. This "bottom-up" or "user-driven" approach will be equally pursued in the provision of "climate-smart" extension services and in the promotion

[27] Each of the tracks is associated with a technical component of the project, which in turn has a specific outcome formulation (presented in section IV - Results and Partnerships, as part of the additional cost analysis).

[28] The system may be developed on the basis of applicable open access street map platforms with custom layers, a system with also have an interface open to the public for viewing, aimed at helping government oversee and manage the coast zone and stakeholders secure access to public information, customizable and above all, useful. For additional inspiration and guidance, refer to PPG Report 011 in Annex Y (Geo-Based Vulnerability Assessment).

[29] The preference is for a Strategic Environmental Assessment (SEA) for informing decision-making with in-depth analysis for important topics and subject matters affecting the coast.

[30] With reference to discussion under Barrier# 2, Issue #6 Ecosystem restoration in tropical biomes looks promising as a cost-effective adaptation measure, but it is still somewhat experimental.

climate adaptive fisheries management in Bijagós archipelago. Facilitating access to adaptation finance, financial products and climate-sensitive insurance products are also part of similar measures.

Overall, the outcomes of the LDCF project have been designed to build upon and complement the baseline efforts by integrating climate risk management into key planning instruments, by strengthening human and institutional capacities, and by investing in climate resilient physical measures and livelihood strategies.

Capacities at the national and local level to adapt to and cope with the long-term effects of climate change are low, and even more so the rural areas. Therefore the LDCF-financed project will contribute towards strengthening this capacity, so that coastal communities can gradually adapt to climate change and reduce their vulnerability to climate-related risks and disasters. In so doing, the project will address the barriers previously outlined to implementing adaptation measures and solutions at the local level, taking key principles from UNDP policies into account, namely 1. Human Rights; 2: Gender Equality and Women's Empowerment and Principle 3: Environmental Sustainability. Regarding the latter, the project will make an effort to avoid, reduce and, if needed, mitigate potential negative impacts on sensitive ecosystems—and biodiversity altogether—as well as communities' health, safety and working conditions.

The proposed interventions are well aligned with the six sectoral priorities identified and ranked in the NAPA. Among them coastal/marine ecosystems, food security and education and capacity building are at the core of the project strategy, which has three main pillars: coastal governance for adaptation, coastal protection and the resilience of coastal livelihoods.

The LDCF-financed project is innovative in that it will implement an integrated approach to climate change risk management in the coastal zone by strengthening and building it on a baseline for ICZM governance, developing coastal infrastructures and the management of natural assets along the coast, such as mangrove forests and wetlands. Addressing pressing needs for optimizing the use of coastal land for agriculture, the project will work with selected communities to improve rice productivity. Hence, the project will be in a position to address the effects of climate change across multiple sectors simultaneously, including ecosystems management, agriculture, and infrastructural coastal protection, alongside with the nascent tourism coastal sector.

Furthermore, the integrated approach ensures that the current effects of climate change as well as the future climate risks will be integrated into planning for and managing climate-related impacts and hazards.

LDCF funding will also be used for financing or subsidizing both "soft" and hard infrastructure with respect to coastal defense measures. By 'hard infrastructure', it is implied that the project will be able to select a handful of fishery wharfs, tidal dikes, small dams or berms and invest in construction, improvement or maintenance, as applicable and in a cost-effective way to maximize the demonstration element of the so-called hard adaptation measures. The 'soft' infrastructure are in turn natural assets, and also in a demonstrative fashion, the project will set out to restore and/or rehabilitate mangroves and wetlands in selected landscapes throughout the country.

The LDCF-financed project will produce direct adaptation benefits for local communities through the implementation of climate-resilient, diversified and sustainable livelihoods. These activities will provide an alternative source of income as well as improve economic productivity and food security. Through these interventions, the project will reduce the levels of poverty as well as the vulnerability of local communities to the effects of climate change. Furthermore, local communities' vulnerability to floods and droughts will be reduced through the promotion of resilient ecosystems, which can provide protective and productive ecosystem services.

The implementation of adaptation measures will also contribute to global environmental benefits such as preventing land degradation. Socio-economic and environmental benefits will be monitored through the development of a long-term monitoring system which will build a scientific evidence base for the effectiveness of such interventions in the Guinea-Bissau.

## Project Sites

Project Concept (PIF) mentioned a long list of villages located along Guinea-Bissau's rural coastal zone that could potentially become project sites. A site selection process was carried out during the PPG. Those villages (**'localities'**) were then studied, most of them visited, and their **selection validated during the PPG phase**. Given that the coastal zone is very large and harbors 80% of the country`s population, **three Project Zones** were prioritized for benefitting from project intervention, with their approximate location shown in Figure 2.

The three **Project Zones** include **'coastal landscapes',** or **land-/seascapes**, more precisely, and they represent the project's "sites", which are thus grouped (see also Table 2):

- **Zone #1 is "The Bolama-Bijagós Archipelago",** with all its features, including a complex of coastal-marine protected areas and special management arrangements that this implies;
- **Zone #2 is "Varela-Cacheu"**, an area highly affected by both natural and climate-driven erosion and includes both man-made and natural assets that are vulnerable to climate change (agricultural land, piers, bridges, roads, touristic infrastructures, mangroves, wetlands, etc.);
- **Zone #3 "The South" and "Mansoa-Buba-Cufada"**, in fact including two zones that have been combined into one for the purposes of managing project activities. It includes areas that are highly important for coastal agriculture (rice, cashew), as well as protected areas.

***Figure 2. Approximate location of Project Zones 1, 2 and 3***


***Table 2. Indicative list of priority sites (localities) with resident population***

| *Localities in the 3 Project Zones ** | *Notes ** | *Total resident population** | *Men* | *Women* | *% of women* |
|---|---|---|---|---|---|
| ***Zone #1)*** **Bolama-Bijagós** | | **32,424** | **15,770** | **16,654** | **51%** |
| Bolama | [a, b] | 10,206 | 5,054 | 5,152 | 50% |
| Bubaque | [a, b] | 11,204 | 5,374 | 5,830 | 52% |
| Caravela | | 4,263 | 2,133 | 2,130 | 50% |
| Uno | | 6,751 | 3,209 | 3,542 | 52% |
| ***Zone #2)*** **Varela-Cacheu** | | **15,041** | **7,782** | **7,259** | **48%** |
| Cacheu (Urbano) | [c] | 5,674 | 2,842 | 2,832 | 50% |
| Catão Butame | [a] | 117 | 61 | 56 | 48% |
| Catão Calenquin | [a] | 303 | 169 | 134 | 44% |
| Catão Cassica | [a] | 221 | 112 | 109 | 49% |
| Catão Jonique (Edjonique) | [a] | 474 | 274 | 200 | 42% |
| Djifunco | [d] | 607 | 338 | 269 | 44% |

| *Localities in the 3 Project Zones ** | *Notes ** | *Total resident population** | *Men* | *Women* | *% of women* |
|---|---|---|---|---|---|
| Edgim Djongofer | [d] | 87 | 46 | 41 | 47% |
| Edgim Odjoe | [d] | 127 | 73 | 54 | 43% |
| Edgim São Paulo | [d] | 225 | 110 | 115 | 51% |
| S.Domingos (Urbano) | [a] | 5,102 | 2,719 | 2,383 | 47% |
| SUZANA | [a] | 1,507 | 739 | 768 | 51% |
| Varela (Ial) | [a] | 597 | 299 | 298 | 50% |
| ***Zone #3a)*** **Masoa-Buba-Cufada** | | **18,279** | **9,219** | **9,060** | **50%** |
| Buba (Urbano) | [a, c] | 7,571 | 3,835 | 3,736 | 49% |
| Fulacunda (Urbano) | [a, c] | 1,526 | 798 | 728 | 48% |
| Gã-Turé | [a] | 602 | 312 | 290 | 48% |
| Indjassane Balanta | [a] | 535 | 244 | 291 | 54% |
| Mansoa (Urbano) | [a, c] | 7,996 | 4,004 | 3,992 | 50% |
| Tira camisa | [a] | 49 | 26 | 23 | 47% |
| ***Zone #3b)*** **South Zone** | [c] | **1834** | **959** | **875** | **48%** |
| Cacine (Urbano) | [c] | 977 | 540 | 437 | 45% |
| Cabedu | [c] | 857 | 419 | 438 | 51% |
| Grand Total | | 67,578 | 33,730 | 33,848 | 50.1% |

Table Notes:

***General Notes:***

- See location of localities in **Figure 3** + in Annex X-4 (`Project Atlas with Selected Sites).
- All estimates are based on the 2009 Population Census.
- For the purposes of illustrating the total relative proportion of population among the localities, the exact figures from the 2009 Census were adopted as the potential beneficiary population on sites, even though population growth has effectively increased from 2009 to till now (2018). Using the 2009 Census's growth rate (which is 1.9% per year and based on comparisons to the previous census readings), a gross increase of 18% over 9 years should apply *ceteris paribus* to reach an approximate projection of today's population. The grand total would then be 80,052. Since the mentioned growth ratio could have fallen since (in line with overall trends in West Africa), and since the population universe is small and we have no information on migration, a number of 80,000 as the target population could be overestimation of the current population. AMATT indicator # 1 and corresponding Results Framework Indicator #1 describe this target number as "a proxy for the number of people whose vulnerability to the adverse effects of climate change is reduced as a result of an LDCF/SCCF - financed adaptation project."
- Therefore, we considered wiser to adopt the 2009 census data for our universal localities, even though it could a slight underestimation vis a vis the current population.
- Refer to more information on site characterization in Annex X-3 (*Sites visited & communities consulted*) and in the following PPG Reports in Annex Y:
  - Report 002b (2017): [First PPG] Mission Report + Site Level Consultations in Cacheu and Varela Zones with Route followed & Site Locations, PPG Inception Phase, 11 – 14 Aug 2017.
  - Report 007 (2018): [Second PPG] Mission Report. Appended to the Report: + Mission Plans Ad hoc [as of] Report 005; + Photo Essay from the Mission. PPG Second Field Mission Report, 05 - 12 October 2017.

***Notes referring to specific lines in the Table 2:***

[a] Refers to all localities directly visited by the PPG team during the first and second field missions, in which local leaders, including women and local associations, were informed about the project and duly consulted about their engagement. Evidence of stakeholder consultation is included in Annex X-3.

[b] Localities visited either during first and second field mission, for assessing coastal infrastructures, or in other occasions by team member J Biai.

[c] Refers to sites that were not directly visited.
In the Varela-Cacheu Project Zone, this (under the names of 'Djifunco' and 'Edjin'), but which form part of coastal strip that includes Catão and stretches from Varela to Djufunco within Santo Domingo Sector.

[*] The names of localities follow the same standard used in the 2009 Census.

[**] In Zone #1 (Bolama-Bijagós), the exact localities visited included Bolama town, Ancadjedje and Bruce (Ilha de Bubaque). Refer to PPG Report 007 (2018) for the Misson Report.

***Figure 3. Proposed outline of coastal land-/seascapes with localities identified (Jan 2018)***

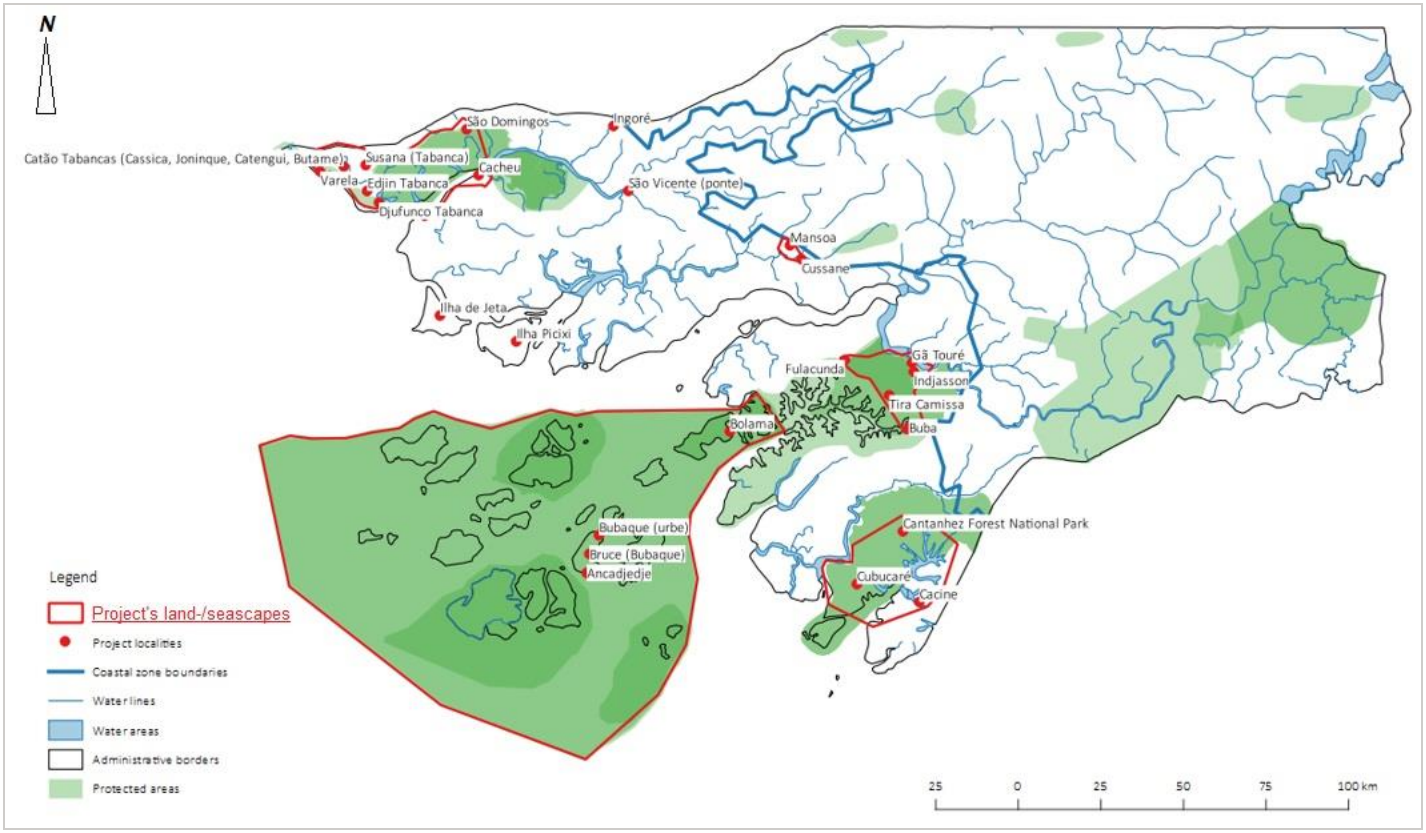


*Table 3. Indicative Activities per Site (refer to Annex X-3 for additional information)*

| | | | Components/Outputs | | | | | | | | | | | | | | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | COMPONENT 1) Policy and institutional development for climate risk management in coastal zones. | | | | COMPONENT 2) Coastal protection investments | | | | COMPONENT 3) Diffusion of technologies to strengthen coastal communities' climate resilience. | | | | | | Activity Reference |
| Project Zone | Sites | # localities | *1.1 Capacity building ICZMt* | *1.2 Pol &Reg* | *1.3 CC Risk Mgt* | *1.4 Coastal Zone Monit Prog* | *2.1 Small wharf fish* | *2.2 Lowland rice* | *2.3 Mangroves* | *2.4 Wetlands* | *3.1 Econ Diversif* | *3.2 Wet/Fish NRM* | *3.3 Livelih Strat* | *3.4 Alt Cashew* | *3.5 Estension* | *3.6 Access to Finance* | |
| | National | NA | X | X | X | X | | | | | | | | | | | Activities 1.1.1 to 1.5.5 and 2.4.1 |
| | National/Bissau | NA | X | X | X | X | | | | | | | | | | | Activity 2;2.5 Strengthen capacity of intervention of INPA and Direcção Nacional de Vulgarização Agricola and development of agriculture education (schools) |
| Varela-Cacheu | Suzana - Sto Domingo / + Cacheu (port, re. 2.1.6) | 1 | | | | | X | | X | | X | | | X | | | Activities 2.1.1 to 2.1.6 and 2.3.1 to 2.3.8 |
| | Varela/Catão | 4 | | | | | | X | X | | X | | | | | | Activities 2.2.1, 2.2.3, 2.2.4, 2.2.6, 2.2.7, 2.2.8 and 2.3.1 to 2.3.8 |
| Bolama-Bijagós | (Bubaque, Bruce, Ancadjedje) | 3 | | | | | | | | | X | X | X | | | | All relevant bottom-up Activities under Outputs 3.1 through to 3.3 |
| Mansoa-Cufada | Mansoa / Cussane | 2 | | | | | | X | | X | X | | | X | | | Activities 2.2.1 to 2.2.4, 2.2.6 to 2.2.8 and 2.4.2 to 2.4.9 |
| | Cufada (Indjasson, Gã Turé, Tira Camissa) | 3 | | | | | | | | X | X | X | | | | | Activities 2.4.2 to 2.4.9 |
| | Bubatchinque, Buba | 1 | | | | | | | X | | X | X | | X | | | Activities 2.3.1 to 2.3.8 |
| | Potential localities Component 3 [*] | Any | | | | | | | | | X | X | X | X | | | All relevant bottom-up Activities under Outputs 3.1 through 3.4 |

[*] Through competitive bidding and a "bottom-up" participatory way. May include communities located across the entire coastal zone, as long as it is not within Greater Bissau and peri-urban areas.

# IV. RESULTS AND PARTNERSHIPS

## Expected Results

### *Objective and Components*

The objective of this LDCF-financed project is: **To strengthen the adaptive capacity and climate resilience of vulnerable coastal communities to climate risks in Guinea-Bissau**. The Project has three main components, each with a corresponding outcome formulated:

*Component 1) Governance frameworks for climate risk management in the coastal zone*

*Outcome 1)* Policies, regulations institutions and individuals mandated to manage the coastal zone are strengthened in order to reduce the risks of climate change.

*Component 2) Coastal protection investments*

*Outcome 2)* The vulnerability of coastal investments to climate risks is reduced through the design, construction and maintenance of coastal protection measures.

*Component 3) Diffusion of technologies to strengthen coastal communities' climate resilience*

*Outcome 3)* Communities adaptive capacity is reinforced, and rural livelihoods are enhanced and protected from impacts of climate change in the coastal zone.

The fourth component pertains to M&E for the entire project with standard outcomes defined by UNDP-GEF practices (see Annex X-2 for more details).

**Under each of the above Outcomes (1 through 3),** a series of **Outputs** have been conceived, and under those **indicative activities** proposed. Outcomes, their additionality and outputs are presented in more detail in the next sub-sections and activities in Annex A and Annex X-2.

**Addionality:** To achieve its outcomes, the LDCF project will build on achievements from baseline interventions and work in close collaboration with co-financed ones. It will complement the current baseline efforts and demonstrate the additionality of its actions and measured by:

(i) **Integrating climate risk management into key policy and planning instruments**, where there are gaps in these governance frameworks, exactly as identified under Barrier # 1. They relate to decision-making, planning, institutional coordination and above all – capacity for managing the coastal zone within a scenario of increased climate risks and hazards. Hence strengthening human and institutional capacities is absolutely necessary, especially given the low baseline of governmental management affecting the coastal zone.

(ii) **Investing in climate resilient physical interventions** through demonstration measures. Climate-proofing of physical and natural infrastructures is a new concept in Guinea-Bissau and the project needs to try it, preferably "from A to Z" to show that it works. Given the project's limited scope, such interventions, whether in coastal infrastructures or forests, will needs to be tactical in its choice of sites and approach.

(iii) **Investing in strategies for more resilient livelihood** by equally ensuring a positive gender bias and due attention given to the coastal and marine environment. This will include enhanced access to finance for greater climate resilience and to extension services and technical assistance for innovation by fully taking *"the climate angle"* into consideration.

Together with the **standard component of Monitoring and Evaluation**, the project will seek to achieve the stated outcomes through three main components.

More specifically, **Component 1** ***"Policy and institutional development for climate risk management in coastal zones"*** will support the establishment of an enabling political, institutional and administrative environment for advancing the management of climate risks in the coastal zone that threaten the achievement and sustainability of the expected results of the baseline projects. **Component 2** ***"Coastal protection investments"*** will finance additional investments in hard and soft coastal protection measures to help maintain critical economic and natural infrastructure in face of sea level rise and coastal degradation,

including interventions in the agricultural and fisheries sectors as well as in regard to nature protection and restoration. **Component 3** ***"Diffusion of technologies to strengthen coastal communities' climate resilience"*** will contribute to enhancing the climatic resilience of livelihood options for coastal communities with special emphasis on the most vulnerable groups such as women and youth.

To date, Guinea-Bissau has taken few but important steps to strengthen its capacity for climate risk management in coastal zones. **An overview of both past and current initiatives** that are well aligned with the subject matter of this project including GEF-funded projects can be found in Table 5 and Table 6. The projects and programs there listed recent have contributed significantly to Guinea-Bissau current achievements in terms of **development gains in** several domains, as well as with the country's first steps towards **addressing adaptation challenges**. And although GEF and LDCF projects are not part of this project's 'financial baseline', they are leaving and important the legacy that the current LDCF will build upon and complement. Together all of these initiatives have yielded important lessons that are fully taken into consideration by the current LDCF project. For on-going ones, appropriate synergies and partnerships have been sought during the design phase and will continue to be pursued during project implementation.

However, the current set of baseline interventions, as well as the investments that they represent, show **visible gaps vis-à-vis specifically addressing climate challenges in Guinea-Bissau's coastal zone**. An overview of baseline projects and the additional cost argument that justifies the project intervention is provided per component below.

## *Component 1) Policy and institutional development for climate risk management in coastal zones*

**Outcome 1) Policies, regulations, institutions and individuals mandated to manage the coastal zone are strengthened in order to reduce the risks of climate change**

*Baseline Finance:* *$ 65 million*
*LDCF project grant requested:* *$ 1,886,000*
*Co-financing* *$ 11,730,000*

### *Without LDCF-finances (baseline situation for Component 1)*

Baseline projects for Component 1, which contribute in different ways directly to the institutional development in Guinea-Bissau and to capacity building in regard to environmental governance and management. They are supported by five lead agencies (UNDP, WB, FAO, AfDB and EC) and they are not necessarily restricted to the coastal zone. Together, this baseline sums up $53M for Component 1 alone. Baseline programs are listed in the table below.

| Lead Agency & ref. | Component 1 Baseline Programs<br>*[data below includes the intervention's total budget the applicable baseline amount, while to the right, the amount shown is what applies to this component – in green, the co-financing]* | Estimated Amounts considered under Comp 1 ($M) |
|---|---|---|
| UNDP 1 | Capacity building for local governance, including e-governance, | $2.9 |
| UNDP 2 | Capacity for natural resource management (national level) | $0.8 |
| UNDP 3 | UNDP-EC Management Capacity Building Program (improved public administration) | $2.0 |
| UNDP Baseline extrapolated | Extrapolated relevant baseline finance expected during LDCF project implementation (approx) - %11.5relating to its future Program | $11.5 |
| WB 2 | Rural Community-Driven Development Project (P090712, P146746, P151443), including the first and second additional funding (2009-2019, $30M); | $5.0 |
| WB 4 | Guinea-Bissau Public Sector Strengthening Project (P150827), excluding the pipeline project for additional finance (2015-2020, $5M) | $5.0 |
| FAO 6 | GCP /GBS/035/EC - For a Responsible Land Governance (Project "N`Tene Terra"): Support for the Implementation of the Land Law in Guinea-Bissau (2016 - 2020) at $3,450K; | $3.4 |
| IFAD | PADES: Support for the start-up of economic development in the South - IFAD project (Appui au démarrage du projet d'appui au développement économique du Sud-PADES) - At least $19.M | $9.5 |
| EC 1 | UE-ACTIVA - Eixo 1: Governação territorial - Desenvolvimento Regional através do Reforço da Sociedade Civil) | $1.7 |
| EC 2 | UE-ACTIVA 2 - Projet de désenclavement des zones rurales pour faciliter la commercialisation de la production agricole et améliorer l'accès aux services sociaux de base | $0.1 |
| EC 3 | Programme d'appui au Développement Territorial en la région de Cacheu (PADETEC) | $1.1 |

| Lead Agency & ref. | Component 1 Baseline Programs<br>*[data below includes the intervention's total budget the applicable baseline amount, while to the right, the amount shown is what applies to this component – in green, the co-financing]* | Estimated Amounts considered under Comp 1 ($M) |
|---|---|---|
| EC 10 | EC 2016 - 2020 \| Áreas protegidas e resiliência às mudanças climáticas; | $5.0 |
| AfDB 1 | Projet d'Appui au Renforcement de la Gouvernance Economique et Financière (PARGEF) - Ref.: P-GW-K00-005, (2010 - ongoing). Estimated amount is $20M, of which half is accounted for as baseline finance, i.e. $10M | $5.0 |
| AfDB 2 | Projet d'appui au renforcement des capacités d'administration - Reference : P-GW-IAD-001 | $10.3 |
| **Multi-Partner - Baseline and Co-financing** | Regional /Global Project (and co-financier to this LDCF project) Global Alliance for Resilience Initiative / Sahel-West Africa (AGIR), European Union through Club Sahel / OECD - at least $100M, of which $51.7 represents Guinea-Bissau's baseline and co-financing. | $2.9 |
| | **BASELINE TOTAL ~** | **$65 million** |

With significant resources invested, the above-listed baseline projects for Component 1 touch upon different aspects of capacity building in relevant intervention areas pertaining to the management coastal zones.

Although crucial to the country in their own right, **Component 1 baseline efforts only address some of basic development needs** vis-à-vis Guinea-Bissau's general capacity for public administration (e.g. project's UNDP 1 and UNDP 2, WB 4 or AfDB 1 and AfDB 2). They do not touch upon the specificities of coastal governance and only relate in a peripherical manner to the key economic and environmental sectors relevant for adaptive coastal zone management, and which have been prioritized for this project – namely coastal protection, resilience of fisheries' infrastructure and communities' capacities. E.g., developing a specific national directive (sectoral regulation) that requires coastal investments to be climate-proof is not an activity foreseen in any of the baseline projects listed further up.

Baseline projects concerned with local or sub-national development in the coastal regions of Guinea-Bissau are not necessary taking climate change into consideration – or if they do, the approach is superficial. This is the case of projects EC 3 and IFAD's PADES, which benefit The South and Cacheu regions respectively – parts of the country particularly prone to climate-driven risks, both of slow and sudden hazard onset (i.e. disasters). In the context of coastal people's extreme vulnerabilities, the approach should be different.

Along the same lines, the key national stakeholders and government agencies involved in the implementation of these initiatives do not have sufficient technical capacity to integrate climatic drivers or climate proofing measures into the implementation of activities on the ground. Amongst key decision-makers, the general understanding of climate change risks on coastal dynamics and their awareness around related impacts remains limited.
Furthermore, the baseline project for Component 1 is a **fragmented of set interventions** vis-à-vis the envisaged approach to coastal zone management under this project. Climate change and ICZM could serve to "connect the dots" vis-à-vis policy cohesion. Instead, a **lack of integration and cohesion in ODA policies** is likely to remain undressed, if the status quo is maintained.

Before a country can consider I&ACZM, a first step towards ICZM needs to be pursued. Most if of the projects under Component 1 baseline seek to address capacity building and governance more broadly. These are steps in the right direction. However, these projects lack the necessary emphasis on coastal adaptation, resilience and integration of sectors to be able to "go the extra mile" and address adaptation needs.

There are **two exceptions** to this pattern though: **(i) Project Multi-Partner's AGIR** and the **(ii) EC's Protected Areas Project (EC 10).** Both projects address climate change in a more consistent way. Yet, their focus differs from that of the current LDCF project and there is, hence, no potential overlap. EC 10 is dedicated to improving the climate resilience of four protected areas through capacity building and environmental stress reduction. It is included in the baseline of Component 1 due to proposed activities that are linked with the support to a "Climate Change Secretariat" and local capacity building. However, its scope is very limited in terms of its relevance for coastal management and would therefore greatly benefit from complementary partnerships. In turn, AGIR project has potential for several synergies, but these remain to be properly explored during , as its scope is still very "open".

Crucially, the operations of the most relevant national actors and decision-makers for coastal management do not fully share a cohesive regulatory and administrative framework that is conducive to integrated planning and **decision-making**, let alone an approach to coastal zone management which takes climate risks into consideration. This directly affects central stakeholders for this project, namely the Ministry of Environment and Sustainable Development (MADS), the Competent Environmental Assessment Authority (AAAC), the Institute for Biodiversity and Protected Areas (IBAP) and the not least also Coastal Planning Office (CPG).

Despite recent progress, this scenario will tend to perpetuate a fragmented and unengaged approach to coastal management. For example, there is no single and coordinated governance framework dedicated to the coastal zone (either regulatory, institutional or fiscal).

At the level of institutional staff, limited capacity at the national level for coastal zone management and limited awareness on associated climate change risks the will continue to be the rule, as it has been the norm in the country for the past few years. The *status quo* of shortage of scientific, engineering, legal and managerial capacities needed to identify, plan, design, assess, prioritize, implement and monitor coastal defense measures will continue.

As it is, without the LDCF intervention, **coastal zone governance and coastal zone management in Guinea-Bissau will continue to have major gaps**. Coastal adaptation needs, which would be a next step after addressing ICZM, will also remain unaddressed. This includes key aspects such as planning and in the development of essential legal and regulatory frameworks for managing the coastal zone, which need to be focused and specific for addressing emerging climate challenges.

### *With LDCF-financed intervention (adaptation alternative for Component 1)*

The stated Outcome under Component 1 for this LDCF project is focused on building on and complementing baseline efforts, by integrating climate risk management into key planning instruments, and by strengthening human and institutional capacities to that effect.

**Three interconnected Outputs have been designed** to support the emergence of an enabling policy, institutional and administrative environment for advancing the adaptive management of the climate risk in the coastal zone. They focus respectively on facilitating an enabling policy and institutional environment for a more consistent approach to managing Guinea-Bissau's coastal zone, while fully taking climate change into consideration. Over the course of the project's 5-6 years of effective implementation, these measures will support the emergence of an improved governance, capacity and management frameworks for the coastal zone of Guinea-Bissau, by taking climate risks, hazards and resilience fully into consideration.

Currently these aspects are **not catered for in the set of baseline interventions**, which either tend to be 'generic' when focusing on improved public administration frameworks, or with climate change barely mainstreamed into plans and activities of baseline project. Hence, proposed outputs and activities under Component 1 are **additional** vis-à-vis the baseline and complementary, synergetic vis-a-vis the co-financing.

In terms of key results under Outcome 1 with respect to national and/or sectoral policies, plans and processes that are expected developed and strengthened, the following are mentioned:

> *Climate Adaptive and Integrated Coastal Zone Monitoring Framework, including:*
> a) Risk management systems
> b) Strategic assessments
> c) Forum for Coastal Stakeholders
> d) Relevant coastal research
> e) Climate Proof coastal investment plan
> f) Coastal Risk Monitoring Program (longer-term, community based, sustainable)

Under these, stakeholders will be helped to identify, prioritize and integrate adaptation strategies and measures by implementing the following outputs:

**Core outputs under Outcome 1**

| Outputs (short reference) | Outputs full text |
|---|---|
| 1.1 Capacity building for coastal zone management | Output 1.1) A capacity development program is implemented for climate risk mainstreaming, benefitting key institutions and stakeholders that either manage and use the coastal zone |
| 1.2 Policy and regulations | Output 1.2) Measures to improve the policy, regulatory and administrative environment for climate risk management in the coastal zone are implemented |
| 1.3 Coastal Zone Risk Management and Monitoring Program | Output 1.3) Institutional coordination is strengthened for Climate Adaptive and Integrated Coastal Zone Monitoring and risk management Program |

**Within the framework of Output 1.1,** the project will support the design and delivery by the Office of Coastal Planning, assisted by the PMU in collaboration and duly backed by the national implementation agency (the MADS), of a capacity development program. Based on the project's thorough stakeholder analysis, this program will define targeted audiences (from high level decision makers to community members) and organize training sessions, seminars and consultations, with the aim of building national capacity. The targeted audiences should include key actors at the various administrative levels and preferably with links to baseline related projects (see next section on Partnerships). For that reason, this is the broadest-reaching output in terms of baseline fit. It will consolidate the human resource basis for the mainstreaming of climate changes concerns and adaptation options into current key development policies and plans concerning the coastal zone.

In order to ensure the quality of materials and of the message delivered, the provision of training services will be international procured. Refer to PRODOC Annex C1, Work to be Tendered Out, Overview Table.

If funding permits, a marketing campaign to raise awareness may also be tagged along Output 1.1. the activities.

**Under Output 1.2** measures to improve the policy, regulatory and administrative environment for climate risk management in the coastal zone will be financed by the LDCF. The existing coastal zone management unit, will be empowered and given the mandate to design and implement the (spatial) planning of activities in the coastal zone. It will need to have sufficient capacity and mandate to design and implement long term planning activities. This will therefore include the drafting of proposals, including legal statute texts, for the establishment of a strong, capable, and fully mandated institution responsible for coordinating action in the coastal zone. It will evolve from the legacy and achievements of the GPC, but it will need to do more in order to specifically address climate challenges.

This new authority is expected to **reach out and engage a wide range of sectoral stakeholders** as needed for ensuring that that climate change resilience guides local and national development. This LDCF project will fund legal technical assistance and consultation fora. In this manner, this would complement the activities of baseline projects UNDP 2, WB 4, FAO 6, AfDB 1 and AfDB 2.

Equally under Output 1.2, **a study on fiscal policies** pertaining to the coastal zone will be conducted in close collaboration with the **Port Authority**, related partners and other institutional stakeholders. It will be carried out with a view towards proposing solutions for improving and attracting investment to the coastal zone through trade. Such project is not catered for under baseline projects. It is therefore additional. This study will be especially relevant to baseline project AfDB 1, but equally to the remainder ones, to the extent that several of them have a bearing on fiscal policies. The use of fiscal instruments (such as taxation, duties or duty waivers, incentives and possibly also subsidies) will be assessed for their potential to support policy implementation and change in public behavior, which currently contributes to increasing the vulnerability of coastal zones' economies. Fiscal instruments may also be used for curtailing unsustainable practices, such as uncontrolled sand mining, settlements in climate sensitive areas, mangrove deforestation. Along the same fiscal instruments are a powerful lever for promoting private sector participation in the construction and the maintenance of the coastal infrastructures, in particular those that will and be a target for coastal protection measures under Component 2.

Still under Output 1.2, a framework for local development plans will be developed and plans revised in selected project sites, taking into account climate change impacts, solutions and consolidation of adaptation measures at the level. **Activity 1.2.3**'s full name is thus formulated: "*A policy, institutional and local development planning framework in selected coastal sites is developed, priming innovation, gender responsiveness and updating of revised to take into account climate change*"). At least 10 local development plans will be revised, including through the use of geographically based information systems and tools for the mainstreaming of climate change impacts into planning. This last point may be successfully matched with baseline projects focused on local development, i.e., UNDP 1, WB 2, FAO 6, EC 1, EC 4 and EC 10.

**Activity 1.2.3 will be developed by the GPC** and sub-national planning and budget execution entities (e.g. *Secretaria de Estado do Plano e Integração Regional*, *Secretaria de Estado do Orçamento e Assuntos Fiscais*, as well as local governments in targeted sites). GPC will work in close collaboration with baseline projects and other national authorities. Where needed, international TA will be called upon to assist GPC, facilitated by the project's Chief Technical Advisor. Refer to PRODOC Annex C1, Work to be Tendered Out, Overview Table.

**Under Output 1.3**, the PMU will procure and engage consultancies with a view to strengthen the reach of the Coastal Zone Planning Office and propose an institutional process aimed at gradually transforming the Office into an Integrated Coastal Zone Management Office, with a broader mandate and improved capacity. It will build on the legacy of the integrated ICZM

plan and coastal zoning developed thanks to the GEF SPA ACCC (yet to be adopted by the government), and will support the integration of a climate risk management approach into key national and regional development plans and policies including: the master plan of tourism areas, the urban master plan of Bissau, national coastal areas zoning regulations, the local development plans in coastal regions, the National Plan for Environmental Management (PNGA), strategies, tools and the sub-regional action plan to being developed by the projects UNDP 3, WB 4 and AfDB 1 and AfDB 2. This will entail several activities, the first of which is the full development of suitable Geographically-based Information and Decision Support Systems for Guinea-Bissau's coast and the development of a generic but useful multi-partner investment plan for coastal zone management, identifying additional investments necessary to address likely climate change risks and identifying the most appropriate financing sources to cover the additional costs of risk management from both the public and private sector. In this context, a partnership with the Regional Multi-partner WACA Program West Africa Coastal Areas Management Program (WACA) will be sought to achieve goals and have the activity cross-subsidized. Secondly, priority research projects on climate change and climate risks will be identified and implemented. Finally, a national level SEA will be carried out on the potential benefits and risks linked to Guinea-Bissau's coastal zone and the likely emergence of an offshore oil and gas boom. Under this project, a clear focus on the climatic vulnerability element will be ensured to the extent that unmanaged and unmitigated offshore operations in Guinea-Bissau are more likely to exacerbate vulnerability rather than contribute to the wider public good.

Output 1.3 will additionally develop and roll out a Climate Adaptive and Integrated Coastal Zone Monitoring Program in order to ensure that the policy and planning process remains flexible to ongoing change occurring within the coastal zone. The program will provide up-to-date data on marine meteorological and related oceanographic climate-induced dynamics affecting beach width and slopes, coastal line evolution, lagoon sediments, coral reefs, winds, wave height and strength, tide levels, river flows, river water quality, ground water quality. It will also monitor the efficiency (including cost-benefit assessments of the coastal adaptation strategies supported by the project. It will furthermore build upon the SANDWATCH (national program for beach surveillance) set up by the ACCC project to involve and build the capacity of coastal communities for coastal monitoring. The monitoring mechanism will provide decision-makers, technical staff, local communities, and the private sector (such as the tourism industry) with critical information on the ongoing effects of sea level rise to allow more flexible, adaptable and responsive decision making in the coastal zone. For these reasons, it will be highly instrumental to any initiative designed to increase the institutional capacity of all decision-making pertaining to coastal zones, and therefore especially relevant to support and climate-proof baseline projects UNDP 1, UNDP 2, UNDP 3, WB 2, WB 4, AfDB 1, AfDB 2 and EC3.

## *Component 2) Coastal protection investments*

**Outcome 2) The vulnerability of coastal investments to climate risks is reduced through the design, construction and maintenance of coastal protection measures**

| | |
|---|---|
| *Baseline Finance:* | *$ 36 million* |
| *LDCF project grant requested:* | *$ 5,906,000* |
| *Co-financing* | *$ 22,870,000* |

### *Without LDCF-finances (baseline situation for Component 2)*

As a consequence of the low adaptive capacity of local communities and the adverse effect that climate change will have upon long-term agricultural productivity, they are particularly vulnerable to the effects of climate change. In this context, the main vulnerabilities are related to the degradation of mangrove ecosystems and the salinization of coastal fields and water resources. Key socio-economic infrastructure is frequently located in the coastal zones and is thus exposed to extreme weather events such as storms, coastal flooding and erosion. In addition, coastal roads are threatened by coastal erosion. This increases the vulnerability of local communities who are cut off during climate-related disasters and are not able to evacuate during such times or receive emergency relief. Households are also at risk of damage or destruction because of the increasing frequency and severity of such events. Artificial structures have failed to take into account future climate risks – such as increasing frequency and intensity of extreme weather events, as well as increased tidal action and sea level rise. Unfortunately, nowhere near enough is being done to increase the protection of coastal investments.

Baseline projects for component 2 stem from three lead agencies (WB, IFAD and EC) and generally include activities related to interventions and infrastructure linked to the protection of agriculture, fisheries and local transportation

| Lead Agency & ref. | Component 2 Baseline Programs | Estimated Amounts |
|---|---|---|

| | *[data below includes the intervention's total budget the applicable baseline amount, while to the right, the amount shown is what applies to this component – in green, the co-financing]* | considered under Comp 2 ($M) |
|---|---|---|
| WB 2 | Rural Community-Driven Development Project (P090712, P146746, P151443), including the first and second additional funding (2009-2019, $30M); | $5.0 |
| WB 5 | Pipeline: Second Additional Finance to Rural Community-Driven Development Project for Guinea-Bissau (P151443) ($23.5M, of which $10M is considered as baseline to this project) | $3.0 |
| EC 3 | Programme d'appui au Développement Territorial en la région de Cacheu (PADETEC) | $0.1 |
| EC 8 | EC 2016 - 2018 \| Pdil Pecixe: Projeto de Desenvolvimento da Ilha de Pecixe | $0.3 |
| EC10 | EC 2016 - 2020 \| Áreas protegidas e resiliência às mudanças climáticas; | $1.1 |
| AfDB 3 | Projet de Développement des Chaines de Valeur Riz — Reference: P-GW-A00-003, (2018 + 6 years, i.e. recently started), providing co-financing to the LDCF project. Baseline amount is $10M, including $6M in parallel (cash/collaborative and assigned to component 2) co-financing, plus another $0.4M as in-kind co-financing (assigned to component 3). | $6.0 |
| Multi-Partner - Baseline and Co-financing | Regional Project that Provided co-financing to the LDCF Project - Global Alliance for Resilience Initiative / Sahel-West Africa (AGIR), European Union through Club Sahel / OECD - at least $100M, of which $51.7 represents Guinea-Bissau's baseline and co-financing. | $20.7 |
| | TOTAL ~ | $36 million |

All of these projects are partly or exclusively related to the coastal zones of Guinea-Bissau. To greater or lesser degree, they include activities related to infrastructure investments. For the most part, they relate to infrastructures and spaces that play a role in agriculture, fisheries and local transportation. Such infrastructural activities include the construction, improvement or maintenance of landing wharfs, tidal dikes, dams and berms. WB 2 and WB 5 has the objective of increasing access to priority basic social and economic infrastructures and services in participating communities in at least two regions of Guinea-Bissau, the latter program by fostering the involvement of the private sector. These baseline programs also include the potential for emerging agribusiness development through WB 5.

IFAD's PADES Project has a strong economic development focus on infrastructure and the promotion of rice production and the rehabilitation of mangrove swamps for the purpose of rice production is a key feature of the project. EC 8 is specifically dedicated to small-scale infrastructures for local development in the Island of Pecixe, related to fisheries and the provision of social services. Such infrastructures are indeed crucial and are likely to have important developmental impact. They generally lack adequate measures to safeguard their durability and functionality under climate change, which is likely to undermine their medium/long-term gains.

## *With LDCF-financed intervention (adaptation alternative for Component 2)*

**The outcome of Component 2** is reduced vulnerability of coastal investments to climate risks through the design, construction and maintenance of coastal protection measures. In this context, this LDCF intervention will finance additional investments in hard and soft coastal protection measures to help maintain critical economic infrastructure, including the key infrastructural investments supported by the baseline projects in the face of sea level rise and coastal degradation. Ports and other infrastructure supporting the production and distribution of fishery products, in general, do not guarantee a sufficient financial return to justify venture investments, and it is therefore necessary to have a strategy for ports and wharfs rehabilitation, but one that fully takes into account climate proofing.

The table below provides an overview of the general strategy and results for Component 2, as well as the designated sites for these measures (reference to background information on the topics outlined in the table can be found in Annex X-1, in PPG Reports 009b through 009d, and to activities in Annex X-2 ):

***Table 3. General Strategy for Component 2***

| General Topic / Target for climate proofing | Approach and ancillary activities | Sites, landscapes and localities* | Measure of success | CC additionality |
|---|---|---|---|---|

| General Topic / Target for climate proofing | Approach and ancillary activities | Sites, landscapes and localities* | Measure of success | CC additionality |
|---|---|---|---|---|
| ***Coastal Sector:*** **Fisheries**<br><br>*Target for climate proofing:*<br>• Small fishery wharfs<br>• Boat ramps | The GEF funding will be used to improving the resilience of the artisanal fishing sector to climate change by providing infrastructures to improve landing conditions (as small wharfs and ramps), facilities to storage and process products and road infrastructures, would directly generate an added value to the products, create jobs and stimulate. | In Cacheu town (the one currently budgeted for).[31]<br><br>Depending on scale, partnerships and government decisions, as well as co-participation, a GEF investment can also be targeted to climate proof 1-2 additional ports, (e.g. Bubaque, Bolama). | The ability of small fishery wharfs to withstand the projected sea-level rise and storm surges | Climate proofing and improvement of the infrastructure in the targeted sectors, i.e. rice cultivation and fisheries, will allow to strengthen the resilience of these vulnerable and vital local sectors. Those investments will directly contribute to the increase of productivity, attracting investments, creating jobs. Improving livelihood of fisheries and rice cultivation leads to an increase in their resilience (a decrease of vulnerability) and better capacity to overcome climate change risks and effects. |
| ***Coastal Sector:*** **Low-land Rice cultivation**<br><br>*Target for climate proofing*<br>Vulnerable, rural Infrastructures, techniques and essential agricultural inputs, including:<br>• Dikes and sluicegates, including the knowhow on their construction and operation<br>• Quality of rice seeds (regarding salt tolerance, harvesting cycle e.g.)<br>• Where essential, feeder roads | The GEF funding will be used to improving the climate change resilience of the low-land rice cultivation agricultural segment, by restoring 1,000 ha of mangrove swamp rice cultivation, where rice fields are impacted by saline intrusion and flooding. This will be done in selected locations (see to the right) and in areas of approximately 250ha each, (to be confirmed during inception):<br>• Rain water harvesting systems<br>• Marketing systems | • Catão villages<br>• Localities around the Mansoa valley<br>• Localities in the Buba region, between the Cufada Lake and Corubal river[32]<br>• Possibly in the South | At least 1500 Families benefit from climate proof mangrove swamp rice cultivation | |
| ***Natural infrastructure:*** **Mangroves**<br><br>*Target for climate proofing*<br>Restoration of the ecosystem's structures and function, thereby securing a steady flow of ecosystem services that are useful in helping **people** adapt to climate change.<br><br>The following features of well conserved mangroves will be enhanced:<br>• deterrence of sea level rise, water filtration<br>• fish spawning<br>• several provision | GEF funding will finance mangrove restoration efforts by implementing the "Green Belt" approach and identifying of threats and opportunities for mangrove conservation and sustainable use as an adaptation measure with multiple benefits. There will be two tracks of mangrove restoration / rehabilitation activities:<br><br>***i)*** Promoting **natural regeneration** where mangrove ecosystems are self-renewing (1500ha), | 1) Parque Natural Tarrafas do Rio Cacheu:<br><br>*First Green Belt*: Around Santo Domingo, Suzana and Cacheu (an area that may constitute a Green Belt)<br><br>*Second Green Belt*: Along the fringe of coastal strip from Varela to Djufunco (currently dominated by marginally viable rice cultivation, and more specifically in areas with degraded and retreating | Approximately 2500 ha of mangrove restored<br><br>Adequate and metrics and timelines for ecosystem restoration and rehabilitation, using science-based methods of measurement and assessment | Investment in restoration of natural mangrove and wetland ecosystems will lead to climate proofing of the area.<br><br>Additionally, rehabilitation of these ecosystems will result in securing the ecosystem services flow and by this it will contribute to increasing the capacity of local communities to handle climate change risks. |

[31] See considerations in PRODOC Annex C3, Site Selection Process, Justification & Cost Assessment for Output 2.1 (Fishery Wharfs).
[32] "In those locations, IBAP had only moderate success in mangrove reforestation efforts, due to strong river erosion and rice cultivation turns out very difficult" (note from PPG Report 009b on Rice).

| General Topic / Target for climate proofing | Approach and ancillary activities | Sites, landscapes and localities* | Measure of success | CC additionality |
|---|---|---|---|---|
| services (food, shelter, medicine, timber, etc.) | ***ii)*** Rehabilitating degraded mangrove via **replanting** (1000ha)<br><br>Four approaches to mangrove restoration will be put to use according to sites and conditions:<br>• Techniques for the restoration or ecological rehabilitation of degraded mangroves,<br>• Measures to reduce pressures on mangrove resources,<br>• Actions that facilitate a change in population behavior and the sustainable use of resources in mangrove areas,<br>• The rollout of capacity development, education, training and awareness raising focusing on riparian communities. | mangrove and highly threatened by sea-level rise and storm surge<br><br>2) Bolama-Bijagós Archipelago, in areas where dwellings and social infrastructures are threatened by sea-level rise and storm surge<br><br>3) Cacine, within Cantanhez Natural Park, but where localities are yet to be defined and the population consulted<br><br>4) Cussane I, II and III, near Mansoa, combining mangrove and wetlands restoration | | |
| ***Natural infrastructure:*** **Wetlands**<br><br>*Target for climate proofing*<br>Protection and rehabilitation of wetlands' essential ecosystem functions, thereby securing a steady flow of ecosystem services that are useful in helping **people** adapt to climate change.<br><br>The following features of well conserved wetlands will be enhanced:<br>• Flow control, mitigating flooding and erosion<br>• Improvement and control of water quality, through purification, retention of nutrients<br>• Recharge of aquifers<br>• Coastal protection against storms | The GEF funding would be used to protect coastal wetlands by replanting native trees and weeds (indigenous species) and other wetland management strategies to strengthen the resilience against the risks of definitive drying out and salinization of 1,500 ha wetlands. | 1) Lagoas da Cufada, including several project localities between Buba and Fulacunda, namely Gã-Turé, Tira camisa and Indjassane<br><br>2) Cussane I, II and III, near Mansoa, combining mangrove and wetlands restoration<br><br>--------<br>If feasible, include as well certain spots within the Parque Nacional das Tarrafas do Rio Cacheu (PNTC) and locations near Cacine (Cacafa, potential project site), plus certain Intermittent streams in non-protected coastal areas | Adequate and metrics and timelines for ecosystem restoration and rehabilitation, using science-based methods of measurement and assessment | |

*Note: * See Figure 3 + Table 2 for sites and maps*

Additionally, refer to **Annex C** for how the work will be tendered out and conducted

*C2) TOR Outline for International TA on Institutional Strengthening for Climate Risk Management (Output 1.3)*
*C3) TOR for Climate Proofing Small Fishery Wharfs and Related Works (Output 2.1)*
*C4) TOR for Other Interventions under Component 2 (Outputs 2.3 through 2.4 on rice, mangrove, wetlands)*

## Core outputs under Outcome 2

| Outputs (short reference) | Outputs full text |
|---|---|
| 2.1 Small wharf fisheries | Output 2.1) Climate-proofing, rehabilitation and/or protection of essential fisheries and local transportation coastal infrastructures against sea-level rise and coastal degradation |
| 2.2 Protect 1000ha of lowland rice | Output 2.2) Cultivation of low-land rice is protected from climate risks |
| 2.3 Restore 2500ha of mangroves | Output 2.3) A total of 2,500 ha of mangroves forests restored and maintained in selected coastal sites |
| 2.4 Protect coastal wetlands | Output 2.4) Restoration and management of at least 1,500 ha of coastal wetlands, in view of strengthen the resilience against drying-out risks and salinization |

In this framework, **Output 2.1** will support the rehabilitation and the protection against sea-level rise and coastal degradation of small landing wharfs and ramps and other important coastal landing facilities to improve the domestic market access of agricultural producers and artisanal fishermen. More specifically, this will support the structures built by projects WB 2 and EC 8 and will also cover the design and construction of a pilot climate resilient landing ramp for fishing boats, including associated facilities and equipment (maintenance tools, fueling station, fishing gear, warehouses, ice factory, cold store, etc.) that are necessary to support small-scale fishing operations.

**Under Output 2.2**, up to 1,000 ha of low-land rice growing areas in the coastal zones will also be protected through the climate proofing of the water control and management infrastructures built by the IBAS-UNDP project[33] and the installation and maintenance of complementary protection dikes, tidal gates and other flow control structures and machines in targeted areas. This will involve a participatory planning process designed to engage beneficiaries from the outset in site selection, design, implementation of works and long-term management and maintenance. LDCF resources will be used to design and build structures that will directly benefit at least 1,500 families in these areas. It is expected that a basic level of maintenance of these facilities will be provided by beneficiary communities. However, a co-management approach will most likely be necessary and will involve relevant government agencies, such as the Departments for Water Management, for Agriculture, Rural Engineering Services. This project document includes strong dispositions for a prior Environmental Impact Assessment before construction of these infrastructures and for annual environmental and social audits (during the project monitoring and site visits) to ensure that their use and maintenance will not lead to major negative environmental, social and economic impacts.

Investing in the improvement of the infrastructures in the fishery center in Cacheu will allow to strengthen the resilience of this vulnerable and vital local sector. The investments will directly contribute to the increase of productivity, attracting further investment, creating jobs. Improving livelihood of fisheries leads to an increase in their resilience (a decrease of vulnerability) and better capacity to overcome climate change risks and effects. Moreover, these infrastructures need to be protected against effects of climate change such as flooding, erosion and salt water intrusion. By protecting the infrastructure, the local population is better adapted for climate change and so they will become less vulnerable (see figures 1 and 2 in **B&F Report 011 'Geo-based Climate Change Vulnerability Assessment'**). Output 2.2 activities will also include agroecological and soil suitability studies for rice cultivation and structures for rainwater management. In this context, partnerships with local NGOs will be sought and small grants provided for focused community engagement as well as gender mainstreaming. Output 2.2 activities will support baseline projects WB 2 and IFAD 1.

**Output 2.3** will restore and maintain 2,500 ha of mangroves forests in the Varela-Cacheu (Project Zone #1), where two "Green Belts" are planned in and around the protected area Parque Natural Tarrafas do Rio Cacheu. In that area, which

[33] "Support for low land rehabilitation and for agricultural and livestock processing" (2011-2015).

includes project localities (Edjin, Catao, Djufunco). Other localities this activity will include the Bolama-Bijagós Archipelago (Project Zone #1) Cacine, and Cussane I, II and II (Project Zone #3). Together with localities in the South (where partner projects are also carrying out mangrove restoration activities in collaboration with IBAP), the beneficiary population can reach a total of 60,820 Bissau-Guineans, who depend directly or indirectly for their economic activities.

Mangrove forest provide important ecosystem services as buffer zones, sewage sinks and as an important element for coastal stabilization. These mangroves will directly complement hard physical measures designed to protect lowland rice paddies. Selected community members will be trained in mangrove management, which will include ecosystem regeneration and monitoring, and the development/maintenance of community-based agreements on resource-use. In surrounding communities there will be awareness raising initiatives on the role of mangroves in promoting coastal resilience. Output 2.3 activities will be divided between two types of areas. The first relates to areas where mangrove ecosystems are able to self-regenerate (1500ha). The rehabilitation or restoration of destroyed or degraded mangrove areas should preferably be carried out through natural regeneration or, if necessary, by assisted natural regeneration (including restoration of the hydrological regime). This method will allow the project to achieve scale in terms of ecosystem restoration. The areas where natural regeneration will be rolled out will be those where the threat level is low and the willingness of local communities to contribute to conservation is high. In the second type of areas the restoration strategy will be more incisive and will replanting mangrove species (1000ha). Active mangrove restoration can be very costly and therefore related activities must be rigorously planned and implemented. It is likely that this output would fit well with the activities of baseline project IFAD 1, namely in regeneration of buffer vegetation around mangrove areas used for rice cultivation.

**Output 2.4** relates to the restoration and management of at least 1,500 ha of coastal wetlands, in order to strengthen the resilience against dehydration and salinization of these important coastal ecosystems. Intervention areas are likely to include wetlands of the lagoons of Cufada, Mansoa (Cusana), Cacine (Cacafa) and of the intermittent streams in coastal areas. This output has a similar scope to that of the previous output and would likewise fit best with baseline project IFAD 1, namely in regeneration of buffer vegetation around mangrove and other wetland areas used for rice cultivation.

## *Component 3) Diffusion of technologies to strengthen coastal communities' climate resilience*

**Outcome 3) Communities adaptive capacity is reinforced, and rural livelihoods are enhanced and protected from impacts of climate change in the coastal zone**

*Baseline Finance:* *$ 106 million*
*LDCF project grant requested:* *$3,435,000*
*Co-financing* *$23,020,000*

### *Without LDCF-finances (baseline situation for Component 3)*

The majority of households in Guinea-Bissau depend on traditional crops and natural resources for their livelihoods. A large number (21) of baseline projects and initiatives, whose objectives and activities would fall under the far-reaching scope of Component 3, are currently being implemented or expected to be in the near future (see table below). To greater or lesser extent, the vast majority of these seek to promote rural development through the diversification of livelihoods. Three of them also target in parallel the management of landscapes and natural resources.

| Lead Agency & ref. | Component 2 Baseline Programs<br>*[data below includes the intervention's total budget the applicable baseline amount, while to the right, the amount shown is what applies to this component – in green, the co-financing]* | Estimated Amounts considered under Comp 3 ($M) |
|---|---|---|
| UNDP 2 | Capacity for natural resource management (national level) | $0.8 |
| UNDP 4 | Peace Building Fund / UNDP Development Assistance (governance, sustainability, job creation, gender) | $5.4 |
| UNDP Baseline relating to its future Program | Extrapolated relevant baseline finance expected during LDCF project implementation (approx) | $12.6 |
| WB 1 | Participatory Rural Development Project (P117861) (2009-2019, $5M); | $5.0 |
| WB 2 | Rural Community-Driven Development Project (P090712, P146746, P151443), including the first and second additional funding (2009-2019, $30M); | $20.0 |
| WB 3 | Private Sector Rehabilitation & Agribusiness Development (PSRAD) (P127209) (2014-2020, $8.2M) | $8.2 |

| Lead Agency & ref. | Component 2 Baseline Programs<br>*[data below includes the intervention's total budget the applicable baseline amount, while to the right, the amount shown is what applies to this component – in green, the co-financing]* | Estimated Amounts considered under Comp 3 ($M) |
|---|---|---|
| WB 5 | Pipeline: Second Additional Finance to Rural Community-Driven Development Project for Guinea-Bissau (P151443) ($23.5M, of which $10M is considered as baseline to this project) | $7.0 |
| FAO 1 | GCP /GBS/034/EC - Support to producers for improving productivity and quality of cashew production in Guinea-Bissau (2016 - 2018) at $396K. | $0.4 |
| FAO 2 | TCP/GBS/3601 - Support for the establishment of technical and organizational systems for multiplication of commercial food crops' seeds in Guinea-Bissau (2016 - 2018) at $359K; | $0.4 |
| FAO 3 | TCP/GBS/3602 - Improving resilience of livelihoods to threats and crises (2016 - 2018) at $301K; | $0.3 |
| FAO 4 | TCP/GBS/3603 - Support to small producers for improving the productivity and commercialization of cashew (2016 - 2018) at $100K; | $0.1 |
| FAO 5 | TCP/GBS/3604 - Validation and dissemination of integrated aquaculture - agriculture systems (rice-fish culture + others) through the "Farmer Field Schools" approach (2016 - 2018) at $299K; | $0.3 |
| IFAD | PADES: Support for the start-up of economic development in the South - IFAD project (Appui au démarrage du projet d'appui au développement économique du Sud-PADES) - At least $19.M | $9.5 |
| EC 1 | UE-ACTIVA - Eixo 1: Governação territorial - Desenvolvimento Regional através do Reforço da Sociedade Civil) | $1.7 |
| EC 2 | UE-ACTIVA 2 - Projet de désenclavement des zones rurales pour faciliter la commercialisation de la production agricole et améliorer l'accès aux services sociaux de base | $1.7 |
| EC 3 | Projet de Développement des Chaines de Valeur Riz — Reference: P-GW-A00-003, (2018 + 6 years, i.e. recently started), providing co-financing to the LDCF project. Baseline amount is $10M, including $6M in parallel (cash/collaborative and assigned to component 2) co-financing, plus another $0.4M as in-kind co-financing (assigned to component 3). | $0.1 |
| EC 4 | EC \| 2017 - 2021 \| Labradur de n futuro: fortalecimento da formação profissional na região de Cacheu | $0.3 |
| EC 5 | EC \|2016 - 2020 \| No Intchi Mbemba - Reforço da fileira de sementes de arroz | $0.8 |
| EC 6 | EC 2015 - 2018 \| Firkidja di bida digna di n mindjeres ku jovens i purduto di no tchon | $0.6 |
| EC 7 | EC \| 2015 - 2018 \| Kópóti pa cudji n futuro | $0.0 |
| EC 8 | EC 2016 - 2018 \| Pdil Pecixe: Projeto de Desenvolvimento da Ilha de Pecixe | $0.3 |
| EC 9 | EC \| 2016 - 2019 \| Projet d'appui à la diversification agricole et au développement d'une offre en noix de cajou de qualité en régions de Oio et de Cacheu | $0.3 |
| EC10 | EC 2016 - 2020 \| Áreas protegidas e resiliência às mudanças climáticas; | $1.1 |
| AfDB 1 | Projet d'Appui au Renforcement de la Gouvernance Economique et Financière (PARGEF) - Ref.: P-GW-K00-005, (2010 - ongoing). Estimated amount is $20M, of which half is accounted for as baseline finance, i.e. $10M | $5.0 |
| AfDB 3 | Projet de Développement des Chaines de Valeur Riz — Reference: P-GW-A00-003, (2018 + 6 years, i.e. recently started), providing co-financing to the LDCF project. Baseline amount is $10M, including $6M in parallel (cash/collaborative) co-financing, plus another $0.4M as in-kind co-financing. | $4.0 |
| **Multi-Partner - Baseline and Co-financing** | Regional Project that Provided co-financing to the LDCF Project - Global Alliance for Resilience Initiative / Sahel-West Africa (AGIR), European Union through Club Sahel / OECD - at least $100M, of which $51.7 represents Guinea-Bissau's baseline and co-financing. | 20.7 |
| | **TOTAL ~** | **$106 million** |

As evidenced by the number of such projects, there is currently a rich and varied scope of activities attempting to tackle these issues in Guinea-Bissau. Given the country's geography, most development initiatives affect coastal zones, which is the case of all those listed above. They cover different regions, different aspects and sectors of the rural economy, different scales of decision-making and development and involve different national stakeholders. They also include capacity building initiatives when these are aimed at diversifying or improving livelihoods, as it is the case with most of these EC projects. Some are dedicated to the consolidation and strengthening of cashew sector, by far the country's most important export (e.g. FAO 1, FAO 4, EC 9). Rice production, the increase of which is essential for greater food security in Guinea-Bissau, is another sector that is being intensively targeted in this scenario (e.g. FAO 5, AfDB 3, IFAD 1, EC 5, EC 6 among others.) Among these, some projects target the development of value chains (including processing, transport and commercialization) while others aim to improve production conditions through physical interventions. This is the case of IFAD's PADES, which also targets the rehabilitation of mangrove swamps for the purpose of rice production. Many of these initiatives are also linked to the development of small-scale community level projects, sometimes including those that are now increasingly being framed by local development plans. Projects aimed at livelihood diversification through small-scale community projects and infrastructural improvements would include projects such as WB 1, WB 2, FAO 3, IFAD 1 (with an important component related to microfinance), and EC 3. This list

of projects represents a concentration of national and international effort that is absolutely crucial for the country's socio-economic development.

However, for the most part, these projects lack sufficient provisions to sustainably address their objectives under climate change scenarios, which is likely to greatly undermine their medium/long-term gains. It is essential for the long-term development and sustainability of Guinea-Bissau that such initiatives are adequately climate-proofed. The exception in this list is project EC 10 that explicitly targets climate change adaptation. It is designed to improve the climate resilience of four protected areas through capacity building and the reduction of drivers and pressures to protect PAs from land degradation and deforestation. It is included in the baseline of Component 3 because it includes activities linked with livelihood improvement and diversification as a strategy to reduce pressures on PAs. However, its scope is very limited in terms of its relevance for coastal management and would therefore greatly benefit from complementary partnerships.

### *With LDCF-financed intervention (adaptation alternative for Component 3)*

The outcome related to Component 3 is "a future, where enhanced rural livelihoods in the coastal zone are protected from the impacts of climate change". This is to be achieved by supporting and climate-proofing a diverse set of baseline initiatives that are key for livelihood diversification and rural development and, secondarily, to the landscape-level management of natural resources. Enhancing the climate resilience of these livelihoods will be approached with special emphasis on the most vulnerable groups such as women and youth.

**Core outputs under Outcome 3**

| Outputs (short reference) | Outputs full text |
|---|---|
| 3.1 Economic diversification & resilience | Output 3.1) A Climate Adaptive community-based local Investment Program is rolled out for coastal communities in view of strengthening economic diversification & resilience in a gender-sensitive, innovative and sustainable way |
| 3.2 Wetlands Fisheries/ Natural Resources Management | Output 3.2) Climate resilient wetland and fisheries management strategy is developed for the Bijagós Archipelago |
| 3.3 Gender sensitive local development planning for adaptation | 3.3) Gender sensitive local development planning for adaptation at the landscape level management in support to Climate Adaptive Livelihoods |
| 3.4 Alternatives to climatic vulnerability | Output 3.4) Alternative agricultural production systems in the cashew nuts production areas in the coastal zone |
| 3.5 Provision of extension services | Output 3.5) National agro-ecological extension services is strengthened for climate resilience and vulnerability reduction, including in the management of bush fire on coastal forests |
| 3.6) Viable local finance mechanisms and products for adaptation & resilience | Output 3.6) Financing products developed and aligned initiatives supported for promoting adaptive livelihoods and climate-proofing activities along the coastal zone |

Due to their scope and dimension, baseline projects UNPD 2, WB 1, WB 2, WB 3 and IFAD will be especially relevant for this component as a whole.

**Output 3.1 has a strategic focus on 'Economic diversification & resilience',** which is a broad idea, but which, under the project will be developed through a **bottom-up grant-making scheme with a clear and strong adaptation additionality in its financial and strategic "architecture"**. The remainder of the Outputs under Component 3 will in different ways corroborate mentioned the strategy, centered around making communities better prepared to face climate change on their own terms. On an interim basis the scheme will be called **The Coastal Communities Livelihoods Diversification Grant-Making Framework.** It is **thoroughly described in PRODOC Annex C5** (TOR Outline of Advisory Services and Small Works foreseen under Component 3). Additional background coastal livelihoods and resilience can also be found in PRODOC Annex X-1.4.

At least 1,500 women rice growers and 500 horticulture producers (400 women and 100 young men) will be organized and will receive agricultural extension services, introduced crop varieties, land management methods and access to credit to promote more resilient rice production in the bolanhas. This will include hands-on learning about agricultural techniques that minimize

salt water effects on rice production (such as improved irrigation regimes and techniques to reclaim highly saline soils) will be provided; salt tolerant rice varieties will be introduced, tested and disseminated. Such measures from the realm of "Climate Smart Agriculture" are meant to complement the infrastructural measures planned under output 2.2. A particular focus on gender disparities will be introduced taking account of special needs faced by women farmers regarding climate risks. Financial incentives will be provided to promote field-based work as necessary, with a focus on the poorest and most vulnerable. The work herein will consist of an 'Adaptive Coastal Community Investment Program' to be kick- started by the project, and where grants are competitively tendered out through the GEF SGP as specific calls for proposals. Details are described in the Output's B&F. Dedicated to value chain development, this output could build potential baseline co-financing partnerships in projects such as WB 2, WB 3, FAO 1, FAO 2, FAO 4, FAO 5, AfDB3, EC 2, EC 5, EC 9.

**Output 3.2** focuses on Bijagós Archipelago, where the potential of fisheries, tourism, palm oil production and mollusk production is significant and untapped. In the particular case of the islands, the peripheral nature has left the Bijagos Archipelago isolated and extremely limited in its ability to develop a regional economy. Furthermore, most baseline projects have ignored the Bijagos and concentrated on the mainland. For these reasons, Output 3.2 will therefore promote the development and introduction of climate resilient wetland and fisheries management strategies in vulnerable villages in the Bijagos islands. Intended to spur bottom-up dynamics, activities will be led by existing community-based fisheries organizations and management committees, which will be guided and supported by the extension staff of the Department of Fisheries. The respective activities will imply support services, namely for infusing innovation into solutions. The PMU will procure and subcontract an international consulting business for developing the strategy and helping leverage tourism investment. In the context of this output, relevant baseline projects include UNDP 2, WB 2, WB 3, FAO 3 and EC 2.

**Output 3.2** will cater for the mainstreaming of gender into the overall strategy for Component 3. The work is not only thoroughly described in Annex C5, but also complemented by additional "pointers" in Annex G (Gender Analysis and Action Plan) with respect to the core consultancy(ies) foreseen under the mentioned output. The work at hand will include implementing complementary measures to diversify rural livelihood strategies in at least 30 villages in the coastal areas, including the Bijagos Islands with a specific focus on communities currently depending on unsustainable practices and vulnerable activities such as oyster production, shrimp production, sand mining and horticulture in locations that are highly exposed to climate-related risks. Current initiatives supporting coastal community livelihoods and agribusiness development like UNDP 2, WB 2, WB 3, FAO 3 and EC 2 rely on climate vulnerable operations. The focus will be on alternative livelihood options such as beekeeping, ecotourism (in the Islands), forest management, and jobs in coastal defense installation and maintenance.

**Under Output 3.4**, the above strategies will be complemented by the introduction of alternative agricultural production systems in coastal cashew production areas. It is tagged "Alternatives to Vulnerability" (while at PIF stage it appeared to focus on "Alternatives to cashew". The change since PIF stage comes from the recognition that a sound adaptation strategy should not focus on removing an important source of income for local communities, and which the cashew crop represents. Strengthening local livelihoods and making them more resilient to climate change would rather imply protecting cashew orchards against climate driven hazards and ensuring that communities adopt improved technology and know-how for being better positioned within the cashew nut value chain. In this light, and in seeking viable and sustainable 'alternatives', other aspects of the potential value chain of cashew production (beyond the mere nut) need to be explored. This is explained in PRODOC Annex C5.3 (Notes on Innovation regarding Output 3.4 "Alternatives to Vulnerability"). In this context, FAO 1, FAO 4, EC 9 are relevant baseline projects. As these new production systems may cause land degradation, their design should integrate sustainable land management (SLM) practices which, in addition to other aspects like soil erosion, should pay close attention to the excessive use of chemical pesticides and fertilizers.

**Output 3.5** will support the strengthening of the operational capacity (mobility and other working equipment) and technical capacity (Climate Smart Agriculture) of the national extension services to allow them to efficiently provide coastal rural communities with the necessary advisory support. In this regard, most of the mentioned baseline projects that include extension activities may be relevant. In addition, the strategies for the reduction of vulnerability may cover the management of bushfires on coastal forests and thus related activities may include some of the landscape-level work that was at PIF stage foreseen under Output 2.5 and that is now dropped or subsumed here. In relation to this last point, projects UNPD 2, IFAD 1 and EC 10 are relevant initiatives in terms of co-financing potential. The phases and steps regarding the provision of **climate adaptive extension services** under Output 3.5 are described in PRODOC Annex C5.4.

**Output 3.6** will seek to support the development of local adaptation finance mechanisms, by working with traditional and innovative financial institutions and partners. One of the aim for the coastal zones is to develop useful -- and preferably innovative -- financial products that meet the needs of communities (e.g. climate-risk insurance schemes) to support the coastal communities to access to the financial resources needed for adapting their practices. This will imply enabling the

necessary financial environment for climate specific priority investments, both at commune level and at the level of local associations or individual households in order to build up the resilience of the rural sector and local livelihoods in coastal areas. Baseline project IFAD has a sizable micro-finance related component.

**The activities of Outputs 3.2 through 3.6 are an integral part of a nascent 'Adaptive Coastal Community Investment Program'.** They are therefore to be managed by the PMU and subcontracted to suitable service providers. In terms of access to finance for communities, the Grant Making Scheme described under Output 3.1 will be the main source of funding. Hence, Outputs 3.2 through 3.6 are in different ways 'enabling' vis-à-vis the goal of ensuring coastal communities' resilience through improved livelihoods.

## *Component 4) Monitoring and evaluation*

### Outcome 4) *Effective monitoring and Evaluation of the LDCF Project*

*LDCF project grant requested: $ 223,000*
*Baseline and co-financing do not apply, as the above is a full-cost activity.*

#### *With LDCF-finances (adaptation alternative for Component 4)*

This component includes the development and implementation of a long-term monitoring and evaluation program which will take place throughout the duration of the project. The purpose of such monitoring is to ensure that the intended objectives are being met. Where intended project goals are not being met, the activities can then be modified. The monitoring will concern particularly environmental and social risks, and corresponding management plans. Long-term monitoring and evaluation (M&E) also provides an opportunity for feedback on whether the project design was appropriate. The results of such M&E provide lessons learned as well as best practices which will inform future projects and programs Guinea-Bissau and its coastal zones. 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 advise to the Project Board with regards to the incorporation of gender indicators into project implementation.

**Activities under Outcome 4**

| | |
|---|---|
| 4.1.1 | Project Inception Workshop |
| 4.1.2 | Review of gender mainstreaming strategy, stakeholder engagement approach and plan and the logical framework with indicators (+ development of specific TORs under pilots, review of budget allocations, detailed work-planning etc.) |
| 4.1.3 | Generation of missing baseline data for indicators |
| 4.1.4 | Measurement of indicators (incl. Local workshop for applying the GEF Tracking Tool) |
| 4.1.5 | Internal review (Annual Project Board Meetings) and organization of indicator data |
| 4.1.6 | Mid-term review |
| 4.1.7 | Final evaluation |
| 4.1.8 | Negotiation of details of exit/sustainability strategy |
| 4.1.9 | Review/feedback workshop |
| 4.1.10 | Project Audits |

## *The Project's Additional Cost Reasoning*

#### *Background and Baseline Review*

The LDCF-financed project will enhance the effectiveness of adaptive measures currently being implemented by Guinea-Bissau with respect to coastal zone management, fully taking into account the risks and hazards posed by climate change, as well as the country's vulnerable situation based on its status as both LDC and SIDS. It will do so by strengthening the adaptive capacity and resilience of vulnerable coastal communities to climate risks in Guinea-Bissau with a specific focus on climate and on the expected impacts that the phenomenon will bring on rural coastal livelihoods.

In the development of the Guinea-Bissau's 2006 NAPA, **multi-criteria analysis** was undertaken as part of the NAPA process in order to prioritize actions according to their potential for positive effects on economic development, social capital and environmental management. Hence, the actions proposed by the NAPA correspond not only **the most urgent and pressing measures** needed to face climate change, but they have also been assessed for cost-effectiveness. The LDCF-financed project is fully aligned with the priorities of the NAPA, which identified and ranked **priority sectors**, of which **coastal/marine ecosystems, food security and cross-cutting** are absolutely central elements in this project's strategy.

The fourteen **priority projects & measures** outlined in the 2006 NAPA are listed in Table 24 in Annex X-1.1, where a brief explanation on how they are addressed is included. Of those, the **six priority projects & measures** have been specifically integrated into the project's strategy, as they show strong alignment with its strategy:

| | |
|---|---|
| Priority# 1 | Diversification of food production |
| Priority# 3 | Prevention and protection of mangrove-rice agro-ecological cultivation systems along the coast |
| Priority# 4 | Monitoring the status of mangrove resources |
| Priority# 5 | Coastal zone erosion monitoring |
| Priority# 9 | Protection, conservation and enhancement of fisheries and coastal resources |
| Priority# 12 | Rehabilitation of small perimeters of mangrove soils for coastal protection in critical spots |

Through the more in-depth development of the project strategy during the implementation of the PPG, **elements of vision, scale and scope for the above-listed NAPA priorities.** In other words, they were duly **contextualized** put into **a more up-to-date perspective**, given that it is, after all, almost 12 years ago, since the NAPA 'priority projects' were formulated. Yet, Guinea-Bissau's coastal zone remains even more now a pressing and urgent priority for adaptation.

**The baseline analysis,** underpinned by the several PPG B&F Reports "drew a picture" of a coastal zone rich in resources, such as fish, mangrove forests and fresh water—possibly even oil and gas—but of resources that are to date largely under-exploited from an economic point of view. The baseline analysis also points out to the unsurpassed economic and demographic importance of the coastal zone, as well as its vulnerability. The baseline analysis equally unveiled **the nature of the country's vulnerability** with respect to its coastal zone.

The financial baseline analysis and efforts towards carving out partnerships for the project showed furthermore that, **over the past 5 to 10 years very development interventions addressed coastal zone management issues in Guinea-Bissau**. Although not part of the financial baseline, the only two projects had specifically addressed coastal issues were GEF funded: the WB GEF Coastal and Biodiversity Management Project (with Biodiversity as the focal area) and the regional ACCC Project Adaptation to Climate Change (funded by an extinguished GEF fund, the SPA) – see PRODOC Table 5. Baseline Finance Project (all components). There are, in addition, a few International Waters projects, but which are limited in scope, given their regional character. Both projects (the WB GEF Coastal and the ACCC) are now history and legacy, i.e. they ended several years ago, leaving a large gap in terms of policies and interventions relating to coastal zone management. Guinea-Bissau has been unable to address this gap with own funds, on the account of subsequent crises that the country has gone through in the past few years.

### *The Alternative and the Additionality within it*

Hence, **the additionality of this project is strong**, and it equally builds on **strong baseline of development interventions.** Yet, this baseline has proven insufficiently to specific to address integrated coastal zone management (ICZM) issues, and even less so climate change adaptation issues, which are becoming more serious and costly for Guinea-Bissau for every year that passes.

**A total of $207 million constitutes the baseline for this project**, divided in a balanced way across the components (see Table 4).

Upon this baseline, the project strategy was developed[34] and the co-financing negotiated and leveraged. **A total of $58.1 million from the baseline serves as the project's co-financing, plus $500K availed by UNDP, in cash** and managed together with the resources from the LDCF.

During the PPG phase, the following cost-effective measures were identified for the project:

- Support the establishment of an enabling political, institutional and administrative environment for advancing the management of the climate risk in the coastal zone;
- Finance additional investments in hard and soft coastal protection measures to help maintain critical economic and natural infrastructure in the face of sea level rise and coastal degradation. Those will include interventions in the

[34] See otherwise the wealth of themes and knowledge products generated during the PPG stage (Reports).

agricultural and fisheries sectors, as well as relating to nature protection and restoration, for which the project will build on achievements from baseline interventions and work in close collaboration with co-financed ones; and

- Contribute to strengthening the climatic resilience by having livelihood options for the coastal communities with the special emphasis to most vulnerable groups such as women and youth.

The LDCF-financed project will pursue an active partnership with current initiatives in the Guinea-Bissau and elsewhere, including various GEF-funded projects (see Table 6). Through these partnerships, the project will build on lessons learned from past and current projects. The collaboration will also ensure that cost effectiveness is included as selection criteria for appropriate adaptation interventions – interventions that combine on-the-ground measures with targeted capacity building and strategic changes to policy, institutional and legal frameworks. In other words, the project includes both "hard" and "soft" adaptation interventions.

**Under Outcome 1, project activities will build the capacity of the key decision makers and relevant** entities engaged in the management of the coastal zone. This is additional because it will **address a glaring gap** in terms of policies, regulations and frameworks for an **adaptive and integrated coastal zone management (A&ICZM).** Increasing the capacity of existing agencies will reduce project costs, strengthen institutional support and increase the potential for project approaches and newly capacitated staff to be integrated into departments, ministries and institutions beyond project termination. This will contribute to an enabling environment for integrating adaptation frameworks into long-term planning. Moreover, the size of the Project Management Unit (PMU), which will be instrumental for building national capacity, has been given careful consideration by stakeholders during the PPG phase – to avoid overstaffing whilst still ensuring effective management of the project – to keep costs down. The selection of existing government staff for the PMU will also ensure that finances spent on capacity development through the course of the project are a long-term investment into the functioning of the government of the Comoros – should the staff be retained within government institutions.

The LDCF-financed project will enhance existing institutional structures, both nationally and locally, where possible. Project implementation will be undertaken by government and local authorities, among them established organizations and sectoral entities with a track record of delivery (GPC, IBAP, Engenharia Rural, INEP and others). This approach is believed to be particularly cost effective, as it reduces costs that would need to be spent on consultant driven implementation. Furthermore, it builds the capacity of the government system for ongoing and more widespread implementation of similar climate-sensitive development.

**Under Component 2**, the project will deliver concrete benefits on the ground as a development and environmental co-benefit – through e.g. improved fishery infrastructures, improved productivity of local rice production, mangrove forest restored and coastal wetlands protected – in addition to an efficient adaptation strategy linked to those interventions. This strategy foresees the **testing and demonstration of climate-proofing approaches**, by focusing both on vulnerable infrastructures and sectors and on vulnerable ecosystems. Climate proofing will therefore target, on the one hand, fishery wharfs and coastal rice in naturally growing mangrove areas, as well as mangrove restoration and wetlands protection as coastal protection measures. Trying out these technologies in Guinea-Bissau is needed for addressing climate change, and they bear an element of novelty. **The additionality linked to Outcome 2** interventions comes from the fact that the climate proofing approach would not take place, was it not for the LDCF project. Yet, their inclusion into the project was able to leverage partners' interest and co-financing.

**Finally, under Outcome 3, the need for strengthening resilience is addressed**. The baseline of development intervention is strong, but they lack to address, within their time scope, the looming risks posed by climate change to communities' future and to the investments being made. These risks include sea-level rise, erosion, coastal flooding, decreased availability of drinking water, etc. Addressing them in a systematic but varied way is important. Hence, the project will try out actions adopting **an outright bottom-up approach, in which communities are the key protagonists of their climate resilient local development**. Overall, interventions will focus on livelihoods strengthening, value-chain creation and infusion of know-how, but that are "framed" not as 'plain rural development' activities, but as adaptation measures. Issues of gender, innovation and access finance will be equally addressed under that Outcome 3. This is additional and such interventions would not be in place was it not for the LDCF project.

## *Additionality Calculus*

***Table 4. The Project's Additional Reasoning***

| Baseline (B) | The Alternative (A) | The Increment (A-B) |
|---|---|---|
| *At the baseline:* | *The project will:* | *Adaptation benefits will thus be generated:* |
| The coastal zone is prone to | Strengthen the adaptive capacity and climate | Benefits from the LDCF-financed project are expected |

| Baseline (B) | The Alternative (A) | The Increment (A-B) |
|---|---|---|
| climate hazards and communities, as well as their assets, livelihoods and infrastructures, vulnerable to climate change. Adaptation is insufficiently catered for in baseline interventions.<br><br>Coastal planning, management and monitoring is neither coordinated, nor effective, and it does not take climate challenges into account. Coastal protection and investments in productive sectors remain non-strategic and essential infrastructures not climate proof.<br><br>At the same time, the natural ability of coastal ecosystems (such as mangroves and coastal wetlands) to help people adapt to climate change is not sufficiently explored.<br><br>Local communities have limited access to technologies and know-how for resilience, as well as viable finance. | resilience of vulnerable coastal communities to climate risks in Guinea-Bissau. As follows:<br><br>1. Support the establishment of an enabling political, institutional and administrative environment for advancing the management of the climate risk in the coastal zone;<br><br>2. Finance additional investments in hard and soft coastal protection measures to help maintain critical economic and natural infrastructure in the face of sea level rise and coastal degradation. Those will include interventions in the agricultural and fisheries sectors, as well as relating to nature protection and restoration, for which the project will build on achievements from baseline interventions and work in close collaboration with co-financed ones; and<br><br>3. Contribute to strengthening the climatic resilience by having livelihood options for the coastal communities with the special emphasis to most vulnerable groups such as women and youth. | to touch some 60,000 across at least 15 localities in the rural coastal zone, favoring women where possible.<br><br>New policy, institutional and financial frameworks for managing climate risk within the national frameworks and institutions that manage or use the coast will be developed or created.<br><br>Capacities and awareness will increase as a result of consistent training, communication and outreach.<br><br>Climate-proofing will be demonstrated by renovating "from A to Z" a small fishery wharf in Cacheu, adding to the pier an ancillary infrastructure that will include an ice factory a small market, etc.<br><br>At least 1000 ha of lowland rice will count on measures to avoid climate impacts.<br><br>Some 2,500 ha of mangroves will be restored, as essential and natural coastal assets, which may eventually function as a coastal protection barrier against sea level rise and saline intrusion.<br><br>Livelihoods of local communities, with a clear positive bias in favor of women, will become more resilient by participating in the project by accessing the Grant-making scheme, bound to benefit least 5,000 people, 80% of whom are expected to be vulnerable women, living along the coast. |
| **Current baseline expenditure and investments at approx.:**<br>**$207 million**<br>*broken-down per component as follows ($ millions):*<br><br>1 $65<br>2 $36<br>3 $106<br>M&E -<br>Mgt $1.0<br>**TOTAL $207.0** | **The Alternative: Baseline + GEF + Co-financing net of baseline:**<br>**$70.6 million**<br>*broken-down per component as follows ($ millions):*<br><br>1 $13.6<br>2 $28.8<br>3 $26.5<br>M&E $0.2<br>Mgt $1.6<br>**TOTAL $70.6** | **The additional costs: LDCF + Co-financing, net from baseline funds**<br>**$13.5 million, of which $12.0M are from LDCF**<br>*broken-down per component as follows ($ millions):*<br><br>1 $2.2<br>2 $5.9<br>3 $3.6<br>M&E $0.2<br>Mgt $1.6<br>**TOTAL $13.5** |

# Partnerships

## *Baseline Projects*

Baseline finance interventions were analyzed and their contribution to both baseline and potential co-financing were calculated. The sources of data included:

1. **Results and detailed notes from stakeholder consultation meet**ings during the first and second missions to Guinea-Bissau. Refer to PPG Reports: #003 (Main Inception Report), #005 (Mission Plans) and #007 (Second Mission Report).
2. **Extensive web research**, which focused on UNDP's as well as partners' sites, among them the corporate sites for WB, IFAD, FAO, AfDB and EC.
3. **A focused query into the data (or the API) of the International Aid Transparency Initiative – IATI** (see https://www.aidtransparency.net/) generated very detailed data, which was filtered, distilled, analyzed and cross check with partners' sites data. Data duplication was attempted eliminated to the extent possible by cross-checking IATI's data with data from partners' sites and those from the PPG Team's own findings. This was particularly important for multi-partner programs.
4. **Data from certain foreign cooperation partners were excluded**, as they were deemed not directly relevant to the subject matter of the project, or less significant in terms of amounts, but only after a cursory analysis – e.g. programs funded by USAID, Australian Aid, Brazil's ABC, among others.

The results are presented in summary form are in Table 5 below (**for details**, refer to PRODOC Table 22. Baseline Finance Project Break-down per Project and Component, plus Co-financing from baseline in Annex X-1.1).

***Table 5. Baseline Finance Project (all components)***

| # / Links | Agency | Title | **Baseline ($M)** | **Confirmed Co-financing ($M)** | Source of Funds | Period | Main components (relevance to the project) | Link with the LDCF project |
|---|---|---|---|---|---|---|---|---|
| 1 | UNDP Baseline Current Projects | Relevant on-going and pipeline non-GEF programs and project managed by UNDP relating to administrative governance, inclusive job creation, sustainability and gender [*] | **$36.0** | | UNDP core and other bilateral and multilateral (non-GEF) funds entrusted to the organization | 2017-2023 | Approx. funds disbursed in 2017 for relevant programs: (i) Capacity building for local governance, including e-governance, $2.9M; (ii) Capacity for natural resource management (national level), $1.6M; (iii) Peace Building Fund / UNDP Development Assistance (covering themes such as governance, sustainability, job creation, gender), $5.4M; (iv) UNDP-EC Management Capacity Building Program (covering themes such as improved public administration), $2.0. Total $11.9m for 1 year (2017) -- Extrapolated relevant baseline finance expected during LDCF project implementation: at least $36M. | Component 1 |
| 2 | WB Ongoing programs (as analyzed in Mid-2017) + new pipeline project | WB Programs on rural development, agriculture, public sector and infrastructure. | **$58.2** | | IBRD/IDA funds and others (all non GEF) | 2017-2020 | Investments in the mentioned sectors are relevant for Components 1, 2 and 3 and have been considered. The programs are relevant because they cover: food security and essential rural infrastructure and transport, creating a strong baseline for adaptation.: | Components 1, 2 and 3 |
| 3 | FAO | Six projects that are relevant for agricultural, fisheries and rural livelihoods themes, among them Technical Cooperation Programs (TCPs) and projects funded by FAO managed Trust Funds (herein tagged GCP) [*] | **$4.9** | | Various sources, managed by FAO | 2017-2018 (pipeline plans not yet included) | The FAO Program in Guinea Bissau provides an excellent baseline of projects that address the need for building capacity in the agricultural sector and enhancing productivity. The scope of programs is limited because they are restricted to technical cooperation (as opposed to projects that represent investments on the ground). Of all FAO interventions, Project "N`Tene Terra" is particularly relevant for Component 1 because to deals with land governance. Hence, of $4.9M that represents FAO's contribution to the baseline finance, $3.5M represents contribution to Component 1. | Components 2 and 3 |
| 4 | IFAD | PADES: Support for the start-up of economic development in the South - IFAD project (Appui au démarrage du projet d'appui au développement économique du Sud-PADES) - At least $19.M | **$19.0** | | IFAD managed funds | 2015-2023 | 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 Réhabilitation Rurale et de Développement Communautaire (PRRDC), which closed in 2013, PADES draws on some of its activities – including community development and microfinance. However, PADES has a stronger economic development focus on infrastructure and the promotion of rice production. The rehabilitation of mangrove swamps within the project zone for the purpose of rice production is a key feature of PADES. Current rice output meets one third of local demand. The project also promotes alternative income-generation activities such as market gardening, small-scale livestock production, capacity strengthening of rural organizations and improved access to markets. | Component 1 ($3.5M) and Components 2 and 3 |
| 5 | European Commission (EC) Baseline Programs only | Various EC funded project dealing with local development, agriculture, food security, livelihoods and natural resource management [*] | **$13.2** | | EU through the EC, rolled out through country-level representation | 2016-2020, according to list [*] | Investments in the mentioned sectors are relevant for Components 1, 2 and 3 and have been considered, for calculation purposes at the respective ratio of 20%, 40% and 40%. The programs are relevant because they cover: local development, agriculture, food security, livelihoods and natural resource management. | Components 2 and 3 |
| 6 | AfDB Baseline and Co-financing | Various projects within the sectors of: Agriculture and Rural Development; Agriculture; Fisheries / Maritime Food; Agro-Industry; Rural Development; Road Transport / infrastructure; Public Sector Management; and Institutional Support. | **$25.0** | **$6.4** | AfDB, including loans and grants (Note: amounts are rough estimates and extrapolated for | 2017-2023 (extrapolated) | Relevant topics targeted by AfDB projects include: rice value chains, agriculture, fisheries, rural development, infrastructure and capacity development/ governance / public administration | Components 1, 2 and 3, according to list [*] |

| # / Links | Agency | Title | Baseline ($M) | Confirmed Co-financing ($M) | Source of Funds | Period | Main components (relevance to the project) | Link with the LDCF project |
|---|---|---|---|---|---|---|---|---|
| | | Co-financing ($10M) from Rice Value Chain Project. | | | the duration of the LDCF project) | | | |
| 7 | Multi-Partner - Baseline and Co-financing | Global Alliance for Resilience Initiative / Sahel-West Africa (AGIR), European Union through Club Sahel / OECD - at least $100M, of which $51.7 represents Guinea-Bissau's baseline and co-financing. | **$51.7** | **$51.7** | Various | 201-On | Regional / Global Program | Components 2 and 3 |
| | | **TOTAL BASELINE** | **$208.0** | **$58.1** | ***Co-financing from the baseline*** | | | |
| | **UNDP co-financing** | **UNDP Bissau's cash co-financing (funding directly allocated to the project's budget and which would not be invested, was it not for the project)** | **n/a** | **$0.5** | ***Leveraged co-financing*** | | | |

| # | External Links |
|---|---|
| 1 | http://www.gw.undp.org/content/guinea_bissau/fr/home/about-us.html |
| 2 | www.worldbank.org > Projects… |
| 3 | http://projects.worldbank.org/P151443?lang=en |
| 4 | http://www.fao.org/countryprofiles/index/en/?iso3=GNB |
| 5 | https://operations.ifad.org/web/ifad/operations/country/project/tags/guinea_bissau/1757/project_overview |
| 6 | https://iatiregistry.org/ (for further info, refer to https://ec.europa.eu/) |
| 7 | https://iatiregistry.org/ (for further info, refer to www.afdb.org) |

## *Partner Projects*

***Table 6. Synergies, collaboration and partnerships***

| # | Agency | Title | Budget ($ million) | Source of Funds | Period | Lessons learned, synergies, proposed and collaboration | Link with the LDCF project |
|---|---|---|---|---|---|---|---|

| # | Agency | Title | Budget ($ million) | Source of Funds | Period | Lessons learned, synergies, proposed and collaboration | Link with the LDCF project |
|---|---|---|---|---|---|---|---|
| 1 | WB leadership with several partners, including GEF | Regional Multi-partner WACA Program West Africa Coastal Areas Management Program (WACA) | not assessed | Various sources | 2017-onwards | In response to the challenges in coastal zone management expressed by West African governments, WACA has mobilized technical assistance and finance in support of existing coastal management initiatives in the region, and to helps countries integrate infrastructure and natural resources management in order to enhance their resilience in the face of climate change, and coastal erosion and flooding in particular. the WACA Project is highly relevant for Guinea-Bissau and for the subject matter of this project. There is still an opportunity for Guinea-Bissau to join the project and help leverage more funds for it. The non-GEF portion of funds may eventually contribute to co-financing, if partnerships can be negotiated. | All |
| 2 | GEF WB, IUCN and IBAP | The WB GEF Coastal and Biodiversity Management Project | $4.8 + co-financing | GEF WB | 2004 - 2010 | Before the approval of this LDCF project, the WB GEF Coastal and Biodiversity Management Project represented the most important national intervention in the coastal zone in terms of projects and programs. While there is a marked difference in the focal area (the WB GEF project focused on biodiversity and the LDCF one on adaptation), the importance of ecosystem health and natural assets for the sustainable and adaptive management of the coastal zone in Guinea-Bissau is significant. The WB GEF project created the basis for what may be tagged as an Integrated Coastal Zone Management (ICZM), even though the project was somewhat short and limited in funding to actually consolidate such approaches in the country. Specific lessons from the evaluation reports of the now closed WB GEF project have been activity incorporated into the design of the current LDCF project, in particular with respect to sustainability and the need to carefully craft the institutional setup. Key lessons also include the importance of securing long-term investment in ICZM. | All |
| 3 | GEF UNDP – IBAP | Other GEF project under the Protected Areas' and Ecosystem Restoration Program | $4.2 + co-financing | GEF UNDP | 2005-ongoing | Includes: GEF ID 5368 - Strengthening the Financial and Operational Framework of the National PA System in Guinea-Bissau ($2.3M, on-going); GEF ID 3817 - SPWA-BD: Guinea-Bissau Biodiversity Conservation Trust Fund Project ($1M, on-going); and GEF ID 3575 - SPWA-BD: Support for the Consolidation of a Protected Area System in Guinea-Bissau's Forest Belt ($1M, recently closed). All three projects have elements of lessons, methods, techniques and ways of working that will help the LDCF project achieve results. Special attention will be paid to evaluation work and partnerships with respect to lessons, collaborations and synergies. | Components 2 and 3 |
| 4 | Various national and international partners | GEF Regional Projects and EAs (CC, BD, IW and others) | at least $10.0M + co-financing | GEF | 2010-onwards | Synergies with other GEF projects will be sough during the project implementation with regional and global initiatives co-funded by GEF. An important one to highlight is the recent "TRI - The Restoration Initiative - Fostering Innovation and Integration in Support of the Bonn Challenge", with IUCN as the GEF Agency, considering proposals for restoring mangroves and wetlands. Collaboration between the two projects though IBAP will help bring the costs of ecosystem restoration down, in addition to optimizing the production of multiple benefits. The goals under Component 2 are very much aligned with this. Else, Enabling Activities (EA) projects helped /are helping create the foundation for environmental management in Guinea-Bissau and are highly relevant in terms of capacity development and further synergies, as well as lessons learned. | Component 2 |
| 5 | GEF UNDP - MADS | GEF ID 4019 Strengthening Resilience and Adaptive Capacity | $4.0 + co-financing | GEF / LDCF | 2015-ongoing | Dubbed as the "NAPA follow-up" project, this was the first national climate change adaptation project approved for Guinea-Bissau. With a focus in the interior of the country, the project has been crucial for waking the country's interest in the subject matter of adaptation. Several lessons, including of operational nature are being learned from the | Component 1 |

| # | Agency | Title | Budget ($ million) | Source of Funds | Period | Lessons learned, synergies, proposed and collaboration | Link with the LDCF project |
|---|---|---|---|---|---|---|---|
| | | to Climate Change in Guinea-Bissau's Agrarian and Water Sectors | | | | project and infused into the design of the current project, which is the second "NAPA follow-up" project. As with the Protected Area Program, special attention will be paid to evaluation work and partnerships with respect to lessons, collaborations and synergies. | |
| 6 | GEF UNDP - MADS (ex-SEAD) | The ACCC Project: Adaptation to Climate Change - Responding to Shoreline Change and its human dimensions in West Africa through integrated coastal area management. | $3.0 + co-financing | GEF SPA | 2007-2011 | The ACCC has accessed one of the first climate change adaptation funding windows under the GEF (the SPA), a window that no longer exists. It was crucial for identifying a number of adaptation challenges in the coastal zone. Furthermore, a small group of national experts started developing skills in the topics of identification of climate risks, exposure and vulnerability assessments with the project. Varela Beach was one the project sites, where the problem of coastal erosion began being addressed. Coastal communities and CBOs that have been involved in ACCC are eager to engage again. Because the ACCC was a regional project, there were many limitations as to what it could achieve with respect to coastal zone adaptation. The needs for addressing it in a much more comprehensive way will be catered for under this project. | All |
| 7 | GEF UNDP - MADS (ex-SEAD) | GEF Pipeline projects (CC and MFA) | at least $3.0M | GEF UNDP | 2017 - onwards | Included: GEF ID 9561 - Promoting Better Access to Modern Energy Services through Sustainable Mini-grids and Low-carbon Bioenergy Technologies Among Guinea-Bissau's Forest-dependent Communities; and GEF ID 9502 - Strengthening Natural Resource Valuation Capacities for Improved Planning and Decision-making to Conserve the Global Environment. Although the thematic of the other projects are not directly related to the one for the current LDCF project, there is potential for synergies and collaboration -- the exact nature of which will be defined as all projects advance with their preparation. UNDP and MADS will be in the forefront of defining collaboration modalities. | All |

## Risks and Assumptions

As per standard 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 at PIF stage: 7**. At PPG stage, a total of 7 project level risks apply and have been validated, of which 2 have been recorded as either social or environmental through the SESP and recorded there as well.

The table below summarizes the project-level risks:

***Table 7: Project Risks***

| # | Risk | Type | Identified at PIF / PPG stage / validation | Impact, Likelihood, Level | Mitigation Measures |
|---|---|---|---|---|---|
| 1 | Climate science and risk information is either unavailable or too coarse to be used for effective national, regional and local planning | Technical | PIF stage, validated at PPG stage, response enhanced | Impact = Moderate<br><br>Probability = Highly likely<br><br>Level = Moderate | The component 1 of the project will be to develop and integrate a coastal zone monitoring program that will provide up to date advice and information on relevant climate induced coastal dynamics and also provide training and support on how to compile and integrate available climate risk information and use this through the medium of vulnerability assessment in the context of development planning. |
| 2 | Too many different/ divergent stakeholder interests, and lack of coordination of initiatives concerning the coastal areas with this project | Organizational | PIF stage, validated at PPG stage, response enhanced | Impact = Moderate<br><br>Probability = Highly likely<br><br>Level = Moderate | The project will elaborate during its preparation phase for the establishment of a body to coordinate all the coastal areas adaptation activities and future donor initiatives including the potential for Prime Minister's Office to play this coordination role |
| 3 | Technical capacity on risk management systems and strategies including on financing systems | Financial | PIF stage, validated at PPG stage, response enhanced | Impact = Moderate<br><br>Probability = Highly likely<br><br>Level = Moderate | Support from international expertise and also from UNDP, a Capacity Assessment Evaluation is proposed at the PRODOC. |
| 4 | Political instability mitigates against effective coordination across key development sectors. | Political | PIF stage, classification reviewed at PPG stage, response enhanced | High Impact = Severe<br><br>Probability = Highly likely<br><br>Level = Moderate | Strong support for the policy changes in key ministries will be generated at the Directorate General level, which have been relatively stable in staffing despite political changes. SEADD is directly linked to the Prime Minister's office and therefore should be able to leverage necessary influence to achieve policy reforms necessary. UNDP is a trusted partner of both government and opposition parties in situations of political and institutional instability in Guinea-Bissau. |
| 5 | Bad financial governance and corrupt practices may lead to less funds invested in | Financial | PIF stage, validated at PPG stage, response enhanced | Impact = Moderate<br><br>Probability = Moderately | One of the project's first activities will be the development of the 'local stakeholder involvement plan' and research into local livelihoods and socio-economic conditions in coastal areas. In addition, the project will enter into strategic partnerships at the local level, not |

| # | Risk | Type | Identified at PIF / PPG stage / validation | Impact, Likelihood, Level | Mitigation Measures |
|---|---|---|---|---|---|
| | desired outcomes than planned | | | likely<br><br>Level = Moderate | just with local government, but in particular with local NGOs and community-based organizations. Understanding the local reality and having the project intervention being facilitated by organizations already on the ground will be crucial to overcome cultural barriers. |
| 6 | Lack of community involvement in some project sites | Social | PPG stage, response enhanced | Impact = Moderate<br><br>Probability = Not likely<br><br>Level = Moderate | The assessment of available community workforce and cash-for work-modalities in target sites prior to project inception combined with raising awareness on project benefits for communities' livelihoods (during the project presentation) could contribute to raise their interest to participate in the project activities. |
| 7 | Inadequate implementation, maintenance and unsustainable management of the coastal protection measures proposed could affect the sustainability of these measures | Environmental | PPG stage, response enhanced | Impact = Severe<br><br>Probability = Not likely<br><br>Level = Moderate | The project will address this risk by : i) creating, at national and community level, the capacity to ensure good maintenance of the protection measures; ii) strengthening the emphasis on an approach to community ownership of measures that take advantage of the strengths identified with regard to local social organization to empower local stakeholders for the maintenance and sustainable management of these protection measures., iii) building strong partnerships with other projects and organizations; iv) conducting relevant dialogues with the Government for the commitment and allocation of government budgetary resources for the maintenance of coastal protection measures. |

Low risk count = 0
Moderate risk count = 6
High risk count = 1
Critical risk count = 0
General risk assessment at project level: Moderate

# Stakeholders

The project design process involved consultations with a wide range of stakeholder groups and participatory vulnerability assessments with local communities. Detailed description of stakeholder participation during the PPG phase provided in Annex F.

During project implementation, the project team will support broad participation from all relevant stakeholders to ensure that implementation approaches are well targeted to meet 'end users' needs (i.e. the beneficiaries) and to establish strong ownership of project outcomes by national partners and beneficiaries. A strong emphasis will be placed on consultation with vulnerable local communities to assess their needs and the impact of project support in meeting those needs. The participatory decentralized approach to project implementation will help to ensure that each project zone and locality has ownership of the adaptation process. The detail of those stakeholders and their roles and responsibilities are detailed in the table below.

## *Methodology of stakeholder selection*

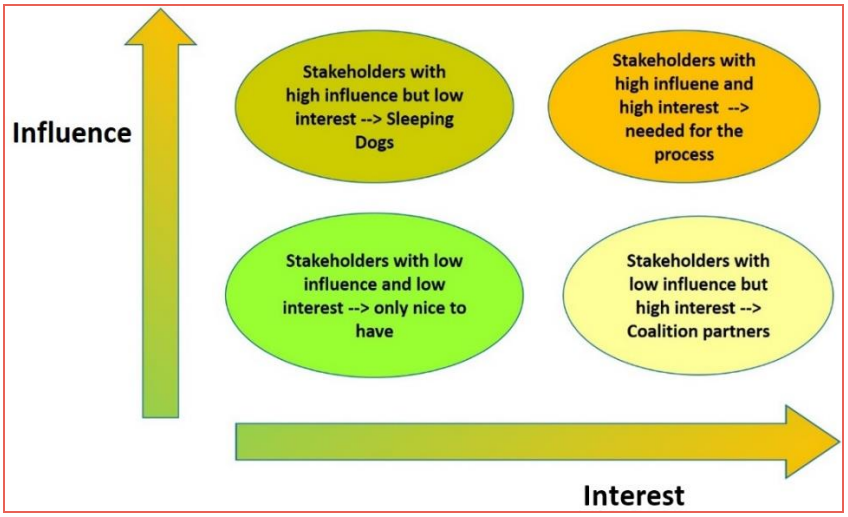
The overall analysis of the stakeholders that cover coastal zone stakeholders was based on the interviews with the known actors, players, heads of institutions, participation in the Inception Workshop, as well as other existing data in the documents such as the ACCC Project, and coastal planning reports and also on the FAOLex site.

An assessment of relevance was then made, including different public and private stakeholders, and hereunder civil society, in relation to their: '**Mandate**', '**Sector**', '**Role / Network of Influence**' and '**Type of Stakeholder**'. **Gender** sensitivity screening was also applied. In general, the following criteria[35] were used:

1. *Legitimacy or mandate:*
   - Does the stakeholder have an influential position?
   - If a public entity, does they have a strong legitimacy?
   - Is management interested in coastal issues, including vulnerability and climate risks?
2. *The sectors are divided into:*
   - Social functions: housing, health, education, other (sports, religions, etc.);
   - Production functions: agriculture, livestock, fisheries, industry, mining, trade and tourism;
   - Infrastructure functions: transport (port, roads and others), public services (water, electricity, gas);
   - Cross-cutting functions: environment (ecosystems, pollution), knowledge and research
3. *The analysis and classification of the actors:*
   - Main stakeholders with high influence and high interests: necessary for the process;
   - Non-key stakeholders with low influence, but high interests: necessary for the process because these may include the most vulnerable groups;
   - "Dormant" stakeholders with great influence and little interest: necessary to brings together powerful stakeholder who have the capacity to thwart a process, because they are influential. They are likely not very aware of coastal issues, and therefore not immediately interested. It is therefore necessary to ensure strategic communication with this group.
   - Non-key actors with little influence and little interest: not of interest.

All stakeholders can be classified along two criteria: **INFLUENCE** (formal and informal) and **INTEREST**, as per the figure below:

***Figure 4. Stakeholders' formal mandates and roles and responsibilities.***




## *Relevant stakeholder summary*

The stakeholders particularly important for the project have been summarized in the Table 8. One of the main stakeholders however, are the communities, that are projected to benefit from the project. Their participation is crucial for the successful implementation of the project. These communities (both already included in the project, as well as communities potentially to be included) are listed in Table 19. Current baseline of stakeholder involvement in Annex F.

[35] The classification of stakeholders is based on an approach which has been used in the WACA program (World Bank project in Benin and Togo).

***Table 8. Project's key stakeholders and their prospective roles in the project***

| Stakeholder | Description | Role in project |
|---|---|---|
| **Government** | | |
| The Ministry of Environment and Sustainable Development (MADS) | Coordinates actions to combat coastal risks in close consultation with other competent institutions<br>It is home to other institutions that play an important role in the environmental field: i) the Competent Environmental Assessment Authority (AAAC), ii) the Institute of Biodiversity and Protected Areas (IBAP) and the iii) Coastal Planning Office (GPC).<br>i) Competent Environmental Assessment Authority (AAAC) is Responsible for the implementation of the Environmental Assessment policy,<br>ii) The Institute for Biodiversity and Protected Areas (IBAP) promotes sustainable management of biodiversity resources and conservation policies is in line with the agreements Guinea-Bissau<br>iii) The Coastal Planning Office (GPC) is a technical instrument of analysis of the occupation and land uses of the coast, aiming at the harmonization and complementarity of the long-term activities, as well as the resolution of existing conflicts between the different economic sectors.<br>The above national institutions are linked to MADS and enjoy different subsidiary legal status, according to the case and the framework in place. | MADS is the project's 'Implementing Partner' (in UNDP's terminology). Refer to PRODOC Section VII. Governance and Management Arrangements for more details on what this entails. Quoting from it: "The Implementing Partner is responsible and accountable for managing this project, including the M&E of project interventions, achieving project outcomes, and for the effective use of UNDP resources."<br><br>The following national institutions are set to play a direct role in the implementation of project activities which will be outlined according to the PRODOC and contracted upon through Letters of Agreement (LoAs), making them Responsible Parties under the project:<br>• Coastal Planning Office (GPC)<br>• Institute of Biodiversity and Protected Areas (IBAP). |
| Ministry of Fisheries | Definition of the rules for fisheries management<br>It defines appropriate measures for the exploration, conservation and preservation of fisheries resources. | Partner entity, advising, in particular through the Artisanal Fisheries Research Center (CIPA) on fisheries related intervention measures (activities) foreseen under Components 2 and 3. |
| Ministry of Agriculture, Forestry and Livestock | Ensures the improvement of productivity and the sustainable increase of production for consumption and improvement of food security.<br>It is home to the National Institute of Agricultural Research (INPA) Agricultural Research that is responsible for the diffusion of new technologies, agrarian training and the dissemination of technical and scientific information. | Key player regarding mangroves and wetlands restoration as well as management and protection of forests, law enforcement |
| Ministry of Infrastructure and Construction and Town Planning | General Regulation on the Construction of Urban Housing | Will eventually act as the responsible parties for providing the engineering support to deliver Components 2 and 3 |
| Ministry of Transport | Port of Bissau<br>Captaincy of the ports of Bissau (Fight against pollution of ports)<br>Development of road infrastructure in the coastal zone | Will eventually support infrastructure regarding roads and ports. |
| **Other line Ministries** | | |
| Ministry of Natural Resources | Defining the legal regime of all activities relevant with water and mines management | Might eventually have some interaction on the regulations of water management. |
| Ministry of Tourism and Handicrafts | Regulates the Development and Tourism of the Private Sector | Might eventually interact on Bijagos livelihoods, regarding increasing tourism activities; it will contribute to the macro coastal zoning. |
| Ministry of Interior | Internal security missions<br>Vulnerability of risk limits | Ensure coordination of the security and civil protection sector |
| Ministry of Commerce and Business Promotion | Creation of legal, institutional and operational agreements for distribution, import and export activities | The Ministry will have relevance on the governance and regulatory framework for livelihoods strengthening. |
| **NGOs/CBOs/Other** | | |
| Fundação BIOGUINÉ | Established in 2008 is a nonpartisan, non-for-profit and secular foundation, constituted as a public utility legal entity under private law, and with and autonomous financial and patrimonial legal profile. BIOGUINÉ was created to serve as a perennial instrument for financing the cost of managing the National | Can potentially play a role as the contracting authority for the grant-making scheme foreseen under Output 3.1 (Economic diversification & resilience). [TO BE CONFIRMED BY UNDP IN THE LPAC]. Refer to PRODOC Annex C5.2 - Scope of Work for Consultancy aimed at preparing the documentation for the Output 3.1 Call for Proposals. |

| Stakeholder | Description | Role in project |
|---|---|---|
| | Protected Areas System (SNAP) and promoting the sustainable and social development of its communities. | |
| Chamber of Commerce Industry and Services | Business association, commercial interests. Mandate and governance defined by their statutes. | Beneficiary stakeholders as the project interventions will help improve their livelihoods |
| Association of Women of Economic Activity (AMAE) | Group striving to improve economic activities, and equality and inclusion of women. | Connection with the development of economic activity, local employment |
| NGO Tiniguena | Supporting actions in sectors linked to the sustainable management of resources and local development actions, such as: (i) sustainable management of the coastal areas of certain archipelago islands and their resources, (ii) sustainable small-scale fisheries, (iii) transport and communication between the islands with Bissau. | Sustainable management of resources and local development actions |
| NGO Development Action (AD) | It is dedicated to the development of key actions such as food security, creation and support of radio communities, art training and other professions as well as environmental actions to protect the forests of Guinea-Bissau and conducting bio-ecological studies in the wetlands of Cantanhez | Potential entity to provide services as sustainable management of resources and local development actions |
| NGO Nantinian | It is dedicated to community-based and environmental-based development, while civil society and is engaged in the environmental field with awareness activities | |
| Communities of Fishermen and Fish Processors | Groups on the front line in the fight against coastal erosion. | Connection with the development of agriculture and fisheries, food production, local employment, coastal development |
| Association of Women of Economic Activity (AMAR) | Group striving to improve economic activities, and equality and inclusion of women. | Connection with the development of economic activity, local livelihoods, employment |
| Research and Academia | Some semi-public institutions have done research, such as the National Institute of Research and Studies (INEP), which incorporates the Center for Environmental Studies and Relevant Technology (CEATA) and natural science domains, as well as the adoption of technologies that reduce the impact ecosystems and biodiversity resources. CEATA has a Geographic and Remote Sensing Institute (with the Coastal Planning Office), responsible for the management of the Bolama-Bijagos Biosphere Reserve (with IUCN and GPC) and socioeconomic studies. | All these institutions maintain good complementary relations in the planning of programs and exchange of information.<br><br>National Institute of Research and Studies (INEP) is set to play a direct role in the execution of project activities which will be outlined. according to the PRODOC and contracted upon through Letters of Agreement (LoAs), making it a Responsible Party under the project. |
| Private sector | There are some institutions related to the environment such as the Cell of Environmental Studies and Appropriate Technology, the Geographic Information System, the National Institute of Applied Technological Research, the Applied Fisheries Research Center and the National Institute of Agrarian Research | The private sector is a group of actors of extreme importance for coastal management, despite the low level of investment and involvement in coastal management, which is a reflection of governance problems. |

Note: The Stakeholder Analysis and Engagement Plan is outlined in Annex F.

## Gender equality and empowering women

The impacts of climate change on human life in Guinea-Bissau is severe and therefore it has become urgent to focus on people-oriented climate change solutions and particularly consider the gender dimension of resilience and adaptation strategies to climate change.

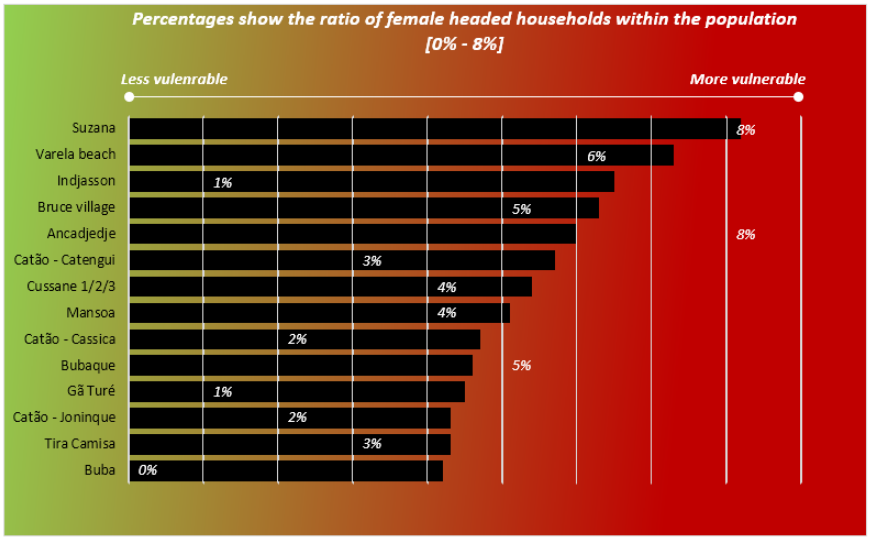
Structural inequalities between men and women in Guinea-Bissau are dictated by cultural and economic context and by specific social and political circumstances. Exclusion and discrimination of women in Guinea-Bissau are based on the logics of patriarchal power, reflected in phenomena such as female mutilation, domestic violence, early marriages, limited access to resources, land and credit, weak institutional representation, inequalities in the judicial and economic fields as well as in education, especially in rural areas. Less literate and less educated, more exposed to health risk factors and with less access to means of production and decision making, Guinean women more exposed and vulnerable to climate change and unable to fully participate in the development of the country.

The climate change is intimately linked with poverty and economic marginalization. Agriculture, a highly climate sensitive sector employs 60 percent[36] of the country´s labor force. Poor and marginalized segments of society are especially vulnerable to the adverse effects of climate change since they tend to have limited resources, and hence capacity, to adapt. It is their livelihoods that tend to be highly dependent on natural resources and, as such, are sensitive to climatic vulnerability.

Ongoing gender inequality in Guinea-Bissau is high by several indicators, despite some significant improvement at the (formal) legal frameworks that have a bearing on this inequality. Most importantly, the new laws against Female Mutilation (2011) and Domestic Violence (2014) are recent achievements in the direction of increased women's empowerment and gender equality.

Awareness on gender issues was raised more systematically, for the first time, in DENARP II (2011) – the second Poverty Reduction Strategy, which links structural gender inequalities to the economic development of the country and applies gender analysis and gender indicators to explain the situation of Guinean women - and through the PNIEG (2012), the "National Policy for Gender Equity and Equality". The current development plan "Terra Ranka" (2015) follows that line.

***Figure 5. Relative levels of climatic vulnerability among project sites with a gender bias added***




In the project zones, the assessment of climatic vulnerability with added gender bias has been conducted (see Figure 5). Notwithstanding the results of comparison among sites shown in Figure 5, the entire coastal zone is clearly vulnerable. And although addressing urban adaptation needs for Bissau—and in other medium-sized urban centers around the country—lies outside the scope of this project which has 'a rural bias', a point is made about the need to consider, not just in future interventions, but under this project, a broader approach to governing the coastal zone. This will be particularly important with respect to policies, plans, systems and institutions.

[36] WB data portal

## *Main constraints and barriers*

There are several main constraints and barriers contribute to the abovementioned status quo of gender inequity in Guinea Bissau and that lead to women vulnerability to climate change:

- Women are main food producers for the households, they are responsible for housework, taking care of children, elderly and sick. Women are not decision-makers in terms of access to and management of household goods, even though their contribution to family income is generally growing. The efficiency of their work is very low in light of lack of basic sanitary infrastructure and electricity;
- Traditional gender-specific roles, where a man decides for the family, high fertility rates, malnutrition and high rates of maternal mortality;
- Women land ownership rights are very much limited, the inheritance laws are discriminating, women have no access to loans or other form of financial support;
- Lack of education, high illiteracy rates among rural women;
- Women are underrepresented in higher levels of value chains – they occupy the low end of value chains, namely positions such us harvesters. The men traditionally work in farming for export, bringing higher income. Traders and processors of export products are male. Also, more labor-intensive farming (like rice) lays on women's shoulders;
- Underrepresentation of women in decisive positions, government where men are holding almost 70% of positions in key ministries;
- Lack of institutional capacity and legal and policy gaps for gender mainstreaming;
- Lack of sufficient data regarding gender differentiated impact of climate change. Available data is incomplete and not disaggregated by gender.

## *Addressing the gap*

The most urgent interventions aimed at addressing the abovementioned barriers include:

- Providing women with access to financing; special fund for loans and micro-credits for women engaged in agriculture and the management of small business; for women´s association and cooperatives which work outside Bissau, network of agricultural credit and training in credit management. Promotion of '*bideira*' model of self-reliance, encouraging women to undertake economic activities higher-up in the value chain;
- Provision of extension services and training to improve production and sales of cooperatives, associations and small and medium enterprises owned by women, making women's work more efficient;
- construction of basic infrastructure (rural roads, water, sanitation, electricity) to ease time burdens and increase efficiency of work. Especially applicable in horticultural gardening sector, and in terms of ensuring road connection between rural areas and city markets.
- Adopting the objectives of GEF Gender Equality Plan for 2015-2018:
    - Mainstream gender in all policies, programs and processes of climate change management of Guinea-Bissau. This means making women's and men's concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of policies and programs to meet the specific needs of women and men.
    - Enhance capacities for gender mainstreaming in the overall climate change management;
    - Generate and disseminate knowledge and information on the differentiated impacts of climate change on women and men, girls and boys in Guinea-Bissau, including through sensitization campaigns;
    - Give strategic attention to gender equality and the empowerment of women in Guinea-Bissau, ensuring that programmatic and operational activities of Climate Change Resilience projects are gender-sensitive in order to accelerate social transformation. Achieving equality and equity between women and men implies a process of transformation that replaces the standards associated with masculinity and femininity. Men and women should have equal rights to power and equal access to services and control of resources;
    - Increase gender responsive and sustainable adaptation and mitigation measures in the communities in Guinea-Bissau in order to reduce significantly the risks associated with climate change and natural disasters. These should simultaneously maximize opportunities for the women, men, youth and vulnerable groups through resilience building. Gender mainstreaming includes gender-specific activities and affirmative action where women or men are in a particularly unfavorable position.
    - Promote partnership and cooperation among key actors (state- and non-state, national and international) on gender and climate change;
    - Mainstream gender responsiveness into the monitoring and evaluation systems of CC projects in Guinea-Bissau through gender analysis and support of the collection of sex disaggregated data on climate change;
    - Strengthen the institutional framework for gender mainstreaming in Guinea-Bissau.

## South-South and Triangular Cooperation (SSTrC)

The project could enhance cooperation through technology transfer from Brazil. Especially beneficial cooperation could take place with Embrapa's Tropical Agroindustry Experimental Field, located in the city of Pacajus (CE), metropolitan region of Fortaleza. The Experimental Field was created with the purpose of enabling the development and execution of development strategies related to cashew and other tropical crops and connected to genetic improvement of plants, improvement of soil fertility, plant physiology, plant nutrition, management of tissue cultures, phytopathology, entomology, etc. These activities additionally provide the base for training interventions (internships, courses) and diffusion of technologies generated by the technical-scientific area of Embrapa Agroindústria Tropical.

With regards to cashew production and the market for cashew nuts, unbated global demand for cashews has helped Guinea-Bissau's farmers reach the record prices, but the industry could generate more income by selling processed nut, instead of exporting raw material only. Demand for cashews has risen by 31% globally over the last decade, according to the International Nut and Dried Fruit Council (INC), driven by its popularity in Asia and cashews' image as a healthy food ingredient in the West. According to the National Cashew Agency (ANC), in 2017 cashew exports reached 200 000 tons in Guinea Bissau, a 6% increase compared to 2016. Meanwhile, the revenue of cashew producers are expected to soar to $70-80 M from around $40-50 M last year.

Given Guinea Bissau focuses on developing cashew cultivation and post harvesting techniques, a cooperation with Brazil could be very beneficial to the industry and livelihoods of people it employed in cashew. Embrapa's subsidies to cashew studies has already led to a development of simple management techniques such as that the right pruning will increase plant productivity, improve harvesting methods, and if done in different areas of the plantation at different occasions, increases fruit production. Improved plague control is also some of the results of the Embrapa's research. Local productive arrangements were also focus of studies, since Brazil managed to increase cashew nut productivity by forming conglomerates of producers with government subsidies, rather than promoting individual producers with no investment resources. These solutions could be explored in Guinea Bissau as well.

The process of developing local cashew-processing capacity has also started in southern Casamance region of Senegal in July 2001, and with external assistance from Enterprise Works, 20 enterprises have been trained to process cashews. Altogether, these enterprises have processed over 110,000 kg of raw cashew nuts since the inception of the project, resulting in almost 28,000 kg of processed cashew kernels, proving high capacity of the cashew market in Senegal.

These are lessons that Guinea Bissau can use to grow its cashew market, using cooperation to surpass the gaps in technology for planting and harvesting. Subsidies following from the cooperation opportunities will help to overcome the absence of nuts processing technology internally, considering the continuous market growth.

In terms of industrial and artisanal fisheries in Guinea Bissau, lack of regulations and control over the fisheries have been systematically destroying country's fish production. There are several harmful practices taking place, such as e.g. transshipment which leads to laundering illegally caught fish. This illegal activity contributes to unemployment and desperation in the region and might push fishermen into involvement in piracy. As noted by The Oceans Beyond Piracy, the number of piracy incidents in West Africa almost doubled between 2015 and 2016. While piracy has declined in recent years in East Africa due to increased security levels, illegal fishing off the coast of Somalia was one of the main reasons it took off again in 2009 and has contributed to its comeback this year.

The World Bank West Africa Regional Fisheries Program (Cabo Verde, Cote d'Ivoire, Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mauritania, Senegal and Sierra Leone) aims to increase the economic contribution of marine resources through strengthened fisheries governance, reduced illegal fishing, and increased value added to fish products. Launched in 2010 with four countries, the program now encompasses 10 countries with about half of them moving into its second phase. In Cabo Verde, Guinea Bissau, Liberia, Senegal and Sierra Leone, where first phase of the program is reaching completion, Illegal, Unreported and Unregulated (IUU) fishing has significantly decreased. For countries such as Liberia and Sierra Leone, reduction in IUU fishing has had direct positive results on livelihoods in coastal communities. In all countries, fisheries legal frameworks are better aligned with international standards, and bring about various measurable positive outcomes (like e.g. increased number of registered canoes). Senegal has successfully piloted community-based fisheries management. Along Senegal's coast, fishing communities have made significant progress in developing community-based fisheries management. In Ngaparou, 40 miles from Senegal's capital Dakar, as part of the aforementioned WB program, residents worked closely with international and

regional organizations and successfully established “co-management areas” run entirely by the local fishing community. The new Senegalese Fisheries Code was enacted in 2015 and eight fishing communities have since been formally recognized, with the first recognized one reporting a 133 percent increase in catch productivity and more resources allocated to education and healthcare. Senegal is very much ahead of Guinea Bissau in terms of cooperation established through the program and therefore could be an example to follow.

In Sierra Leone, as a result of close collaboration within the West Africa Regional Fisheries Program and the Ministry of Fisheries, the surveillance and prosecution of illegal fishing vessels was significantly improved, resulting in a noticeable decrease of their presence. In the marine villages, fishers are learning sustainable fishing practices, methods to improve fish processing, and the hazards related to damaging practices.

All aforementioned initiatives could successfully take place in Guinea Bissau encouraged by other countries as well as by the outcomes of this project (establishment of new fishing wharfs with auxiliary structures, in three different areas).

In Guinea Bissau, lessons should also be learnt from the experience of Smart Fish, a FAO Program for the ‘Implementation of A Regional Fisheries Strategy for the Eastern and Southern Africa - Indian Ocean Region’ in terms of Post-Harvest Losses (PHL). The most common causes of these loses are inadequate handling and processing methods, lack of knowledge and skills amongst producers, as well as poor access to crucial infrastructure, equipment and services such as water, ice, electricity or roads. In order to raise awareness, skills and knowledge of all those involved in the value-chain a series of training videos has been developed by the program on best practices in handling and hygiene standards throughout the value chain. These self-explanatory videos are used in the form of a short participatory training course. Key messages on better practices are conveyed using local languages; the discussions of key issues are encouraged as a part of the learning process. The theory is backed up with the provision of equipment to enable the participants to put into practice the techniques and ideas they have learnt.

## Sustainability and Scaling Up + Innovativeness

Sustainability is the main focus of this project, disguised under the word *resilience.* Considering that and in light of Guinea Bissau already profoundly experiencing various negative impacts of climate change, ‘sustainable’ would mean ready to face climate change risks and impacts.

This LDCF-funded project will bring knowledge and experience to climate change risks-based management. The emphasis will be placed at creating an integrative, and above all adaptive Coastal Management System for the country. Through Component 1, this aspect will be included in all regulations and decision-making processes regarding coastline, both present and in the future. Climate change adaptation will be mainstreamed into the county’s governance and planning at national and regional level.

Local stakeholders, institutions, NGO’s and communities were consulted extensively during the PPG phase. Similar consultations will be taking place as a part of the project implementation phase.
GIS-based planning and capacity building activities are important and innovative tools that will be engaged in this project to help address vulnerability and adaptation problems in the coastline. Innovative measures will include the restoration of critical coastline areas, integrating the restoration of an outer mangrove strip to function as a buffer for wave action and coastal erosion. The historical rice production on lowland areas protected by a system of dykes and salt water containment processes is unique to Guinea Bissau’s natural resources management and livelihood adaptation for climate change. This is a model that could be replicated in other vulnerable areas identified during project implementation. The hard measures that the project will implement (construction works on fisheries wharfs and introducing auxiliary structures for fueling and post harvesting) will contribute to climate proofing of fishery - a very important source of food in Guinea Bissau. This kind of interventions are very innovative to local reality.

Despite being a LDC, Guinea Bissau will also display the unique characteristic of managing the imperatives of nature preservation and low-impact, community-governed natural resource use within the same coastal landscapes. The key to success is based on an intensive engagement of communities in protected area management, based on their own values and land-seascape stewardship. Though unique such experience has been praised by the GEF before in a corporate publication and it can be successfully scaled-up in other contexts with similar situations.

Capacity building at all levels and a special emphasis on gender matters will ensure 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. Understanding the importance of soft measures is very important for biodiversity conservation of coastal areas, mangrove and wetlands protection from climate risks and generally for a long-term sustainability.

Providing alternatives to strengthen the ongoing cashew production, strengthening women's participation in local livelihoods as well as the capacity of institutions to provide knowledge-based advice will also increase Guinea Bissau's adaptive capacity to climate change and response to natural and climate-related disasters.

# V. PROJECT MANAGEMENT

## Cost efficiency and effectiveness

The proposed project provides a supplementary and important function in addressing key deficiencies faced by baseline coastal protection projects and activities in Guinea Bissau. With LDCF funding, the proposed project will be able to build on the recent baseline investments through integrated coastal management and scaling up the use of soft engineering solutions and ecosystem-based adaptation measures. LDCF funding will play a key role in relation to the evident gaps in current baseline coastal protection investments. Together with the co-financing being mobilized for the proposed project, LDCF funds will enable the Governemnt of Guinea Bissau to address the urgent climate adaptation needs in the coast most vulnerable areas, while also addressing the above barriers and looking to broader challenges impacting the sustainable development in the area.

The amount of funding requested from the LDCF is justified at four levels. First, extensive engineering scoping assessments have been conducted on the Guinea Bissau coast to identify specific areas of the coast that are the most vulnerable to coastal flooding from the combination of sea level rise and more frequent/intense storms. Details of the scoping assessments are provided in Annex III Second, GEF funds are only requested to protect priority vulnerable hotspot areas. The funding gap between available government resources to protect these hotspot areas and total required resources to safeguard the communities and infrastructure in these regions is directly offset by GEF resources. Third, conceptual designs of the soft coastal protection measures have been assessed for each of the 5 hotspot segments. (see Annex IV)

The proposed LDCF project is fully aligned with national priorities and builds on existing government programmes. Co-financing of $58.6 million funded by government organizations and with Guinea Bissau development partners, including UNDP, over the 6-year project duration. The LDCF support will mainly address critical building blocks to integrating climate change risks into government programmes, thereby providing needed information and capacity to making future government investments risk-sensitive.

In line with the GEF/LDCF Council's guidance on assessing project cost-effectiveness, the project preparation phase has developed a scenario planning approach to assess and compare different future alternatives. Four scenarios emerged under different conditions in terms of planning capacities (high or low) and funding (lack or availability). The current LDCF proposal aims for a trajectory of coastal resilience based on a cost effectiveness scenario, linking a higher planning capacity with an adequate availability of funding to support the proposed actions. Nevertheless, without the project approved, three other scenarios could emerge, with a baseline situation (business as usual) leading to a potential vision of coastal collapse (worst case scenario) and also two other less negative scenarios, according to different conditions of effectiveness.

### *The baseline scenario*

If the current trends and problems that are affecting the Guinea Bissau coastal areas (including local communities and economic sectors) would continue into the future, in result of low planning capacities associated with the lack of funding to support adaptive strategies and interventions, the strategic vision of "Coastal collapse" emerges very strongly. This is the "Scarce effectiveness scenario", representing the "business as usual reality", in a country demonstrating a low adaptive capacity to support the impacts associated with climate change. This scenario

represents the extension of the baseline situation without GEF funding under the current project proposal. The baseline scenario is a representation of what would reasonably be expected to have occurred in the project's absence. In previous sections of the document, the climatic, biophysical and socio-economic expression of the baseline scenario was described.

If the country achieves a higher planning capacity as a result of other ongoing baseline projects, even if not directly targeting the problems related to coastal management associated with climate change, there might be some conditions to plan and to adapt better to the specific problems, at least in theory. Nevertheless, if that higher planning capacity is not associated to support the actions planned, the strategic vision will not happen. Without the LDCF resources it is not possible to implement adaptive strategies over the coastal areas to protect communities, livelihoods and activities. This scenario represents an evolution from the baseline situation, assuming that other projects might enhance some adaptive capacities and strategies, without LDCF funding under the current project proposal.

*The cost effectiveness scenario ("coastal resilience")*

The current LDCF project proposal has the ambition to be the most cost effective of the scenarios, in order to promote a trajectory leading to a stronger coastal resilience. The project assumes a high planning capacity as crucial to address the several problems discussed and to implement the actions defined, making an effective and adequate use of the funding solicited to LDCF. The project has three outcomes that mutually reinforce each other, raising the planning capacities from an integrated perspective. The investment in policy, institutional and governance development for climate risks management in Guinea Bissau coastal zones (Outcome 1) supports the planning of the physical interventions in coastal protection for reducing key vulnerabilities (Outcome 2), also strengthening the livelihoods of coastal communities and their socio-economic activities (Outcome 3). It is also relevant to highlight that the additionality of the project brings the possibility to articulate several other projects (and funding) from a strategic perspective, maximizing the use of the financial resources, promoting cost effectiveness. The project design took into consideration the need to reinforce several dimensions related to planning (e.g. monitoring systems, feasibility studies to be done previously to physical interventions, capacity building actions at several institutional levels, joint actions between departments and ministries, engagement of local communities in site selection, etc.). The funding of the project under LDCF will effectively contribute to coastal resilience of Guinea Bissau, otherwise looming alternative scenarios may emerged.

## *Cost Effectiveness and Alternatives*

The cost-effectiveness of the project will be reflected at the operational level through the following approaches:

Throughout the project, LDCF resources will be aligned with the financing and delivery of project outputs that have competitive procurement components to ensure best value for money. In this regard, the project will apply best practices in coastal engineering and adaptation identified by other, ongoing climate change adaptation projects in the country and the West Africa region (Ghana, Togo, Mali, Burkina Faso, Benin, and Ivory Coast, Liberia). UNDP procurement procedures will be followed.

This project will utilize existing government structures and processes for implementation. By building on existing government and institutional structures, the project will also harness in-kind support and contributions from offices at the national, provincial, district and local levels (office space, staff time, communications, etc.)

Through the existing network of stakeholders, the results framework of the project, will be able to utilize existing baseline surveys of line agencies and harness existing delivery mechanisms such as the UNDP/GEF Guinea Bissau Small Grants project, if applicable. This will further expand the reach and replicability of outputs.

The bulk of the Project's funds will be directed to community-level activities and hence brings opportunities for local procurement of goods and services with it.

Indeed, the term "cost-effective" for technologies improving sea and river defence management, in the context of

climate changes, means optimum value for money invested over the long term. Coastal defense measure options are meant to be designed for a lifespan of up to 50 years and thus this is an appropriate financial investment horizon to consider in a cost-benefit estimate. The lowest cost of m3or per unit length of defense measure (is not always the most cost-effective over a climate-relevant planning horizon due to on-going repair or periodic replacement, particularly if construction quality is compromised to save money. In addition, with decaying defenses there is some loss of protection function which can be caused by overtopping of blow-outs in specific locations, thus a reduced initial cost may lead to a decay in coastal resilience.

It is important to stress that cheaper and less robust engineering techniques, poor construction quality and poor material use can lead to premature failure of the defense very quickly. Coastal defense structures (soft or hard) that are subsequently abandoned by the users after only a few years of operation are clearly not cost-effective. Cost-effectiveness of such defense types entails the transport distance of materials between the home and the source, the protection of the source from wave inundation, the cost of maintenance of the infrastructures and all these costs are difficult to apprehend without an evaluation of all the option and the environment in which they will be build and they will operate. Thus, the costs effectiveness of the options will be guaranteed during the project implementation by ensuring that the building of the coastal protection techniques proposed will take in account the expectations and principles of cost-effectiveness to allow an economical and sustainable protection from beach erosion, sea level rise and increase storm inundation impacts.

The proposed investment budget of this project will also support the acquisition of the best technical expertise to help towards full implementation, with the involvement of proven coastal engineers, coastal planners, drainage experts and supporting community stakeholders that will guide all future sea and river defense management and agriculture adaptation in Guinea Bissau. All Government staff involvement in the project will be an “in-kind” contribution of GoGB. The cost-effectiveness analysis of these options will be improved as more data become available during project implementation before the building of these technologies.

## Project management

The project management unit will be located at MADS’s HQ in Bissau, with “antennas” or liaison officers placed in Buba covering Project Zones #2 and 3 (Varela-Cacheu and Masoa-Buba-Cufada, respectively, in addition to The South) and Bubaque, covering Project Zone #1, sharing IBAP’s National Protected Areas office facilities in these locations. The National Project Coordinator, placed in the MADS HQ, will be responsible for the overall management of the project, including the mobilization of all project inputs and supervision of project staff, consultants and sub-contractors as well as mobilization of synergies with others projects to support the accomplishment of project goals, in line with the received co-financing letters referred in Annex xxx.
The Implementing Partner will work closely with: the Coastal Planning Office (GPC), the Directorate for Rural Engineering (Engenharia Rural) the Directorate for Agricultural and Rural Development (DGAg) the Institute of Biodiversity and Protected Areas (IBAP) and the National Institute of Research and Studies (INEP) as executing partners, tasked with executing specific activities to them assigned and ensuring the government’s contribution to the project and working with the project management team and Project Board to achieve the intended results. The MADS is responsible for ensuring the government’s contribution to the project and working with the project management team and Project Board to achieve the intended results. The Implementing Partner is responsible and accountable for managing this project, including the M&E of project interventions, achieving project outcomes, and for the effective use of UNDP resources. In this context, the Implementing Partner will be responsible for processing the requests for disbursements of government funding and production of financial reports, in compliance with the rules and procedures of UNDP. Technical and financial oversight will be provided by UNDP, via the CO and the UNDP-GEF team based in Addis Ababa and will actively monitor implementation of the project according to UNDP and GEF regulations and procedures. The Implementing Partner will also be responsible for promoting and supporting the effective coordination of the project with other national partner agencies, initiatives and baseline projects and for ensuring that lessons learned from the project are incorporated into new climate change initiatives, to support sustainability and replicability of project outcomes.

The Project Coordinator (PC) will run the project on a day-to-day basis on behalf of the Implementing Partner within the constraints laid down by the Board. Responsibilities of the PC will include daily project management, on-going monitoring and reporting of the extent to which project activities and Outputs are being implemented according to agreed time frames and budget – towards achieving intended Outcomes. He will co-ordinate the Project Management Unit (PMU) which will also

include support staff whose role is to provide project administration, management and technical support to the PC and broader project team and consultants. The PC will divide its time equally between Bissau. Buab and Bubaque and will be responsible for ensuring the smooth running of project capacity building and support activities on each target zone. A secretary/accountant will also be hired by the project to support the PC. In addition, he will work closely with the 3 UNVs CC-A, Economics and Finance and Communication specialists, the 3 national technical officers, the 2 liaison officers located in the project Antennas and the CTA as well as with all other project staff and project partners. Meetings with the technical committee, including baseline and partner projects and agencies will be held quarterly to ensure effective coordination and partnership building. The PC will also ensure that all interventions are designed and implemented using gender-sensitive tools and approaches.

## Agreement on intellectual property rights and use of logo on the project's deliverables and disclosure of information

To accord proper acknowledgement to the GEF for providing grant funding, the GEF logo will appear together with the UNDP logo on all promotional materials, other written materials like publications developed by the project, and project hardware. Any citation on publications regarding projects funded by the GEF will also accord proper acknowledgement to the GEF. Information will be disclosed in accordance with relevant policies notably the UNDP Disclosure Policy[37] and the GEF policy on public involvement[38].

## Social and Environmental Safeguards (SES)

The UNDP environmental and social safeguards requirements have been followed in the development of the proposed project. In accordance with the UNDP Social and Environmental Screening Procedure (Annex E), the project is categorized as moderate and – as outlined below – is not expected to have any negative environmental or social impacts.

The LDCF-financed project will strengthen the resilience of the coastline and all livelihoods related to it.. Hard interventions – like the construction of a climate proof wharf for artisanal fisheries is foreseen but the impacts will be concentrated on the construction phase on a very punctual manner. Soft interventions such as the restoration of mangroves and wetlands will actually be a positive impact for protecting the coast from wave action and erosion, forming green belts of mangroves around sensitive environments. All proposed activities will be carried out following the best practices and local and international environmental controls and standards especially where residual risks are foreseen. Local communities will be a part of the project at all stages through consultation for project planning, through working on the direct restoration areas planting propagules and seeds, and at the monitoring and maintenance stage. An improved and climate proof artisanal fisheries wharf is a first step for strengthening the economy on a long-term basis. The study of rice and cashew plantation as well as alternatives will also be relevant to gender mainstreaming and communities' development. As a result, no conflicts within the local communities are expected. The project aims to prepare the countries' coastline for resilience against climate change effects and the communities shall be positively impacted by the actions.

Mangroves and wetlands are environmentally sensitive areas and a controlled management shall happen during the reforestation stage avoiding excessive movement of workers over the healthier areas, as well as a very careful management of the resources to be introduced as revegetation in order not to contaminate or bring invasive species to an already degraded area. An integrative approach for the coastal zone management will also allow for a balance between the land that will be cultivated in regard to the land that shall be protected in order not to accelerate the erosion and destruction of the coastline. No population displacement is expected as a direct or indirect result of the project.

Gender equality is a focus area of the LDCF-financed project. The project interventions will promote social equity and equality. All social consequences of the project are expected to be positive. Local communities' approval and support of the interventions will be sought prior to implementation. As the project is expected to have either no effects or positive effects on the environment and community, it is not necessary to undertake a full environmental and social review. However, focused Environmental Impact Assessments will be conducted prior to the construction of hard infrastructure and on the rice cultures and reforestation of mangroves and wetlands.

[Refer to ANNEX D. UNDP Social and Environmental and Social Screening Template (SESP)]

[37] See http://www.undp.org/content/undp/en/home/operations/transparency/information_disclosurepolicy/
[38] See https://www.thegef.org/gef/policies_guidelines

# VI. PROJECT RESULTS FRAMEWORK

| |
|---|
| **This project will contribute to the following Sustainable Development Goal (s):**<br>SDGs 5, 12, 14 and 15 |
| **This project will contribute to the following country outcomes included in the UNDAF/Country Program Document:**<br>Outcome UNPAF 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. |
| **This project will be linked to the following output of the UNDP Strategic Plan:**<br>Signature solution 3: Enhance prevention and recovery for resilient societies |

| Objective and Outcomes | # | Objective and Outcome Indicators | Baseline | Mid-term Target | End of Project Target | Assumptions |
|---|---|---|---|---|---|---|
| **Project Objective:** To strengthen the adaptive capacity and climate resilience of vulnerable coastal communities to climate risks in Guinea-Bissau | 1 | Number of vulnerable people in local communities that directly and indirectly benefit from the project in selected localities with respect to access to enhanced living conditions and more sustainable livelihoods, of which percentage of women<br><br>*[AMATT Indicator 1: Number of direct beneficiaries]* | Zero | 30,410 people of which, at least 50% are women<br><br>[number from 2009 census for the selected localities in three project zones – refer to PRODOC Project Sites] | 60,820 people of which, at least 50% are women | Any hindering political and institutional barriers towards improved coastal governance can be overcome through dialogue.<br><br>The project reviews the list of sites and the count of beneficiaries in a pro-active and dynamic manner to avoid pulverizing funds and keeping the project cost-effective, on track and delivering results. |
| | 2 | At least one long term (10-year) climate responsive coastal management plan outlining adaptation measures available.<br><br>*[AMATT Indicator 12: Regional, national and sector-wide policies, plans and processes developed and strengthened to identify, prioritize and integrate adaptation strategies and measures]* | No plan in place | A Plan developed | A Plan cleared for government adoption | |
| ***Component 1 Outputs:*** | *Output 1.1) A capacity development program is implemented for climate risk mainstreaming, benefitting key institutions and stakeholders that either manage and use the coastal zone*<br>*Output 1.2) Measures to improve the policy, regulatory and administrative environment for climate risk management in the coastal zone are implemented*<br>*Output 1.3) Institutional coordination is strengthened for Climate Adaptive and Integrated Coastal Zone Monitoring and risk management Program* | | | | | |
| **Outcome 1.** Policies, regulations, | 3 | The development of an ICZM framework in Guinea-Bissau | Not developed | Progress towards the development of ICZM | ICZM framework fully developed. A coastal zone | The capacity building element in project |

| Objective and Outcomes | # | Objective and Outcome Indicators | Baseline | Mid-term Target | End of Project Target | Assumptions |
|---|---|---|---|---|---|---|
| institutions and individuals mandated to manage coastal areas strengthened to reduce the risk of climate change | | *[AMATT Indicator 12: Regional, national and sector-wide policies, plans and processes developed and strengthened to identify, prioritize and integrate adaptation strategies and measures]* | | framework made, evidenced by e.g.: proposals drafted regarding the legal statute texts, for the establishment of a strong, capable, and fully mandated institution responsible for coordinating action in the coastal zone | planning, executing and monitoring office/agency is operational as a fully mandated institution, responsible for coordinating action in the coastal zone | activities is adequately modulated to the capacity baseline of beneficiaries, institutions and the project's goals.<br><br>Policy framework are useful for advancing the adaptation agenda in the coastal zone. |
| | 4 | Number of people trained on capacity building for integrated and adaptive coastal zone management<br><br>*[AMATT Indicator 9: Number of people trained to identify, prioritize, implement, monitor and evaluate adaptation strategies and measures]*<br>*+*<br>*[AMAT Indicator 10: Capacities of …, national and sub-national institutions to identify, prioritize, implement, monitor and evaluate adaptation strategies and measures]* | 171 | At least 250 (mixed Bissau-based level decision makers and communities' members) | At least 500 people trained from amongst Bissau-based level decision makers; 1500 people trained in communities | |
| | 5 | Coastal Zone climate risk Monitoring framework in place and operational:<br><br>(a) Risk management systems<br>(b) Strategic assessments<br>(c) Forum for Coastal Stakeholders<br>(d) Relevant coastal research<br>(e) Climate Proof coastal investment plan<br>(f) Coastal Risk Monitoring Program (longer-term, participatory, sustainable)<br><br>*[AMATT Indicator 12: Regional, national* | No frameworks in place | Frameworks (a) to (d) initiated | Framework is operational and effective for at least 4 out 6 frameworks (a) to (d) and at least initiated for remaining two (e) to (f). | |

| Objective and Outcomes | # | Objective and Outcome Indicators | Baseline | Mid-term Target | End of Project Target | Assumptions |
|---|---|---|---|---|---|---|
| | | *and sector-wide policies, plans and processes developed and strengthened to identify, prioritize and integrate adaptation strategies and measures]* | | | | |
| ***Component 2 Outputs:*** | *Output 2.1) Climate-proofing, rehabilitation and/or protection of essential fisheries and local transportation coastal infrastructures against sea-level rise and coastal degradation*<br>*Output 2.2) Cultivation of low-land rice is protected from climate risks*<br>*Output 2.3) A total of 2,500 ha of mangroves forests restored and maintained in selected coastal sites*<br>*Output 2.4) Restoration and management of at least 1,500 ha of coastal wetlands, in view of strengthen the resilience against drying-out risks and salinization* | | | | | |
| **Outcome 2.** Vulnerability of coastal investments to climate risks reduced through the design, construction and maintenance of coastal protection measures | 6 | The number of people benefitting from climate-proofing adaptation measures in project Zones:<br>(1) Bolama-Bijagós<br>(2) Masoa-Buba-Cufada<br>(3) Varela-Cacheu<br>(4) South Zone<br><br>*[AMATT Indicator 3: Population benefiting from the adoption of diversified, climate-resilient livelihood options]*<br><br>For the baseline reading, refer to PROODC Annex F1 and for Mid-Term and Project to PRODOC Section 'Project Sites') | Approximately:<br>(based on site level consultations – Refer to)<br>(1) 60 people, including 30% women<br>(2) 120 people, including 30% women<br>(3) 140 people, including 30% women<br>(4) 0 persons | At least:<br>(% of women as per Census data – Refer to<br><br>(1) 14,591 people, of which women: 51%<br>(2) 8,226 people, of which women: 50%<br>(3) 6,768 people, of which women: 48%<br>(4) 825 people, of which women: 48% | At least:<br>(% of women as per Census data – Refer to PRODOC Table 3. General Strategy for Component 2)<br><br>(1) 29,182 people, of which women: 51%<br>(2) 16,451 people, of which women: 50%<br>(3) 13,537 people, of which women: 48%<br>(4) 1,651 people, of which women: 48% | Hard and soft adaptation measure complement each other with no detriment to conservation goals for protected areas and green belts. |
| | 7 | Percentage of Coastal area protected or restored surface:<br>(a) ha of land<br>(b) ha of marine area<br>(c) km of coast<br><br>(1) ha of wetlands<br>(2) ha of mangroves<br>(3) ha of rice cultivation | Coastal stretch not protected:<br>(a) 0 ha<br>(b) 0 ha<br>(c) 0 km<br><br>(1) 0 ha<br>(2) 0 ha<br>(3) 0 ha | Coastal stretch protection initiated by development of climate proof infrastructure and restoration of coastal ecosystems:<br>(a) 154,952 ha<br>(b) 406,506 ha<br>(c) 212 km | Coastal stretch fully protected with improved infrastructure, maintenance measures in place and coastal mangrove and wetland ecosystems fully restored.<br>(a) 309,903 ha<br>(b) 813,011 ha<br>(c) 423 km | |

| Objective and Outcomes | # | Objective and Outcome Indicators | Baseline | Mid-term Target | End of Project Target | Assumptions |
|---|---|---|---|---|---|---|
| | | *[AMATT Indicator 2: Type and extent of assets strengthened and/or better managed to withstand the effects of climate change]* | | (1) 7,517 ha<br>(2) 109,113 ha<br>(3) 31,253 ha | (1) 15,034 ha<br>(2) 218,226 ha<br>(3) 62,506 ha | |
| | 8 | Ha of coastal land under Climate-resilient practices and technologies:<br><br>(a) Number of wharfs<br>(b) ha of wetlands<br>(c) ha of mangroves<br>(d) ha of rice cultivation<br><br>and number of people benefiting<br><br>*[AMATT Indicator 4: Extent of adoption of climate-resilient technologies/ practices]* | No climate resilience technologies present:<br><br>(a) 0 wharfs<br>(b) 0 ha<br>(c) 0 ha<br>(d) 0<br><br>and 0 people benefiting | Climate resilience technologies adopted:<br><br>(a) 1 wharf<br>(b) 750 ha<br>(c) 1,250 ha<br>(d) 500<br><br>and 750 people benefiting, of which 50% are women | Climate resilience technologies adopted:<br><br>(a) 3 wharfs<br>(b) 1,500 ha<br>(c) 2,500 ha<br>(d) 1,000<br><br>and 1,500 people benefiting, of which 50% are women | Climate resilient technologies will be adopted through in mangrove, wetland and rice cultivation areas in a form of restoration activities, investment in new/improved infrastructure and management tools |
| ***Component 2 Outputs:*** | *Output 3.1) A Climate Adaptive community-based local Investment Program is rolled out for coastal communities in view of strengthening economic diversification & resilience in a gender-sensitive, innovative and sustainable way*<br>*Output 3.2) Climate resilient wetland and fisheries management strategy is developed for the Bijagós Archipelago*<br>*Output 3.3) Gender sensitive local development planning for adaptation*<br>*Output 3.4) Alternatives to climatic vulnerability*<br>*Output 3.5) National agro-ecological extension services is strengthened for climate resilience and vulnerability reduction, including in the management of bush fire on coastal forests*<br>*Output 3.6) Financing products developed and aligned initiatives supported for promoting adaptive livelihoods and climate-proofing activities along the coastal zone* | | | | | |
| **Outcome 3.** Rural livelihoods in the coastal zone enhanced and protected from the impacts of climate change | 9 | Number of beneficiaries (rural producers) of the project's grant-making scheme for, bottom-up livelihoods' economic diversification activities that both move up in existing value chains (e.g. cashew) and/or develop new value chains, under the following approaches:<br><br>a) Value chain development, innovative agricultural and agro-industrial, alternatives to or improved approaches to cashew cropping and handling, rice cultivation, beekeeping, horticulture | No livelihoods' economic diversification activities funded by the project under implementation:<br>(a) 0<br>(b) 0 | (a) 2,000 people, of which women are 80%<br><br>(b) 2,500 people, of which women are 80% | (a) 4,000 people, of which women: 80%<br><br>(b) 5,000<br>of which women: 80% | Economic diversification activities using a bottom-up and gender-sensitive approach are feasible to roll out through community focused grants-making. |

| Objective and Outcomes | # | Objective and Outcome Indicators | Baseline | Mid-term Target | End of Project Target | Assumptions |
|---|---|---|---|---|---|---|
| | | etc., of which % of women)<br><br>b) Wetlands fisheries and NRM on Bijagós Archipelago, of which % of women) | | | | |
| | 10 | % reduction in Income gap for men and women in selected project sites, as independently assessed | NA – study not commended, only 2009 census data available showing the average numbers available for the localities – not conclusive. | Income gap established selected project sites by 2020 and already shows a 10% change towards closing the gap vis a vis the baseline | 30% change towards closing the gap vis a vis the baseline in the same selected project sites by project end | |

# VII. MONITORING AND EVALUATION (M&E) PLAN

Project-level monitoring and evaluation will be undertaken in compliance with UNDP requirements as outlined in the UNDP POPP and UNDP Evaluation Policy. While these UNDP requirements are not outlined in this project document, the UNDP Country Office will work with the relevant project stakeholders to ensure UNDP M&E requirements are met in a timely fashion and to high quality standards. Additional mandatory GEF-specific M&E requirements (as outlined below) will be undertaken in accordance with the GEF M&E policy and other relevant GEF policies.

In addition to these mandatory UNDP and GEF M&E requirements, other M&E activities deemed necessary to support project-level adaptive management will be agreed during the Project Inception Workshop and will be detailed in the Inception Report. This will include the exact role of project target groups and other stakeholders in project M&E activities including the GEF Operational Focal Point and national/regional institutes assigned to undertake project monitoring. The GEF Operational Focal Point will strive to ensure consistency in the approach taken to the GEF-specific M&E requirements (notably the GEF Tracking Tools) across all GEF-financed projects in the country. This could be achieved for example by using one national institute to complete the GEF Tracking Tools for all GEF-financed projects in the country, including projects supported by other GEF Agencies.

## M&E Oversight and monitoring responsibilities

Project Manager: The Project Manager is responsible for day-to-day project management and regular monitoring of project results and risks, including social and environmental risks. The Project Manager will ensure that all project staff maintain a high level of transparency, responsibility and accountability in M&E and reporting of project results. The Project Manager will inform the Project Board, the UNDP Country Office and the UNDP-GEF RTA of any delays or difficulties as they arise during implementation so that appropriate support and corrective measures can be adopted.

The Project Manager will develop annual work plans based on the multi-year work plan included in Annex A, including annual output targets to support the efficient implementation of the project. The Project Manager will ensure that the standard UNDP and GEF M&E requirements are fulfilled to the highest quality. This includes, but is not limited to, ensuring the results framework indicators are monitored annually in time for evidence-based reporting in the GEF PIR, and that the monitoring of risks and the various plans/strategies developed to support project implementation (e.g. gender strategy, KM strategy etc.) occur on a regular basis.

Project Board: The Project Board will take corrective action as needed to ensure the project achieves the desired results. The Project Board will hold project reviews to assess the performance of the project and appraise the Annual Work Plan for the following year. In the project's final year, the Project Board will hold an end-of-project review to capture lessons learned and discuss opportunities for scaling up and to highlight project results and lessons learned with relevant audiences. This final review meeting will also discuss the findings outlined in the project terminal evaluation report and the management response.

Project Implementing Partner: The Implementing Partner is responsible for providing all required information and data necessary for timely, comprehensive and evidence-based project reporting, including results and financial data, as necessary and appropriate. The Implementing Partner will strive to ensure project-level M&E is undertaken by national institutes, and is aligned with national systems so that the data used by and generated by the project supports national systems.

UNDP Country Office: The UNDP Country Office will support the Project Manager as needed, including through annual supervision missions. The annual supervision missions will take place according to the schedule outlined in the annual work plan. Supervision mission reports will be circulated to the project team and Project Board within one month of the mission. The UNDP Country Office will initiate and organize key GEF M&E activities including the annual GEF PIR, the independent mid-term review and the independent terminal evaluation. The UNDP Country Office will also ensure that the standard UNDP and GEF M&E requirements are fulfilled to the highest quality.

The UNDP Country Office is responsible for complying with all UNDP project-level M&E requirements as outlined in the UNDP POPP. This includes ensuring the UNDP Quality Assurance Assessment during implementation is undertaken annually; that annual targets at the output level are developed and monitored and reported using UNDP corporate systems; the regular updating of the ATLAS risk log; and, the updating of the UNDP gender marker on an annual basis based on gender

mainstreaming progress reported in the GEF PIR and the UNDP ROAR. Any quality concerns flagged during these M&E activities (e.g. annual GEF PIR quality assessment ratings) must be addressed by the UNDP Country Office and the Project Manager.

The UNDP Country Office will retain all M&E records for this project for up to seven years after project financial closure in order to support ex-post evaluations undertaken by the UNDP Independent Evaluation Office (IEO) and/or the GEF Independent Evaluation Office (IEO).

UNDP-GEF Unit: Additional M&E and implementation quality assurance and troubleshooting support will be provided by the UNDP-GEF Regional Technical Advisor and the UNDP-GEF Directorate as needed.

Audit: The project will be audited according to UNDP Financial Regulations and Rules and applicable audit policies on NIM implemented projects.[39]

## Additional GEF monitoring and reporting requirements

Inception Workshop and Report: A project inception workshop will be held within two months after the project document has been signed by all relevant parties to, amongst others:

a) Re-orient project stakeholders to the project strategy and discuss any changes in the overall context that influence project implementation;
b) Discuss the roles and responsibilities of the project team, including reporting and communication lines and conflict resolution mechanisms;
c) Review the results framework and finalize the indicators, means of verification and monitoring plan;
d) Discuss reporting, monitoring and evaluation roles and responsibilities and finalize the M&E budget; identify national/regional institutes to be involved in project-level M&E; discuss the role of the GEF OFP in M&E;
e) Update and review responsibilities for monitoring the various project plans and strategies, including the risk log; Environmental and Social Management Plan and other safeguard requirements; the gender strategy; the knowledge management strategy, and other relevant strategies;
f) Review financial reporting procedures and mandatory requirements, and agree on the arrangements for the annual audit; and
g) Plan and schedule Project Board meetings and finalize the first-year annual work plan.

The Project Manager will prepare the inception report no later than one month after the inception workshop. The inception report will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and will be approved by the Project Board.

GEF Project Implementation Report (PIR): The Project Manager, the UNDP Country Office, and the UNDP-GEF Regional Technical Advisor will provide objective input to the annual GEF PIR covering the reporting period July (previous year) to June (current year) for each year of project implementation. The Project Manager will ensure that the indicators included in the project results framework are monitored annually in advance of the PIR submission deadline so that progress can be reported in the PIR. Any environmental and social risks and related management plans will be monitored regularly, and progress will be reported in the PIR.

The PIR submitted to the GEF will be shared with the Project Board. The UNDP Country Office will coordinate the input of the GEF Operational Focal Point and other stakeholders to the PIR as appropriate. The quality rating of the previous year's PIR will be used to inform the preparation of the subsequent PIR.

**Lessons learned and knowledge generation:** The project potential for knowledge generation is high. First of all, the project will contribute to the creation of a national coastal monitoring system through the output 1.3. The observation system will generate key scientific key information and knowledge that will inform the management of the resilience of the Guinea Bissau coastal zones. The project is anticipated to effectively participate in scientific, policy-based and/or any other networks concerned with ICZM. Over the mid- to long-term, effective incorporation of knowledge-developed experiences, success stories, lesson learned, technical and institutional capacities, etc. will help to reduce vulnerability and build resilience to the adverse impacts of climate change

[39] See guidance here: https://info.undp.org/global/popp/frm/pages/financial-management-and-execution-modalities.aspx

Learning, awareness raisings and capacity building cut across almost all outputs and activities of the project. This set of measures imply development and implementation of comprehensive multi-hazard risk management, knowledge generation, awareness raising, professional training/re-training programs targeting all stakeholders, including vulnerable communities, local governments, schools and universities and relevant authorities.

All knowledge products, generated within the project including technical reports, methodological guidelines, regulatory and policy, planning and outreach materials will be available on-line. Projects results and impacts will be monitored and reported annually and evaluated periodically during project implementation to ensure the project effectively achieves these results. These results will be disseminated within and beyond the project intervention area through existing information sharing networks and forums. The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to the project. The project will identify, analyse and share lessons learned that might be beneficial to the design and implementation of similar projects and disseminate these lessons widely. There will be continuous information exchange between this project and other projects of similar focus in the same country, region and globally. The capacity building approach will focus on the introduction of new diagnostic methods and tools to integrate evolving knowledge and data about climate change-induced coastal threats generated by the national observation system, as well as regional and international bodies. The project capacity building program will create the basis for a thorough understanding of various aspects of coastal management, including climate change adaptation and ICZM, as well as promoting collaborative networks equipped with the necessary skills, knowledge and attitudes to undertake different tasks involved in the climate change adaptation and planning of the coastal areas of Guinea Bissau. The framework for the program will aim to identify gaps and corresponding capacity needs relative to key ICZM implementation issues, and to build capacity of individuals and institutions to implement the ICZM Plan.

Altogether, the project will create solid grounds for better understanding of current and future trends of climate-induced coastal issues as well as for improved preparedness and resilience to these events for Guinea Bissau. This information will be also relevant for the Coastal zones of the other West Africa Countries
The extensive amount of information and knowledge material generated by the project, as outlined above, will be put into a long-term and sustainable use through the following approaches:

(i) Ensuring access to data and information generated by the project by all relevant institutions and practitioners ( A principle of connecting people to information and knowledge); (ii)
(ii) Connect key stakeholder groups, practitioners and experts to ensure that key learning and experience is shared within and across sectors (A principle of connecting people to people);
(iii) Introduce KM methods and techniques to all project partner institutions, both IP and responsible party entities (a principle of institutional KM improvement); and
(iv) Ensuring that KM tools introduced by the project will be systematically used and maintained within the stakeholder institutions (Developing and embedding KM tools and practices)

**GEF Focal Area Tracking Tools:** The GEF 6 Tracking Tool for Biodiversity, Objective X, Program X: XXX will be used to monitor global environmental benefits of the project results. The baseline/CEO Endorsement ABS GEF Tracking Tool – submitted in Annex B to this project document – will be updated by the Project Manager/Team and shared with the mid-term review consultants and terminal evaluation consultants (not the evaluation consultants hired to undertake the MTR or the TE) before the required review/evaluation missions take place. The updated ABS GEF Tracking Tool will be submitted to the GEF along with the completed Mid-term Review report and Terminal Evaluation report.

**Independent Mid-term Review (MTR):** An independent mid-term review process will begin after the second PIR has been submitted to the GEF, and the MTR report will be submitted to the GEF in the same year as the 3rd PIR. The MTR findings and responses outlined in the management response will be incorporated as recommendations for enhanced implementation during the final half of the project's duration. The terms of reference, the review process and the MTR report will follow the standard templates and guidance prepared by the UNDP IEO for GEF-financed projects available on the UNDP Evaluation Resource Center (ERC). As noted in this guidance, the evaluation will be 'independent, impartial and rigorous'. The consultants that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. The GEF Operational Focal Point and other stakeholders will be involved and consulted during the terminal evaluation process. Additional quality assurance support is available from the UNDP-GEF Directorate. The final MTR report will be available in English and will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and approved by the Project Board.

**Terminal Evaluation (TE):** An independent terminal evaluation (TE) will take place upon completion of all major project outputs and activities. The terminal evaluation process will begin three months before operational closure of the project allowing the

evaluation mission to proceed while the project team is still in place, yet ensuring the project is close enough to completion for the evaluation team to reach conclusions on key aspects such as project sustainability. The Project Manager will remain on contract until the TE report and management response have been finalized. The terms of reference, the evaluation process and the final TE report will follow the standard templates and guidance prepared by the UNDP IEO for GEF-financed projects available on the UNDP Evaluation Resource Center. As noted in this guidance, the evaluation will be 'independent, impartial and rigorous'. The consultants that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. The GEF Operational Focal Point and other stakeholders will be involved and consulted during the terminal evaluation process. Additional quality assurance support is available from the UNDP-GEF Directorate. The final TE report will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and will be approved by the Project Board. The TE report will be publically available in English on the UNDP ERC.

The UNDP Country Office will include the planned project terminal evaluation in the UNDP Country Office evaluation plan, and will upload the final terminal evaluation report in English and the corresponding management response to the UNDP Evaluation Resource Centre (ERC). Once uploaded to the ERC, the UNDP IEO will undertake a quality assessment and validate the findings and ratings in the TE report, and rate the quality of the TE report. The UNDP IEO assessment report will be sent to the GEF IEO along with the project terminal evaluation report.

**Final Report:** The project's terminal PIR along with the terminal evaluation (TE) report and corresponding management response will serve as the final project report package. The final project report package shall be discussed with the Project Board during an end-of-project review meeting to discuss lesson learned and opportunities for scaling up.

***Table 9. Mandatory GEF M&E Requirements and M&E Budget***

| GEF M&E requirements | Primary responsibility | Indicative costs to be charged to the Project Budget[40] (US$) | | Time frame |
|---|---|---|---|---|
| | | GEF grant | Co-financing | |
| Inception Workshop | UNDP Country Office | $20,000 | None | Within two months of project document signature |
| Inception Report | Project Manager | None | None | Within two weeks of inception workshop |
| Standard UNDP monitoring and reporting requirements as outlined in the UNDP POPP | UNDP Country Office | None | None | Quarterly, annually |
| Risk management | Project Manager<br>Country Office | None | None | Quarterly, annually |
| Monitoring of indicators in project results framework | Project Manager + Project Team specialists (GIS e.g.) with external specialized support) | Per year: $3,000 x 5 years = $15,000 | None | Annually before PIR |
| GEF Project Implementation Report (PIR) | Project Manager and UNDP Country Office and UNDP-GEF team | None | None | Annually |
| NIM Audit as per UNDP audit policies | UNDP Country Office | Per year: $4,800 x 5 years = $24,000 | None | Annually or other frequency as per UNDP Audit policies |
| Lessons learned and knowledge generation | A sub-contracted communications web & outreach professional | $5,000 | None | Annually |
| Review of gender mainstreaming strategy, complementary site level stakeholder engagement approach and | A sub-contracted gender specialist, plus research assistants to survey primary data on gender (quantitative | $10,000 | None | |

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

| GEF M&E requirements | Primary responsibility | Indicative costs to be charged to the Project Budget[40] (US$) | | Time frame |
|---|---|---|---|---|
| | | GEF grant | Co-financing | |
| plan and the logical framework with indicators (+ development of specific TORs under pilots, review of budget allocations, detailed work-planning etc.) | and qualitive) in selected sites + advise the decision-making board for Output 1.3 on how to incorporate gender indicators | | | |
| Monitoring of environmental and social risks, and corresponding management plans as relevant | Project Manager, with external specialized assistance for purchase of equipment and provision of services for generating the needed data.<br>UNDP Country Office | $9,000 | None | On-going |
| Addressing environmental and social grievances | Project Manager UNDP Country Office BPPS as needed | None for time of project manager, and UNDP CO | None | On-going |
| Project Board meetings | Project Board<br>UNDP Country Office<br>Project Manager | Per year:<br>$3,000 x 5 years =<br>$15,000 | None | Annually |
| Addressing environmental and social grievances | Project Manager<br>UNDP Country Office | None for time of project manager, and UNDP CO | None | On-going |
| Supervision missions | UNDP Country Office | None[41] | None | Annually |
| Oversight missions | UNDP-GEF team | None[42] | None | Troubleshooting as needed |
| Knowledge management as outlined in Outcome 4, including (Startup outreach, Exit Strategy and Closure) | Project Manager + Team | $17,000 | None | As per Multi-Year Work Plan |
| GEF Secretariat learning missions/site visits | UNDP Country Office and Project Manager and UNDP-GEF team | t.b.d. | None | To be determined. |
| Mid-term GEF Tracking Tool to be updated by PMU in coordination with project partners | Project Manager with assistance from consultants | $4,000 | None | Before mid-term review mission takes place. |
| Independent Mid-term Review (MTR) and management response | UNDP Country Office and Project team and UNDP-GEF team | $50,000 | None | Between 2nd and 3rd PIR. |
| Terminal GEF Tracking Tool to be updated by PMU in coordination with project partners | Project Manager | $4,000 | None | Before terminal evaluation mission takes place |
| Independent Terminal Evaluation (TE) included in UNDP evaluation plan, and management response | UNDP Country Office and Project team and UNDP-GEF team | $50,000 | None | At least three months before operational closure |
| Translation of MTR and TE reports into English | UNDP Country Office | Included in the overall cost of the MTR and TE. | None | As required. GEF will only accept reports in English. |
| **TOTAL indicative COST**<br>Excluding project team staff time, and UNDP staff and travel expenses<br>(Refer to Section VI. Total Budget and Work Plan) | | **$223,000** | n/a | None |

[41] The costs of UNDP Country Office and UNDP-GEF Unit's participation and time are charged to the GEF Agency Fee.
[42] *Idem*.

Notes: Refer to PRODOC Section IV. Total Budget and Work Plan for cost break-downs and other details, and to ANNEX A. Multi Year Work Plan for timelines.

# VIII. GOVERNANCE AND MANAGEMENT ARRANGEMENTS

## Roles and responsibilities of the project's governance mechanism

The project will be implemented following UNDP's national implementation modality, according to the Standard Basic Assistance Agreement between UNDP and the Government of Guinea-Bissau, and the Country Program.

**The Implementing Partner for this project is the Ministry of Environment and Sustainable Development (MADS).**

The Implementing Partner will work closely with: the **Coastal Planning Office (GPC)**, the **Directorate for Rural Engineering (*Engenharia Rural*)** [BUDGETS ASSIGNED], the **Directorate for Agricultural and Rural Development (DGAg)**, the **Institute of Biodiversity and Protected Areas (IBAP)** and **the National Institute of Research and Studies (INEP)** as responsible parties, tasked with implementing specific activities to them assigned and ensuring the government's contribution to the project and working with the project management team and Project Board to achieve the intended results.

The Implementing Partner is responsible and accountable for managing this project, including the **M&E** of project interventions, achieving project outcomes, and for the effective use of UNDP resources.

The Implementing Partner is responsible for:

- Approving and signing the multiyear workplan;
- Approving and signing the combined delivery report at the end of the year; and,

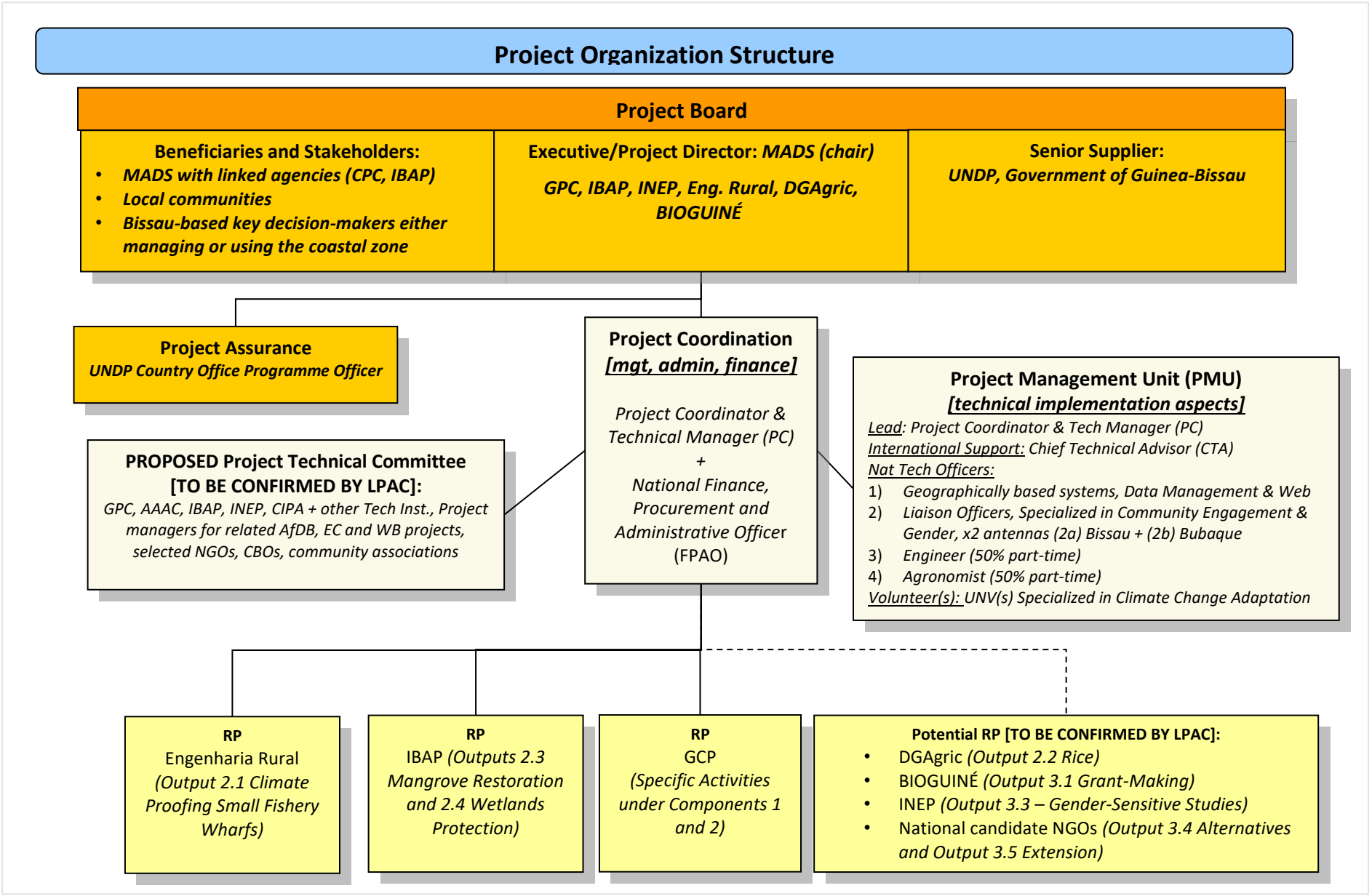
Signing the financial report or the funding authorization and certificate of expenditures

In this context, the Implementing Partner will be responsible for processing the requests for disbursements of government funding and production of financial reports, in **compliance with the rules and procedures of UNDP**.

**Technical and financial oversight** will be provided by UNDP, via the CO and the UNDP-GEF team based in Addis Ababa and will actively monitor implementation of the project according to UNDP and GEF regulations and procedures. The Implementing Partner will also be responsible for promoting and supporting the effective coordination of the project with other national partner agencies, initiatives and baseline projects and for ensuing that lessons learned from the project are incorporated into new climate change initiatives, to support sustainability and replicability of project outcomes.

The project organization structure is set out in the Figure 6.

*Figure 6. Project organization structure*



**Project Board:** The Project Board (also called Project Steering Committee) is responsible for making by consensus, management decisions when guidance is required by the Project Manager, including recommendations for UNDP/Implementing Partner approval of project plans and revisions, and addressing any project level grievances. In order to ensure UNDP's ultimate accountability, Project Board decisions should be made in accordance with standards that shall ensure management for development results, best value money, fairness, integrity, transparency and effective international competition. In case a consensus cannot be reached within the Board, final decision shall rest with the UNDP Programme Manager.

Specific responsibilities of the Project Board include:

- Provide overall guidance and direction to the project, ensuring it remains within any specified constraints;
- Address project issues as raised by the project manager;
- Provide guidance on new project risks, and agree on possible countermeasures and management actions to address specific risks;
- Agree on project manager's tolerances as required;
- Review the project progress, and provide direction and recommendations to ensure that the agreed deliverables are produced satisfactorily according to plans;
- Appraise the annual project implementation report, including the quality assessment rating report; make recommendations for the workplan;
- Provide ad hoc direction and advice for exceptional situations when the project manager's tolerances are exceeded; and
- Assess and decide to proceed on project changes through appropriate revisions.

The composition of the Project Board must include the following roles:

Executive: The Executive is an individual who represents ownership of the project who will chair the Project Board. This role can be held by a representative from the Government Cooperating Agency or UNDP. The Executive is: *Add who will represent the Executive for the project.*

The Executive is ultimately responsible for the project, supported by the Senior Beneficiary and Senior Supplier. The Executive's role is to ensure that the project is focused throughout its life cycle on achieving its objectives and delivering outputs that will contribute to higher level outcomes. The executive has to ensure that the project gives value for money, ensuring cost-conscious approach to the project, balancing the demands of beneficiary and suppler.

Specific Responsibilities: (as part of the above responsibilities for the Project Board)

- Ensure that there is a coherent project organisation structure and logical set of plans;
- Set tolerances in the AWP and other plans as required for the Project Manager;
- Monitor and control the progress of the project at a strategic level;
- Ensure that risks are being tracked and mitigated as effectively as possible;
- Brief relevant stakeholders about project progress;
- Organise and chair Project Board meetings.

Senior Supplier: The Senior Supplier is an individual or group representing the interests of the parties concerned which provide funding and/or technical expertise to the project (designing, developing, facilitating, procuring, implementing). The Senior Supplier's primary function within the Board is to provide guidance regarding the technical feasibility of the project. The Senior Supplier role must have the authority to commit or acquire supplier resources required. If necessary, more than one person may be required for this role. Typically, the implementing partner, UNDP and/or donor(s) would be represented under this role. The Senior Suppler is: *Add who will represent the Senior Supplier for the project.*

Specific Responsibilities (as part of the above responsibilities for the Project Board)

- Make sure that progress towards the outputs remains consistent from the supplier perspective;
- Promote and maintain focus on the expected project output(s) from the point of view of supplier management;
- Ensure that the supplier resources required for the project are made available;
- Contribute supplier opinions on Project Board decisions on whether to implement recommendations on proposed changes;
- Arbitrate on, and ensure resolution of, any supplier priority or resource conflicts.

Senior Beneficiary: The Senior Beneficiary is an individual or group of individuals representing the interests of those who will ultimately benefit from the project. The Senior Beneficiary's primary function within the Board is to ensure the realization of project results from the perspective of project beneficiaries. The Senior Beneficiary role is held by a representative of the government or civil society. The Senior Beneficiary is: *Add who will represent the Senior Beneficiary for the project.*

The Senior Beneficiary is responsible for validating the needs and for monitoring that the solution will meet those needs within the constraints of the project. The Senior Beneficiary role monitors progress against targets and quality criteria. This role may require more than one person to cover all the beneficiary interests. For the sake of effectiveness, the role should not be split between too many people.

Specific Responsibilities (as part of the above responsibilities for the Project Board)

- Prioritize and contribute beneficiaries' opinions on Project Board decisions on whether to implement recommendations on proposed changes;
- Specification of the Beneficiary's needs is accurate, complete and unambiguous;
- Implementation of activities at all stages is monitored to ensure that they will meet the beneficiary's needs and are progressing towards that target;
- Impact of potential changes is evaluated from the beneficiary point of view;
- Risks to the beneficiaries are frequently monitored.

**Project Manager**: The Project Manager has the authority to run the project on a day-to-day basis on behalf of the Project Board within the constraints laid down by the Board. The Project Manager is responsible for day-to-day management and decision-making for the project. The Project Manager's prime responsibility is to ensure that the project produces the results specified in the project document, to the required standard of quality and within the specified constraints of time and cost.

The Implementing Partner appoints the Project Manager, who should be different from the Implementing Partner's representative in the Project Board.

Specific responsibilities include:

- Provide direction and guidance to project team(s)/ responsible party (ies);
- Liaise with the Project Board to assure the overall direction and integrity of the project;
- Identify and obtain any support and advice required for the management, planning and control of the project;
- Responsible for project administration;
- Plan the activities of the project and monitor progress against the project results framework and the approved annual workplan;
- Mobilize personnel, goods and services, training and micro-capital grants to initiative activities, including drafting terms of reference and work specifications, and overseeing all contractors' work;
- Monitor events as determined in the project monitoring schedule plan/timetable, and update the plan as required;
- Manage requests for the provision of financial resources by UNDP, through advance of funds, direct payments or reimbursement using the fund authorization and certificate of expenditures;
- Monitor financial resources and accounting to ensure the accuracy and reliability of financial reports;
- Be responsible for preparing and submitting financial reports to UNDP on a quarterly basis;
- Manage and monitor the project risks initially identified and submit new risks to the project board for consideration and decision on possible actions if required; update the status of these risks by maintaining the project risks log;
- Capture lessons learned during project implementation;
- Prepare the annual workplan for the following year; and update the Atlas Project Management module if external access is made available.
- Prepare the GEF PIR and submit the final report to the Project Board;
- Based on the GEF PIR and the Project Board review, prepare the AWP for the following year.
- Ensure the mid-term review process is undertaken as per the UNDP guidance, and submit the final MTR report to the Project Board.
- Identify follow-on actions and submit them for consideration to the Project Board;

- Ensure the terminal evaluation process is undertaken as per the UNDP guidance, and submit the final TE report to the Project Board;

**Project Assurance**: UNDP provides a three – tier supervision, oversight and quality assurance role – funded by the GEF agency fee – involving UNDP staff in Country Offices and at regional and headquarters levels. Project Assurance must be totally independent of the Project Management function. The quality assurance role supports the Project Board and Project Management Unit by carrying out objective and independent project oversight and monitoring functions. This role ensures appropriate project management milestones are managed and completed. The Project Board cannot delegate any of its quality assurance responsibilities to the Project Manager. This project oversight and quality assurance role is covered by the GEF Agency.

Governance role for project target groups: *Describe how project target groups will be engaged in decision making for the project*

The **National Project Coordinator & Technical Manager (PC)**[43] will run the project on a day-to-day basis on behalf of the Implementing Partner within the constraints laid down by the Board. The PC function will end when the final project terminal evaluation report and corresponding management response, and other documentation required by the GEF and UNDP, has been completed and submitted to UNDP (including operational closure of the project). Responsibilities of the PC will include daily project management, on-going monitoring and reporting of the extent to which project activities and Outputs are being implemented according to agreed time frames and budget – towards achieving intended Outcomes. The PC will be supported in his/her managerial tasks by a **National Finance, Procurement and Administrative Officer (FPAO)**, given the financial complexity of the project.

Together, and with segregated tasks and responsibilities, the PC and the FPAO will be responsible for ensuring the smooth running of project capacity building and support activities, both in the capital and in the field, ensuring the oversight of the project's responsible parties. The PC, closely assisted and deputized by the FPAO, will co-ordinate the **Project Management Unit (PMU)**, which will also include **(i) support staff** (drivers, clerk) and **(ii) a strong body of technical staff**, also given the project's complexity.

The former's role ("**admin**") is to provide project administration, management and implementation support services to the PC and FPAO and to the broader project team and consultants. If needed, a **secretary/accountant**, and drivers will be hired by the project to support the PC and FPAO with logistical and less complex financial management tasks. As for the PMU's technical staff – and noting that the PC must also have a technical profile – several posts are foreseen and have been budgeted for. An international Chief Technical Advisor (CTA) will work closely with the PC and National Officers. Profiles for the following National Technical Officers are foreseen**:**

- **Nat Tech Officer #1)** Geographically based systems, Data Management & Web;
- **Nat Tech Officer #2) Two Liaison Officers, Specialized in Community Engagement & Gender**, with similar TOR and functioning as the project's "antennas" at the local level, one based in Bissau (#2a), covering Project Zones #2 and 3 (Varela-Cacheu and Masoa-Buba-Cufada, respectively, in addition to The South), and another one based in Bubaque (2b), covering Project Zone #1;
- **Nat Tech Officers #3 and 4) respectively the Engineer and Agronomist** (50% part-time), engaged part-time at 50%;

Finally, **one or more UN Volunteers (UNVs) Specialized in Climate Change Adaptation** are foreseen engaged. A budget reserve has been allocated for one fully-funded UNV. Depending on partnerships, needs and arrangements additional UNVs may be allocated to the project. **Two options UNV profiles** are proposed and would be useful to the project: **(1) Economics and Finance**; and/or **(2) Training, Communications, Outreach & Capacity Building.** Whether one or the other should be prioritized first will depend on the profile of the PC and of national officers.
In addition, they will work closely with the CTA as well as with all other project staff and project partners and will be supported by procured and contracted technical assistants (TA), both national and international -- Refer to PRODOC Annexes C and D for TORs for TA and project staff.

A Project Technical Committee is proposed as an advisory body. Whether this will represent duplication of efforts vis-à-vis the National Coastal Forum foreseen under Activity 1.3.9, is for the Project's LPAC / Board to validate in due course. The aim for

[43] Title in TOR and budget is: *"National Project Coordinator & Technical Manager"*.

such Forum or Committee is to assist with 'Institutional Coordination and Progressive Integrated and Adaptive Coastal Zone Planning'.

Funds have been allocated within the project management budget for the purchase of vehicles for project activities. Meetings with the **Technical Committee**, including baseline and partner projects and agencies will be held quarterly to ensure effective coordination and partnership building. If and when established, the **Coastal Forum** is set to meet annually, and its formation may be approached as an 'extension' of the more restricted **Technical Committee**
The PC will also ensure that all interventions are designed and implemented using gender-sensitive tools and approaches. Funds have been allocated for the purpose under relevant activities and two project staff will have this specific task in their TOR, namely:

| | |
|---|---|
| **2 x TEAM members** | Team Member: National Technical Officer #2a (Bissau) + #2b (Bubaque): Liaison Officers, Specialized in Community Engagement & Gender |
| **START-UP Activ.7** | Review of gender mainstreaming strategy, complementary site level stakeholder engagement approach and plan and the logical framework with indicators (+ development of specific TORs under pilots, review of budget allocations, detailed work-planning etc.) |
| **Activity 1.2.3** | A policy, institutional and local development planning framework in selected coastal sites is developed, priming innovation, gender responsiveness and updating of revised to take into account climate change |
| **Activity 3.3.2** | Ensuring the "A-Z" mainstreaming of gender into all relevant livelihoods activities under Component 3. |
| **Activity 3.5.5** | Extension Services - PHASE IV - Gauging success & Improving: Provision of extension services in selected coastal zone, prioritizing those with related GEF and/or co-financing activities under project, with regular (bi-annual) meetings / workshop of the extension service group for refreshed training, exchange of ideas, innovation and gender marking. |

The TAs will be responsible for: i) ensuring effective liaison between the PC, CTA, MADS, the different Responsible Parties and NGOs at project sites, as well as with all key stakeholder organizations and baseline/partner initiatives at project sites; ii) supporting logistical arrangements for coastal landscapes workshops and meetings; and iii) ensuring effective arrangements are in place to enable consultants and project staff to undertake their work effectively on the island, especially at project sites.

**An International Chief Technical Advisor (CTA) will be recruited**. He/she will be hired for: i) up to three and adopting a flexible modality of seeking persons who are embedded in a service providing entity or corporation, and where the possibility of backstopping or support makes the contracting more interesting than that of individual contractors only. The CTA will be strongly involved during the first year to provide strategic overall advice and technical support to the PC, helping to guide project implementation, to ensure that it follows the key principles laid out in this project document and supporting the effective delivery of project outputs and outcomes in line with the TORs. In addition, the CTA will assist the PC in the establishment of efficient project management, monitoring and evaluation systems. The CTA will also provide capacity building and advisory support to key implementing organizations and beneficiary/target groups. Furthermore, the CTA will provide advice on and input to progress reports, presentations, work plans, budgets and bid evaluations.

The **Project Assurance** function will be provided by the UNDP Country Office. The designated Program Officer will have the responsibility for overseeing the implementation of the project and will be responsible for monitoring the implementation and achievement of the project outputs, as well as ensuring the proper use of UNDP/GEF funds. The UNDP CO will ensure that project activities are being conducted in partnership with key stakeholders, in line with the approach outlined in this Project Document and in adherence with annual work plans/budgets. In addition, the UNDP CO will ensure that the project complies with UNDP and GEF monitoring, evaluation and reporting requirements. UNDP CO will be responsible for: i) providing financial and audit services to the project; ii) recruitment and contracting of project staff; iii) overseeing financial expenditures against project budgets approved by the Project Board; iv) appointment of independent financial auditors; and v) ensuring that all activities, including procurement and financial services, are carried out in strict compliance with UNDP and GEF procedures. Additional quality assurance will be provided by the **UNDP GEF Regional Technical Advisor** responsible for the project at the regional level.

# Other Elements in Project Governance and Management

## *Governance role for project target groups*

The project will focus on the development of climate-resilient and diverse income-generating activities at the community level. Implementation of project outcomes will enable local communities to: i) enhance their understanding and awareness of the

impacts of climate change on livelihoods and natural resources, as well as natural and climate-related disasters; ii) introduce sustainable natural resources management practices to ensure the long-term sustainability of ecosystem goods and services; and iii) undertake community-based participatory planning and develop Local Development Plans for restoring, sustaining and enhancing the productive capacity and climate-resilience of the project intervention sites.

Community-based planning exercises will be undertaken develop vulnerability maps for local communities. In addition, community consultations will also be undertaken to prioritize climate and non-climate related risks through synthesizing community observations, traditional knowledge and scientific knowledge obtained. Community members will be trained to undertake self-capacity assessments as well as household data collection and relevant community institutions will be strengthened. To facilitate the uptake of project objectives, existing structures at the local community level – including women's, youth and environmental associations – will be strengthened. These groups will also assist the coordination of local level participation in community level development planning.

Intensive training will be provided to stakeholders including local authorities, NGOS, CBOs and community members throughout the project areas focusing on: i) the benefits of integrated CCA and DRR as well as sustainable natural resource use and management; ii) community-based land use and risk planning that involves all stakeholders; and iii) skills required in conflict resolutions, negotiations and dialogue. Furthermore, user friendly knowledge products will be developed at the outset of the implementation phase, which will outline stakeholders' participation throughout the project's duration. Refer to Section III. Stakeholder Engagement for further details on the involvement of stakeholders during the project implementation phase.

## *UNDP Direct Project Services as requested by Government*

UNDP Direct Project Services as requested by Government: "The UNDP, as GEF Agency for this project, will provide project management cycle services for the project as defined by the GEF Council. In addition, the Government of Guinea-Bissau may request UNDP direct services for specific projects, according to its policies and convenience. The UNDP and Government of Guinea-Bissau acknowledge and agree that those services are not mandatory, and will be provided only upon Government request. If requested the services would follow the UNDP policies on the recovery of direct costs. These services (and their costs) are specified in the Letter of Agreement (Annex J). As is determined by the GEF Council requirements, these service costs will be assigned as Project Management Cost, duly identified in the project budget as Direct Project Costs. "Eligible Direct Project Costs should not be charged as a flat percentage. They should be calculated based on estimated actual or transaction based costs and should be charged to the direct project costs account codes: 64397 – 'Services to projects - CO staff' and 74596 – 'Services to projects - GOE for CO'.

The micro assessment of implementation partners for the implementation of programs that will benefit from the financial support of the agencies of the United Nations system applying HACT has shown that MADS is a significant risk partner. In this context, the project management method recommended is direct payment.

# IX. FINANCIAL PLANNING AND MANAGEMENT

The total cost of the project is USD 70,629,172. This is financed through a GEF grant of USD 12,000,000 to be administered by UNDP under the same budgetary award as **UNDP's own TRAC funds at USD 500,000**, in addition to **partner managed co-financing** at USD 58,129,172. From the latter amount, **an input of $720,000 in cash for UNDP to manage is being negotiated** with these partners.

The table below provides an overview:

| Description | Amount (USD) | Managed by UNDP in Atlas? *(Y/N)* |
|---|---|---|
| Project TOTAL | 70,629,172 | |
| GEF LDCF Project Financing | 12,000,000 | *Yes* |
| UNDP's own TRAC funds (part of the co-financing assigned to the budget) | 500,000 | *Yes* |
| Current partner managed co-financing | 58,129,172 | *No* |
| An unfunded in-cash amount needed and being negotiated with co-financing partners | *-720,000* | *Being negotiated* |
| *If the above is funded, the remainder of Partner-managed co-financing would be:* | *57,409,172* | *No* |

UNDP, as the GEF Implementing Agency, is responsible for the execution of the GEF resources and the cash co-financing transferred to the UNDP bank account only.

Co-financing: The actual realization of project co-financing will be monitored during the mid-term review and terminal evaluation process and will be reported to the GEF. The planned co-financing will be used as follows:

| Co-financing source | Co-financing type | Co-financing amount, USD | Planned Activities/ Outputs | Risks | Risk Mitigation Measures |
|---|---|---|---|---|---|
| Funding from EC and OECD through the Ministry of Agriculture, Forests and Livestock of Guinea-Bissau, in connection with Project 'Global Alliance for Resilience (AGIR) - Sahel and West. | Partner managed grant through national entity | 51,729,172 | All of the Components | A series of resilience strengthening measures (soft and hard) are foreseen with some risk for overlap. | The PC will work with the respective development partner to ensure coordination on the ground of both capacity building measures and investments. |
| Funding from AfDB through the Ministry of Agriculture, Forests and Livestock of Guinea-Bissau, in connection with Projet de Développement de la Chaine Valeur -Riz (PDCV-Riz) | (i) Partner managed grant through national entity, plus (ii) In-kind | (i) 6,000,000<br>(ii) 400,000 | All of the Components [see note *] | Negotiations break down before project start and the working budget needs to be reduced. | Lines that correspond to the "unfunded" amount can be re-managed or simply dropped without any serious detriment of the project's achievement. |
| UNDP core funds (TRAC) | Funds assigned to the project budget in UNDP's financial system Atlas | 500,000 | Components 1 and 3 [see note **] | More pressing challenges emerge for UNDP to support the government on other development issues and funds for environmental interventions get redirected. | At the beginning of the planning year, co-financing for GEF funded project will be set aside and allocated to the projects as appropriate. |

Table NOTES

*** Note on unfunded amount:**

It is foreseen that the costs of construction under Output 2.1 plus other items could be shared with co-financiers. The LDCF project's budget could benefit from an additional input of **at least $720K to fully fund activities foreseen in the Multi-Year Work Plan**. Negotiations with partner are advanced but not yet concluded. The amount sought leveraged corresponds to the following budget lines / Activities:

| TOTAL unfunded (USD 720,000): | TBW Budget Notes # | Budget Note text complete |
|---|---|---|
| 60,000 | 16 | Budget reserve for selected engineering and/or environmental services in connection the revision of construction standards under Output 2.1 (Climate proofing Fishery Wharfs): International Consultancy for mainstreaming climate proofing measures in the national code of engineering standards with a focus on construction works in the coastal zone. Refer to PRODOC Annex C1 - Work to be Tendered Out. |
| 210,000 | 22 | Budget reserve for tendering engineering and/or environmental services in connection with Output 2.1 (Climate proofing Fishery Wharfs): [OPTION B1] Cacheu: Climate proof/rehabilitation of the existing wharf, Studies: Design & Assessment Studies, including Socio-environmental Impacts. Refer to PRODOC Annex C3 (Environmental & Engineering Works: Climate Proofing Small Fishery Wharfs and Related Works). |
| 150,000 | 38 | Extra funds for Activity 3.3.2, if possible to leverage (Ensuring the "A-Z" mainstreaming of gender into all relevant livelihoods activities under Component 3.): Ensuring the mainstreaming of gender into all relevant livelihoods activities under Component 3. May be executed by INEP as responsible party. |
| 300,000 | 39 | Extra funds for Indicative Activities 3.4.1 through 3.4.5. Refer to PRODOC Annex C5 - TOR Outline of Advisory Services and Small Works foreseen under Component 3. |

**** Note on UNDP's co-financing (TBW budget lines 10, 15 and 36 respectively):**

- Activity 1.2.3) A policy, institutional and local development planning in selected coastal sites is developed
- Activity 1.3.9) The Bissau-Guinean Coastal Forum
- PROJECT TEAM) X 2 Liason Officers, Specialized in Community Engagement & Gender

Budget Revision and Tolerance: As per UNDP requirements outlined in the UNDP POPP, the project board will agree on a budget tolerance level for each plan under the overall annual work plan allowing the project manager to expend up to the tolerance level beyond the approved project budget amount for the year without requiring a revision from the Project Board. Should the following deviations occur, the Project Manager and UNDP Country Office will seek the approval of the UNDP-GEF team as these are considered major amendments by the GEF:

a) Budget re-allocations among components in the project with amounts involving 10% of the total project grant or more;
b) Introduction of new budget items/or components that exceed 5% of original GEF allocation.

Any over expenditure incurred beyond the available GEF grant amount will be absorbed by non-GEF resources (e.g. UNDP TRAC or cash co-financing).

Refund to Donor: Should a refund of unspent funds to the GEF be necessary, this will be managed directly by the UNDP-GEF Unit in New York.

Project Closure: Project closure will be conducted as per UNDP requirements outlined in the UNDP POPP. On an exceptional basis only, a no-cost extension beyond the initial duration of the project will be sought from in-country UNDP colleagues and then the UNDP-GEF Executive Coordinator.

Operational completion: The project will be operationally completed when the last UNDP-financed inputs have been provided and the related activities have been completed. This includes the final clearance of the Terminal Evaluation Report (that will be available in English) and the corresponding management response, and the end-of-project review Project Board meeting. The Implementing Partner through a Project Board decision will notify the UNDP Country Office when operational closure has been completed. At this time, the relevant parties will have already agreed and confirmed in writing on the arrangements for the disposal of any equipment that is still the property of UNDP.

Financial completion: The project will be financially closed when the following conditions have been met:
a) The project is operationally completed or has been cancelled;
b) The Implementing Partner has reported all financial transactions to UNDP;
c) UNDP has closed the accounts for the project;
d) UNDP and the Implementing Partner have certified a final Combined Delivery Report (which serves as final budget revision).

The project will be financially completed within 12 months of operational closure or after the date of cancellation. Between operational and financial closure, the implementing partner will identify and settle all financial obligations and prepare a final expenditure report. The UNDP Country Office will send the final signed closure documents including confirmation of final cumulative expenditure and unspent balance to the UNDP-GEF Unit for confirmation before the project will be financially closed in Atlas by the UNDP Country Office.

# X. TOTAL BUDGET AND WORK PLAN

| | | | | | |
|---|---|---|---|---|---|
| **Atlas Proposal of Award ID:** | 00095375 | **Atlas Primary Output Project ID:** | 00099383 | **Atlas Business Unit:** | GNB10 |
| **Atlas Proposal or Award Title:** | Coastal area communities' resilience to climate change | | | | |
| **Atlas Primary Output Project Title:** | Strengthen the adaptive capacity and climate resilience of Guinea-Bissau vulnerable coastal communities to climate risks | | | | |
| **UNDP-GEF PIMS no.:** | 4978 | | | | |
| **Implementing Partner:** | Ministry of Environment and Sustainable Development (MADS) | | | | |

| GEF Component / Atlas Activity | Fund ID / Donor Name | Responsible | Atlas Budgetary Account Code | Y1 | Y2 | Y3 | Y4 | Y5 | TOTAL | *Notes* |
|---|---|---|---|---|---|---|---|---|---|---|
| **1) Policy Inst CC Risk** | 62160 - LDCF | UNDP | 71200 International Consultants | 44,000 | 88,000 | 88,000 | 88,000 | 22,000 | 330,000 | *1* |
| | 62160 - LDCF | MADS | 71300 Local Consultants | 6,000 | 24,000 | 0 | 0 | 0 | 30,000 | *2* |
| | 62160 - LDCF | MADS | 71400 Contractual Services - Individual | 70,000 | 70,000 | 70,000 | 70,000 | 70,000 | 350,000 | *3* |
| | 62160 - LDCF | MADS | 71500 UN Volunteers | 28,000 | 56,000 | 56,000 | 56,000 | 28,000 | 224,000 | *4* |
| | 62160 - LDCF | MADS | 71600 Travel | 13,750 | 36,500 | 17,750 | 14000 | 14000 | 96,000 | *5* |
| | 62160 - LDCF | MADS | 72100 Contractual Services - Companies | 82,500 | 501,000 | 96,500 | 74,000 | 11,000 | 765,000 | *6* |
| | UNDP TRAC | GPC | 72100 Contractual Services - Companies | 0 | 60,000 | 0 | 60,000 | 30,000 | 150,000 | *7* |
| | 62160 - LDCF | MADS | 72200 Equipment and Furniture | 45,000 | 0 | 0 | 0 | 0 | 45,000 | *8* |
| | 62160 - LDCF | MADS | 75700 Training, Workshops and Conferences | 3,500 | 14,000 | 28,500 | 0 | 0 | 46,000 | *9* |
| | UNDP TRAC | GPC | 75700 Training, Workshops and Conferences | 40,000 | 40,000 | 40,000 | 40,000 | 40,000 | 200,000 | *10* |
| | | | **SUB-TOTAL Component 1 LDCF** | **292,750.00** | **789,500.00** | **356,750.00** | **302,000.00** | **145,000.00** | **1,886,000.00** | |
| | | | **SUB-TOTAL Component 1 UNDP** | **40,000.00** | **100,000.00** | **40,000.00** | **100,000.00** | **70,000.00** | **350,000.00** | |
| **2) Coastal Prot Inv** | 62160 - LDCF | MADS | 71200 International Consultants | 0 | 0 | 12,500 | 50,000 | 37,500 | 100,000 | *11* |
| | 62160 - LDCF | MADS | 71400 Contractual Services - Individ | 34,000 | 34,000 | 34,000 | 34,000 | 34,000 | 170,000 | *12* |
| | 62160 - LDCF | MADS | 71600 Travel | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 40,000 | *13* |
| | 62160 - LDCF | Engenharia Rural | 72100 Contractual Services - Companies | 10,000 | 80,000 | 1,905,000 | 270000 | 65000 | 2330000 | *14* |
| | 62160 - LDCF | MADS | 72100 Contractual Services - Companies | 0 | 40,000 | 295,000 | 525,000 | 0 | 860,000 | *15* |
| | 62160 - LDCF | IBAP | 72100 Contractual Services - Companies | 345,500 | 396,500 | 435,000 | 378,000 | 201,000 | 1,756,000 | *16* |
| | 62160 - LDCF | MADS | 72200 Equipment and Furniture | 0 | 160,000 | 0 | 0 | 0 | 160000 | *17* |
| | 62160 - LDCF | MADS | 72300 Materials & Goods | 0 | 0 | 25,000 | 25,000 | 0 | 50,000 | *18* |
| | 62160 - LDCF | MADS | 72600 Grants | 0 | 0 | 10,000 | 20,000 | 20,000 | 50,000 | *19* |
| | 62160 - LDCF | GPC | 72600 Grants | 9,000 | 6,500 | 6,500 | 4,500 | 13,500 | 40,000 | *20* |
| | 62160 - LDCF | MADS | 72100 Contractual Services - companies | 0 | 20,000 | 35,000 | 25,000 | 0 | 80,000 | *21* |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 62160 - LDCF | IBAP | 72100 Contractual Services - companies | 45,350 | 27,700 | 27,700 | 27,700 | 41,550 | 170,000 | *22* |
| | 62160 - LDCF | MADS | 75700 Training, Workshops and Conferences | 4,000 | 16,000 | 32,000 | 32,000 | 16,000 | 100,000 | *23* |
| | | | **SUB-TOTAL Component 2 LDCF** | **455,850** | **788,700** | **2,825,700** | **1,399,200** | **436,550** | **5,906,000** | |
| **3 Com resilience** | UNDP TRAC | MADS | 71400 Contractual Services - Individ | 30,000 | 30,000 | 30,000 | 30,000 | 30,000 | 150,000 | *24* |
| | 62160 - LDCF | MADS | 71400 Contractual Services - Individ | 30,000 | 30,000 | 30,000 | 30,000 | 30,000 | 150,000 | *24* |
| | 62160 - LDCF | MADS | 71600 Travel | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 80,000 | *25* |
| | 62160 - LDCF | MADS | 72100 Contractual Services - Companies | 152688 | 634,875 | 201750 | 170000 | 45687 | 1,205,000 | *26* |
| | 62160 - LDCF | MADS | 72600 Grants | 700,000 | 500,000 | 400,000 | 400,000 | 0 | 2,000,000 | *27* |
| | | | **SUB-TOTA UNDP Component 3 LDCF** | **898,688** | **1,180,875** | **647,750** | **616,000** | **91,687** | **3,435,000** | |
| | | | **SUB-TOTALGEF LDCF Component 3 UNDP** | **30,000** | **30,000** | **30,000** | **30,000** | **30,000** | **150,000** | |
| **4) M&E** | 62160 - LDCF | MADS | 72100 Contractual Services - Companies | - | 2,000.00 | 2,000.00 | - | - | 4,000.00 | *28* |
| | 62160 - LDCF | MADS | 71300 Local Consultants | 13,500.00 | 9,000.00 | 7,500.00 | 9,000.00 | 23,500.00 | 62,500.00 | *29* |
| | 62160 - LDCF | MADS | 71600 Travel | 3,000.00 | 3,000.00 | 3,000.00 | 3,000.00 | 3,000.00 | 15,000.00 | *30* |
| | 62160 - LDCF | MADS | 72300 Materials and Goods | 4,000.00 | 4,000.00 | 2,500.00 | 2,500.00 | 2,500.00 | 15,500.00 | *31* |
| | 62160 - LDCF | UNDP | 72100 Contractual Services - Companies | - | - | 40,000.00 | - | 60,000.00 | 100,000.00 | *32* |
| | 62160 - LDCF | MADS | 75700 Training, Workshops and Conferences | 200.00 | 200.00 | 200.00 | 400.00 | 1,000.00 | 2,000.00 | *33* |
| | 62160 - LDCF | UNDP | 74100 Professional service | 4,800.00 | 4,800.00 | 4,800.00 | 4,800.00 | 4,800.00 | 24,000.00 | *34* |
| | | | **SUB-TOTAL M&E - LDCF** | **25,500** | **23,000** | **60,000** | **19,700** | **94,800** | **223,000** | |
| **5) PMC** | 62160 - LDCF | MADS | 72800-Information Technology Equipment | 150,000 | 0 | 0 | 0 | 0 | 150,000 | *35* |
| | 62160 - LDCF | MADS | 71400 Contractual Services - Individual | 38,000 | 38,000 | 38,000 | 38,000 | 38,000 | 190,000 | *36* |
| | 62160 - LDCF | UNDP | 74596 - DPC | 52,500 | 35,000 | 35,000 | 35,000 | 52,500 | 210,000 | *37* |
| | | | **SUB-TOTAL PMC - LDCF** | **240,500** | **73,000** | **73,000** | **73,000** | **90,500** | **550,000** | |
| | | | **Total GEF LDCF** | **1,913,288** | **2,855,075** | **3,963,200** | **2,409,900** | **858,537** | **12,000,000** | |
| | | | **Total UNDP** | **70,000** | **130,000** | **70,000** | **130,000** | **100,000** | **500,000** | |
| | | | **Total** | **1,983,288** | **2,985,075** | **4,033,200** | **2,539,900** | **958,537** | **12,500,000** | |

**Budget Notes**

| # | Budget Notes |
|---|---|
| 1 | Budget reserve for the UNDP-managed engagement of a Project Chief Technical Advisor (CTA): PMU will procure and engage external / sub-contracted individual to function as the project's CTA for up to 3 years, using the modality 'Individual Contract' (IC) or 'Reimbursable Loan Agreement' (RLA), in case she/he is embedded in a service providing entity or corporation and where the possibility of backstopping or support makes the contracting more interesting than that of individuals. Refer to PRODOC Annex D for the TOR for Project Chief Technical Advisor (CTA). |
| 2 | Estimated costs of Legal consultancy: Short / Medium-term local consultants with legal expertise in connection with Activity 1.2.1 (Consolidating institutional mandates and coordination for and Integrated and Adaptive Coastal Zone Management in Guinea Bissau). Costs are all inclusive and to be delivered by engaging a capable legal service provider. Refer to PRODOC Annex C1, Work to be Tendered Out, Overview Table. |
| 3 | PROJECT TEAM - estimated costs to be assessed, validated and adjusted before recruitment: Team Member: Project Coordinator & Technical Manager. Annual remuneration approx. $70K x 5 years. UNDP may adjust costs and approach to contracting and engagement. The profile being sought is that of a rural economist, or social scientist with wide experience / Senior Agronomist. Refer to Annex C1 for Overview and to Annex D, TOR for the Project Coordinator & Technical Manager. |
| 4 | PROJECT TEAM - estimated costs to be assessed, validated and adjusted before recruitment: Team Member: UNV Specialized in Climate Change Adaptation. Proforma costs of a UNV Specialized in Climate Change Adaptation over a 4-year period, approx. $45K per annum. Refer to Annex C1 for Overview and to Annex D, TORs for Other Project Team Members. |
| 5 | Estimated costs – Local travel (and when justified, international) |
| 6 | Estimated costs of Activities under Output 1.1 (Capacity building for coastal zone management), in particular the development and implementation of an audience-tailored capacity development and training program targeting priority stakeholders and the coastal populations at large, under Activity 1.1 and related costs of Stakeholder Meetings and Workshops. Decision Makers Capacity Development for Climate Adaptive Costal Zone Adaptation: Based on the project's thorough stakeholder analysis, define targeted audiences (from high level decision makers to community members) and organize training sessions, seminars and consultations in view of building national capacity. TOR to be developed during Project Inception. Budget reserve of $150K for the activity consists of: Training provision service provision (international procurement, as a package - up to $100K); Participants' travel (plus minus $30K); and Other expenses such as rental of venues, communication costs etc. (now under a general training budget line - plus minus $20K). Refer to PRODOC Annex C1, Work to be Tendered Out, Overview Table.<br>- Estimated costs of Fiscal Policy Study: Short / Medium-term international technical assistance may be procured to carry out the study foreseen under Activity 1.2.2 (A study on fiscal policies, pertaining to the coastal zone, in close collaboration with port authority and other institutional stakeholders, is carried out, in view of proposing solutions for improving and attracting investment to the coastal zone). Refer to PRODOC Annex C1, Work to be Tendered Out, Overview Table.<br>- Estimated costs of Output 1.3 (Institutional coordination is strengthened for improved climate risk management in the coastal zones), activities 1, 2 and 3 + support to 4. The work will be tendered out to international bidders, to be selected on a competitive basis. Partnerships with local entities / service providers are encouraged. Refer to PRODOC Annex C2 - TOR Outline for International TA on Institutional Strengthening for Climate Risk Management (Output 1.3).<br>- Estimated costs of the Youth Adaptation Talent Program. The work may be carried out by national entities through a consortium (e.g. IBAP, GPC, INEP, CIPA among others). PMU will fully plan and develop the activity during Inception. Total max. duration 4 years, with varied operational intensity services. Refer to PRODOC Annex C1, Work to be Tendered Out, Overview Table. |
| 7 | Estimated costs of Act. 1.2.3 - A policy, institutional and local development planning framework in selected coastal sites is developed, priming innovation, gender responsiveness and updating of revised to take into account climate change - Execution to be proposed the Costal Planning Office on the basis of a satisfactory proposal and endorsement by Project Board / LPAC. : Development Planning consultancy: Two-and-a-half-year consultancy, combining national and international technical assistance expertise, coordinating the planning and inputs closely with the PMU, the Coastal Planning Office (GPC), and entities sub-national planning and budget execution. Refer to PRODOC Annex C1 - Work to be Tendered Out, Overview Table. |
| 8 | Estimated costs of GOODS AND SERVICES - Field Equipment (protection equipment) and 7 motor cycles. |
| 9 | Budget reserve for Stakeholder meetings and workshops in connection with Output 1.3 (Institutional coordination is strengthened for improved climate risk management in the coastal zones). The planning will be coordinated between the PMU, the CTA and the service provider responsible for the remainder of activities under Output 1.3. |

| | |
|---|---|
| 10 | Estimated costs of Act. 1.3.9 - The Bissau-Guinean Coastal Forum: Institutional Coordination and Progressive Integrated and Adaptive Coastal Zone Planning - Execution to be proposed the Costal Planning Office on the basis of a satisfactory proposal and endorsement by Project Board / LPAC. : This will be a rolling activity, building on all previous activities under Component 1, culminating in the organization of an annual 3-day seminar with national and international presence. It will consist on the establishment of a sectoral consultation forum (the proposed name is "The Bissau-Guinean Coastal Forum"). the Seminar will have an information and awareness raising track and a workshop track. The latter and it will result in the production a dynamic plan -- a transparent, accessible, dynamic and climate adaptive plan -- for the Integrated and Adaptive Coastal Zone Planning. Plans and TOR to be developed during project inception. |
| 11 | Engagement of specialized technical assistance on agricultural practices. In combination with capacity building Activity 2.2.5. Refer to PRODOC Annex C1, Work to be Tendered Out, Overview Table. |
| 12 | PROJECT TEAM - estimated costs to be assessed, validated and adjusted before recruitment: Team Member: National Technical Officer 3 (Part Time at 50%): Engineer. Annual remuneration approx. $36K x 5 years at 50%. UNDP may adjust costs and approach to contracting and engagement. Refer to PRODOC Annex C1 for Overview and to Annex D, TORs for Other Project Team Members.<br>- PROJECT TEAM - estimated costs to be assessed, validated and adjusted before recruitment: Team Member: National Technical Officer 4 (Part Time at 50%): Agronomist. Annual remuneration approx. $32K x 5 years at 50%. UNDP may adjust costs and approach to contracting and engagement. Refer to PRODOC Annex C1 for Overview and to Annex D, TORs for Other Project Team Members. |
| 13 | Estimated costs – Local travel (and when justified, international) |
| 14 | Budget reserve for tendering engineering and/or environmental services in connection with Output 2.1 (Climate proofing Fishery Wharfs): [OPTION A1] Cacheu: New climate proof ramp and ancillary facilities: Design & Assessment Studies, including Socio-environmental Impacts. Refer to PRODOC Annex C3 (Environmental & Engineering Works: Climate Proofing Small Fishery Wharfs and Related Works).<br>- Budget reserve for tendering engineering and/or environmental services in connection with Output 2.1 (Climate proofing Fishery Wharfs): [OPTION A2] Cacheu: New climate proof ramp and ancillary facilities: Construction & Two years of Maintenance. Refer to PRODOC Annex C3 (Environmental & Engineering Works: Climate Proofing Small Fishery Wharfs and Related Works).<br>- Budget reserve for tendering engineering and/or environmental services in connection with Output 2.1 (Climate proofing Fishery Wharfs): [OPTION B2] Cacheu: Climate proof/rehabilitation of the existing wharf: Construction & Two years of Maintenance. Refer to PRODOC Annex C3 (Environmental & Engineering Works: Climate Proofing Small Fishery Wharfs and Related Works). |
| 15 | Budget reserve for tendering engineering and/or environmental services in connection with Output 2.2 (Protect Low Land Rice), activities 2.2.1 (assessments) and 2.2.3 (construction). Assessment of existing infrastructures -- including impact assessment will be carried out. Unit cost of mud dyke considered = 6 USD/m. For a total of 1,000 ha of restored (rice fields ('bolanhas') is was considered 3 km of mud dykes. Unit cost for dam/sluice construction considered = 682 UDS/ha. Total unit price for construction works considered = 700 USD/ha. Activities to be further developed during inception. Refer to PRODOC Annex C1, Work to be Tendered Out, Overview Table. See also Annex X-1.2 ("Climate-proofing productive coastal sectors and related infrastructures"), and under it the "Coastal Rice" section. |
| 16 | Budget reserve for assigning activities 1 through 6 and under Output 2.3. Refer to PRODOC Annex C4) TOR for Other Interventions under Component 2 (Outputs 2.3 through 2.4 on rice, mangrove, wetlands), and under it to section C4.2 (TOR and Activities under Output 2.3 (Mangroves) and Output 2.4 (Wetlands).<br>- Budget reserve for assigning activities 1 through 7 and under Output 2.4. Refer to PRODOC Annex C4) TOR for Other Interventions under Component 2 (Outputs 2.3 through 2.4 on rice, mangrove, wetlands), and under it to section C4.2 (TOR and Activities under Output 2.3 (Mangroves) and Output 2.4 (Wetlands). |
| 17 | Equipment for, under Activity 2.3.3: Rain water management (amongst others in Geba and Corrubal rivers). For 4 areas This is including water management study and design of solutions/techniques and their installation. Per area: (i) Studies and design = 35,000; (ii) Installation = 5,000. |
| 18 | Budget reserve for climate improved seeds. Promote the distribution of improved seeds (adapted to mangrove areas) - Project Africa Rice is a reference. Refer to PRODOC Annex C1, Work to be Tendered Out, Overview Table. |
| 19 | To be assigned to a suitable grant-making mechanism. Funds to be used as seed money and to kick-start mutual savings activities. Grants will be monitored following the UNDP Guidelines on Micro-Capital Grants. |
| 20 | Grant indicatively assigned to GPC under Activity #2.3.7 pertaining to Output 2.3 on Coastal Wetlands Protection. Object: Independently monitor mangrove health in areas subject to regeneration and rehabilitation on the ground.<br>- Grant indicatively assigned to GPC under Activity #2.4.8 pertaining to Output 2.4 on Wetlands Protection. Object: Establish and implement effective and efficient mechanisms for participatory wetland monitoring.<br>Grants will be monitored following the UNDP Guidelines on Micro-Capital Grants. |

| | |
|---|---|
| 21 | Costs in connection with Activities 2.2.1 through 2.2.7 under Output 2.2 (Protect 1000ha of lowland rice). Costs of planning, engaging qualified HR, coordinating the process of stakeholder engagement in the field, purchasing inputs, managing the activity's implementation, step-by-step, its reporting to project / UNDP according to format and requirements, risk management, safeguards adherence, quality control, and external audit services with aspect to use of funds. Approximately $20K/year with transport costs included (part time, i.e. restricted to the time when planning, training and building activities are taking place. |
| 22 | IBAP's transaction and administrative costs in connection with Activities 2.3.1 through 2.3.7 under Output 2.3 (Restore 2500 ha of mangroves). Includes: Costs of planning, engaging qualified HR, coordinating the process of stakeholder engagement in the field, travel and purchasing of inputs, managing the activity's implementation, step-by-step, its reporting to PMU and UNDP, all according to formats and requirements, risk management, safeguards adherence, quality control, and external audit services applied to use of funds. These costs were initially estimated at approximately $15.5K/year and restricted to the time when planning, training and building activities are taking place. They may be adjusted according to delivery and needs.<br>- IBAP's transaction and administrative costs in connection with Activities 2.4.1 through 2.4.7 under Output 2.4 (Protect coastal wetlands). Includes: Costs of planning, engaging qualified HR, coordinating the process of stakeholder engagement in the field, travel and purchasing of inputs, managing the activity's implementation, step-by-step, its reporting to PMU and UNDP, all according to formats and requirements, risk management, safeguards adherence, quality control, and external audit services applied to use of funds. These costs were initially estimated at approximately $12.5K/year and restricted to the time when planning, training and building activities are taking place. They may be adjusted according to delivery and needs. |
| 23 | Procurement of materials for the project, under Activity 2.2.4: Training. Activity 2.2.5: Strengthen capacity of intervention of INPA and Direcção Nacional de Vulgarização Agricola. In combination with Activity 2.2.6 on innovation. |
| 24 | PROJECT TEAM X 2 - estimated costs to be assessed, validated and adjusted before recruitment: 2 X Team Members: National Technical Officers: #2a (Bissau) + #2b (Bubaque): Liaison Officers, Specialized in Community Engagement & Gender. Annual remuneration each approx. $30K x 5 years. UNDP may adjust costs and approach to contracting and engagement. |
| 25 | Estimated costs - Domestic travel (and when justified, international) |
| 26 | IBAP's transaction and administrative costs in connection with Activities 2.3.1 through 2.3.7 under Output 2.3 (Restore 2500 ha of mangroves). Includes: Costs of planning, engaging qualified HR, coordinating the process of stakeholder engagement in the field, travel and purchasing of inputs, managing the activity's implementation, step-by-step, its reporting to PMU and UNDP, all according to formats and requirements, risk management, safeguards adherence, quality control, and external audit services applied to use of funds. These costs were initially estimated at approximately $15.5K/year and restricted to the time when planning, training and building activities are taking place. They may be adjusted according to delivery and needs.<br>- IBAP's transaction and administrative costs in connection with Activities 2.4.1 through 2.4.7 under Output 2.4 (Protect coastal wetlands). Includes: Costs of planning, engaging qualified HR, coordinating the process of stakeholder engagement in the field, travel and purchasing of inputs, managing the activity's implementation, step-by-step, its reporting to PMU and UNDP, all according to formats and requirements, risk management, safeguards adherence, quality control, and external audit services applied to use of funds. These costs were initially estimated at approximately $12.5K/year and restricted to the time when planning, training and building activities are taking place. They may be adjusted according to delivery and needs.<br>- Budgetary reserve for Activity 3.5.2 (Extension Services - PHASE I: Training 3-6 months at suitable extensionist school, with first deployment to project sites and initial engagement with local partners, finishing off with the appointment of supervision, reporting lines and quality assurance "HR architecture".):<br>- Budgetary reserve for Activity 3.5.3 (Extension Services - PHASE II - Planning: Planning and deployment of extension officers, followed by upscaling of on-the-ground training activities in the regions / sites, with network-building and rotation if needed among deployed extension officers (construction or recuperation of local assembly infrastructure may be needed, and budgets adjusted accordingly).):<br>- Budgetary reserve for Activity 3.5.4 (Extension Services - PHASE III - Execution & Delivery: Service of trained officers is rendered and reaches out to communities in selected project sites and the work is coordinated with other project activities, under Component 3.):<br>- Budgetary reserve for Activity 3.5.5 (Extension Services - PHASE IV - Gauging success & Improving: Provision of extension services in selected coastal zone, prioritizing those with related GEF and/or co-financing activities under project, with regular (bi-annual) meetings / workshop of the extension service group for refreshed training, exchange of ideas, innovation and gender marking.):<br>- Budgetary reserve for Activity 3.5.6 (Extension Services - PHASE V - Completion of GEF sustained activities, with a quick but external evaluation of the success of sub-project Output 3.3 mini-project, and with the dissemination of information, radio programs, production of leaflets (topics: improved seeds, irrigation, importance of horticulture etc.) and with further outreach to make the activity as self-sustained (or minimally subsidized) as possible.):<br>- Costs in connection with Activities 3.6.1 and 3.6.2 (etc).Ideas for the focus of the study will include support to innovations at the local and/or micro-level (coastal community) and the mechanisms on focus may range from mobile banking, small agric-, forestry, fisheries, tourism or other typical community based coastal sector that may be implemented by and which might be at risk from climate change impacts. These may e.g. include the designing of products that specifically address the needs of agricultural producers (e.g. contract farming, access to extension services, targeted communication on agricultural products practices price). It may additionally include whether or disaster. Such financial / insurance services and products |

| | |
|---|---|
| | may also revolve around savings, short and long-term credit, farming insurance, financial products for women, youth, local money transfers, international remittances, and leasing of agricultural equipment |
| 27 | Budgetary reserve for: Grant-making activity in connection with the implementation of Component 3 aimed at 'Diffusion of technologies to strengthen coastal communities' climate resilience' - 1st, 2nd, 3rd and 4th Call for proposals under Output 3.1 (Activities 3.1.1 through 3.1.4). The work is thoroughly described in PRODOC Annex C4 - TOR Outline of Advisory Services and Small Works foreseen under Component 3. Refer more specifically to Annex C5.1 under it (TOR "Pointers" for the Calls for Proposals under Output 3.1), where a prototype of the TERMS OF REFERENCE for the "The Coastal Communities Livelihoods Diversification Grant-Making Framework" (regarding Output 3.1) has been included. During inception, the Documentation for the 1st call for proposals will be composed for launching the scheme. The indicative schedule is as follows: 1st Call for Proposals by YEAR 1 = $700K. 2nd Call for Proposals by YEAR 2 = $500K, adjusting the tender documentation as needed and assessing the feasibility of additional calls for proposals but with same goals as the 1st call. 3rd and 4th Call for Proposals by YEARS 3 and 4 = $400K (each), adjusting yet again the tender documentation, as needed and according to feedback from implementation on the ground, and assessing the feasibility of additional calls for proposals. See additionally Annex C5.2 - Scope of Work for Consultancy aimed at preparing the documentation for the Output 3.1 Call for Proposals.<br>Grants will be monitored following the UNDP Guidelines on Micro-Capital Grants. |
| 28 | As per UNDP GEF procedures. Project Inception Workshop and under it, all proceeding project activities under "Project launching, planning and stakeholder engagement": START-UP Activ.2 (Scoping); START-UP Activ.3 (Baseline finance updated and sealing of partnerships); START-UP Activ.4 (Tracking Tool) and START-UP Activ.5 (Regular review). |
| 29 | As per UNDP GEF procedures. Project Regular M&E, Activ. 4.1.2 - Measurement of indicators By Project End (incl. Local workshop for applying the GEF Training Tool) and. monitoring of environmental and social risks, regularly gathering data and corresponding management plans as relevant. Similar to START-UP Activ.5 (Regular review), Project Regular M&E, Activ. 4.1.3 - Internal review (Annual Project Board Meetings) and organization of indicator data)<br>- National M&E Consultancy on in connection with the inception phase and then regular M&E. To carry out the following Activities: START-UP Activ.7) Review of gender mainstreaming strategy, complementary site level stakeholder engagement approach and plan and the logical framework with indicators (+ development of specific TORs under pilots, review of budget allocations, detailed work-planning etc.); and M&E Activity 4.1.8 (Comp 4) Monitoring of environmental and social risks, and corresponding management plans as relevant.<br>- A sub-contracted gender specialist, plus research assistants to survey primary data on gender (quantitative and qualitive) in selected sites + advise the decision-making board for Output 1.3 on how to incorporate gender indicators. As per UNDP GEF procedures.<br>- National M&E Consultancy on in connection with the inception phase and then regular M&E. To carry out the following Activities: START-UP Activ.7) Review of gender mainstreaming strategy, complementary site level stakeholder engagement approach and plan and the logical framework with indicators (+ development of specific TORs under pilots, review of budget allocations, detailed work-planning etc.); and M&E Activity 4.1.8 (Comp 4) Monitoring of environmental and social risks, and corresponding management plans as relevant. As per UNDP GEF procedures. |
| 30 | Estimated costs – Local travel for monitoring activities |
| 31 | As per UNDP GEF procedures Estimated costs of M&E Activity 4.1.8) Monitoring of environmental and social risks, and corresponding management plans as relevant. Implies the engagement of an external specialized assistance for purchase of equipment. |
| 32 | Engagement of independent consultants. Company approach MTE and TE. |
| 33 | Organization of a Project Review Workshop |
| 34 | Audit fee |
| 35 | Costs of acquisition (computers, phones, printers, furniture, materials, etc.), plus two off-road vehicles. According to UNDP standards.). Sufficient funds are to be allocated to these lines, as implementation progresses for ensuring adequate replacements for the equipment, plus maintenance and supplies. |
| 36 | PROJECT TEAM - estimated costs to be assessed, validated and adjusted before recruitment: Team Member: National Finance, Procurement and Administrative Officer. Annual remuneration approx. $33K x 5 years. UNDP may adjust costs and approach to contracting and engagement. |
| 37 | Estimated UNDP direct project service / cost recovery charges - see LOA |

## Summary of Funds Tables

| Summary of funds in Atlas per source and Component | 62160 - LDCF | UNDP TRAC | Grand Total |
|---|---|---|---|
| 1) Policy Inst CC Coastal Risk Mgt | 1,886,000.00 | 350,000.00 | 2,236,000.00 |
| 2) Coastal Prot Inv | 5,906,000.00 | | 5,906,000.00 |
| 3) Comm resilience | 3,435,000.00 | 150,000.00 | 3,585,000.00 |
| 4) M&E | 223,000.00 | | 223,000.00 |
| 5) PMC | 550,000.00 | | 550,000.00 |
| **Grand Total** | **12,000,000.00** | **500,000.00** | **12,500,000.00** |

| Summary of Co-financing | Type of | TOTAL Amount ($) | *Co-financing to Component 1 ($)* | *Co-financing to Component 2 ($)* | *Co-financing to Component 3 ($)* | *Co-financing to Component 4 - M&E ($)* |
|---|---|---|---|---|---|---|
| Ministry of Agriculture, Forests and Livestock, in connection with Project 'Global Alliance for Resilience (AGIR) - Sahel and West | grant | 51,729,172 | 10,345,834 | 20,691,669 | 19,451,669 | 1,240,000 |
| Ministry of Agriculture, Forests and Livestock, in connection with AfDB's Rice Value Chains Project | grant | 6,000,000 | 1,200,000 | 2,400,000 | 2,400,000 | 0 |
| Ministry of Agriculture, Forests and Livestock, in connection with AfDB's Rice Value Chains Project | in-kind | 400,000 | 80,000 | 160,000 | 160,000 | 0 |
| United Nations Development Program, core funds | grant | 500,000 | 100,000 | 200,000 | 200,000 | 0 |
| **TOTAL** | | **58,629,172** | **11,725,834** | **23,451,669** | **22,211,669** | **1,240,000** |

# XI. LEGAL CONTEXT

This document together with the CPAP signed by the Government and UNDP which is incorporated by reference constitute together a Project Document as referred to in the SBAA and all CPAP provisions apply to this document.

This project document shall be the instrument referred to as such in Article 1 of the Standard Basic Assistance Agreement between the Government of Guinea Bissau and UNDP, signed in 1975. All references in the SBAA to "Executing Agency" shall be deemed to refer to "Implementing Partner."

This project will be implemented by Ministry of Environment and Sustainable Development (MADS), "Implementing Partner" in accordance with its financial regulations, rules, practices and procedures only to the extent that they do not contravene the principles of the Financial Regulations and Rules of UNDP. Where the financial governance of an Implementing Partner does not provide the required guidance to ensure best value for money, fairness, integrity, transparency, and effective international competition, the financial governance of UNDP shall apply.

Consistent with the Article III of the Standard Basic Assistance Agreement, the responsibility for the safety and security of the implementing partner and its personnel and property, and of UNDP's property in the implementing partner's custody, rests with the implementing partner.
The implementing partner shall:

- put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried; and
- assume all risks and liabilities related to the implementing partner's security, and the full implementation of the security plan.

UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of this agreement.
The implementing partner agrees to undertake all reasonable efforts to ensure that none of the UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via http://www.un.org/Docs/sc/committees/1267/1267ListEng.htm This provision must be included in all sub-contracts or sub-agreements entered into under this Project Document.
Any designations on maps or other references employed in this project document do not imply the expression of any opinion whatsoever on the part of UNDP concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries.

# XII. RISK MANAGEMENT

## Government Entity (NIM)

Consistent with the Article III of the SBAA [or the Supplemental Provisions to the Project Document], the responsibility for the safety and security of the Implementing Partner and its personnel and property, and of UNDP's property in the Implementing Partner's custody, rests with the Implementing Partner. To this end, the Implementing Partner shall:

a) put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;
b) assume all risks and liabilities related to the Implementing Partner's security, and the full implementation of the security plan.

UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of the Implementing Partner's obligations under this Project Document.

The Implementing Partner agrees to undertake all reasonable efforts to ensure that no UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via http://www.un.org/sc/committees/1267/aq_sanctions_list.shtml.

Social and environmental sustainability will be enhanced through application of the UNDP Social and Environmental Standards (http://www.undp.org/ses) and related Accountability Mechanism (http://www.undp.org/secu-srm).

The Implementing Partner shall: (a) conduct project and program-related activities in a manner consistent with the UNDP Social and Environmental Standards, (b) implement any management or mitigation plan prepared for the project or program to comply with such standards, and (c) engage in a constructive and timely manner to address any concerns and complaints raised through the Accountability Mechanism. UNDP will seek to ensure that communities and other project stakeholders are informed of and have access to the Accountability Mechanism.

All signatories to the Project Document shall cooperate in good faith with any exercise to evaluate any program or project-related commitments or compliance with the UNDP Social and Environmental Standards. This includes providing access to project sites, relevant personnel, information, and documentation.

The Implementing Partner will take appropriate steps to prevent misuse of funds, fraud or corruption, by its officials, consultants, responsible parties, subcontractors and sub-recipients in implementing the project or using UNDP funds. The Implementing Partner will ensure that its financial management, anti-corruption and anti-fraud policies are in place and enforced for all funding received from or through UNDP.

The requirements of the following documents, then in force at the time of signature of the Project Document, apply to the Implementing Partner: (a) UNDP Policy on Fraud and other Corrupt Practices and (b) UNDP Office of Audit and Investigations Investigation Guidelines. The Implementing Partner agrees to the requirements of the above documents, which are an integral part of this Project Document and are available online at www.undp.org.

In the event that an investigation is required, UNDP has the obligation to conduct investigations relating to any aspect of UNDP projects and programs. The Implementing Partner shall provide its full cooperation, including making available personnel, relevant documentation, and granting access to the Implementing Partner's (and its consultants', responsible parties', subcontractors' and sub-recipients') premises, for such purposes at reasonable times and on reasonable conditions as may be required for the purpose of an investigation. Should there be a limitation in meeting this obligation, UNDP shall consult with the Implementing Partner to find a solution.

The signatories to this Project Document will promptly inform one another in case of any incidence of inappropriate use of funds, or credible allegation of fraud or corruption with due confidentiality.

Where the Implementing Partner becomes aware that a UNDP project or activity, in whole or in part, is the focus of investigation for alleged fraud/corruption, the Implementing Partner will inform the UNDP Resident Representative/Head of Office, who will promptly inform UNDP's Office of Audit and Investigations (OAI). The Implementing Partner shall provide regular updates to the head of UNDP in the country and OAI of the status of, and actions relating to, such investigation.

UNDP shall be entitled to a refund from the Implementing Partner of any funds provided that have been used inappropriately, including through fraud or corruption, or otherwise paid other than in accordance with the terms and conditions of the Project Document. Such amount may be deducted by UNDP from any payment due to the Implementing Partner under this or any other agreement.

Where such funds have not been refunded to UNDP, the Implementing Partner agrees that donors to UNDP (including the Government) whose funding is the source, in whole or in part, of the funds for the activities under this Project Document, may seek recourse to the Implementing Partner for the recovery of any funds determined by UNDP to have been used inappropriately, including through fraud or corruption, or otherwise paid other than in accordance with the terms and conditions of the Project Document.

Note: The term "Project Document" as used in this clause shall be deemed to include any relevant subsidiary agreement further to the Project Document, including those with responsible parties, subcontractors and sub-recipients.

Each contract issued by the Implementing Partner in connection with this Project Document shall include a provision representing that no fees, gratuities, rebates, gifts, commissions or other payments, other than those shown in the proposal, have been given, received, or promised in connection with the selection process or in contract execution, and that the recipient of funds from the Implementing Partner shall cooperate with any and all investigations and post-payment audits.

Should UNDP refer to the relevant national authorities for appropriate legal action any alleged wrongdoing relating to the project, the Government will ensure that the relevant national authorities shall actively investigate the same and take appropriate legal action against all individuals found to have participated in the wrongdoing, recover and return any recovered funds to UNDP.

The Implementing Partner shall ensure that all of its obligations set forth under this section entitled "Risk Management" are passed on to each responsible party, subcontractor and sub-recipient and that all the clauses under this section entitled "Risk Management Standard Clauses" are included, mutatis mutandis, in all sub-contracts or sub-agreements entered into further to this Project Document.

# XIII. MANDATORY ANNEXES

## ANNEX A. Multi Year Work Plan

| Activities | START-UP | YEAR 1 | YEAR 2 | YEAR 3 | YEAR 4 | YEAR 5 | CLOSURE |
|---|---|---|---|---|---|---|---|
| START-UP Activ.2) Purchase equipment and 2 off-road vehicles for the project team | | | | | | | |
| START-UP Activ.3) Orient PMU members | | | | | | | |
| START-UP Activ.2) Project launching, planning and stakeholder engagement: Scoping | | | | | | | |
| START-UP Activ.3) Project launching, planning and stakeholder engagement: Baseline finance updated and sealing of partnerships | | | | | | | |
| START-UP Activ.4) Project launching, planning and stakeholder engagement: Tracking Tool | | | | | | | |
| START-UP Activ.5) Project launching, planning and stakeholder engagement: Regular review | | | | | | | |
| START-UP Activ.6) Project Inception Workshop | | | | | | | |
| START-UP Activ.7) Review of gender mainstreaming strategy, complementary site level stakeholder engagement approach and plan and the logical framework with indicators (+ development of specific TORs under pilots, review of budget allocations, detailed work-planning etc.) | | | | | | | |
| START-UP Activ.8) A sub-contracted communications web & outreach professional | | | | | | | |
| START-UP Activ.9) Monitoring of environmental and social risks, and corresponding management plans as relevant | | | | | | | |
| **Component 1) Policy and institutional development for climate risk management in coastal zones** | | | | | | | |
| PMU GOODS AND SERVICES) Field Equipment and transport for the PMU | | | | | | | |
| PMU GOODS AND SERVICES) Domestic travel (and when justified, international) for the PMU | | | | | | | |
| 1.1 Capacity building for coastal zone management | | | | | | | |
| 1.1.1) Development and implementation of an audience-tailored capacity development and training program targeting priority stakeholders and the coastal populations at large | | | | | | | |
| 1.1.2) Stakeholder Meetings and Workshops in connection with audience-tailored capacity development and training program | | | | | | | |
| 1.2 Policy and regulations | | | | | | | |
| 1.2.1) Consolidating institutional mandates and coordination for and Integrated and Adaptive Coastal Zone Management in Guinea Bissau | | | | | | | |
| 1.2.2) A study on fiscal policies, pertaining to the coastal zone, in close collaboration with port authority and other institutional stakeholders, is carried out, in view of proposing solutions for improving and attracting investment to the coastal zone. | | | | | | | |
| 1.2.3) A policy, institutional and local development planning framework in selected coastal sites is developed, priming innovation, gender responsiveness and updating of revised to take into account climate change | | | | | | | |
| 1.3 Coastal Zone Risk management and Monitoring Program | | | | | | | |
| 1.3.1) Develop and implement a Geographically-based Information and Decision Support Systems for Guinea Bissau's coast that fully takes climate risk into account | | | | | | | |
| 1.3.2) Identify and implement priority small projects on community based disaster risk reduction and management (DRRM) | | | | | | | |
| 1.3.3) Carry out a Strategic Environmental Assessment (SEA) at the national level on the potential benefits and risks linked to Guinea Bissau's coastal zone and the likely emergence of an off-shore oil and gas boom. | | | | | | | |
| 1.3.4) Develop and validate among key stakeholders and investors a generic but highly bankable multi-partner investment plan for Integrated and Adaptive Coastal Zone Management in Guinea-Bissau | | | | | | | |
| 1.3.5) International Technical Assistance: Project Support for addressing gaps in specialized technical capacity, combining intermittent in-country service delivery with remote, desk-based support | | | | | | | |
| 1.3.8) Project Youth Talent Teams: National Junior Fellows: At least 3 x graduate level students, who are willing to combine post-graduate research with project work, are placed at a time in the PMU | | | | | | | |
| 1.3.9) The Bissau-Guinean Coastal Forum: Institutional Coordination and Progressive Integrated and Adaptive Coastal Zone Planning | | | | | | | |
| **Component 2) Coastal protection investments** | | | | | | | |

| Activities | START-UP | YEAR 1 | | | YEAR 2 | | | | YEAR 3 | | | | YEAR 4 | | | | YEAR 5 | | | | CLOSURE | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.1 Small wharf fisheries | | | | | | | | | | | | | | | | | | | | | | |
| 2.1.0) International Consultancy for mainstreaming climate proofing measures in the national code of engineering standards with a focus on construction works in the coastal zone | | | | | | | | | | | | | | | | | | | | | | |
| [OPTION A1] Cacheu: New climate proof ramp and ancillary facilities: Design & Assessment Studies, including Socio-environmental Impacts.A1- [x] Cacheu) [OPTION A1] Cacheu: New climate proof ramp and ancillary facilities: Design & Assessment Studies, including Socio-environmental Impacts | | | | | | | | | | | | | | | | | | | | | | |
| 2.1.1- [A1 - Design & Assessment] Cacheu) Screening of local needs in terms of infrastructure, facilities and equipment in the support center for artisanal Fisheries in Cacheu | | | | | | | | | | | | | | | | | | | | | | |
| 2.1.2- [A1 - Design & Assessment] Cacheu) Preliminary studies and design solution of a climate-proof ramp and ancillary structures | | | | | | | | | | | | | | | | | | | | | | |
| 2.1.3- [A1 - Design & Assessment] Cacheu) Social, economic and environmental impact assessment studies for all interventions foreseen | | | | | | | | | | | | | | | | | | | | | | |
| 2.1.4- [A1 - Design & Assessment] Cacheu) Detailed design of the new ramp and ancillary structures | | | | | | | | | | | | | | | | | | | | | | |
| [OPTION A2] Cacheu: New climate proof ramp and ancillary facilities: Construction & Two years of Maintenance.A2- [x] Cacheu) [OPTION A2] Cacheu: New climate proof ramp and ancillary facilities: Construction & Two years of Maintenance | | | | | | | | | | | | | | | | | | | | | | |
| 2.1.5- [A2 - Construction & Maintenance] Cacheu) Construction works for a new climate proofing ramp for landing fishing boats, maintenance/repair | | | | | | | | | | | | | | | | | | | | | | |
| 2.1.6- [A2 - Construction & Maintenance] Cacheu) Constructions works for ancillary services, facilities and equipment (fuelling station, fishing gear warehouses, ice factory, cold store, etc.) | | | | | | | | | | | | | | | | | | | | | | |
| 2.1.7- [A2 - Construction & Maintenance] Cacheu) Maintenance of the new infrastructure (over the subsequent 2 years) | | | | | | | | | | | | | | | | | | | | | | |
| [OPTION B1] Cacheu: Climate proof/rehabilitation of the existing wharf, Studies: Design & Assessment Studies, including Socio-environmental Impacts.B1- [x] Cacheu) [OPTION B1] Cacheu: Climate proof/rehabilitation of the existing wharf, Studies: Design & Assessment Studies, including Socio-environmental Impacts | | | | | | | | | | | | | | | | | | | | | | |
| 2.1.8- [B1 - Design & Assessment] Cacheu) Local evaluation and structural assessment of the existing wharf | | | | | | | | | | | | | | | | | | | | | | |
| 2.1.9- [B1 - Design & Assessment] Cacheu) Rehabilitation needs and Climate proof strategy (including preliminary studies and feasibility assessments) | | | | | | | | | | | | | | | | | | | | | | |
| 2.1.10- [B1 - Design & Assessment] Cacheu) Social, economic and environmental impact assessment studies | | | | | | | | | | | | | | | | | | | | | | |
| 2.1.11- [B1 - Design & Assessment] Cacheu) Basic and detailed design for construction of the final solution (including local surveys, bidding documents/specifications for construction) | | | | | | | | | | | | | | | | | | | | | | |
| [OPTION B2] Cacheu: Climate proof/rehabilitation of the existing wharf: Construction & Two years of Maintenance.C1- [x] Cacheu) [OPTION B2] Cacheu: Climate proof/rehabilitation of the existing wharf: Construction & Two years of Maintenance | | | | | | | | | | | | | | | | | | | | | | |
| 2.1.12- [B2 - Construction & Maintenance] Cacheu) Construction works for a climate proofing wharf | | | | | | | | | | | | | | | | | | | | | | |
| 2.1.13- [B2 - Construction & Maintenance] Cacheu) Maintenance of the new infrastrure (over the subsequent 2 years) | | | | | | | | | | | | | | | | | | | | | | |
| 2.2 Protect 1000ha of lowland rice) | | | | | | | | | | | | | | | | | | | | | | |
| 2.2.1) Assessment of existing infrastructures, design and upgrade of infrastructure Agroecological studies and soils suitability studies for rice agriculture. EIA of proposed interventions | | | | | | | | | | | | | | | | | | | | | | |
| 2.2.2) Rain water management (amongst others in Geba and Corrubal rivers) | | | | | | | | | | | | | | | | | | | | | | |
| 2.2.3) Dedicated construction works (rehabilitation and upgrade of existing structures, construction of new structures: dikes, dams and sluices) | | | | | | | | | | | | | | | | | | | | | | |
| 2.2.4) Promote the distribution of improved seeds (adapted to mangrove areas) - Project Africa Rice | | | | | | | | | | | | | | | | | | | | | | |
| 2.2.5) Strengthen capacity of intervention of INPA and of the National Directorate for Agricultural Outreach / Extension (Direcção Nacional de Vulgarização Agrícola) and development of agriculture education (schools) | | | | | | | | | | | | | | | | | | | | | | |
| 2.2.6) Introduction of innovative techniques such as the use of residues in the production of biofertilizers and sustainable energy generation (as an alternative to the use of mangrove firewood and irrigation techniques | | | | | | | | | | | | | | | | | | | | | | |
| 2.2.7) Create a village based mutual saving mechanisms and facilitate access to market information | | | | | | | | | | | | | | | | | | | | | | |
| 2.2.8) Activity support and technical supervision (including specialized consultancy + travel) | | | | | | | | | | | | | | | | | | | | | | |
| 2.3 Restore 2500ha of mangroves | | | | | | | | | | | | | | | | | | | | | | |
| 2.3.1) Identification of threats and opportunities for mangrove conservation and sustainable use as an adaptation measure with | | | | | | | | | | | | | | | | | | | | | | |

| Activities | START-UP | YEAR 1 | | | | YEAR 2 | | | | YEAR 3 | | | | YEAR 4 | | | | YEAR 5 | | | | CLOSURE | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| multiple benefits | | | | | | | | | | | | | | | | | | | | | | | |
| 2.3.2) Promote natural regeneration where mangrove ecosystems are self-renewing (1500ha) - initially estimated at USD 250/ha | | | | | | | | | | | | | | | | | | | | | | | |
| 2.3.3) Rehabilitate via degraded mangrove replanting (1000ha) - initially estimated at USD 550/ha | | | | | | | | | | | | | | | | | | | | | | | |
| 2.3.4) Planning and M&E System | | | | | | | | | | | | | | | | | | | | | | | |
| 2.3.5) Green coastal belts: Identify protected areas that could be extended or already covers mangrove areas and strengthen their financial baseline | | | | | | | | | | | | | | | | | | | | | | | |
| 2.3.6) Stakeholders' engagement and training | | | | | | | | | | | | | | | | | | | | | | | |
| 2.3.7) Independently monitor mangrove health in areas subject to regeneration and rehabilitation on the ground | | | | | | | | | | | | | | | | | | | | | | | |
| 2.3.8) Planning, implementation, execution and reporting by IBAP in coordination with GPC. | | | | | | | | | | | | | | | | | | | | | | | |
| 2.4 Protect coastal wetlands | | | | | | | | | | | | | | | | | | | | | | | |
| 2.4.1) Update the national wetland inventory: carry out wetland assessments: carry out specific studies to characterize the initial status of the functions and assess the functionality of the wetlands concerned | | | | | | | | | | | | | | | | | | | | | | | |
| 2.4.2) Identify and estimate the value of ecosystem services (ecological, socio-economic and economic) provided by wetlands in support of their rational use, management and decision-making | | | | | | | | | | | | | | | | | | | | | | | |
| 2.4.3) Development of partnerships with related projects for bringing wetlands restoration activities to scale | | | | | | | | | | | | | | | | | | | | | | | |
| 2.4.4) Planning and M&E System: Develop a medium to long-term eco-climatic Monitoring Plan for targeted wetlands, taking into account the need for adaptation, (and where applicable mitigation) and, most importantly, in view of assessing the impact of project activities in the increased resilience of wetlands to climate change, in particular with respect to the natural and restored water flows. GPC will be primarily responsible, but it will work with IBAB on achieving goals and ensuring that the system is sustainably maintained, including after project end. | | | | | | | | | | | | | | | | | | | | | | | |
| 2.4.5) Restoration of degraded wetlands (installation of infiltration wells, retention basins and other means of replenishing the wetland's old ebb and flow from tributaries, sediment removal and clearing up the river's main flow, where possible, affordable and critical). | | | | | | | | | | | | | | | | | | | | | | | |
| 2.4.6) Sustainable intensification of wetland use with the following main modalities: [A]. Agro-pastoral-horticulture [B]. Introduction of mixed Rice-fish systems (see e.g. IRRI Rice Knowledge Bank in www.knowledgebank.irri.org/training/fact-sheets/crop.../rice-fish-systems-fact-sheet); [C]. Control of water use, forage and pasture, [D]. Valuation of non-timber forest products, [E]. Ecotourism valuation | | | | | | | | | | | | | | | | | | | | | | | |
| 2.4.7) Stakeholders' engagement and training | | | | | | | | | | | | | | | | | | | | | | | |
| 2.4.8) Establish and implement effective and efficient mechanisms for participatory wetland monitoring | | | | | | | | | | | | | | | | | | | | | | | |
| 2.4.9) Planning, implementation, execution and reporting by IBAP in coordination with GPC. | | | | | | | | | | | | | | | | | | | | | | | |
| **Component 3) Technologies to strengthen coastal communities' climate livelihoods & resilience** | | | | | | | | | | | | | | | | | | | | | | | |
| 3.1 Economic diversification & resilience | | | | | | | | | | | | | | | | | | | | | | | |
| 3.1.1) Grant-making activity in connection with the implementation of Component 3 aimed at 'Diffusion of technologies to strengthen coastal communities' climate resilience' - 1st call for proposals, under Activity 3.1.1 | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| 3.2 Wetlands Fisheries/ Natural Resources Management | | | | | | | | | | | | | | | | | | | | | | | |
| 3.2.1) PMU procures and subcontracts an international consulting business for developing the strategy and helping leverage tourism investment. | | | | | | | | | | | | | | | | | | | | | | | |
| 3.3.1) Development and/or updating of local development plans for the administrative sector of Bubaque (covering the Bolama-Bijagós Project Zone) including: (i) the climate proofing of hard infra-structural developments / investments; and (ii) a business plan for sustainable and adaptive coastal tourism. | | | | | | | | | | | | | | | | | | | | | | | |
| 3.3 Gender sensitive local development planning for adaptation at the landscape level management in support to Climate Adaptive Livelihoods | | | | | | | | | | | | | | | | | | | | | | | |
| 3.3.2) Ensuring the "A-Z" mainstreaming of gender into all relevant livelihoods activities under Component 3 | | | | | | | | | | | | | | | | | | | | | | | |
| 3.4 Alternatives to climatic vulnerability: Partnerships towards innovative technologies uptake, local and gender-sensitive skills | | | | | | | | | | | | | | | | | | | | | | | |

| Activities | START-UP | YEAR 1 | | | | YEAR 2 | | | | YEAR 3 | | | | YEAR 4 | | | | YEAR 5 | | | | CLOSURE | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| enhancement & problem solving social organization | | | | | | | | | | | | | | | | | | | | | | | |
| 3.4.1) Promotion of sustainable income generating activities (beekeeping, fishing, oyster harvesting, horticulture, agro-forestry, community-based tourism. Sustainable) -- actual access to funding should be secured though micro-granting activities under Output 3.1 | | | | | | | | | | | | | | | | | | | | | | | |
| 3.4.2) Climate proofing community's social infrastructures and transport in partnership with UN agencies, NGOs and investors | | | | | | | | | | | | | | | | | | | | | | | |
| 3.4.3) Innovative and sustainable ways of improving local living conditions -- actual access to funding should be secured though micro-granting activities under Output 3.1 | | | | | | | | | | | | | | | | | | | | | | | |
| 3.4.4) South-South Cooperation for Coastal Adaptation | | | | | | | | | | | | | | | | | | | | | | | |
| 3.4.5) Supporting an integrated system of regularly monitoring climatic and other relevant events in coastal zone of pilot sites with community involvement, in particular women and youth, in the monitoring of key parameters such as shoreline change. | | | | | | | | | | | | | | | | | | | | | | | |
| 3.5 Provision of extension services | | | | | | | | | | | | | | | | | | | | | | | |
| 3.5.1) Conceptualization of the targeted training program, selection process for the appointment of a suitable service provider (or consortium of service providers) | | | | | | | | | | | | | | | | | | | | | | | |
| 3.5.2) Extension Services - PHASE I: Training 3-6 months at suitable extensionist school, with first deployment to project sites and initial engagement with local partners, finishing off with the appointment of supervision, reporting lines and quality assurance "HR architecture" | | | | | | | | | | | | | | | | | | | | | | | |
| 3.5.3) Extension Services - PHASE II - Planning: Planning and deployment of extension officers, followed by upscaling of on-the-ground training activities in the regions / sites, with network-building and rotation if needed among deployed extension officers (construction or recuperation of local assembly infrastructure may be needed, and budgets adjusted accordingly) | | | | | | | | | | | | | | | | | | | | | | | |
| 3.5.4) Extension Services - PHASE III - Execution & Delivery: Service of trained officers is rendered and reaches out to communities in selected project sites and the work is coordinated with other project activities, under Component 3. | | | | | | | | | | | | | | | | | | | | | | | |
| 3.5.5) Extension Services - PHASE IV - Gauging success & Improving: Provision of extension services in selected coastal zone, prioritizing those with related GEF and/or co-financing activities under project, with regular (bi-annual) meetings / workshop of the extension service group for refreshed training, exchange of ideas, innovation and gender marking. | | | | | | | | | | | | | | | | | | | | | | | |
| 3.5.6) Extension Services - PHASE V - Completion of GEF sustained activities, with a quick but external evaluation of the success of sub-project Output 3.3 mini-project, and with the dissemination of information, radio programs, production of leaflets (topics: improved seeds, irrigation, importance of horticulture etc.) and with further outreach to make the activity as self-sustained (or minimally subsidized) as possible. | | | | | | | | | | | | | | | | | | | | | | | |
| 3.6) Viable local finance mechanisms and products for adaptation & resilience | | | | | | | | | | | | | | | | | | | | | | | |
| 3.6.1) Carry out a simple scoping study on the feasibility on what is needed for boosting the local-level access to finance and insurance mechanisms along the coastal zone | | | | | | | | | | | | | | | | | | | | | | | |
| 3.6.2) Implement the recommendations on the scoping study on the feasibility of adaptation finance mechanisms | | | | | | | | | | | | | | | | | | | | | | | |
| **[The remainder of M&E Activities under Component 4, beyond those listed under START-UP]** | | | | | | | | | | | | | | | | | | | | | | | |
| 4.1.1) Measurement of indicators By Mid-term (incl. Local workshop for applying the GEF Tracking Tool) and monitoring of environmental and social risks, and corresponding management plans as relevant | | | | | | | | | | | | | | | | | | | | | | | |
| 4.1.2) Measurement of indicators By Project End (incl. Local workshop for applying the GEF Tracking Tool) and monitoring of environmental and social risks, and corresponding management plans as relevant | | | | | | | | | | | | | | | | | | | | | | | |
| 4.1.3) Internal review (Annual Project Board Meetings) and organization of indicator data | | | | | | | | | | | | | | | | | | | | | | | |
| 4.1.4) Mid-term review | | | | | | | | | | | | | | | | | | | | | | | |
| 4.1.5) Final evaluation | | | | | | | | | | | | | | | | | | | | | | | |
| 4.1.6) Negotiation of details of exit/sustainability strategy | | | | | | | | | | | | | | | | | | | | | | | |
| 4.1.7) Review/feedback workshop | | | | | | | | | | | | | | | | | | | | | | | |
| 4.1.8) Monitoring of environmental and social risks, and corresponding management plans as relevant | | | | | | | | | | | | | | | | | | | | | | | |
| 4.1.9) Project Audits | | | | | | | | | | | | | | | | | | | | | | | |
| 4.1.10) Administrative closure | | | | | | | | | | | | | | | | | | | | | | | |

## ANNEX B. GEF Tracking Tool at Baseline

*[Refer To Separate File In Excel]*

# ANNEX C. Overview of Technical Consultancies

**In this Annex, Table 10 contains overviews of: (i) the Project's Core Team**, including both national and international members of the Project Management Unit (PMU) with the indicative duration of their assignments; and **(ii) Technical Assistance by External Consultants,** referred to in the project´s budget notes, whether they are individuals, institutional, organizations and corporate service providers.

**Refer Annex D for** more details on Project Team's TORs (Coordinator, CTA, Admin & Finance).

Further down, TOR pointers for the more complex work & services to be tendered out are also described, in particular:

- **Annex C2)** International TA on Institutional Strengthening for Climate Risk Management (Output 1.3);
- **Annex C3)** Climate Proofing Small Fishery Wharfs and Related Works (Output 2.1), with detailed considerations on options for construction, choice of sites and cost assessments;
- **Annex C4)** Other Interventions under Component 2, focusing on Outputs 2.3 through 2.4 on rice, mangrove and wetlands respectively;
- **Annex C5)** Advisory Services and Small Works foreseen under Component 3, which in turn includes the following sub-sections:
    - C5.1) TOR "Pointers" for the Calls for Proposals under Output 3.1
    - C5.2) Scope of Work for Consultancy aimed at preparing the documentation for the Output 3.1 Call for Proposals
    - C5.3) Notes on Innovation regarding Output 3.4 "Alternatives to Vulnerability"
    - C5.4) Details and Phases regarding Output 3.5 "Provision of Extension Services"

--oOo--

## *C1) Work to be Tendered Out*

***Table 10. Core Team and main Technical Assistance consultancies***

| Consultant | Time Input | Tasks, Inputs and Outputs |
|---|---|---|
| ***The Project Management Unit (PMU)*** | | |
| ***Local / National contracting*** | | |
| Project Team | Full time over 60 months | **National Team Members:**<br>• Project Coordinator & Technical Manager<br>• National Technical Officer #1: Geographically based systems, Data Management & Web<br>• National Technical Officers #2a and #2b: Liaison Officer, Specialized in Community Engagement & Gender (X 2), 2 X Team Members: National Technical Officers: #2a based in Bissau, covering Project Zones #2 and #3, and Officer #2b based on the Islands (in Bubaque, indicatively), covering Project Zone #1.<br>• National Finance, Procurement and Administrative Officer |
| Project Team | Part-time over 60 months | **National Team Members:**<br>• Team Member: National Technical Officer 3 (Part Time at 50%): Engineer<br>• Team Member: National Technical Officer 4 (Part Time at 50%): Agronomist |
| ***International / Regional and global contracting*** | | |
| Project Team | Up to 3 years (additional years is dependent on | **International Team Members:**<br>• Chief Technical Advisor with expertise in Adaptation Finance / Financial Engineering (Refer to TOR pointers further down). |

| Consultant | Time Input | Tasks, Inputs and Outputs |
|---|---|---|
| | funding and carving of partnerships) | • UNV Specialized in Climate Change Adaptation: two possible profiles (1) Economics and Finance; (2) Training, Communications, Outreach & Capacity Building. [*]<br><br>*[*] Note: UNDP will develop the UNV's TOR in collaboration with the Coordinator and UNV HQ. If funding permits and partnerships allow, more than one UNV may be prioritized to be engaged through the. Hence not a choice, but both types of profiles will apply* |
| ***Technical Assistance by External Consultants- targeting individuals, institutional, organizations and corporate service providers*** | | |
| ***Local / National contracting*** | | |
| Legal consultancy | Total max. duration 1 year, with intermittent services | ***Activity 1.2.1) Consolidating institutional mandates and coordination for and Integrated and Adaptive Coastal Zone Management in Guinea-Bissau***<br><br>Short / Medium-term local consultants with legal expertise in connection with Activity 1.2.1 and related activities. To be delivered by engaging a capable legal service provider. The work at hand will include the drafting of proposals, including legal statute texts, for the establishment of a strong, capable, and fully mandated institution responsible for coordinating action in the coastal zone, reaching out and engaging other sectoral stakeholders as needed, and ensuring that climate change considerations and resilience guide local and national development. Legal technical assistance, along with the funding of consultation fora are envisaged herein. TOR to be developed during Project Inception. |
| Development Planning consultancy | Total max. duration 3 years, with intermittent services | ***Activity 1.2.3) Local development plans for project sites are revised to take into account climate change***<br><br>Two-and-a-half-year consultancy, combining national and international technical assistance expertise, coordinating the planning and inputs closely with the PMU, the Coastal Planning Office (GPC), and entities sub-national planning and budget execution (e.g. *Secretaria de Estado do Plano e Integração Regional*, *Secretaria de Estado do Orçamento e Assuntos Fiscais*, as well as local governments in targeted sites). The activity will be developed in close collaboration with baseline projects and national authorities. At least 10 local development plans will be revised, including through the use of geographically based information and tools for the mainstreaming of climate change impacts into planning. TOR to be fully developed during Project Inception. Proposed sites to choose from are listed in Table 2. Indicative list of priority sites (localities) with resident population. |
| Youth Adaptation Talent Program | Total max. duration 4 years, with varied operational intensity services | ***Activity 1.3.8) Project Youth Talent Teams: National Junior Fellows***<br><br>The fellowship scheme foresees that at least 3 x graduate level students, who are willing to combine post-graduate research with project work, are placed at a time in the PMU. Each student may be attached to the project for a maximum of 2 years, creating thereby the opportunity for another student to compete and join the project, creating a pool of post-graduate students that use the project to produce data for their studies, while also contributing as part the PMU's workforce, to the implementation of project activities. Fellows will be receiving a stipend from the project and encouraged to seek additional funding for their research. The work may be carried out by national entities through a consortium (e.g. IBAP, GPC, INEP, CIPA among others). PMU will fully plan and develop the activity during Inception. |
| Other: Output 2.2 | According to the | ***Output 2.2) Cultivation of low-land rice is protected from climate*** |

| Consultant | Time Input | Tasks, Inputs and Outputs |
|---|---|---|
| | different consultancies needs and scope | ***risks***<br><br>Various consultancies or services are foreseen under the above Output. Their scope and need will be determined by the Project's Team, in close collaboration with the Directorate for Rural Engineering (Engenharia Rural) and the Directorate for Agricultural and Rural Development. They include the following activities:<br>2.2.1 Assessment of existing infrastructures, design and upgrade of infrastructure Agroecological studies and soils suitability studies for rice agriculture. EIA of proposed interventions.<br>2.2.3 Dedicated construction works (rehabilitation and upgrade of existing structures, construction of new structures: dikes, dams and sluices).<br>2.2.6 Introduction of innovative techniques such as the use of residues in the production of biofertilizers and sustainable energy generation (as an alternative to the use of mangrove firewood and irrigation techniques. |
| ***International / Regional and global contracting*** | | |
| Decision Makers Capacity Development for Climate Adaptive Costal Zone Adaptation | Total max. duration 3 years, with intermittent services | ***Activity 1.1.1) Development and implementation of an audience-tailored capacity development and training program targeting priority stakeholders and the coastal populations at large***<br><br>Based on the project's thorough stakeholder analysis, define targeted audiences (from high level decision makers to community members) and organize training sessions, seminars and consultations in view of building national capacity. TOR to be developed during Project Inception. |
| Fiscal Policy Study | Total max. duration 1 year, with intermittent services | ***Activity 1.2.2) A study on fiscal policies, pertaining to the coastal zone, in close collaboration with port authority and other institutional stakeholders, is carried out, in view of proposing solutions for improving and attracting investment to the coastal zone***<br><br>Short / Medium-term international technical assistance may be procured to carry out the study foreseen under Activity 1.2.2 and related activities. The use of fiscal instruments (such as taxation and duty waivers) will be assessed for their potential to support policy implementation, change in public behavior which currently contributes to increasing the vulnerability of coastal areas and to curtail unsustainable practices like uncontrolled sand mining, settlements in climate sensitive areas, mangrove deforestation, and to promote private sector participation in the construction and the maintenance of the coastal protection measures. |
| Institutional strengthening for improved climate risk management | Approximately over a 3 to 3.5-year period | ***Various Activities under Output 1.3) Institutional coordination is strengthened for Climate Adaptive and Integrated Coastal Zone Monitoring and risk management Program***<br><br>The PMU, working with UNDP Procurement Services, will procure and engage consultancies with two main goals: (1) to strengthen the reach of the Coastal Zone Planning Office and propose an institutional process aimed at gradually transforming the Office into an Integrated Coastal Zone Management Office, with a broader mandate and improved capacity. (2) develop and roll out a Climate Adaptive and Integrated Coastal Zone Monitoring Program. Refer to sub-section further down for more details. |
| Engineering & Legal | Duration to be defined. Activity must start in year 1. It may be concatenated with other work under | ***Activity 2.1.0) International Consultancy for mainstreaming climate proofing measures in the national code of engineering standards with a focus on construction works in the coastal zone***<br><br>The PMU, working with UNDP Procurement Services and the National Technical Officer Engineer (#3), will engage a national / international |

| Consultant | Time Input | Tasks, Inputs and Outputs |
|---|---|---|
| | Output 2.1 and procured in that way as well as a separate lot. | consultancy to assist Guinea-Bissau in reforming the the national code of engineering standards in view of climate proofing constructions at risk from cliamte-driven hazards. This work is closely related Output 2.1 activities. It may be advertised together as a package under the tenders foreseen under that Output (e.g. Options A1 and B1, which are about 'Design & Assessment Studies, including Socio-environmental Impacts'). Refer to sub-section further down:<br>C3) TOR for Climate-Proofing Small Fishery Wharfs and Related Works (Output 2.1)) |

--oOo--

## *C2) TOR Outline for International TA on Institutional Strengthening for Climate Risk Management (Output 1.3)*

Specialized International Technical Assistance TA will be procured for Output 1.3) Coastal Zone Risk management and Monitoring Program. The approach to engaging specialized service provision is described herein.

**Background:** For further developing the TOR, refer to background information in PPG Report 009a:

| Baseline and Feasibility (B&F) REPORT #009A (2018) regarding Component 1:<br>*Capacities, Policies & Practices for an Adaptive ICZM*<br><br>Prepared by EBDGLO/ANTEAGROUP Project #038 LDCF. UNDP GEF Guinea Bissau. Project "Strengthening the resilience of vulnerable coastal areas and communities to climate change in Guinea Bissau". Client UNDP Bissau. |
|---|
| Report's selected content (relevant for the TOR) |
| BASELINE ASSESSMENT: Baseline and Context<br>- Introduction to Component 1's Baseline: institutions, coordinating mechanisms & relevant partners<br>- Key issues for coastal governance & capacity<br>- Who are the key stakeholders in Guinea Bissau's coastal zone<br>- Governance frameworks for coastal zone management<br>- Recommendations for GEF strategic support under Component 1 |
| BASELINE ASSESSMENT: Relevant tables, figures and boxes<br>T 1. Stakeholder Inventory<br>T 2. Laws and regulations according to who governs their enforcement<br>T 3. NAPA 2006 priorities reflected in the project<br>T 4. UNFCCC's capacity-building portal: initiatives benefitting Guinea-Bissau<br>F 3. Visualization of long term and short term (no-regret) measures<br>F 4. Flowchart for measures<br>B 1. Description of core entities for coastal zone management in evidence |
| BASELINE ASSESSMENT: APPENDED INFO to B&F Report 009a<br>- Other policies, plans and programs<br>- Management of the environment<br>- EIA processes and safeguards<br>*Land management*<br>*Management of protected areas*<br>*Management of water resources*<br>*Management of forest resources* |

**Goal and Scope:** Implement a suite of activities under Output 3.1 over a three-year period as described below:

The full text of Output 1.3 and its goals are as follows: *Institutional coordination is strengthened for Climate Adaptive and Integrated Coastal Zone Monitoring and risk management Program.*

Adequate metrics for measuring capacity improvements will be reconfirmed during the Project's inception phase.

The scope of the work will encompass the following activities project Activities:

1.3.1 Fully develop suitable Geographically-based Information and Decision Support Systems for Guinea Bissau's coast and develop a generic but useful multi-partner investment plan for coastal zone management.
   (a) Conceive the systems,
   (b) Identify needs: hardware, software and data security needs, as well as the HR needs for maintaining it after project end.
   (c) Develop the system and roll it out.

1.3.2 Identify and implement priority research projects on climate change and climate risks.

1.3.3 Carry out a Strategic Environmental Assessment (SEA) at the national level on the potential benefits and risks linked to Guinea Bissau's coastal zone and the likely emergence of an off-shore oil and gas boom.

1.3.4 Develop and validate among key stakeholders and investors a generic but highly bankable multi-partner investment plan for Integrated and Adaptive Coastal Zone Management in Guinea-Bissau

**Procurement Modality:**

The work will be tendered out to international bidders, to be selected on a competitive basis. Partnerships with local entities / service providers are encouraged. PMU will develop the tender documentation with more detail during implementation.

Core and Additional Activities & Descriptions:

| Activity # | Activity Title | Brief Description |
|---|---|---|
| **Core** | **Activities expected from the consultancy** | |
| 1.3.1 | Develop and implement a Geographically-based Information and Decision Support Systems for Guinea Bissau's coast that fully takes climate risk into account | Seek partnership with the WACA Program to achieve goals and have the activity cross-subsidized. Refer to PPG Report #011 for details on the requirements to the system. Refer also to the description of relevant baselines and partners programs. Under this activity, the establishment of a monitoring system will be procured and established in Guinea Bissau, following a detailed plan to be developed, as part of the activity. A total of $200K is being reserved for fully developing the activity early in the project implementation stages. |
| 1.3.2 | Identify and implement priority research projects on climate change and climate risks. | The company will administer to gather with the PMU the awarding of four stipends / research grants of $25K each, to be offered to national / international "twin" researchers on a competitive basis (i.e. through calls for proposals) so that they can contribute through their focused research and innovation development to the process of climate risk management within the coastal zone. The aim is of advancing with the Integrated and Adaptive Coastal Zone Management (I&ACZM), including with focus on the institutional, gender and socially-inclusive approaches. Guidelines for expressions of interest and calls for proposals will be developed during the project's inception phase. Indicatively, the following topics may be on focus: (i) Reducing Marine and Coastal Pollution; (ii) Improving Data and Information for Decision Making; (ii) The role of well-preserved mangroves and wetlands in preventing Coastal Erosion in Guinea Bissau - a review of national empirical experiences; and (iv) Free style: any other topic that applying researches may propose, as long as it relates to adaptation and risk management in the coastal zone. Quality criteria will include innovativeness of solutions, potential replication scale and contributions to vulnerability reduction and/or resilience strengthening. |
| 1.3.3 | Carry out a Strategic Environmental Assessment (SEA) at the national level on the potential benefits and risks linked to Guinea Bissau's coastal zone and the likely emergence of an off-shore oil and gas boom. | This will imply procuring a suitable consultancy company to carry out the SEA study and disseminate it widely, including through workshops, radio talks, TV programs and other means, as a call for participation in discussions and public consultation. Strategic environmental assessment (SEA) is a systematic decision support process, aiming to ensure that environmental and possibly other sustainability aspects are considered effectively in policy, plan and program making. SEA may be seen as: (1) a structured, rigorous, participative, open and transparent environmental impact assessment (EIA) based process, applied particularly to plans and programs, prepared by public planning authorities and |

| Activity # | Activity Title | Brief Description |
|---|---|---|
| **Core** | **Activities expected from the consultancy** | |
| | | at times private bodies; (2) a participative, open and transparent, possibly non-EIA-based process, applied in a more flexible manner to policies, prepared by public planning authorities and at times private bodies; (3) a flexible non-EIA based process, applied to legislative proposals and other policies, plans and programs in political/cabinet decision-making. Other related projects may be called in to pool funds and carry out a more comprehensive study and follow on public consultation campaign. Under this project, a clear focus on the climatic vulnerability element will be ensured, to the extent that an unmanaged and unmitigated off-shore oil and gas boom in Guinea Bissau is more likely to exacerbate vulnerability rather than bring revenue for the wider public good. |
| 1.3.4 | Develop and validate among key stakeholders and investors a generic but highly bankable multi-partner investment plan for Integrated and Adaptive Coastal Zone Management in Guinea-Bissau | The planning will be coordinated between the PMU, the CTA and the service provider responsible for the remainder of activities under Output 1.3. |
| **Additional** | **Activities supported by the consultancy** | |
| Activities under Output 1.3 | The consultancy may also provide inputs into the preparation, development and implementation of the following Activities: | ***1.3.8 Project Youth Talent Teams: National Junior Fellows: At least 3 x graduate level students, who are willing to combine post-graduate research with project work, are placed at a time in the PMU.***<br>Refer to Table 10 further up for descriptions.<br><br>***1.3.9 The Bissau-Guinean Coastal Forum: Institutional Coordination and Progressive Integrated and Adaptive Coastal Zone Planning.***<br>This will be a rolling activity, building on all previous activities under Component 1, culminating in the organization of an annual 3-day seminar with national and international presence. It will consist on the establishment of a sectoral consultation forum (the proposed name is "The Bissau-Guinean Coastal Forum"). the Seminar will have an information and awareness raising track and a workshop track. The latter and it will result in the production a dynamic plan -- a transparent, accessible, dynamic and climate adaptive plan -- for the Integrated and Adaptive Coastal Zone Planning. Plans and TOR to be developed during project inception. |

-oOo-

## *C3) TOR for Climate-Proofing Small Fishery Wharfs and Related Works (Output 2.1)*

### *Summary from the Feasibility Study for Infrastructural Work under Output 2.1 (Fishery Wharfs)*

During the PPG, the **baseline** for the coastal sectors of 'Fisheries and Infrastructures' in Guinea-Bissau was assessed, in particular regarding the need for climate proving some of these infrastructures and projects and initiatives. Sites were selected on the basis of due justifications. Activities were proposed, and their **feasibility** pondered, along with budgets, potential associated risks and risk mitigation actions.

*/For further and detailed information on background, refer to PPG Report (2018): Updated Baseline Assessment & Feasibility Study (B&F) Report #009b Coastal Sector: Fisheries and Agricultural Infrastructures/*

The background sections of the above-referred B&F Report (on fisheries and then on infrastructures, respectively), its Baseline Assessment part has a bearing for at least the following Project Outputs:

**Output 2.1)** Climate-proofing, rehabilitation and/or protection of essential fisheries and local transportation coastal infrastructures against sea-level rise and coastal degradation

**Output 3.2)** Climate resilient wetland and fisheries management strategy is developed for the Bijagós Archipelago.

**Output 3.1)** An 'Adaptive Coastal Community Investment Program' is implemented, through which economic diversification and livelihoods' strengthening activities contribute to the resilience of vulnerable coastal communities.

**For both fisheries and infrastructures, the following partnerships were assessed** as a possibility under the above outputs:

- Maritime Port Institute – Guinea Bissau
- CIPA – Guinea Bissau
- FISCAP – Guinea Bissau
- Ministério das Obras Públicas Construções e Urbanismo
- Administração dos portos da Guiné-Bissau
- LEGUI – Guinea Bissau
- LNEC – Portugal

**Specifically relating to Output 2.1** (Climate-proofing, rehabilitation and/or protection of essential fisheries and local transportation coastal infrastructures against sea-level rise and coastal degradation), the Feasibility section in the report outlined considerations on site selection and proposed interventions in three sites, the main one being **Cacheu Wharf,** and where the other two sites (**Biombo and Bubaque/Uracane**) were included as 'options', for which only preliminary studies regarding climate proofing would be carried out. Even for Cacheu, the options revolved having a climate proof ramp and ancillary facilities, for which actual construction would be financed by the GEF, and the actual rehabilitation (including climate proofing) of the existing wharf's structure remained as an option, for which finance would need to be complemented during project implementation.

## *Site Selection Process, Justification & Cost Assessment for Output 2.1 (Fishery Wharfs)*

**The considerations behind these options and choices are described herein** and duly presented in the tables, maps and boxes that follow.

***Box 2. Summary Considerations relating to Output 2.1 (Fishery Wharfs)***

| Topic | Selected and summarized content from B&F Report 009b on Infrastructure |
|---|---|

| Topic | Selected and summarized content from B&F Report 009b on Infrastructure |
|---|---|
| ***Baseline of existing related activities regarding small fishery wharfs, the climate change adaptation additionality and the optimal site for GEF investment*** | Defining "small wharfs"<br>During the PPG, it was gathered that at least 165 artisanal fishing communities were registered throughout as active in Guinea-Bissau (based on secondary data from 2010). These are congregated in 17 small fishing centers. The majority of the fishing units in the country are not equipped with any type of infrastructures to support the activity. Landing of small fishing boats is mostly done in natural beaches, coastal areas in the rivers and channels between the islands. In PPG Report, a pictorial and descriptive account of the state of these wharfs is included.<br>In the Project Identification Form (PIF) for this project, reference is made to an AfDB funded project that would cater for the rehabilitation and protection of at least 10 small landing wharfs and ramps that would have been built under that project. The mentioned project (*Fisheries Sector Support Project - PASP*) aimed at promoting fishing nationally, specially through institution building and the construction of a 360 m fishing wharf in Bandim fishing harbour, in the Greater Bissau area. This structure intended to facilitate the landing of artisanal production. EU financing investments are also planned at this location. Bissau City's Master Plan provides for the construction of a fishing port in Bandim. In addition, urban adaptation issues that affect the Bissau area e.g. were early on considered outside the scope of this project. Hence, Bandim wharf was not prioritized as an intervention site under this project, though synergies will be attempted.<br><br>**The current five-year strategic Master Plan for Fisheries & National Development,** a key policy document of the Secretariat of State for Fisheries and the Maritime Economy (*Secretaria de Estado das Pescas e Economia Marítim*a), included, among other measures, priorities for the construction of **five artisanal (i.e. "small") fishing centers**[44]**,** which feature in map further down (Figure 7):<br>• Cacheu, near the Senegalese boarder;<br>• Ondame/Biombo, 60 km from Bissau, covering the regions of Biombo and Bijagós north<br>• Bissau;<br>• Bubaque/Uracane to serve the region of Bolama/Bijagós; and<br>• Cacine, in the south, near the border with Guinea Conakry.<br><br>After further scrutiny during the PPG, it showed that some of the projects featured in the Master Plan were, by end 2017, already executed. Others were in the process of negotiating and obtaining funding, within the framework of other development projects.[45] The managing director of State Secretariat for Fisheries and the Maritime Economy was consulted in October/November 2017 and confirmed the lack of investment for the fishery centers in Cacheu and Biombo. The status of the investments for each of the strategic centers in represented in:<br>*Figure 7. Location and selected pictures of artisanal fishing centers with status of funding for renovation.* |

[44] The mentioned measures were included under the Plan's strategic component #3, and mostly under 3.4 (*Desenvolvimento durável da aquaculture* - on the development of artisanal fisheries and aquaculture). Essential content from the Master Plan was included, for easy reference, in an annex titled "A" in PPG Report 009b.

[45] These may or may not have featured in the baseline finance assessment included in this PRODOC. It is an issue of timing for the surveys.

***Table 11. Priority-setting exercise in connection with Output 2.1***

| Fishery center | Strategic Localization | Financing status* | Climate Proof status | Infrastructure status | Need for urgent investment? |
|---|---|---|---|---|---|
| **Cacheu** | North zone/Senegalese border | Without financing | No | Existing infrastructures degraded + in need of ancillary infrastructures | **Yes - PRIORITIZED** |
| **Biombo** | Near Bissau covering Bijagós north | Without financing | No | In need of infrastructures | Yes, although the use of the infrastructures in Bissau can be seen as a temporary alternative |
| **Bissau** | Capital | Financed | To be confirmed | Recent investments in Bandim | No |
| **Bubaque/Uracane** | Covering Bolama/Bigagós | In negotiation** | No | Existing infrastructures degraded + in need of ancillary infrastructures | Yes, funding for it already being negotiated (?) ** |
| **Cacine** | South/Guinea Conakry border | Financed | To be confirmed | Recent investments: wharf and ramp built in 2012 | No |
| **Notes** | [*] To be (re-)confirmed during implementation for all project.<br>[**] Within the framework of other projects (but to be confirmed during implementation). | | | | |

*Figure 7. Location and selected pictures of artisanal fishing centers with status of funding for renovation*


*Table 12. Options' cost assessment exercise in connection with Output 2.1*

| Sets of options | | Cacheu | | Cacheu | | Biombo | | Bubaque/Uracane | | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| | | A1 | A2 | B1 | B2 | C1 | C2 | D1 | D2 | |
| | | $140,000 | $930,000 | $210,000 | $1,260,000 | $200,000 | $2,960,000 | $220,000 | $2,720,000 | |
| *1* | Cacheu ramp & ancillary | $140,000 | $930,000 | | | | | | | **$1,070,000** |
| *2* | Cacheu ramp & ancil. + Cacheu wharf construction | $140,000 | $930,000 | $210,000 | $1,260,000 | | | | | **$2,540,000** |
| *3* | Cacheu ramp & ancil. + 2 wharfs designs (Biombo & Bubaque) | $140,000 | $930,000 | | | $200,000 | | $220,000 | | **$1,490,000** |
| *4* | Cacheu ramp & ancil. + 3 wharfs designs (Cacheu, Biombo & Bubaque) | $140,000 | $930,000 | $210,000 | | $200,000 | | $220,000 | | **$1,700,000** |

## *Core Environmental & Engineering Works and Tendering Approach for Output 2.1 (Fishery Wharfs)*

In this section the conclusions and the summary the approach regarding activities and the tendering are presented. Since the context and situation is fluid, some **notes and considerations apply:**

- In the previous sub-section, the needs and costs assessment carried out during the PPG point to **the wharf Cacheu as the site of choice for Output 2.1** (Table 12): Options A1, A2, B1 and B2 used for the purposes of budgeting and planning at this stage in time.
- The strategy is of using the construction works under Output 2.1 as **"demonstration".**
- Yet, as shown in Table 11, **the wharfs of Biombo and Bubaque/Uracane are in a similar situation** as that of Cacheu.
- The choice **of Cacheu was confirmed by the stakeholders in the Validation Workshop,** held in February 2018 in Bissau. Among the key stakeholders regarding this Output are MADS, UNDP CIPA and Guinea-Bissau's Maritime Port Institute, who actively participated in the Workshop and expressed their views.
- It was noted that the situation regarding partner's and government's investments and available funding is fluid and may change in the coming months – and so can (and should), in response to this, the priority-setting exercise regarding sites of choice under this project's Output 2.1.
- Hence, in the tables that follow

***Table 13. Budgeting exercise and Core Activities in connection with Output 2.1 (Fishery Wharfs)***

| *Proposed groupings of tender lots* | *Options* | *Fisheries center / Activity* | *Activities* | *Notes* | *Estimated costs - Studies* | *Estimated costs - Construction* | *Estimated costs - Total* |
|---|---|---|---|---|---|---|---|
| | **A** | **Cacheu** | **New climate proof ramp and ancillary facilities** | | **$140,000** | **$930,000** | **$1,070,000** |
| | | | ***Design & Assessment Studies, including Socio-environmental Impacts*** | | **$140,000** | | |
| LOT1 | A1 | 2.1.1- [A1] | Screening of local needs in terms of infrastructure, facilities and equipment in the support center for artisanal Fisheries in Cacheu | *i* | $10,000 | | |
| | | 2.1.2- [A1] | Preliminary studies and design solution of a climate-proof ramp and ancillary structures | *ii* | $30,000 | | |
| | | 2.1.3- [A1] | Social, economic and environmental impact assessment studies for all interventions foreseen | | $25,000 | | |
| | | 2.1.4- [A1] | Detailed design of the new ramp and ancillary structures | *iii* | $75,000 | | |
| | | | ***Construction & Two years of Maintenance*** | | | **$930,000** | |
| LOT2 | A2 | 2.1.5- [A2] | Construction works for a new climate proofing ramp for landing fishing boats, maintenance/repair | | | $450,000 | |
| | | 2.1.6- [A2] | Constructions works for ancillary services, facilities and equipment (fuelling station, fishing gear warehouses, ice factory, cold store, etc.) | | | $410,000 | |
| | | 2.1.7- [A2] | Maintenance of the new infrastructure (over the subsequent 2 years) | | | $70,000 | |
| | **B** | **Cacheu** | **Climate proof/rehabilitation of the existing wharf, Studies** | | **$210,000** | **$1,260,000** | **$1,470,000** |
| | | | ***Design & Assessment Studies, including Socio-environmental Impacts*** | | **$210,000** | | |
| LOT1 | B1 | 2.1.8- [B1] | Local evaluation and structural assessment of the existing wharf | | $15,000 | | |

| *Proposed groupings of tender lots* | *Options* | *Fisheries center / Activity* | *Activities* | *Notes* | *Estimated costs - Studies* | *Estimated costs - Construction* | *Estimated costs - Total* |
|---|---|---|---|---|---|---|---|
| | | 2.1.9- [B1] | Rehabilitation needs and Climate proof strategy (including preliminary studies and feasibility assessments) | *iv* | $30,000 | | |
| | | 2.1.10- [B1] | Social, economic and environmental impact assessment studies | | $25,000 | | |
| | | 2.1.11- [B1] | Basic and detailed design for construction of the final solution (including local surveys, bidding documents/specifications for construction) | *v* | $140,000 | | |
| | | | ***Construction & Two years of Maintenance*** | | | **$1,260,000** | |
| | B2 | | Construction works for a climate proofing wharf | | | $1,200,000 | |
| | | | Maintenance of the new infrastructure (over the subsequent 2 years) | | | $60,000 | |
| | **C** | **Biombo** | **New climate proof wharf** | | **$200,000** | **$2,960,000** | **$3,160,000** |
| | | | ***Design & Assessment Studies, including Socio-environmental Impacts*** | | **$200,000** | | |
| LOT3 | C1 | 2.1.12- [C1] | Preliminary studies (including Concept design and feasibility study) | *vi* | $35,000 | | |
| | | 2.1.13- [C1] | Social, economic and environmental impact assessment studies | | $25,000 | | |
| | | 2.1.14- [C1] | Basic and detailed design for construction of the final solution (including local surveys, bidding documents/specifications for construction) | *vii* | $140,000 | | |
| | | | ***Construction & Two years of Maintenance*** | | | **$1,480,000** | |
| | C2 | | Construction works for a climate proofing wharf | | | $1,400,000 | |
| | | | Maintenance of the new infrastructure (over the subsequent 2 years) | | | $80,000 | |
| | **D** | **Bubaque/ Uracane** | **Climate proof/rehabilitation of the existing wharf** | | **$220,000** | **$2,720,000** | **$2,940,000** |
| | | | ***Design & Assessment Studies, including Socio-environmental Impacts*** | | **$220,000** | | |
| LOT3 | D1 | 2.1.15- [D1] | Local evaluation and structural assessment of the existing wharf | | $15,000 | | |
| | | 2.1.16- [D1] | Rehabilitation needs and Climate proof strategy (including preliminary studies and feasibility assessments) | *viii* | $35,000 | | |
| | | 2.1.17- [D1] | Social, economic and environmental impact assessment studies | | $25,000 | | |
| | | 2.1.18- [D1] | Basic and detailed design for construction of the final solution (including local surveys, bidding documents/specifications for construction) | *ix* | $145,000 | | |
| | | | ***Construction & Two years of Maintenance*** | | | **$1,360,000** | |
| | D2 | | Construction works for a climate proofing wharf | | | $1,300,000 | |

| *Proposed groupings of tender lots* | *Options* | *Fisheries center / Activity* | *Activities* | *Notes* | *Estimated costs - Studies* | *Estimated costs - Construction* | *Estimated costs - Total* |
|---|---|---|---|---|---|---|---|
| | | | Maintenance of the new infrastructure (over the subsequent 2 years) | | | $60,000 | |

| *Table Notes* | |
|---|---|
| *i* | *Including work with the local fishery association towards community engagement/appropriation of the selected investments* |
| *ii* | *Including a climate-proof ramp for landing boats and complementary facilities to enhance local climate resilient to be identified in the previous activity.* |
| *iii* | *Including bidding documents/specifications for construction* |
| *iv* | *Including preliminary studies and feasibility assessments* |
| *v* | *Including local surveys, bidding documents/specifications for construction* |
| *vi* | *Including concept design and feasibility study* |
| *vii* | *Including local surveys, bidding documents/specifications for construction* |
| *viii* | *Including preliminary studies and feasibility assessments* |
| *ix* | *Including local surveys, bidding documents/specifications for construction* |

***Table 14. Approach to procurement of Output 2.1: Overview of proposed lots for tendering out***

| *LOT* | *Option* | *Brief Description* | *Sum of amounts* |
|---|---|---|---|
| LOT1 | **A1 + B1** | Screenings and Assessments, incl. socio-environmental, plus Basic and Detailed Design of 1 x New climate-proof ramp and ancillary facilities and rehabilitation of the existing wharf | $350,000 |
| LOT2 | **A2** | 1x Construction of New climate proof ramp and ancillary facilities for Cacheu | $930,000 |
| LOT3 | **B2** | 1x Construction & Two years of Maintenance | $1260,000 |
| *Total planned to be procured under Output 2.1* | | | $2,540,000 |

-oOo-

## *C4) TOR for Other Interventions under Component 2 (Outputs 2.3 through 2.4 on rice, mangrove, wetlands)*

### *C4.1) TOR and Activities under Output 2.2 - Protect 1000ha of lowland rice*

**The full text of Output 2.2** Cultivation of low-land rice is protected from climate risks.

Specialized national Technical Assistance will be prioritized for the work foreseen. Their scope and need will be determined by the Project's Team, in close collaboration with the Directorate for Rural Engineering (Engenharia Rural) and the Directorate for Agricultural and Rural Development.

The following activities are foreseen:

2.2.1 Assessment of existing infrastructures, design and upgrade of infrastructure Agroecological studies and soils suitability studies for rice agriculture. EIA of proposed interventions.

2.2.3 Dedicated construction works (rehabilitation and upgrade of existing structures, construction of new structures: dikes, dams and sluices).

2.2.6 Introduction of innovative techniques such as the use of residues in the production of biofertilizers and sustainable energy generation (as an alternative to the use of mangrove firewood and irrigation techniques.

**Background:** For further developing the TOR, refer to background information in PPG Report 009a: Baseline and Feasibility (B&F) REPORT #009B (2018) regarding Coastal Sector Rice: *Low-Land Rice Cultivation*

### *C4.2) TOR and Activities under Output 2.3 (Mangroves) and Output 2.4 (Wetlands)*

**The full text of Output 2.3:** A total of 2,500 ha of mangroves forests restored and maintained in selected coastal sites.

**The full text of Output 2.4:** Restoration and management of at least 1,500 ha of coastal wetlands, in view of strengthen the resilience against drying-out risks and salinization.

**For background regarding both Outputs,** refer to Annex X-1.3 ("Climate-proofing natural infrastructure in the coastal zone: Mangroves, Wetlands and Agro-Ecology"). Refer also to B&F Reports 009c … on Natural Infrastructure, Mangroves. // … on Natural Infrastructure, Wetlands.

**Responsible Party(ies):** Activities under Outputs 2.3 and 2.4 have been assigned to IBAP. The partnership will be sealed with IBAP through a Letter of Agreement (LOA). IBAP is expected and to work in close collaboration with the GPC for certain activities.

**Activities, Arrangements & Approval:** For Output 2.3, a consolidated budget line congregates all relevant activities Output 2.3 (mangrove), except for two activities: 2.3.7, which corresponds to a grant assigned to GPC under Activity 2.3.6 aimed at independently monitoring mangrove health in areas subject to regeneration and rehabilitation on the ground; and 2.3.8 which is the IBAP's implementation fee. In addition, Activity 2.3.4 aimed at planning and developing the M&E System for mangrove restoration. This task is expected to be carried out by both IBAP/GPC in collaboration with each other and yield detailed plans, including locations, timelines and detailed costs.

The same applies to Output 2.4. One specific budget line covers core activities (2.4.1 through 2.4.7), while two other cover the M&E System and the fee.

The mentioned M&E systems for both Outputs may be consolidated from a operational point of view but the nature of activities on the ground are different with respect to mangroves and wetlands. Hence, metrics for measuring success will also need to be different. Regarding budgets, the entire workplan for both Output 2.3 and 2.4 is subject to the approval by the Project Board, after clearance by the PMU. International TA may contribute to the process, in terms of technical stringency / quality assurance, a role that may be played by the CTA.

See table below for more details on Output 2.3 Activities and thereafter for Output 2.4:

***Table 15. Overview of specific activities under Output 2.3 (Mangroves)***

| Activity | Description | Notes | Budget USD |
|---|---|---|---|
| **Main Activities merged under a single budget lines assigned to IBAP (72100 Contractual Services - Companies)** | | | |
| 2.3.1 | Identification of threats and opportunities for mangrove conservation and sustainable use as an adaptation measure with multiple benefits. | This will imply a quick study, once the project inception has taken place to confirm the exact locations for mangrove restoration, calculate exact costs and develop a detailed plan for the roll out of activities under this output. | **15,000.00** |
| 2.3.2 | Promote natural regeneration where mangrove ecosystems are self-renewing (1500ha) - initially estimated at USD 250/ha. | Core activity on the ground. All inclusive, with a total estimated budget of USD 250,000 for an estimated 1,500 ha of mangrove restored (or in the restoration pathway) over maximum 6 years using a 'natural regeneration' technique. How and where the mentioned surface will be delivered with this technique will be more precisely defined in the planning. | **250,000.00** |
| 2.3.3 | Rehabilitate via degraded mangrove replanting (1000ha) - initially estimated at USD 550/ha. | Core activity on the ground. All inclusive, with a total estimated budget of USD 550,000 for an estimated 1,000 ha of mangrove restored (or in the restoration pathway) over maximum 6 years using a 'mangrove replanting' technique. How and where the mentioned surface will be delivered with this technique will be more precisely defined in the planning. | **550,000.00** |
| 2.3.4 | Planning and M&E System for Mangrove Restoration. | IBAP will develop the planning and consolidate the M&E system for this Output. The Planning under Output will be approved by the Project Board and international TA may contribute (CTA) to the content and in facilitating the approval process with respect to technical stringency / quality assurance. IBAP may engage the GPC in the task. | **19,000.00** |
| 2.3.5 | Green coastal belts: Identify protected areas that could be extended or already covers mangrove areas and strengthen their financial baseline. | Find synergies with local projects aimed at strengthening Bissau's national system of protected areas, with nature protection activities already ongoing. Then establish a collaboration platform for the mangrove restoration protected area interface, establishing what will be called the Green Coastal Belts. | **12,000.00** |
| 2.3.6 | Stakeholders' engagement and training. | Costs are all inclusive and includes both initial engagement and training of community members in the techniques. | **200,000.00** |
| **Oversight & Transaction Costs (separate budget lines)** | | | |
| 2.3.7 | Independently monitor mangrove health in areas subject to regeneration and rehabilitation on the ground | Grant indicatively assigned to GPC under Activity #2.3.7 pertaining to Output 2.3 on Coastal Wetlands Protection. Object: Establish and implement effective and efficient mechanisms for participatory wetland<br><br>Object: Independently monitor mangrove health in areas subject to regeneration and rehabilitation on the ground.<br><br>Budget Line: 72600 Grants | **20,000** |
| 2.3.8 | Planning, implementation, execution and reporting by IBAP in coordination with GPC. | IBAP's transaction and administrative costs in connection with Activities 2.4.1 through 2.4.7 under Output 2.4 (Protect coastal wetlands)<br><br>Includes: Costs of planning, engaging qualified HR, coordinating the process of stakeholder engagement in the field, travel and purchasing of inputs, managing the activity's implementation, step-by-step, its reporting to PMU and UNDP, all according to formats and requirements, risk management, safeguards adherence, quality control, and external audit services applied to use of funds.<br><br>These costs were initially estimated at approximately $15.5K/year and restricted to the time when planning, training and building activities are taking place. They may be adjusted according to delivery and needs.<br><br>Budget Line: 74500 Miscellaneous Expenses. | **95,000** |
| **TOTAL** | | | **1,161,000** |

Activities under Output 2.3 (with budgets and notes):

***Table 16. Overview of specific activities under Output 2.4 (Wetlands)***

| Activity | Description | Notes | Budget USD |
|---|---|---|---|
| Main Activities merged under a single budget lines assigned to IBAP (72100 Contractual Services - Companies) | | | |
| 2.4.1 | Update the national wetland inventory: carry out wetland assessments: carry out specific studies to characterize the initial status of the functions and assess the functionality of the wetlands concerned | Nationally procured study. Support from the Secretariat of the Ramsar Convention on Wetlands of International Importance may be sought, as they provide grants and technical assistance for studies and other activities that promote the sustainable use of wetlands. This approach applies to other activities hereunder, which may be 'bundled as a package', when presented to the Ramsar Secretariat. | 15,000.00 |
| 2.4.2 | Identify and estimate the value of ecosystem services (ecological, socio-economic and economic) provided by wetlands in support of their rational use, management and decision-making | Same as for Activity 2.4.1. | 20,000.00 |
| 2.4.3 | Development of partnerships with related projects for bringing wetlands restoration activities to scale | No cost activity, developed within the roll-out of other activities. | 0.00 |
| 2.4.4 | Planning and M&E System for Coastal Wetlands' Protection | More specifically, this implies: Develop a medium to long-term eco-climatic Monitoring Plan for targeted wetlands, taking into account the need for adaptation, (and where applicable mitigation) and, most importantly, in view of assessing the impact of project activities in the increased resilience of wetlands to climate change, in particular with respect to the natural and restored water flows. GPC will be primarily responsible, but it will work with IBAB on achieving goals and ensuring that the system is sustainably maintained, including after project end. Similar to Output 2.3, IBAP will work with GPC to develop the planning and consolidate de M&E system for this Output. The Planning under Output will be approved by the Project Board and international TA may contribute (CTA) to the content and in facilitating the approval process with respect to technical stringency / quality assurance. | 20,000.00 |
| 2.4.5 | Restoration of degraded wetlands (installation of infiltration wells, retention basins and other means of replenishing the wetland's old ebb and flow from tributaries, sediment removal and clearing up the river's main flow, where possible, affordable and critical). | Core activity on the ground. All inclusive, with a total estimated budget of $380,000. | 380,000.00 |
| 2.4.6 | Sustainable intensification of wetland use with the following main modalities: [A]. Agro-pastoral-horticulture [B]. Introduction of mixed Rice-fish systems (see e.g. IRRI Rice Knowledge Bank in www.knowledgebank.irri.org/training/fact-sheets/crop.../rice-fish-systems-fact-sheet); [C]. Control of water use, forage and pasture, [D]. Valuation of non-timber forest products, [E]. Ecotourism valuation | This may be rolled out as additional micro-grants in sites where there are wetlands being protected. | 200,000.00 |
| 2.4.7 | Stakeholders' engagement and training | Costs are all inclusive and includes both initial engagement and training of community members in the techniques. | 75,000.00 |
| Oversight & Transaction Costs (separate budget lines) | | | |
| 2.4.8 | Establish and implement effective and efficient mechanisms for participatory wetland monitoring | Grant indicatively assigned to GPC under Activity #2.4.8 pertaining to Output 2.4 on Wetlands Protection.<br><br>Object: Establish and implement effective and efficient | 20,000 |

| Activity | Description | Notes | Budget USD |
|---|---|---|---|
| | | mechanisms for participatory wetland monitoring.<br><br>Budget Line: 72600 Grants | |
| 2.4.9 | Planning, implementation, execution and reporting by IBAP in coordination with GPC. | IBAP's transaction and administrative costs in connection with Activities 2.4.1 through 2.4.7 under Output 2.4 (Protect coastal wetlands)<br><br>Includes: Costs of planning, engaging qualified HR, coordinating the process of stakeholder engagement in the field, travel and purchasing of inputs, managing the activity's implementation, step-by-step, its reporting to PMU and UNDP, all according to formats and requirements, risk management, safeguards adherence, quality control, and external audit services applied to use of funds.<br><br>These costs were initially estimated at approximately $15.5K/year and restricted to the time when planning, training and building activities are taking place. They may be adjusted according to delivery and needs.<br><br>Budget Line: 74500 Miscellaneous Expenses. | 75,000 |
| TOTAL | | | 805,000 |

## *C5) TOR Outline of Advisory Services and Small Works foreseen under Component 3*

The work on the below under Component 3 has been divided into blocks of PRODOC prescriptive guidance (to be used as suitable by the project implementation team that will compose the PMU and UNDP. This

| ***Outputs under Component 3*** | ***1,000 USD (estimates in the budget)*** |
|---|---|
| 3.1) Economic diversification & resilience | 2,000 |
| 3.2) Wetlands Fisheries/ Natural Resources Management | 210 |
| 3.3) Gender sensitive local development planning for adaptation at the landscape level management in support to Climate Adaptive Livelihoods | 140 |
| 3.4) Alternatives to climatic vulnerability: Partnerships towards innovative technologies uptake, local and gender-sensitive skills enhancement & problem solving social organization | 530 |
| 3.5) Provision of extension services | 470 |
| 3.6) Viable local finance mechanisms and products for adaptation & resilience | 300 |

***Box 3. Why local economic diversification is important in the context of climate change adaptation***

| INSPIRATION FOR VALUE CHAIN DEVELOPMENT AND DIVERSIFICATION IN VIEW OF CC ADAPTATION MAINSTREAMING |
|---|
| QUOTING FROM THE WB'S 2016 SCD - SYSTEMATIC COUNTRY DIAGNOSTIC, PAGE 122: |
| "[…] A top priority for Guinea-Bissau is to start capitalizing on many of its opportunities for economic growth, which remain largely untapped and could thereby be available **to diversify the economy in the medium to long term.** This is not only about exploring new industries and sources of growth, but also about involving making traditional sectors and industries (for instance, cashews) more productive and competitive. In this regard, the analysis points to three keys areas for intervention over the short to medium term:<br><br>***Fostering moving up the value chain in the cashew sector.*** Guinea-Bissau has the potential in the short-run to move to higher |

value chain segments within the cashew economy through improved processing capabilities. This may require capitalizing on emerging opportunities in ICT, as well as attracting a more dynamic private sector (including FDI-type structures) to usher in a new era of accountability. It is estimated that cashew-processing creates about one full-time job for every three tons of processed raw nuts. Processing 30,000 tons of nuts a year could therefore create around 10,000 jobs, which is essential in Guinea-Bissau, and could increase the returns to cashew production for the vast majority of the rural population (many of them poor) whose livelihoods depend on cashew.

**Development of value chains in rice, and other agricultural crops.** The country also has potential in the medium to long run to begin a structural transformation of its agrarian economy, capitalizing on green shoots in agriculture, such as rice, sesame seeds, and forestry. Diversification is pivotal in reducing economic vulnerabilities of poor rural households. Central to this process, however, is the need for increased access to inputs, capital, training, and accessibility to markets. Notably, immediate improvements can be promoted by better seed variety and crop management that maximizes yield and land utilization.

**Development of value chains in fisheries.** With a vast resource base, the fisheries sector of Guinea-Bissau has the potential to make a much greater contribution to the attainment of key development objectives, such as economic growth and poverty alleviation over the near to medium term. This requires investments in landing and processing facilities as well as improved regulation and management of the sector.

Source: World Bank (2016). Guinea-Bissau: Turning challenges into opportunities for poverty reduction and inclusive growth Systematic Country Diagnostic (SCD). Report No. 106725-GB. June 2016. Document of The World Bank

***Box 4. Why focus on The Bolama-Bijagós Archipelago under Output 3.2***

ABOUT THE BOLAMA-BIJAGÓS ARCHIPELAGO

**The Bolama-Bijagós Archipelago is located in the middle of a conjunction of numerous influences.** the Continental estuaries, where fresh waters mix with marine ones during the rainy season.

There are coastal currents and outward drifts that follow the continent's shoreline, coming both from the South and from the North, and which then meet joining within Guinea-Bissau's waters, but where the Archipelago creates a buffer with calmer waters that sediment rich and hence also rich in biomass.

In addition, there are waves, which are originate from a distance and frequent tides, whose amplitude of approximately 5-6 m that stand out within the West African region.

The different currents bring to the Archipelago the fresh waters, organic matter and plankton, the basis of a long food chain, interrelating all marine-coastal and terrestrial organisms including. Hence it contributing to an exceptional biological productivity.

**The potential of fisheries, tourism, palm oil production and extraction, as well as the selective collection and primary processing of mollusks** are enormous but underutilized. There are practically no physical infra-structures and the promotion of production, and marketing of fisheries' products is still very incipient and made on very traditional bases.

**Oil from native palms (*Elaeis guineensis*) is abundant on the islands** and used in the local cuisine. Because of its pronounced taste the local palm oil (dendê) is not a commodity and has no particular demand in the international market. But with adequate and targeted research different uses could be developed and a value addition targeting the domestic market in Bissau e.g. could create the basis for an interesting value chain, including the production of a wider range of products locally to substitute imports, as is the case of soap, bakery products, food oil and possibly even fuel for certain engines, etc.

Furthermore, fostering **women's income** in the generation of opportunities and livelihoods' improvements is needed, including in the process of collecting, storing, processing, transporting and commercializing the oyster, both fresh and dry. Creation of a market and a space for the consumption of oysters (roasted oysters and typical local dishes in Bubaque e.g.).

## *C5.1) TOR "Pointers" for the Calls for Proposals under Output 3.1*

***[PROTO TOR for:]***
***The Coastal Communities Livelihoods Diversification Grant-Making Framework***

Call for proposals for rolling out a micro-grant framework for promoting communities' adaptive capacity and to protect rural livelihoods from the impacts of climate change in Guinea-Bissau's coastal zone

*[Additional information to be fully developed by the PMU during the project inception. See* Box 3 *and considerations further down. Refer also to Annex X-1.4 and the relevant PPG Reports.]*

During inception, the Documentation for the 1st call for proposals will be composed for launching the scheme. The indicative schedule is as follows: (i) – The 1st Call for Proposals by YEAR 1 = $700K. (ii) – The 2nd Call for Proposals by YEAR 2 = $500K, adjusting the tender documentation as needed and assessing the feasibility of additional calls for proposals but with same goals as the 1st call. (iii) -- 3rd and 4th Call for Proposals by YEARS 3 and 4 = $400K (each), adjusting yet again the tender documentation, as needed and according to feedback from implementation on the ground, and assessing the feasibility of additional calls for proposals. Same goals as the 1st and 2nd calls.

**Structure:**

I) Current State of Affairs at Guinea Bissau's coastline livelihoods
II) Goals, Adaptation Objective of Micro-Grant Proposals and Expected Results
III) Geographical Focus and other Considerations
IV) Contracting Authority for the grant-making mechanism

**See also sub-section further down:**

C5.2) Scope of Work for Consultancy aimed at preparing the documentation for the Output 3.1 Call for Proposals

## *I) Current State of Affairs at Guinea Bissau's coastline livelihoods*

Climate change is already affecting coastal farming communities through increased flooding and saltwater encroachment into rice paddies due to globally driven sea level rise. Evidence on it is discussed in official documents such as the NAPA, the National Communications to the UNFCCC (INC, 2NC) and in the INDC.

*[Pasted content from eight paragraphs in PRODOC section "The Climate Problem", under Part II (Development Challenge), counting as follows:]*

[1] "The level of climate risks affecting Guinea-Bissau's coastal livelihoods is marked by three elements, which may evolve according to the severity of climate change and development conditions for the country. They are: (i) high levels of exposure to climatic hazards (discussed further down); and (ii) a generalized situation of vulnerability (social, economic and physical) – including herein a limited capacity to adapt to such hazards, which in turn translates into (iii) low levels of resilience. Across all these elements, it is important to analyze gender elements, opportunities for young people and to outline the project strategy accordingly, taking into account coastal assets such as mangroves, wetlands and the traditional resilience of coastal rice cultivation.

*[… paras in excluded to avoid repetition]*

[7] Furthermore, it should be stressed that coastal communities are highly dependent on mangrove stands, not only for the provision of timber and non-timber forest products, and as an open-access habitat for useful species – but also as the first line of coastal defense against erosion, floods, storms, wave surges and their consequences. Similar to mangroves, several coastal wetlands also render essential ecosystem services to local communities, providing fish, purifying water and recycling sediment – in addition to representing a potentially attractive tourism asset.

[8] Finally, coastal risks such as coastal flooding, inland flooding and wildfires are relevant, not only within a framework of adaptation, which is the project's core focus, but they should be equally be considered within a broader Disaster Risk Reduction and Management (DRRM) strategy for Guinea-Bissau. This is because at times, the hazards behind these risks strike with a sudden onset (as opposed to slow onset hazards and risks). DRRM is mainstreamed into this project, but its scope is otherwise restricted to the 'prevention' and 'preparedness' elements of the coastal zone DRRM (see Figure 1 for the implications of these considerations)."

*[Thereafter additional information follows:]*

Besides the high level of climate driven exposure experienced by coastal communities in Guinea-Bissau, the majority of households are income-poor, they have limited participation into the monetary economy and depend heavily on traditional crops and natural resources for their livelihoods. Illiteracy rates reach more than 50% in some areas. It is generally higher for women, creating deep-seated conditions for and female-headed households is becoming increasingly more common.

A strong baseline of projects, programs and initiatives are focusing on rural poverty, productivity of land and in on bringing technological innovation to rural areas. Few of them, if any are taking climate risks into consideration. This project, and any mini-projects developed under it, will need to focus on climate resilience as part of the livelihoods strategy.

Since it is not possible to actually *'climate-proof'* livelihoods (which would equate to "shielding" them completely from climate impacts, as in the strategy for infrastructures under Component 2), the approach for Component 3 is a 'people-focused approach' to improved livelihoods that are, additionally, climate resilient and which focuses on developing the adaptive capacities of coastal communities in the face of climate change.

A core strategy to achieving this, under Output 3.1 is to invest in the diversification of local economies, while simultaneously developing the practical capacities of coastal communities to implement local transformative project and succeed. Output 1.3 has budget reserve of $2.0 million to be disbursed through micro-grants awarded to project proponents the development of people's adaptive capacities builds on

Such strategy has not only the advantage of spreading risks, but also of gradually building rural people's skills and capacity to access the market and to participate in the monetary economy.

**Approach:** Enhancing the climate resilience of these livelihoods will be approached with special emphasis on the most vulnerable groups such as women and youth. Therefore, the call for proposals will include a suite of mechanisms for favoring women and women-only organizations as beneficiaries/grantees. Some mechanisms are proposed herein. Others may be developed during the course of the project, as it gains experience from implementing the grant-making scheme.

**Potential:** The potential of fisheries, tourism, palm oil production (artisanal *dendê*) and mollusk production is enormous and untapped. In the particular case of the Bijagós islands, the peripheral nature has left the Archipelago isolated and extremely limited in its ability to develop a regional economy. Baseline analyses carried out in the project area gave further evidence to the considerable threats to traditional production practices and the maintenance of biodiversity, from over-consumption or over-utilization of resources for livelihoods, which have the potential to result in a loss of resource bases. Further, agricultural activity competes with mangroves and wetlands biodiversity, and the potential for harmonious agroforestry has not yet been significantly tapped into.

**The challenge** therefore, is to evaluate and propose economic diversification using a bottom up and gender sensitive strategy to roll-out through community focused grant-making, facilitating options to address the advance of the threats caused by climate change on rice fields. It will also focus on 'diversification from cashew cultures' – which may include value addition and innovative uses of the various parts of the cashew plant, which are currently not being used.

**IMPORTANT :: Waste, Sustainability and Safeguards ::**
Another issue to focus on will be addressing the wastage in connection with post harvesting by enhancing techniques for artisanal and wetlands' fisheries. The application of project-level safeguards will also apply to the micro-granting schemes, regarding in particular gender (and human rights more generally), avoiding and, where not possible, minimizing negative environmental impacts. Among the latter, the following are particularly relevant for eligible micro-projects (consult UNDP's SESP for references):

- Avoid the production of excessive garbage that eventually contributes to increasing amounts of **sea plastic**;
- Avoid unnecessary carbon emissions (especially associated with travel);
- Follow strong safeguards on biodiversity, land management, forestry, cultivation, fishing practices, etc.

## *II) Goals, Adaptation Objective of Micro-Grant Proposals and Expected Results*

**The overall develop objective** of proposals is to effectively create alternatives to current agricultural and artisanal fisheries practices, adding value to livelihood chain, bring innovation to climate proofing the economy of population concentrated at rural coastal areas and vulnerable to climate change, with special attention to gender and youth, guided by communities' participation.

**ADAPTATION OBJECTIVE of the Output 3.1 Micro-Grant:**
*To strengthen the climatic resilience (or reduce the climate-driven vulnerability) of organized communities in the rural areas of Guinea-Bissau's vis-à-vis the negative impacts of climate change by promoting economic diversification at the local level and communities' general resilience to chocks, hazards and livelihood insecurity in a gender-sensitive, equitable innovative and sustainable way.*

**Project-Level Expected Results:** It is expected that the *Coastal Communities Livelihoods Diversification Scheme* will contribute to the following results more generally across the coastal zone – results which can be thus classified:

| # | Typology of results | Articulation of expected results at the project level |
|---|---|---|
| ❶ | **[gender-balanced, cross-generational and also fair income- & benefit generation]** | **Increased economic activities among both men and women** within the project area, reducing the gender related income gap and generating tangible benefits that contribute to and that either translate into the community's general resilience -- and by extension -- their climatic resilience, or into the outright reduction in the community's climate-driven vulnerability. |
| ❷ | **[local economy]** | **Improved resilience of local communities'** by strengthening their local economy in the project area by focusing on the agricultural segment (rice, cashew, other…), artisanal fisheries and/or nature-based tourism by facilitating the generation of useful goods and services from locally available bio/natural resources, whose products – and preferably through local value addition -- can compete more effectively in identified and accessible markets. |
| ❸ | **[capacity & skills development]** | **Increased technical knowledge and competencies,** including on climate adaptive techniques and technologies with respect to the economic activity, adopting approaches such as **learn-by-doing or *"faire-faire",*** and gradually capacitating local leaders to participate in value chain development. |
| ❹ | **["proof of concept" & [the innovation "PLUS"]** | **The grant-making will validate a concept** that is based on a bottom-up approach to defining what activities communities will develop and where through competitive bidding, as well as participatory, in which communities participate in all stages of mini-project development and implementation, with special emphasis on gender and youth inclusion. |

**Micro-Project Level Expected Results:** Each individual micro-grant projects (micro-projects) will need to formulate their own specific objective. However, a clear link to contributions to two or more of the above Project-Level Expected Results needs to be articulated. An example:

| *Action on adaptation (verb)* | *Object (what)* | *… and more specifically (where, how, by whom)* | *Metrics & Benefits, Co-Benefits and the PLUS* |
|---|---|---|---|
| **To enhance the resilience of coastal community *X*** to climate risks and hazards by fostering the utilization, propagation and primary processing of [❷] … | … products from locally occurring fruit trees such as …<br><br>… coconut (côco / *Cocus nocifera*), Bread-fruit (fruta-pão / *Artocarpus altilis*), Bambara Groundnut (mancarra bidjugu / *Voandezia subterranea*), jackfruit (jaca - *Artocarpus heterophyllus*), local raphia (tara - *Raphia* | … for sale in the market in Bissau by organized village-level cooperatives of working women and young men. [❶❸]<br><br>To do that, an adaptated multi-purpose platform -- running on diesel -- or on other cleaner fuel if possible – will be placed at a centrally based village and will be used for gradually developing the post-harvest processing and value addition. [❹]<br><br>The project will have 2 professional staff (account and extension officer) who will | Logic & Climate Link:<br>• Climate risks assessed;<br>• Baseline, status quo and addional cost reasoning articulated<br><br>Quantified & measured:<br>• Improved household income compared to baseline;<br>• Equitably shared proceeds among men, women, villages;<br>• Involving young people;<br>• Etc. |

| *Action on adaptation (verb)* | *Object (what)* | *… and more specifically (where, how, by whom)* | *Metrics & Benefits, Co-Benefits and the PLUS* |
|---|---|---|---|
| | *sudanica* A.Chev.), gum (cola - *Artocarpus heterophyllus*, and *Artocarpus altilis*) | ensure booking, help cooperatives get organized and cater for sustainable harvests. Medium to longer-longer term goals in terms of skills development among youth and women may be sought through follow-on parallel projects with respect to product improvement, value chain development. | Possibly seek South-South Cooperation with Brazil's EMBRAPA for using *dendê* oil (*Elaeis guineensis*) in adapted diesel engines*. |
| [*] See e.g. this and other related links (EMBRAPA is the government sponsored agricultural research agency in Brazil, which has been successfully experimenting with the Bissau-Guinean palm oleaginous species, *Elaeis guineensis*, as a source of biofuel since the 1990's): https://www.embrapa.br/busca-de-publicacoes/-/publicacao/666489/aplicacao-do-oleo-do-dende-como-combustivel-em-motores-ciclo-diesel | | | |

**Note on pre-set indicators of success from PIF stage:** it had been foreseen that the groups of beneficiaries will include:

- At least 1,500 women rice growers
- 500 horticulture producers (among them 400 women and 100 young men)

The above groups will be organized and supported by adaptation-trained agricultural extension services.

## *III) Geographical Focus and other Considerations*

**Eligible – and preferred – beneficiaries:**

Direct beneficiaries will be **organized members of any coastal communities in the rural areas of Guinea-Bissau** (and those located not only those in pre-selected project sites for Component 2, but along the entire coast).

Consider also:

- **Ideas** presented by these groups through the applicable micro-grant project briefs will **fit the criteria of LDCF additionality** and are generally eligible according to other criteria outlined herein.
- **Women, youth and vulnerably groups are particularly welcome to apply**. There will, in fact, be a positive bias towards women, which will be pondered and fully formulated with the help of consultancy under Output 3.3 (*Gender sensitive local development planning for adaptation at the landscape level management in support to Climate Adaptive Livelihoods*).
- Preference will be given to **groups with a certain level of local social organization** (not-for-profit organizations, community associations, local interest groups, local government, organized local resident's groups (e.g. ***"Amigos de … [place]"*** are common types of such organizations in Guinea-Bissau).
- Applicants presenting projects in **collaboration / partnership** with national and international NGOs academia, religious missions (foreign or not) are welcome, but those **'Supporting Organizations'** will not be considered the direct beneficiaries, but rather a facilitator in the process providing services of technical nature at a cost effective price and without detriment to a balanced share of benefits from the grant going to resident community members, women in particular. Supporting organization will need to ensure that members of the community understand and are fully behind the purpose of the activity, co-responsible for outcomes and actively contributing to the development and implementation of **activities that are to be proposed in bottom-up fashion**

**Considerations and other elements for further development in the Background Section of the TOR:**

- Selection of potential intervention sites for women rice growers and horticulture producers on the basis of competitive bidding for small grants.
- The dire need for the installation of water pumping systems, preferably powered by new and renewable energies. The resilience aim is to improve the availability of suitable water resources for, first and foremost meeting human needs and their well-being, and thereafter for agriculture, horticulture, animal production
- Introduction and popularization of improved stoves.
- The need for Intensification of horticultural production and breeding of short cycle animals, valuing the agro-sylvo-

pastoral system.

- The provision of adequate technical equipment according to the 'packages' of economic activities, local needs and other elements.
- The delivery of training on the use of technical equipment, solar energy, water pumps and handling of agricultural equipment, taking into account local conditions regarding language and literacy rates
- Training will be needed to improve production and commercialization strategies taking climate challenges into account.
- The first 1st year of a new production cycle needs to be closely supervised and supported by capable extension services. The second and third years are also crucial. Functional alphabetization of both men and women throughout first production year may be needed to achieve a minimal level of technical mastery and resilience envisaged under the project.
- Continuous supervision of production parameters in years 2-4, assessing additional training needs.

## *IV) Contracting Authority for the grant-making mechanism*

*[Elements to be further defined, when the project is to be approved by UNDP and Government.]*

NOTE: The grant system will be administered through a suitable grant-making mechanism to be selected UNDP and Ministry of Sustainable Development and Environment (MADS), on behalf of the Government of Guinea-Bissau. Due diligence will be carried out by UNDP before selecting final selection is made, preferably to be validated during the procedural meeting of the Local Project Appraisal Committee (LPAC), foreseen to be held once the PRODOC had been CEO Endorsed by the GEF and before it is signed by both UNDP and Government.

Regardless, the contracted party will employ culturally appropriate and gender sensitive methods and approaches, compatible with international and national standards, including those described in UNDP's SESP.

## *C5.2) Scope of Work for Consultancy aimed at preparing the documentation for the Output 3.1 Call for Proposals*

UNDP and the PMU will engage a qualified service provider for analyzing the context and composing the final documentation for launching the First Call for proposal under Output 3.1.

| *Tasks, Content, DELIVERABLES, etc.* | |
|---|---|
| ***Task 1: Preparation phase*** | A consulting outfit will be engaged to manage the preparation phase and compile the documentation for the calls for proposals. They will submit an inception report to the contracting authority no later than four weeks from commencement of the services: to (i) propose the process for rolling out the grant-making activities, (ii) determine roles and responsibilities of key players, including the establishment of a committee for deciding upon mini-project submission, (iii) criteria for selection, which form the basis of implementation, and iv) detail work plan and schedule for the grant-making. Upon receipt of comments from the Contracting Authority, submit the Final Consultancy Report. |
| ***Task 2: Validation of Situational Assessment*** | This task involves the rapid assessment of the situation analysis and needs assessment to validate the identified categories of livelihoods/businesses in conjunction with relevant agencies and stakeholders:<br>• Organize, participate in and contribute to meetings with stakeholders, in particular the with local communities' representatives to define alternative livelihoods selection<br>• Identify the local production and marketing linkages for each of the identified livelihoods and assess their relevance, adequacy, strengths and challenges, etc.<br>• Identify production and marketing groups available within each of the localities that provide inputs, handling, and storage and marketing facilities for each of the identified livelihoods;<br>• Compile statistical data on the import, export and sales of the identified economic activities, including the timing of such sales.<br>• Conduct rapid assessment of policies that affect market access for livelihoods, including relevant Government policies, market liberalization, institutions for credit, insurance, transport, etc.<br>• Prepare a validation report assessment of situation reflective of the above. |
| ***Task 3: Market Potential Validation*** | This task constitutes the conduct of market research for the selected products and services to assess and evaluate product demand, supply, and current market arrangements. In conjunction with relevant agencies and the other stakeholders, the contractor will:<br>• Map national, regional and international potential markets identified in the validation assessment identified in the validation assessment to ascertain:<br>• The market channels and how the channel choices were determined.<br>• The products or services which will be delivered to various markets to include the required intrinsic characteristics of the product or service including the production process.<br>• The number of stages in the channel. For example, a producer can deliver directly to customers further downstream the channel or through intermediary partners (such as traders, distributors or processors).<br>• The factors which constrain channel choices, e.g. barriers to markets, access to demand and price information; and specific demands from these markets such as production in compliance with quality standards; characteristics of these markets, knowledge of market demands by the producers, and their technological abilities.<br>• Identify concrete commercial opportunities and conduct market analysis for each livelihood/business to include new market opportunities with retail chains or with their suppliers and the impact of adding value to current product sales through product diversification, differentiation or other methods.<br>• Prepare Marketing Validation Report addressing issues as identified in i. and ii above. |
| ***Task 4: Value Chain Analysis and Mapping*** | The contractor party shall:<br>• Conduct field surveys, interviews with stakeholders, and market surveys to develop a value chain system for each of the identified commodities.<br>• Identify the actors in each of the value chains.<br>• Assess the resources, skills and capacities of the livelihoods/businesses related to the procurement of inputs and the products of each of the selected economic activity/product.<br>• If the product may be targeted for export, determine the nature of value added in the value chain - safety and quality of the product, branding and labeling, social, gender related and environmental norms and sustainability standards. Compliance with standards implies high certification costs (for producers) and high monitoring costs (for buyers).<br>• Prepare a Draft Value Chain Analysis and Mapping Report for each economic activity/product based on the steps identified above. |
| ***Task 5: Develop Baseline Project Profiles and Business Plans*** | This task involves the preparation of business plans to include marketing plans, as well as proposals for grant funding or concessionary financing. The consultant shall:<br>• In conjunction with relevant agencies, prepare draft project profiles for the selected sustainable livelihood initiatives within the project area.<br>• Organize stakeholder review of proposed Project Profiles and update with stakeholder and contracting |

| *Tasks, Content, DELIVERABLES, etc.* | |
|---|---|
| | authority feedback. Final Project Plans should include:<br>• Opportunities for improved sustainable efficiencies and economies accruing to various actors in the product/marketing chain of each adaptive coastal livelihood/business.<br>• Identify the roles and responsibilities of all stakeholders who will have interface with the livelihoods developed.<br>• Outline the financial resources required to implement/operationalize the livelihoods to include, but not limited to capacity building and development, marketing, infrastructure, branding<br>• Submit final profiles, final project plans and business plans for each bio- livelihood product/service. |
| *Other tasks* | Task 6: Establish how the results from the assessment will shape the micro-grants scheme<br>Task 7: Train communities |
| *Task 7: Closeout Report* | The contracted party is required to submit to the contracting authority a Closeout Report. This report will be prepared to highlight the nature of work undertaken, noting the level of success and constraints in the methodologies used, the nature and quality of stakeholder participation, limitations in the scope of the consultations and meetings, any potential constraints which are anticipated in the deliverables effective application and any other lessons learnt during the process. |
| | |
| DELIVERABLES: | Reporting requirements<br>The contracted party shall provide the following reports in working language, English, in two (2) original hard copies and electronic copy, in addition to documents required under specific activities.<br><br>1. Inception Report, inclusive of a detailed schedule, and methodology, 2 weeks after signing contract (Task 1) – two (2) weeks after contract signing.<br>2. Complete Final Value Chain Analysis and Mapping for all of the identified commodities, inclusive of situational analysis and market validation assessments (Tasks 2, 3 and 4) – ten (10) weeks after signing of contract<br>3. Complete 3 Livelihood/Business Management Project Profiles (Task 5 i)<br>4. eighteen (18) weeks after signing of contract<br>5. Final report for -livelihood enterprises based on feedback from review of the identified commodities, inclusive of comments– eighteen (18) weeks after signing of contract<br>6. Closeout Report detailing the work undertaken, the difficulties and challenges experienced in the conduct of the consultancy, and the lessons learned (Task 7) – twenty-six (26) weeks after signing of contract |
| *Submission & approval of reports* | The reports referred to above must be submitted to the MADS (contracting authority). The Closeout report should be submitted in three (3) hard copies accompanied by the electronic version.<br><br>Feedback on approval and on issues raised from reports shall be given to the contracted party within fifteen (15) working days of receipt of draft by the contracting authority. |
| | |
| *Eligible bidders*<br><br>Partnerships and consortia formation are encouraged. | Proposals would be eligible from:<br>• National NGO's<br>• Community based organizations<br>• Universities<br>• State-owned entities, such as research institutes |

## *C5.3) Notes on Innovation regarding Output 3.4 "Alternatives to Vulnerability"*

**Under Component 3, Output 3.3** pertains to the development of alternatives to climatic vulnerability. Partnerships towards innovative technologies uptake, local and gender-sensitive skills enhancement & problem solving social organization will be developed in different ways.

**Activities under Output 3.4** will primarily complement others under Component 3 to the extent that they will ensure the transfer, uptake, dissemination and adoption of climate-adaptive and appropriate technology packages. Activity 3.4.1 (Promotion of sustainable income generating activities) and noting that much of the funding for actually rolling out activities at the local level will be secured though micro-granting activities under Output 3.1. The aim is to plan, involve partners and "brew" ideas with technical assistance, innovators, South-South cooperation ventures and actual investors. Among them the project may engage UN agencies, NGOs, private, academia, investors, etc. Refer to Mandatory Annex C5) Outline of expected Services and Small Works under Component 3.

The following are the indicative set activities under Output 3.4 (Refer to the Total Budget and Workplan for proposed amounts):

1. Promotion of sustainable income generating activities (beekeeping, fishing, oyster harvesting, horticulture, agro-forestry, community-based tourism. Sustainable)
2. Climate proofing community's social infrastructures and transport in partnership with UN agencies, NGOs and investors
3. Innovative and sustainable ways of improving local living conditions -- actual access to funding should be secured though micro-granting activities under Output 3.1
4. South-South Cooperation for Coastal Adaptation
5. Supporting an integrated system of regularly monitoring climatic and other relevant events in coastal zone of pilot sites with community involvement, in particular women and youth, in the monitoring of key parameters such as shoreline change.

The service provider(s) engaged in implementing these activities will strive to ensure that these packages are innovative, viable, gender and culturally sensitive and that they represent a true alternative to existing techniques, practices, patterns of resource-uses and livelihoods that are currently considered unsustainable. A thorough analysis of these had been carried out during the PPG phase and the results are enshrined in **PPG Reports 009 through 012**, among others.

Typical economic activities that fit such profile and which have been successfully tested in Guinea-Bissau include beekeeping, adaptive and sustainable fishing, selective oyster harvesting, horticulture, agro-forestry and community-based tourism. The aim of the current set Activities under Output 3.4 is to make these economic at the local level along the coast even more compatible with protecting the environment and increasing communities' resilience to the effects and direct impacts of climate change, both the slow onset of activities and the sudden ones. This will imply e.g.:

- Promoting of the production and value-addition of cashew, shrimp and palm oil, overcoming barriers to accessing new markets and getting a circular economy up-and-running at the local level.
- The production of certain fruit trees, legumes, forest essences, etc. (*Artocarpus heterophyllus*) tara (*Raphia excelsa*), different types of natural glues and resins (say, from *Artocarpus heterophyllus, Artocarpus heterophyllus* or *Artocarpus altilis*).
- Improvements to different process of the production and commercialization of oysters given the availability of improved harbor facility with cooling stations. Solar powered portable cooling boxes may e.g. be put to use.
- Intensification of farming practices will help meet the needs of local eco-tourism hotels, improved energy access, land management and other local infrastructures will foster the development of a range of income-generating opportunities and provide a better quality of life.

**Regarding Activities 3.4.2 and 3.4.3,** is important but may rationalized along with the partners, as implementation progresses. Together with **co-financing partners**, the project may choose to also help address, through Activity 3.4.2, certain shortcomings in the health, education, transport and communications sectors at the local level by subsidizing the renovation/climate proofing of local infrastructures – e.g. by bringing solar lightening to schools, clinics and local meeting places -- and given that these are real obstacles to a more sustainable development and adaptation.

**Coastal communities need innovative solutions** that enable them to develop -- e.g. ensuring the provision of domestic lightning and ground water pumping using solar energy, rain water harvesting and storage systems, water purification systems, improved stoves, improved sanitation, access to information in schools and community centers using computers and mobile technology etc.

Finally, **Activity 3.4.4** on South-South Cooperation, UNDP will assess feasibility as opportunities emerge.

## *C5.4) Details and Phases regarding Output 3.5 "Provision of Extension Services"*

Output 3.5 foresees the strengthening of national extension services in order to provide a differentiated service that actually contributes to the adaptation agenda in the agricultural sector. Core focus will be on ensuring that cultures such as rice, cashew and food crops are climate resilient and smart – i.e. "climate smart agriculture". These are a set of contextual and adaptive techniques that on the one hand help mitigate climate change and adapt to its impact, include "agro-ecological approaches", "no-till agriculture", "intercropping", "integrated pest management", among others.

For this project, Output 3.5 makes reference to "national agro-ecological extension services" as a general 'chapeau' and it proposes to capacitate and renew the extension services' workforce adopting innovation and in phased approach. Such approach will necessarily include the management of bush fire vis-à-vis on coastal forests and coastal dwellers. In the long-run,

a better trained, climate-aware and field-tested workforce of **extensionists** will help reduce the vulnerability of farming coastal communities.

Potential service providers identified at PPG stage include local NGOs, INEP, and certain departments of the Ministry of Agriculture. Candidate organizations selected in Bissau and in the regions may also form coalitions for improved competitiveness.

The procurement approach will be competitive contract award (or engagement of semi-governmental services through LOA) and endorsement by Project Board / LPAC of the service provider's proposal. Contract/LOA continuation on the basis of on the basis of satisfactory.

Competitive contract award (or engagement of semi-governmental services through LOA) on the basis of endorsement by Project Board / LPAC. Contract/LOA continuation will be on the basis of satisfactory proposal. Services to be provided over a 1-year period and possibly renewed for an additional one on the basis of performance. Current budgeting includes one year only.

***Table 17. Overview of phases and specific activities under Output 3.5 (Provision of extension services)***

| Activity # | Phase | Activity Description | Elaboration | Budget Reserve ($1000) |
|---|---|---|---|---|
| 3.5.1 | **"Zero" (planning and kick-starting)** | Conceptualization of the targeted training program, selection process for the appointment of a suitable service provider (or consortium of service providers) | Potential service providers could include a coalition involving local NGOs, INEP, Ministries, gender specialists and other candidate organizations selected in Bissau and in the regions. | 30 |
| 3.5.2 | **First** | Extension Services - PHASE I: Training 3-6 months at suitable extensionist school, with first deployment to project sites and initial engagement with local partners, finishing off with the appointment of supervision, reporting lines and quality assurance "HR architecture". | Training support by specialists from ministries, INEP, INA; Payment of technical personnel is key for success of this service. | 150 |
| **3.5.3** | ***Second*** | Extension Services - PHASE II - Planning: Planning and deployment of extension officers, followed by upscaling of on-the-ground training activities in the regions / sites, with network-building and rotation if needed among deployed extension officers (construction or recuperation of local assembly infrastructure may be needed, and budgets adjusted accordingly). | Network, platform for exchange and service assistance to villages, foundation of associations etc. Headquarter, transport of extension service team (vehicles), computers, regional outreach. | 150 |
| **3.5.4** | ***Third or continuous / (repeated, upscaled or other)*** | Extension Services - PHASE III - Execution & Delivery: Service of trained officers is rendered and reaches out to communities in selected project sites and the work is coordinated with other project activities, under Component 3. | Supervision by contractor NGO gender specialist, network responsible. | 50 |
| **3.5.5** | ***Fourth (stocktaking)*** | Extension Services - PHASE IV - Gauging success & Improving: Provision of extension services in selected coastal zone, prioritizing those with related GEF and/or co-financing activities under project, with regular (bi-annual) meetings / workshop of the extension service group for refreshed training, exchange of ideas, innovation and gender marking. | Extension of services beyond pilot sites in year 3-5, supervision must be guaranteed, feed-back, training actualization and payment of personnel ensured sustainable through co-financing e.g. | 50 |
| **3.5.6** | ***Fifth or Final (closure)*** | Extension Services - PHASE V - Completion of GEF sustained activities, with a quick but external evaluation of the success of sub-project Output 3.3 mini-project, and with the dissemination of information, | Agricultural extension service to be widely known by rural population; discussion of important CC related topics; distribution of key information in | 50 |

| Activity # | Phase | Activity Description | Elaboration | Budget Reserve ($1000) |
|---|---|---|---|---|
| | | radio programs, production of leaflets (topics: improved seeds, irrigation, importance of horticulture etc.) and with further outreach to make the activity as self-sustained (or minimally subsidized) as possible. | easy language / picture posters. | |

-- o -- END OF ANNEX C -- o --

# ANNEX D. Terms of Reference

## *TOR for the Project Coordinator & Technical Manager*

| **Long term national consultant, senior, project lead:** |
|---|
| **Background (to be complemented with project information before publishing)** |
| The Project Manager works at national and regional levels and has overall responsibility for delivering the project successfully. The position is based out of Bissau. |
| **Duties and Responsibilities** |
| • Supervise and coordinate the production of project outputs, as per the project document<br>• Mobilize all project inputs in accordance with UNDP procedures for nationally executed projects<br>• Supervise and coordinate the work of all project staff, consultants and sub-contractors<br>• Coordinate the recruitment and selection of project personnel<br>• Prepare and revise project work and financial plans, as required by UNDP<br>• Liaise with UNDP, central and sub-national government, relevant government agencies, and all project partners, including donor organizations and NGOs for effective coordination of all project activities<br>• Facilitate administrative backstopping to subcontractors and training activities supported by the Project<br>• Be responsible for the production and timely submission of the Inception Report, Combined Project Implementation Review/Annual Project Report (PIR/APR), Technical reports, quarterly financial reports, and other reports as may be required by UNDP, GEF, and other oversight agencies<br>• Disseminate project reports and respond to queries from concerned stakeholders<br>• Report progress of project to the PSC, and ensure the fulfillment of PSC directives<br>• Oversee the exchange and sharing of experiences and lessons learned with relevant community based integrated conservation and development projects nationally and internationally<br>• Ensures the timely and effective implementation of all components of the project<br>• Assist community groups, municipalities, NGOs, staff, students and others with development of essential skills through training workshops and on the job training thereby upgrading their institutional capabilities<br>• Coordinate and assists scientific institutions with the initiation and implementation of all field studies and monitoring components of the project<br>• Perform any other duty relevant to the assignment |
| **Competencies** |
| • Very experienced project manager<br>• Financial management and control capabilities<br>• Advanced leadership, negotiation and communication skills<br>• Sensitive to context of the project |
| **Required Skills and Experience** |
| • Education:<br>• Minimum MA or MSc in Social or Environmental Sciences, International Development, or related<br>• Demonstrable background in adaptation and related climate change and natural resource management issues as asset<br>• Project management certificates are an advantage<br>• Experience:<br>• Minimum 10 years' experience in project management, of which 5 years is in an international context.<br>• Experience in managing programs or project financial management, procurement, contracting, recruitment, and staff management.<br>• Prior UNDP/GEF project experience and knowledge of UNDP and GEF procedures and guidelines. |

- Language:
- Fluency in written and spoken Portuguese or French.
- Skills in English an advantage.

## *TOR for the National Finance, Procurement and Administrative Officer*

**Long term national consultant: Procurement & Accounting Manager**

**Background (to be complemented with project information before publishing)**

The Accounting Manager provides support to the Project Manager to support overall project delivery in line with good accounting practice. The position is based at the PMU in Bissau

**Duties and Responsibilities**

- If applicable and needed, serve as the budget holder for GEF and UNDP funds
- Collect, register and maintain all information on project activities, with focus on finance
- Prepare and check all the necessary documentation for project procurement, in close collaboration with the Project Manager and the Chief Technical Advisor, and in consultation with the UNDP Country Office where needed (e.g. international procurement, where UNDP's service can be advantageous), and seeking external expertise (e.g. legal or in climate modelling) when needed.
- Contribute to the preparation and implementation of annual workplans and progress reports
- Monitor project activities, budgets and financial expenditures
- Advise all project counterparts on applicable administrative procedures and ensures their proper implementation
- Maintain project correspondence and communication
- Support the preparations of project work-plans and operational and financial planning processes
- Assist in procurement and recruitment processes
- Assist in the preparation of payments requests for operational expenses, salaries, insurance, etc. against project budgets and work plans
- Follow-up on timely disbursements by UNDP CO
- Receive, screen and distribute correspondence and attach necessary background information
- Prepare routine correspondence and memoranda for Project Manager's signature
- Assist in logistical organization of meetings, training and workshops
- Prepare agendas and arrange field visits, appointments and meetings both internal and external related to the project activities and write minutes from the meetings
- Maintain project filing system and any necessary records for e.g. project equipment inventory
- Perform any other duty relevant to the assignment

**Competencies**

- Bookkeeping skills
- Administration skills
- Good organizational skills

**Required Skills and Experience**

Education:

- A degree and/or professional qualification in accountancy
- Project management certificates are an advantage

Experience:

- At least 5 years of administrative and/or financial management experience;
- Demonstrable ability to administer project budgets, and track financial expenditure;
- Demonstrable ability to maintain effective communication with different stakeholders, and arrange stakeholder

meetings and/or workshops;
- Excellent computer skills, in particular mastery of all applications of the MS Office package, in particular Excel; mastery of other finance applications is a plus;
- Prior UNDP/GEF project experience and knowledge of UNDP and GEF procedures and guidelines is an advantage.

Language:
- Fluency in written and spoken Portuguese or French.
- Skills in English an advantage.

## *TOR for the Project's International Chief Technical Advisor (CTA)*

**UNDP-managed engagement of a Project Chief Technical Advisor (CTA):**

**As per Activity 1.3.5) International Technical Assistance: Project Support for addressing gaps in specialized technical capacity, combining intermittent in-country service delivery with remote, desk-based support.**

**Background (to be complemented with project information before publishing) + Other**

**Contracting Modality**

PMU will procure and engage external / sub-contracted individual to function as the project's CTA for up to 3 years, using the modality 'Individual Contract' (IC) or 'Reimbursable Loan Agreement' (RLA), in case she/he is embedded in a service providing entity or corporation and where the possibility of backstopping or support makes the contracting more interesting than that of individuals.

**Scope and Tasks**

Scope:
The work foresees regular service provision of high technical caliber in support of the project's core team and reporting to the project manager and UNDP designated Program Officer as follows:
- It will combine in-country presence with home-made support at an approximate 50/50 ratio, to be set out in the candidate's workplan.
- The engagement will be for a period of 1 year, renewable up to 3 years, and foreseeing a total billable time in service of 200 days during each 12-month service period.
- Travel costs will be included in the candidates' proposals and she/will be responsible of all arrangements.
- The focus of the work will be on developing the Project's Team Member's skills on implementing an Integrated and Adaptive Coastal Zone Management Program (I&ACZM), in particular with respect to policy, institutional development and capacity strengthening.

Typical tasks will include:
1. Specific technical tasks relating to matters of I&ACZM.
2. Provide technical and strategic assistance for project activities, including planning, monitoring and site operations, and assuming quality control of interventions;
3. Provide hands-on support to the National Project Coordinator, project staff and other government counterparts in the areas of project management and planning, management of site activities, monitoring, and impact assessment;
4. Finalize Terms of Reference for consultants and sub-contractors, and assist in the selection and recruitment process;
5. Coordinate the work of all consultants and sub-contractors, ensuring the timely delivery of expected outputs, and effective synergy among the various sub-contracted activities;
6. Assist the National Project Coordinator in the preparation and revision of the Management Plan as well as Annual Work Plans;
7. Coordinate preparation of the periodic Status Report when called for by the National Project Coordinator;
8. Play a key role, in close collaboration with the National Project Coordinator and with support from project consultants, in the preparation of the Combined Project Implementation Review/Annual Project Report (PIR/APR), inception report, technical reports, quarterly financial reports for submission to UNDP, the GEF, other donors and Government Departments, as required;
9. Assist in mobilizing staff and consultants for project implementation, in the conduct of a mid-term and a final project evaluation, and in undertaking revisions in the implementation program and strategy based on evaluation results;
10. Assist the National Project Coordinator in liaison work with project partners, donor organizations, NGOs and other groups to ensure effective coordination of project activities;
11. Document lessons from project implementation and make recommendations to the Steering Committee for more effective implementation and coordination of project activities; and
12. Perform other tasks as may be requested by the National Project Coordinator, Steering Committee and other project partners.

**Qualifications**

- Advanced university education (MS or PhD) with expertise in the area of environmental management in general (the specialization profile will need to be assessed vis-à-vis the needs of the project);
- At least 10 years' professional experience, of which at least eight are at international level
- Strong skills in monitoring and evaluation and experience in implementing environmental projects;
- Previous experience with GEF projects is a plus;
- Ability to effectively coordinate a large, multidisciplinary team of experts and consultants;
- Be an effective negotiator with excellent oral and presentation skills;
- Excellent writing skills in English,
- A good working knowledge of Portuguese (or alternatively Spanish) is a plus.

## *TORs for Other Project Team Members*

**For the remainder of the Project's Core Team, refer to Division of Labor table below**. Their TORs will be developed during the pre-inception and inception phase. Refer to Matrix below for a guiding reference.

***Table 18. Project Team Division of Labor***

| Core Scope of Tasks: *either in the entire project or in specific outputs* | *Project Coordinator & Technical Manager* | *National Technical Officer #1: Geographically based systems, Data Management & Web* | *UNV Specialized in Climate Change Adaptation (Profiles 2 and 2) ** | *National Technical Officer 3 (Part Time at 50%): Engineer* | *National Technical Officer 4 (Part Time at 50%): Agronomist* | *#2a (Bissau) & #2b (Bubaque): Liaison Officer, Specialized in Community Engagement & Gender *** | *National Finance, Procurement and Administrative Officer (FPAO)* | *International CTA: Technical Profile Coastal Risk Management Systems* |
|---|---|---|---|---|---|---|---|---|
| The entire project | LEAD (Strategy, Management, Planning, Execution, Reporting M&E) | x | 1, 2 | | | X (on the ground activities) ** | LEAD on procurement & Finance | Support to LEAD |
| 1.1) Capacity building for coastal zone management | LEAD | x | 1, 2 | x | x | x | | |
| 1.2) Policy and regulations | LEAD | | 1 | | | x | | Advise |
| 1.3) Coastal Zone Risk management and Monitoring Program | LEAD on Strategy and Stakeholder engagement | CO-LEAD on Systems & Conceptualization | 1, 2 | x | x | x | | CO-LEAD on Systems & Conceptualization |
| 2.1) Small wharf fisheries | x | | | LEAD | x | x | | |
| 2.2) Protect 1000ha of lowland rice | x | x | | x | LEAD | x | | |
| 2.3) Restore 2500ha of mangroves | x | x | | | OVERSEE | x | | |
| 2.4) Protect coastal wetlands | x | x | | | OVERSEE | x | | |
| 3.1) Economic diversification & resilience | LEAD | | 1 | x | x | x | LEAD on the financial controls and reporting | LEAD on Conceptualization |
| 3.2) Wetlands Fisheries/ Natural Resources Management | LEAD | | | | x | x | x | Support to LEAD |
| 3.3) Gender sensitive local development planning for adaptation at the landscape level management in support to Climate Adaptive Livelihoods | LEAD | | | | | x | x | x |
| 3.4) Alternatives to climatic vulnerability: Partnerships towards innovative technologies uptake, local and gender-sensitive skills enhancement & problem solving social organization | x | x | 1, 2 | LEAD | x | x | x | x |

| Core Scope of Tasks: *either in the entire project or in specific outputs* | *Project Coordinator & Technical Manager* | *National Technical Officer #1: Geographically based systems, Data Management & Web* | *UNV Specialized in Climate Change Adaptation (Profiles 2 and 2) ** | *National Technical Officer 3 (Part Time at 50%): Engineer* | *National Technical Officer 4 (Part Time at 50%): Agronomist* | *#2a (Bissau) & #2b (Bubaque): Liaison Officer, Specialized in Community Engagement & Gender *** | *National Finance, Procurement and Administrative Officer (FPAO)* | *International CTA: Technical Profile Coastal Risk Management Systems* |
|---|---|---|---|---|---|---|---|---|
| 3.5) Provision of extension services | x | | 1, 2 | | LEAD | x | x | x |
| 3.6) Viable local finance mechanisms and products for adaptation & resilience | x | | 1, 2 | | | x | LEAD | |
| 4.0) M&E | x | LEAD on Systems & Conceptualization | data feed | data feed | data feed | data feed | data feed | LEAD on Reporting |

TABLE NOTES:

[*] UNV Profiles: (1) Economics and Finance; (2) Training, Communications, Outreach & Capacity Building ofiles (1) Economics and Finance; (2) Training, Communications, Outreach & Capacity Building.

[**] National Technical Liaison Officer 2a) (Bissau-based) covers Project Zones #2 (Varela-Cacheu) and #3a (Masoa-Buba-Cufada), while 2b) (based in Bubaque) covers Zones 1 (Bolama-Bijagós). The South (Project Zone #3b) will be covered by partner projects (co-financing).

# ANNEX E. UNDP Social and Environmental and Social Screening Template (SESP)

[The completed template, which constitutes the Social and Environmental Screening Report, must be included as an annex to the Project Document. Please refer to the Social and Environmental Screening Procedure for guidance on how to answer the 6 questions.]

Project Information

| Project Information | |
|---|---|
| 1. Project Title | Strengthen the adaptive capacity and climate resilience of Guinea-Bissau vulnerable coastal communities to climate risks |
| 2. Project Number | Project ID: 00099383<br>Award: 00095375 |
| 3. Location (Global/Region/Country) | Guinea-Bissau |

Part A. Integrating Overarching Principles to Strengthen Social and Environmental Sustainability

| QUESTION 1: How Does the Project Integrate the Overarching Principles in order to Strengthen Social and Environmental Sustainability? |
|---|
| The project seeks to strengthen Guinea-Bissau's resilience to climate change through adaptation of structures and practices related to the country's coastal livelihoods, targeting long time food safety in a sustainable approach. considering all human rights and gender aspects of the proposed activities, as well as traditional knowledge, following all principles of environmental sustainability, providing adequate impact and risk assessment and mitigation on both social and environmental issues related to the project and its area of influence. |
| By developing an integrate approach to coastal zone management, the project seeks to restore environmentally sensitive areas like mangroves and wetlands that could be crucial for the coastline resilience to resist to increased wave action and erosion. Feasibility studies were provided in order to evaluate current livelihoods and initiatives to climate proof and increase resilience, like mangrove rice and cashew cultures, as well as hard measures to adapt livelihoods to climate change includes the construction of a climate proof wharf for small fisheries. Using local knowledge and engaging communities at all project stages through inception workshops, field consultation, development of local partnerships and monitoring of all results and activities, the project will incorporate social demands and respect and align with ongoing initiatives. For the construction as well as the interventions on environmentally sensitive areas as mangroves and wetlands, a focused ESIA will be developed in order to attain to environmental standards and practices and assure environmental quality at all stages. All personnel involved at the project will follow safety and security standards in compliance with Human Rights. Gender Mainstreaming is a specific focus of the project and can be found in **ANNEX G. Gender Analysis and** Action Plan. |

Part B. Identifying and Managing Social and Environmental Risks

| **QUESTION 2: What are the Potential Social and Environmental Risks?**<br>**Note: Describe briefly potential social and environmental risks identified in Attachment 1 – Risk Screening Checklist (based on any "Yes" responses).** | **QUESTION 3: What is the level of significance of the potential social and environmental risks?**<br>**Note: Respond to Questions 4 and 5 below before proceeding to Question 6** | **QUESTION 6: What social and environmental assessment and management measures have been conducted and/or are required to address potential risks (for Risks with Moderate and High Significance)?** |
|---|---|---|

| ***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.*** |
|---|---|---|---|---|
| The Project could potentially cause adverse impacts to habitats by reforestation of mangroves and wetlands. | I = Moderate (3)<br><br>P = Most Likely (2) | Moderate | - A Strategic Environmental Impact Assessment will be provided under Output 1.3.<br>- Focused Environmental and Social Impact Assessment will be provided under Output 2.3 and Output 2.4. | The areas to be intervened will be primarily studied and target of a focused Environmental Impact Study. Results have proven to be more effective to identify barriers for the vegetation to grow, treat them and let the mangrove recovers by itself than actively planting large areas. The Project will consider both alternatives to be applied in various levels of restoration, and a Strategic Environmental Assessment will be provided at Component 1, so macro zoning evaluation will define, together with soil and water quality monitoring, an appropriate balance for areas to be planted or just protected for natural restoration. The ESIA will focus on the potential impacts regarding the evaluation of target areas, considering potential impacts during implementation that will be addressed on the planning stage such, but not limited, as: i) The potential for having excessive personnel stepping over mangroves and wetlands which will be carefully managed under Activities 2.3.6 and 2.4.7, regarding training the stakeholders; ii) The quality of propagules and seeds will be assured by using, local resources in order to avoid contaminated reforestation; iii) Waste management during reforestation; iv) Personal Protection Equipment for Workers; vi) Training and capacitation of local people. |
| The Project could potentially cause adverse impacts to habitats for strengthening rice and cashew cultures at mangroves and wetlands areas. | I = High (4)<br><br>P = Most Likely (2) | Moderate | A Strategic Environmental Impact Assessment will be provided under Output 1.3.<br>A focused ESIA will be provided under Output 2.2. | A focused evaluation of the balance between cultivation and the establishment of green belts composed of restored and protected mangroves and wetlands in order to provide climate change resilience and coastal protection will be a result of this project as an integrated coastal zone management plan and |

| *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.* |
|---|---|---|---|---|
| | | | | governance. Adverse impact on habitats could come from rice and cashew cultivation if the appropriate environmental control and phytosanitary measures are not applied. The destruction of mangroves accelerates coastline erosion and wave action so zoning will be carefully planned as explained here. The use of pesticides and fertilizers can also cause contamination of soil, streams, and the sea. Monocultures are also known as the cause of soil impoverishment and consequential abandonment of the area. All potential impacts and synergies will be assessed at Activity 1.3.3, Component 1, where it is foreseen a Strategic Environmental Assessment (SEA) at the national level on the potential benefits and risks linked to Guinea-Bissau's coastal zone including the likely emergence of an off-shore oil and gas boom. |
| The Project could cause loss of environmental quality of critical habitats and/or environmentally sensitive areas, where mangroves and wetlands will be restored, as well as the cultivation of rice and cashew | I = Moderate (3)<br><br>P = Most Likely (2) | Moderate | - A Strategic Environmental Impact Assessment will be provided under Output 1.3.<br>- A Focused Environmental and Social Impact Assessment will be provided under Outputs 2.2, 2.3 and 2.4. | The project aims to restore coastal mangrove and wetlands areas sometimes within PA's, as well as reinforcing governance related to coastal area protection and management, all actions will be focus of a Strategic Environmental Assessment at a national level, predicted in Activity 1.3.3 that will take into account all potential impacts as well as mitigatory measures related to the project's proposed activities. The strategic approach once again brings a rational approach to ecological zoning, balancing the impacts by combining cultivated with natural protected areas. Mangroves and wetlands are mandatory soft measures to support climate change resilience and adaptation at the long term. |
| The Project involves reforestation and direct intervention on 1500ha of mangroves and wetlands | I = Moderate (3)<br><br>P = Moderately Likely (3) | Moderate | - A Strategic Environmental Impact Assessment will be provided under Output 1.3.<br>- A Focused Environmental and Social Impact Assessment will be provided under Output 2.3 and Output 2.4. | The Project predicts rehabilitation and reforestation of mangroves and wetlands, aiming at improving overall coastal environmental quality. The first step of the project, Activity 1.3.3, predict the development of a Strategic Environmental Assessment identifying threats and opportunities for mangrove conservation and sustainable use as an adaptation measure with multiple benefits (Activities 2.3.1 and 2.4.1). As potential positive impacts of reforestation and rehabilitation of mangroves, the overall strengthening of livelihoods, especially artisanal fisheries, the harvesting of crabs, oysters, and small fish by the local communities will be incremented as new areas start to |

| *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.* |
|---|---|---|---|---|
| | | | | repopulate. During its development stage, only local propagules and seeds will be planted to assure phytosanitary control. During the implementation phase some areas might be momentarily closed for resources collection, which might generate potential conflicts with communities. For this reason the project will engage local communities in all stages, training and preparing local representatives to collect propagules and seeds, to cultivate without destroying healthy areas, and to monitor habitat recovery as in Activity 2.3.6 and 2.4.7. With all control measures in place, overcoming these risks would be of great benefit to all coastal communities. Results will be monitored and corrected if necessarily as per Component 4, M&E. |
| The Project involves the climate proofing of one wharf at Cacheu | Not likely | | - A Focused Environmental and Social Impact Assessment will be provided under Output 2.1. | The project involves the climate proofing of an artisanal fisheries wharf, although it is not considered a risk for this project considering it will be just a small structure in Cacheu, limited to its closest boundaries, a simple ESIA will be provided for the construction activities. The impacts are considered temporary, since the construction stage is short. Potential impacts during construction are: i) Closure of wharf activities. ii) Increased population in the area. iii) Water contamination iv) Waste management. v) Hazardous and chemicals safety procedures; vi) Construction safety procedures. In order to manage all potential impacts including local communities and stakeholders, social consultation will be provided through an focused ESIA process, as per Activity 2.1.3, regarding Component 2.2 Feasibility, and it will address both the construction and operational phase, where all sustainable principles will be followed regarding safety of personnel, human rights of contractors, appropriate waste management, and landscaping of the area. |
| The Project involve, diversion or containment of surface water for rice cultivation | I = Moderate (3)<br><br>P = Highly Likely (4) | Moderate | A Strategic Environmental Impact Assessment will be provided under Output 1.3.<br>A focused ESIA will be provided under Output 2.2. | See specific activity |
| The Project will involve reforestation of mangrove and wetland species and could | I = High (4) | Moderate | - A Strategic Environmental Impact Assessment will be | Using local seeds and plants will guarantee effective restoring of habitats without any cross contamination in compliance with |

| *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.* |
|---|---|---|---|---|
| cause introduction of contaminated individuals or seeds. | P = Not Likely (2) | | provided under Output 1.3.<br>- A Focused Environmental and Social Impact Assessment will be provided under Output 2.3 and Output 2.4. | phytosanitary guidelines. Activity 2.3.3 will be thoroughly examined at a focused Environmental Impact Assessment that will assure careful handling and cultivation. Local NGO's and specialists will be consulted for adequate alignment with traditional practices and culture, and will train local people as in Activity 2.3.6 to participate on all stages of the work. If all environmental measures are followed, the project will have a positive impact on environmental quality and biodiversity. |

| **QUESTION 4: What is the overall Project risk categorization?** | | |
|---|---|---|
| Select one (see SESP for guidance) | **Comments**: The project presents moderate risk, considering the possibility of potential impacts limited in scale (site-specific) and duration (temporary), that can be avoided, managed and/or mitigated with relatively uncomplicated accepted measures. All environmental and social aspects and potential impacts will be evaluated and addressed accordingly. For this matter, the project has foreseen an appropriate budget for developing a Strategic Environmental Assessment and focused ESIA studies on key activities, assuring appropriate waste management and water quality procedures. The project's social and environmental risks exist, but these can be contained within proposed project activities, standard best practices, stakeholder engagement and other risk mitigation measures during project implementation. | |
| Low Risk | ☐ | |
| Moderate Risk | x | |
| High Risk | ☐ | |

**QUESTION 5: Based on the identified risks and risk categorization, what requirements of the SES are relevant?**

**Comments:** The project includes activities with potential adverse social and environmental risks and impacts and activities that include physical interventions (e.g. construction, cultivation). In addition, the project can potentially – but not intentionally – have an adverse impact on biodiversity conservation and natural resource management. More specifically, the project will proceed as follows with respect to risk management and negative impact mitigation:

- (SES req. 1.2) The project will carry out activities within or adjacent to critical habitats and/or environmentally sensitive areas but will apply best practice impact mitigation measures under the guidance of IBAP, the national body responsible for environmental compliance in Guinea-Bissau.
- (SES req. 1.6) The project involves plantation development and mangrove and wetland reforestation in compliance with environmental best practices and standards and an integrated management plan.
- (SES req. 1.7) The project involves the strengthening of structures for production and/or harvesting of fish populations in alignment with fisheries strategies for the country and west Africa.
- (SES req. 1.8) The Project involves diversion and containment of surface water for construction of dams for rice cultivation on flooded areas
- (SES req. 1.9) The Project involves utilization of local seeds and propagules for restoration, as well as rice and cashew cultivation under strict phytosanitary

| | | |
|---|---|---|
| guidelines.<br>- (SES req.3.3) The Project involves a small-scale infrastructure development, one wharf at Cacheu, so it is not considered a social or environmental risk, but safeguards were provided in order to have all controls and compliance in place during the outcome of this activity. | | |
| Principle 1: Human Rights | ☐ | |
| Principle 2: Gender Equality and Women's Empowerment | ☐ | |
| Principle 3: Environmental Sustainability | x | |
| 1. Biodiversity Conservation and Natural Resource Management | x | |
| 2. Climate Change Mitigation and Adaptation | ☐ | |
| 3. Community Health, Safety and Working Conditions | x | |
| 4. Cultural Heritage | ☐ | |
| 5. Displacement and Resettlement | ☐ | |
| 6. Indigenous Peoples | ☐ | |
| 7. Pollution Prevention and Resource Efficiency | ☐ | |

Final Sign Off

| Signature | Date | Description |
|---|---|---|
| QA Assessor<br>Dauda Sau,<br>Program Specialist, Sustainable Development Portfolio Manager | 3/5/2018 | UNDP staff member responsible for the Project, typically a UNDP Programme Officer. Final signature confirms they have "checked" to ensure that the SESP is adequately conducted. |
| QA Approver<br>Mr. Gabriel Dava,<br>UNDP CO Deputy Resident Representative | 3/5/2018 | UNDP senior manager, typically the UNDP Deputy Country Director (DCD), Country Director (CD), Deputy Resident Representative (DRR), or Resident Representative (RR). The QA Approver cannot also be the QA Assessor. Final signature confirms they have "cleared" the SESP prior to submittal to the PAC. |
| PAC Chair<br>Mr. Gabriel Dava,<br>UNDP CO Deputy Resident Representative | | UNDP chair of the PAC. In some cases, PAC Chair may also be the QA Approver. Final signature confirms that the SESP was considered as part of the project appraisal and considered in recommendations of the PAC. |

SESP Attachment 1. Social and Environmental Risk Screening Checklist

| **Checklist Potential Social and Environmental Risks** | **Answer (Yes/No)** |
|---|---|
| **Principles 1: Human Rights** | |
| 1. Could the Project lead to adverse impacts on enjoyment of the human rights (civil, political, economic, social or cultural) of the affected population and particularly of marginalized groups? | No |
| 2. Is there a likelihood that the Project would have inequitable or discriminatory adverse impacts on affected populations, particularly people living in poverty or marginalized or excluded individuals or groups? 46 | No |
| 3. Could the Project potentially restrict availability, quality of and access to resources or basic services, in particular to marginalized individuals or groups? | No |
| 4. Is there a likelihood that the Project would exclude any potentially affected stakeholders, in particular marginalized groups, from fully participating in decisions that may affect them? | No |
| 5. Is there a risk that duty-bearers do not have the capacity to meet their obligations in the Project? | No |
| 6. Is there a risk that rights-holders do not have the capacity to claim their rights? | No |
| 7. Have local communities or individuals, given the opportunity, raised human rights concerns regarding the Project during the stakeholder engagement process? | No |
| 8. Is there a risk that the Project would exacerbate conflicts among and/or the risk of violence to project-affected communities and individuals? | No |
| **Principle 2: Gender Equality and Women's Empowerment** | |
| 1. Is there a likelihood that the proposed Project would have adverse impacts on gender equality and/or the situation of women and girls? | No |
| 2. Would the Project potentially reproduce discriminations against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits? | No |
| 3. Have women's groups/leaders raised gender equality concerns regarding the Project during the stakeholder engagement process and has this been included in the overall Project proposal and in the risk assessment? | No |
| 4. Would the Project potentially limit women's ability to use, develop and protect natural resources, taking into account different roles and positions of women and men in accessing environmental goods and services?<br>For example, activities that could lead to natural resources degradation or depletion in communities who depend on these resources for their livelihoods and well being | No |
| **Principle 3: Environmental Sustainability:** Screening questions regarding environmental risks are encompassed by the specific Standard-related questions below | |
| | |
| **Standard 1: Biodiversity Conservation and Sustainable** Natural **Resource Management** | |
| 1.1 Would the Project potentially cause adverse impacts to habitats (e.g. modified, natural, and critical habitats) and/or ecosystems and ecosystem services?<br>*For example, through habitat loss, conversion or degradation, fragmentation, hydrological changes* | No |
| 1.2 Are any Project activities proposed within or adjacent to critical habitats and/or environmentally sensitive areas, including legally protected areas (e.g. nature reserve, national park), areas proposed for protection, or recognized as such by authoritative sources and/or indigenous peoples or local communities? | Yes |

46 Prohibited grounds of discrimination include race, ethnicity, gender, age, language, disability, sexual orientation, religion, political or other opinion, national or social or geographical origin, property, birth or other status including as an indigenous person or as a member of a minority. References to "women and men" or similar is understood to include women and men, boys and girls, and other groups discriminated against based on their gender identities, such as transgender people and transsexuals.

| Checklist Potential Social and Environmental Risks | | Answer (Yes/No) |
|---|---|---|
| 1.3 | Does the Project involve changes to the use of lands and resources that may have adverse impacts on habitats, ecosystems, and/or livelihoods? (Note: if restrictions and/or limitations of access to lands would apply, refer to Standard 5) | Yes |
| 1.4 | Would Project activities pose risks to endangered species? | No |
| 1.5 | Would the Project pose a risk of introducing invasive alien species? | No |
| 1.6 | Does the Project involve harvesting of natural forests, plantation development, or reforestation? | Yes |
| 1.7 | Does the Project involve the production and/or harvesting of fish populations or other aquatic species? | Yes |
| 1.8 | Does the Project involve significant extraction, diversion or containment of surface or ground water?<br>*For example, construction of dams, reservoirs, river basin developments, groundwater extraction* | Yes |
| 1.9 | Does the Project involve utilization of genetic resources? (e.g. collection and/or harvesting, commercial development) | Yes |
| 1.10 | Would the Project generate potential adverse transboundary or global environmental concerns? | No |
| 1.11 | Would the Project result in secondary or consequential development activities which could lead to adverse social and environmental effects, or would it generate cumulative impacts with other known existing or planned activities in the area?<br>*For example, a new road through forested lands will generate direct environmental and social impacts (e.g. felling of trees, earthworks, potential relocation of inhabitants). The new road may also facilitate encroachment on lands by illegal settlers or generate unplanned commercial development along the route, potentially in sensitive areas. These are indirect, secondary, or induced impacts that need to be considered. Also, if similar developments in the same forested area are planned, then cumulative impacts of multiple activities (even if not part of the same Project) need to be considered.* | No |
| **Standard 2: Climate Change Mitigation and Adaptation** | | |
| 2.1 | Will the proposed Project result in significant[47] greenhouse gas emissions or may exacerbate climate change? | No |
| 2.2 | Would the potential outcomes of the Project be sensitive or vulnerable to potential impacts of climate change? | No |
| 2.3 | Is the proposed Project likely to directly or indirectly increase social and environmental vulnerability to climate change now or in the future (also known as maladaptive practices)?<br>*For example, changes to land use planning may encourage further development of floodplains, potentially increasing the population's vulnerability to climate change, specifically flooding* | No |
| **Standard 3: Community Health, Safety and Working Conditions** | | |
| 3.1 | Would elements of Project construction, operation, or decommissioning pose potential safety risks to local communities? | No |
| 3.2 | Would the Project pose potential risks to community health and safety due to the transport, storage, and use and/or disposal of hazardous or dangerous materials (e.g. explosives, fuel and other chemicals during construction and operation)? | No |
| 3.3 | Does the Project involve large-scale infrastructure development (e.g. dams, roads, buildings)? | No |
| 3.4 | Would failure of structural elements of the Project pose risks to communities? (e.g. collapse of buildings or infrastructure) | No |
| 3.5 | Would the proposed Project be susceptible to or lead to increased vulnerability to earthquakes, subsidence, landslides, erosion, flooding or extreme climatic conditions? | No |
| 3.6 | Would the Project result in potential increased health risks (e.g. from water-borne or other vector-borne | No |

[47] In regards to $CO_2$, 'significant emissions' corresponds generally to more than 25,000 tons per year (from both direct and indirect sources). [The Guidance Note on Climate Change Mitigation and Adaptation provides additional information on GHG emissions.]

| Checklist Potential Social and Environmental Risks | | Answer (Yes/No) |
|---|---|---|
| | diseases or communicable infections such as HIV/AIDS)? | |
| 3.7 | Does the Project pose potential risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during Project construction, operation, or decommissioning? | No |
| 3.8 | Does the Project involve support for employment or livelihoods that may fail to comply with national and international labor standards (i.e. principles and standards of ILO fundamental conventions)? | No |
| 3.9 | Does the Project engage security personnel that may pose a potential risk to health and safety of communities and/or individuals (e.g. due to a lack of adequate training or accountability)? | No |
| **Standard 4: Cultural Heritage** | | |
| 4.1 | Will the proposed Project result in interventions that would potentially adversely impact sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture (e.g. knowledge, innovations, practices)? (Note: Projects intended to protect and conserve Cultural Heritage may also have inadvertent adverse impacts) | No |
| 4.2 | Does the Project propose utilizing tangible and/or intangible forms of cultural heritage for commercial or other purposes? | No |
| **Standard 5: Displacement and Resettlement** | | |
| 5.1 | Would the Project potentially involve temporary or permanent and full or partial physical displacement? | No |
| 5.2 | Would the Project possibly result in economic displacement (e.g. loss of assets or access to resources due to land acquisition or access restrictions – even in the absence of physical relocation)? | No |
| 5.3 | Is there a risk that the Project would lead to forced evictions?48 | No |
| 5.4 | Would the proposed Project possibly affect land tenure arrangements and/or community based property rights/customary rights to land, territories and/or resources? | No |
| **Standard 6: Indigenous Peoples** | | |
| 6.1 | Are indigenous peoples present in the Project area (including Project area of influence)? | No |
| 6.2 | Is it likely that the Project or portions of the Project will be located on lands and territories claimed by indigenous peoples? | No |
| 6.3 | Would the proposed Project potentially affect the rights, lands and territories of indigenous peoples (regardless of whether Indigenous Peoples possess the legal titles to such areas)? | No |
| 6.4 | Has there been an absence of culturally appropriate consultations carried out with the objective of achieving FPIC on matters that may affect the rights and interests, lands, resources, territories and traditional livelihoods of the indigenous peoples concerned? | No |
| 6.5 | Does the proposed Project involve the utilization and/or commercial development of natural resources on lands and territories claimed by indigenous peoples? | No |
| 6.6 | Is there a potential for forced eviction or the whole or partial physical or economic displacement of indigenous peoples, including through access restrictions to lands, territories, and resources? | No |
| 6.7 | Would the Project adversely affect the development priorities of indigenous peoples as defined by them? | No |
| 6.8 | Would the Project potentially affect the traditional livelihoods, physical and cultural survival of indigenous peoples? | No |
| 6.9 | Would the Project potentially affect the Cultural Heritage of indigenous peoples, including through the commercialization or use of their traditional knowledge and practices? | No |

| Checklist Potential Social and Environmental Risks | | Answer (Yes/No) |
|---|---|---|
| **Standard 7: Pollution Prevention and Resource Efficiency** | | |
| 7.1 | Would the Project potentially result in the release of pollutants to the environment due to routine or non-routine circumstances with the potential for adverse local, regional, and/or transboundary impacts? | No |
| 7.2 | Would the proposed Project potentially result in the generation of waste (both hazardous and non-hazardous)? | No |
| 7.3 | Will the proposed Project potentially involve the manufacture, trade, release, and/or use of hazardous chemicals and/or materials? Does the Project propose use of chemicals or materials subject to international bans or phase-outs?<br>*For example, DDT, PCBs and other chemicals listed in international conventions such as the Stockholm Conventions on Persistent Organic Pollutants or the Montreal Protocol* | No |
| 7.4 | Will the proposed Project involve the application of pesticides that may have a negative effect on the environment or human health? | No |
| 7.5 | Does the Project include activities that require significant consumption of raw materials, energy, and/or water? | No |

# ANNEX F. Stakeholder Engagement Plan

## *1) Stakeholders consulted during the PPG*

**The exercise of stakeholder count** presented herein is relevant for certain Results Framework Indicators, including Indicators #1, #6 and #4, equivalent to AMATT Indicators #1, #3 and #9, plus AMATT Indicator #10. **Table 19 further down represents the baseline of stakeholders engaged during the PPG process**. They were grouped into two broad categories:

- **Category A) Community members in Project Sites**
- **Category B) Institutional stakeholders**

**Category A stakeholder count was estimated that at least 180 community members were directly consulted** during PPG consultations and meetings localities directly visited by the PPG Team, but the number is likely an underestimation. The total is probably higher, considering e.g. that some of the community leaders interviewed said to represent other members of their household for the purpose of consultations. A likely number of **approximately 320 community members would have been "reached-out to"** during the PPG (i.e. directly and indirectly consulted). Also within Category A, **two interest groups** (Friends of Varela Beach, Fishermen of Bubaque) **and one civil society platform** with national scope (Association of Women of Economic Activity, AMAE, #2 in the table's list) were also consulted. The latter has up to 8,000 members through 150 local women's associations distributed across the country, though not clear how many are 'coastal'.

**Category B encompasses a total of 112 individuals,** who participated in some form of project event, primarily workshops, but also consultations and interviews. Women represent only 20% of the 'Bissau-based' decision-makers, which are presented and grouped as follows:

- Stakeholder entities and their members tagged as 'Government' were presented first (marked in green).
- Those included the main stakeholder entities at the national level (as local level is covered under Category A), and having the project proponent (DGA, MADS) listed first.
- The Entity list was ordered alphabetically within the sub-categories that follow: MADS was followed by other national government entities (Directorates / line Ministries), which were then followed by research entities, NGOs, etc., and finally by the main development partners – the latter was marked in blue.
- UNDP and PPG Consultants (tallying 4 entities and 17 people) came last.

All community members (Category A) and national entities (most of those to be classified under Category B) are considered as **'actual or potential project beneficiaries'**. In turn, the groups of entities marked in blue (development partners, including UNDP and, by extension, the PPG Team) cannot be classified as such and, by excluding them, the count is as follows:

- By the end of the PPG (February/March 2018), the beneficiary stakeholder count, including Categories A and B, is **approximately 490 people**, a number that includes (i) **community members in 15 localities** (approximately 10-20 people in each, including local interest groups) and (ii) **representatives from 77 national entities (Bissau-based) – the "decision-makers".** The participation of institutional project beneficiaries based in Bissau in PPG workshops counted as an initial training delivered by the project, with reference to baseline reading of Results Framework Indicator #4 and Tracking Tool AMATT indicator #9.
- Therefore, to date, **77 project beneficiary individuals were 'trained' during the PPG.** This is because that PPG events also included awareness-raising on climate change adaptation, as part of the stakeholder involvement process.
- Of all community members consulted, the rough count indicates that **40% were women**. An effort was made during local-level consultations to specifically call women into community meetings.
- On Bijagós islands, their participation was particularly active.[49] Individuals consulted during the PPG represent some 80 organizations, entities or groups, as shown in Table 19, plus UNDP (project proponent) and the two companies that supplied the PPG Team.

[49] Evidence of community level stakeholder consultation in file with UNDP Bissau. See also PPG Reports.

***Table 19. Current baseline of stakeholder involvement***

| Number of entities (red = priority) | Entity ordered (see note on order) | Stakeholder / Position / Note | Gender | Approximate baseline headcount and gender balance stats |
|---|---|---|---|---|
| *Category A) Project Sites* | Site Level Consultations with local communities, local government and community-based associations and NGOs | *All stakeholders directly consulted on sites:* Includes community members that were directly consulted during the PPG on site, plus one local dweller's association | Gender balance varied | 180-360 people (10-20 per community directly / indirectly consulted (30% women) |
| 1 | Associação de Filhos de Varela, under the leadership and in presence of their Vice-president, Mr. Mamadou Sambo | Various members, with a total of 20 people in their HQ in Varela town | f & m | |
| 2 | Associação de Mulheres com atividades econômicas, AMAE | Antónia Adama Djalo (Vice-president), consulted | f | |
| 3 | Association of Fishermen of Bubaque | Representatives consulted on site | f & m | |
| 4 | Bolama, Project Zone #1 | Papel ethnic group consulted on site | | |
| 5 | Bubaque, Project Zone #1 | Community members consulted | | |
| 6 | Buba (Urbano), Project Zone #3 | Community members consulted | | |
| 7 | Fulacunda (Urbano), Project Zone #3 | Community members consulted | | |
| 8 | Gã-Turé, Project Zone #3 | Community members consulted, belonging to the Mandinga ethnic group | | |
| 9 | Indjassane, Project Zone #3 | Community members consulted, belonging to the Balanta ethnic group | | |
| 10 | Mansoa (Urbano), Project Zone #3 | Community members consulted, belonging primarily to the Mansonka, but also Balanta, ethnic groups | | |
| 11 | Tira camisa, Project Zone #3 | Community members consulted, belonging to the Balanta ethnic group Mandjacos | | |
| 12 | Catão Butame, Project Zone #1 | Representatives Consulted | | |
| 13 | Catão Calenquin, Project Zone #1 | Community members consulted | | |
| 14 | Catão Cassica, Project Zone #1 | Community members consulted | | |
| 15 | Catão Jonique (Edjonique), Project Zone #1 | Community members consulted | | |
| 16 | S.Domingos (Urbano), Project Zone #1 | Community members consulted | | |
| 17 | Suzana, Project Zone #1 | Community members consulted | | |
| 18 | Varela (Ial), Project Zone #1 | Community members consulted | | |
| *Category B) Institutional* | Government (national), research institutes, NGOs and development agencies + others | *Stakeholders consulted during the first, second and/or third missions, both through direct contact (focused meetings) and/or through their participation in the PPG Workshops (Inception, in Oct 2017, and Validation in Feb 2018)* | Gender balance headcount: 89 (80%) are men and only 22 (20%) are women | Baseline headcount: 112, incl. Bissau-based 'decision-makers' + UNDP and PPG Team |
| 19 (Proponent) | Direcção Geral do Ambiente DGA, under the Ministério do Ambiente e Desenvolvimento Sustentável (MADS) | H.E. Mr. António Serifo Embaló, Minister | m | 12 (10 men 2 woman) |
| | | Aua Zahia Sow, CRBPFC | m | |
| | | Casino Jorge Sanea | m | |
| | | D`Burpa Costa Barai, Técnico | m | |
| | | Guilherme da Costa, Inspector Geral | m | |
| | | João Raimundo Lopes, PFO/GEF | m | |
| | | Julio M.L. Bá, Director G.D Sustentável | m | |
| | | Laurenço Vaz, Chefe G.MADS | m | |
| | | Mangla Nantchia, Perito | m | |
| | | Mário Batista Camalá, Jurista | m | |
| | | Mário S. N.M. Correia, Assist. Administrative | m | |
| | | Melinda Teixeira | f | |
| | | Viriato Cassamá, Director Geral | m | |
| | + other Directorates under MADS | Quintino Imbadji, Técnico, Autoridade Avaliação Ambiental Competente (AAAC) | m | |
| | | Augusto Cá, Técnico, MADS/DGDS | m | |
| | | Aurildino Silva Monteiro | m | |
| 20 | Direcção Geral da Agricultura (DGAric) | Etiandra A. Costa, Técnica | f | 3 (2 men 1 women) |
| | | Sr. Carlos Amarante Diretor Geral | m | |
| | | Sr. João José da Costa | m | |
| 21 | Direcção Geral da Segurança Alimentar | Representative Consulted | m | 1 |
| 22 | Direcção Geral das Florestas DGF | Director Joãzinho Mané (Cufada Natural Park Head Office in Buba) | m | 1 |

| Project Zone | Approx. headcount |
|---|---|
| Working Women's National Platform | 20 |
| 1) Bolama-Bijagós | 60 |
| 2) Varela-Cacheu | 160 |
| 3) Masoa-Buba-Cufada | 120 |
| **TOTAL** | **360** |

| Number of entities (red = priority) | Entity ordered (see note on order) | Stakeholder / Position / Note | Gender | Approximate baseline headcount and gender balance stats |
|---|---|---|---|---|
| 23 | Direcção Geral das Obras Públicas | Representative Consulted | m | 1 |
| 24 | Direcção Geral de Administração Terretorial | Buli Dabo, Técnico | m | 1 |
| 25 | Direcção Geral de Geografia Cadastro | Alberto da Silva, Eng. | m | 1 |
| 26 | Direcção Geral de Engenharia Rural | Sr. Rui Nené Djanata, Sr. Eng. Alberto Sanca | m | 1 |
| 27 | Direcção Geral dos Recursos Hídricos | Representatives consulted | f & m (balanced) | 1 |
| 28 | Direcção Geral dos Transportes | Representatives consulted | f & m (balanced) | 1 |
| 29 | Direcção Geral de Desenvolvimento Agrícola | Edumar Q. Emanuel, DGDA | m | 1 |
| 30 | Direcção Geral da Pesca Artesenal | Director Mr. Gualdino Afonso Té | m | 2 (all men) |
| | | Mustafa Danfá, Técnico | m | |
| 31 | Capitania dos Portos | Dr. Siga Batista (Captain of Portos da Guiné-Bissau) | m | 1 |
| 32 | Centro Investigação Pesquisa Aplicada - CIPA | Josepha Pinto Gomes (Directora de Serviço) | f | 1 |
| 33 | Gabinete de Planificação Costeira (GPC) | Dr. Joazinho Sá, Diretor | m | 4 (all men) |
| | | Hamilton Monteiro, Técnico | m | |
| | | João José da Costa, MAPP/GAPLA | m | |
| | | Ivo Mendes | m | |
| 34 | Gestão Durável e Valorização de Recursos GDVR | Bernardino Santos - President of the Executive Council | m | 1 |
| 35 | Guarda Nacional | Amadu Baldé, Major/GN | m | 1 |
| 36 | Instituto da Biodiversidade e Áreas Protegidas (IBAP) | Maurício Insumbo | m | 3 (2 men 1 woman) |
| | | Assia Rella Barros, Coord C. Biodv Instituto da Biodiversidade e Áreas Protegidas IBAP | f | |
| | | Abílio Rachid | m | 1 |
| 37 | Instituto Nacional de Estudos e Pesquisa INEP | Representative Consulted | m | 1 |
| 38 | Instituto Nacional para o Desenvolvimento da Educação INDE | Adelino Badinca, Técnico | m | 1 |
| 39 | Instituto Marítimo e Portuário IMP | Bunene Sisse, Inspector | m | 2 (all men) |
| | | Sr. Josias W. Forbes Lopes Teixeira (Chairm. of Board of Directors) | m | |
| 40 | Instituto Superior de Agronomia (ISA) | Dra. Maria | m | 1 |
| 41 | Laboratório de Engenharia Civil | Dr. Francisco Sancho (responsible for Project in Varela beach in 2011) | m | 1 |
| 42 | Instituto Nacional de Estatística | Braima Manafá, Director Geral | m | 1 |
| 43 | Instituto Hidrográfico (IH) | António José Henriques de Albuquerque e Silva (Chefe da Divisão de Hidrografia) | m | 1 |
| 44 | Instituto Nacional da Meteorologia INM | João Lona Tchedná, RCA | m | 2 |
| 45 | MAFP/Instituto Nacional de Pesquisa Agraria (INPA) | Simão Gomes, Presidente | m | 1 |
| 46 | Marinha da Guiné-Bissau | Comodoro Carlos Alfredo Mandughal, Chefe do Estado Maior da Armada (CEMA) | m | 1 |
| 47 | Ministério do Turismo e Artesanato | Victor Monteiro | m | 1 |
| 48 | Ministério da Agricultura Florestas e Pecuária (MAFP), | Regalla C. Oliveira, Direcção de Serviço de Estatísticas Agrícolas (DGSA) | f | 1 |
| 49 | Ministério Economia Finanças/Direcção Geral Plano | Fabricio A.M. Dias, Técnico | m | 1 |
| 50 | Ministério do Turismo | Domingos António Almeida | m | 1 |
| 51 | Instituto de Gestão Ambiental (IGA) / MADS | Marcelino José Vieira | m | 1 |
| 52 | Instituto Nacional da Meteorologia INM | Francisco Fonseca Dias , Director de Serviço | m | 3 (all men) |
| | | Cherno L. Mendes, Director de Serviço | m | |
| | | Feliciano Mendonça | m | |
| 52 | Instituto Nacional de Desenvolvimento da Educação (INDE) | Djamila Barreto Lopes | f | 1 |
| 53 | National EIA Authority (AAAC) | Samuel Emmanuel Pontes, Técnico | m | 1 |
| 54 | Serviço Nacional da Protecção Civil SNPCIB | Francisco Correia, Técnico | m | 1 |
| 55 | Serviço de Recursos Hídricos DSRH | Mustafa Bolde | m | 1 |
| 56 | Z_Other directorates (DGEDR) | Marcelino Pandé | m | 1 |
| 57 | Z_Other directorates (DGGC) | José Carlos da Silva | m | 1 |
| | | Mempe Correia | f | 1 |
| 58 | ONG ADCTAL | Abdulai Jarname | m | 1 |
| 59 | ONG APESS | Francisco Mahé | m | 1 |
| 60 | G.N-BPNA | Benjamin Mendes Lopes | m | 1 |

| Number of entities (red = priority) | Entity ordered (see note on order) | Stakeholder / Position / Note | Gender | Approximate baseline headcount and gender balance stats |
|---|---|---|---|---|
| 61 | GNBC | Anadi Sahe | m | 1 |
| 62 | IMP | Sabino Sanga | m | 1 |
| 63 | ONG Acção Desenvolvimento AD | Mamadu Ali Jaló, Técnico | m | 3 (2 men 1 women) |
| | | Isabel Miranda | f | |
| | | Adulai Solo | m | |
| 64 | ONG Adema, Nantinyan Bijagós | Representatives consulted | f & m (balanced) | 1 |
| 65 | ONG DIVUTEC, ADS Cufada Mansoa | Representatives consulted | f & m (balanced) | 1 |
| 66 | ONG Tininguena | Representatives consulted (1 male, 1 female) | f & m (balanced) | 4 (2 men 2 women) |
| | | Lassama Samó | m | |
| | | Julio Badinca, Técnico | m | |
| 67 | ONG's APESS/Gabú | Francisco A. Mané, Responsavel | m | 1 |
| 68 | PDCV_RIZ | Julio Cassamá | m | 1 |
| 69 | RERAO | Amendá da ONG RERAO | f | 1 |
| 70 | SNPC | Benvindo Nagague | m | 1 |
| | | Luis Quessonde | m | 1 |
| 71 | UICN – União Internacional para a Conservação da Natureza | Representatives consulted | f & m (balanced) | 1 |
| 72 | University of Lisbon (U.L.) | Pedro Garett, Natural Sciences Faculty, Climate Change group of Prof. Duarte | m | 1 |
| 73 | African Development Bank (AfDB) | Fernando Lobato | m | 1 |
| | | Manuel Saidi | m | 1 |
| 74 | FAO | Garcia Bacar Embaló, Assistente Operações | m | 1 |
| | | Julio M Injai | m | 1 |
| 75 | World Bank (WB) | Representatives consulted | m | 1 |
| 76 | ONU- HABTAT | Edinilson A. Silva, Assistente Técnico | m | 1 |
| 77 | World Food Program | Representatives consulted | m | 1 |
| 78 | UNDP Bissau | Dauda Sau, Chefe da Unidade de Ambiente | f & m (balanced) | 7 (4 men 3 women) |
| | | Gabriel Dava, DRR, UNDP | m | |
| | | Aliu Gomes, Coordenador | m | |
| | | Angda Abdula | f | |
| | | Elisabete Dumbia, Assistente do Programa | f | |
| | | Junko Nakai, Especialista no Amb. Energia | f | |
| | | Mr. Edmilson da Silva | m | |
| 79 | UNDP GEF Regional Office in Addis Ababa | Henry Rene Diouf, Reg Tech Adviser (RTA, UNDP GEF) | m | 2 (1 man 1 woman) |
| | | Adey Tesfaye, Regional PA (UNDP GEF) | f | |
| 80 | PPG Team - Antea Group, Belgium (Joint Venture EBD-Antea) | Ilina Rebordão, Consultora PPG | f | 8 (2 men 6 women, incl. lead) |
| | | Dick van den Bergh | m | |
| 81 | PPG Team - EBD Global Optimum, Brazil | Birgit Embalo , Consultora PPG | f | |
| | | Claudia Bethlem, Consultora PPG | f | |
| | | Itel Abissa Vieira, Consultora PPG | f | |
| | | Justino Biai, Consultor PPG | m | |
| | | Christiane Severo | f | |
| | | Fabiana Issler, Consultora PPG (Lead) | f | |

- [END OF STAKEHOLDER COUNT: n=81 entities] -

## *2) Stakeholder Engagement Strategy and Approach*

The approach to stakeholder involvement and participation during project implementation was based on the principles outlined in the in the table below:

| Principle | Stakeholder Participation will |
|---|---|
| Value adding | Be an essential means of adding value to the project |
| Inclusivity | Include all relevant stakeholders |
| Accessibility and access | Be accessible and promote access to the process |
| Transparency | Be based on information transparency and fair access to it |
| Fairness | Ensure that all stakeholders are treated in a fair and unbiased way |
| Accountability | Be based on a commitment to accountability by all stakeholders |
| Constructiveness | Seek to manage potential conflicts and promote the public interest |
| Redressing | Seek to redress inequality and injustice |
| Capacitating | Seek to develop the capacity of all stakeholders |
| Needs-basing | Be based on the needs of all stakeholders |
| Flexibility | Be flexibly designed and implemented |
| Rationality and coordination | Be rationally coordinated and not be improvised |
| Excellence | Be subject to ongoing reflection and improvement |

## *3) Stakeholder Involvement Plan*

The design of this Project incorporates several features and activities to ensure ongoing and effective stakeholder participation. The project implementation mechanisms in place will facilitate involvement and active participation of different elements:

(i) **Project inception workshop** to enable stakeholder awareness of the beginning of the project implementation. This event will take the form of a multi stakeholder workshop. The workshop will provide an opportunity for all stakeholders to get acquainted with the most updated information on the project and workplan. It will also establish a basis for further consultation as the project implementation commences. The inception workshop will address many key issues including assisting all implementation partners to fully understand and take ownership of the project, detail roles support services and complimentary responsibilities of the diverse stakeholders. The inception workshop will capacitate all partners identified with the plan for implementation of the project outputs and activities and discuss the roles, functions and responsibilities with the project structure, including reporting and communication lines and conflict resolution mechanisms. The inception workshop will also be a forum to review the project budget, finalize the first annual workplan as well as review and agree on the indicators, targets and their means of verification, recheck assumptions and risks, and to provide a detailed overview of reporting, monitoring and evaluation (M&E) requirements.

(ii) **Establishment of a Project Management Team** to oversee stakeholder engagement processes during the project implementation.

(iii) **Project communications --** to facilitate ongoing awareness of project. The project will develop, implement and maintain a communications strategy to ensure that all stakeholders are informed on an ongoing basis about: the project's objectives, the projects activities, overall project progress, and the opportunities for involvement in various aspects of the project implementation. This strategy will ensure the use of communication techniques and approaches that are appropriate to the local contexts such as appropriate language and other skills that enhance communication effectiveness. The project will develop and maintain a web-based platform for sharing and disseminating information on climate adaptive and diversified value chains across the project planning domain

(iv) **Stakeholder consultations and participation in project implementation**. A comprehensive stakeholder consultations and participation process will be developed and implemented for all project outputs/activities, building on the process already started during the PPG stage (refer to section 1 of this Annex for more information on the Stakeholders consulted during the PPG). A participatory approach will be adopted to facilitate the continued involvement of local stakeholders including the women and youth (refer to Gender chapter of the PRODOC for more specific description of gender approach. Wherever possible, opportunities will be created to train and employ residents from villages proximate to sites targeted for project intervention.

(v) **Formal structures to facilitate stakeholder involvement** in project activities. The project will also actively seek to establish formalized structures to ensure the ongoing participation of local and institutional stakeholders in project activities.

(vi) **Capacity building**: All project activities are strategically focused on building the capacity at the systemic, institutional and individual level -- to ensure sustainability of initial project investments. The project will, wherever possible, use the services and facilities of existing local training and skills development institutions.

# ANNEX G. Gender Analysis and Action Plan

## *1) Gender Considerations*

### *Gender Context Analysis*

The sectors that ensure the subsistence of the overwhelming majority of Guinean households and constitute the country's economic basis are the most vulnerable ones to climate change. These are the agrarian sector (agriculture, forests and livestock), the sector of water resources and the fishing sector.

The role and responsibilities of women have increased at the productive level, without parallel decrease in domestic obligations. This is due to the scarcity of social services and infrastructures, the emigration of men who often abandon their home once abroad, early widowhood of women and the absence of traditional mechanisms of social regulation. Women end up being responsible for large part of the family's living obligations, cooking and domestic work, with no real counterpart in terms of access to and management of household goods, but contributing more and more to family income. They usually resort to informal, low-income work as a farmer, merchant woman (*bideira*) and / or domestic worker (PNIEG, 2014).

Bissau-Guinean women bear on average five children (6.8 in rural areas, according to UNICEF country statistics) for whom they care - all without access to basic infrastructure of water, sanitation, electricity or transport to save time, ease physical burdens, and increase productivity. 75% of households do not have on-site drinking water, and women over 15 years old typically spend at least 30 minutes per day to get water, according to the Multiple Indicator Cluster Survey (MICS4). Only 18% of the population has improved sanitation facilities for human waste; in rural areas the number is as low as 3%. The ILAP 2 survey (2010) found that a majority of Bissau-Guinean households (65%) uses candles for light at night, and rural roads are often almost impassable.

The informal sector of the economy is very large, with women in both Bissau and country's regions engaged in small-scale trade, market sales and services. During economic crisis it is expanding even further. Rigorous data are lacking, but the PNIEG estimates that women are 51.6% of those engaged in the informal sector and particularly women heads of households (62,2%). A full analysis of women's roles in the informal sector is still to be undertaken, especially regarding the degree of hardship induced by the type of work undertaken in the informal sector combined with the pressures linked to their household duties.

Although both women and men suffer from the effects of poverty, the feminization of poverty in Guinea-Bissau is highly visible. Men control whatever scarce resources are available and women's income-producing labor becomes more arduous and less productive. Women's gender specific roles are also more burdensome under poverty: domestic labor, which keeps women from income-producing activities and girls from school. Women's reproductive roles, for which poverty increases risks of malnutrition, illness and maternal mortality. Young girls are also at greater risk of early/forced marriage to relieve family economic burdens.

Climate change will have strong impact on women`s health: Regarding the high percentage of people living in poverty / extreme poverty in Guinea-Bissau (67 %/33 % thereof with less than 1 USD/day), women and children often have to skip meals as households cannot afford three meals per day. "Um tiro", one shot, is a popular saying describing the nutritional situation of many families in Guinea-Bissau (MICS, 2014). In times of severe food gaps, women will have even less possibilities to eat enough food. Therefore, they will have less ability to adapt to climate shocks, will be less resilient to certain illnesses, such as malaria and cholera, and often will be too weak to continue their work as primary food producer.

### *Gender Gap Analysis / Gender Parity Indicators*

Gender gaps exist in almost every sector of society in Guinea-Bissau. Although gender disaggregated data do not cover all relevant indicators / areas and authenticity of the data is sometimes doubtful, we can note significant differences. The main source for the following Gender Gap Overview is the Gender Profile Study, elaborated by the African Development Bank and UN-Women in 2015.

***Table 20. Female vs male indicators compared***

| Indicator / Area | Male | Female | Observation / Source |
|---|---|---|---|
| Illiteracy rate (adults) | 28,0 % | 51,5 % | 2015, African Development Bank; 2010 even worse ca. 60% with up to 90% illiteracy in rural areas (DENARP II, 2011) |
| Mean years of schooling (2001-2012) | 3,4 years | 1,4 years | GP |
| Population<br>Outside Bissau 76% | 49,7 % | 50,3 % | Total: 1.700.000<br>(2014) |
| Rural population below poverty line | 33 /69 % | 33 / 69 % | Total: 75,6 % (GP)<br>Extreme: less 1 USD 33%, nationwide, ILAP 2010 |
| Rationale urban/ rural population | no data | 40 % / 60 % | General: 42,16 vs. 57,84 (MICS 4) |
| Life expectance at birth (2014) | 51,5 years | 54,1 years | MICS 5 2014<br>Senegal: 61 years |
| Female Genital Mutilation | n/a | 50% (15-49 years) | |
| HIV/AIDS Prevalence Rate (age 15-24) | 0,9 | 2,0 | Pregnant women (5%) |
| Contraceptive Prevalence Rate | No data | 15% | 2014, INE |
| Fertility Rate, total birth pro woman | n/a | 5 (Bissau);<br>6,8 (rural areas) | GP |
| Maternal Mortality Rate | n/a | 560/100.000 birth | One of the highest worldwide |
| Early union or marriage | No data | 7% before 15; 29% before 18 | MICS, 2010 |
| Household heads | 62% | 31% in Bissau, 20% rest of country | ILAP, 2010 |
| Children (5-17) working | 40,4 | 37,6 | INE 2015, children,<br>85% in families (no remuneration), in agriculture and meal preparation |
| Proportion of women in agricultural work | n/a | 80% | GP |
| Formal occupation | 10% | 2,6% | WB 2016 |
| Social Security and pension | Only civil servants | Only civil servants | |

The general high illiteracy rate of women, with extreme values of 90% in rural areas, particularly in Oio and Tombali regions, demonstrates the magnitude of the challenge to create a skilled labor force in the country (DENARP II, p.22).

The primary (19.3%) and lower secondary (8.9%) school completion rates for women are abysmal and worse than their male counterparts with only 38.6% and 5.9% of girls even enrolling in primary and secondary schools respectively (2014 est.; World Bank, 2016). Further, in 2015, women held between 10-30% of the national parliament and only 31.3% of the ministerial level positions going to women (World Bank, 2016). These indicators suggest that the women of Guinea-Bissau are some of the poorest and most disempowered in the world although there have been slight improvements since 2000 (World Bank, 2016) (Fernandes etc. 2016)

## *Gender commitments and legal situation of women in Guinea-Bissau*

The reality of living conditions in Guinea-Bissau indicate severe discrimination of women and violation of their rights. Articles 24 and 25 of the 1984 Constitution of Guinea-Bissau prohibit all forms of discrimination on the grounds of sex, race or religion. The country ratified the "Convention on the Elimination of All Forms of Discrimination against Women (CEDAW)" in 1985 and "The African Charter on Human and Peoples' Rights" in 1986. The later states in Article 18,3 that "the State shall ensure the elimination of every discrimination against women and also ensure the protection of the rights of the woman and the child as stipulated in international declarations and conventions." Guinea-Bissau also signed the UN-Resolutions 1325 (2000), 1820 (2008) and 1899 (2009) on the participation of women and their protection in conflict and post-conflict situations. It further ratified "The Protocol to the African Charter on Human and Peoples' Rights on the Rights of Women in Africa" of Maputo

(2003), and the "Optional Protocol on Violence against Women" in 2009. In all these declarations, member states have reaffirmed commitment to gender equality.[50]

Nevertheless, in many rural communities of Guinea-Bissau customary law is still followed, and women do not always choose when and whom to marry. Marriages often are not registered. The **legal age of marriage** in Guinea-Bissau is 18 for women and men, but there are no penalties in place to punish those who force children into marriage. While article 25 of the Constitution establishes the principle of equality between men and women, some provisions of the Civil Code and Family Code, inherited from the colonial period, discriminate against women. Although under civil law, both parents have equal **parental authority** within marriage and following **divorce**, article 1674 of the Civil Code states that the husband is the head of family, thus providing him the right to represent his wife and make decisions of behalf of entire family. Although **polygamous marriages** are not legally recognized, survey data from 2010 reports that 48% of 15-49 year-old women live in polygamous marriages (www.genderindex.org/country/guinea-bissau/). In 2011, Guinea-Bissau approved a law prohibiting female genital mutilation (FGM) and cutting nationwide. Based on MICS4 data, it is estimated that in 2010, 50% of women aged 15-49 had experienced some form of FGM and 38.7% of women who age 15-49 have at least one daughter who has experienced FGM (PNIEG).

In 2014, a law against domestic violence was passed which criminalizes domestic violence and establishes sentences of up to 12 years in prison. Although police intervene in domestic disputes if requested to do so, women are often reluctant to report abuse due to stigma and social pressure to avoid filing complaints.

Legally, women have the same rights as men to ownership, but among certain ethnic groups women have no **access to land or non-land assets**, largely because of discriminatory customary laws relating to inheritance. Laws governing **inheritance are also discriminating. According to** Article 1678 of the Civil Code the couple's assets belong to husband, but woman can take them over in case for some reasons husband is unable to do so. Customary laws that govern some ethnic groups prohibit women from inheriting property and the latter is passed on to a male heir. Some communities practice widow inheritance, whereby a widowed woman is forced to marry one of her husband's male relatives. If she refuses, she and her children can be evicted from the family's land.

Women's access to property other than land and their access to bank loans is heavily restricted because as heads of households, men hold sole authority over most family matters. In addition, according to article 1686 of the Civil Code, a woman cannot run a business without her husband's consent unless she is an owner of all of household's property or if couple has a separate property (FIDH, 2013).

In practice, it has to be admitted that there is still a lack of legislation and enforcement capacity in place that would enable the realization of the national and international commitments to gender equality and equity and the rights of women in Guinea-Bissau. Women are still waiting for these documents to become national standards that can be effectively applied at the local level for the benefit of women. With respect to human rights baselines, the country's performance has improved substantially over the last years. Guinea-Bissau began to implement the Convention on the Elimination of All forms of Discrimination Against Women and the Convention on the Rights of the Child in May 2010 (DENARP II, p. 24).

## *Socio-economic situation of women*

A key characteristic of gender roles in the economy of Guinea-Bissau is the high percentage of women engaged in economic activity. About 80% of female household members over 15 years old are economically active compared to 90% of men (ILAP II, GP). The economy of Guinea- Bissau is based on small farmers subsistence agriculture combined with cashew as the key export crop, involving all rural labor force (seasonally) and providing 90% of exports (WB 2014).

[50] In recognition of the need to ensure that women's voices are heard, the Maputo Protocol on the Rights of Women in Africa was adopted by the African Union Commission (AUC) and came into effect in 2005. Article 19 sets out parameters for the right to sustainable development, calling for realistic participation of women in development planning; guaranteed land and property rights; and access to credit, training, skills development and extension services to promote economic rights and combat poverty. Women's NGOs have called for full ratification and implementation of the Protocol and for enhanced allocation of resources for climate change mitigation and adaptation. They have highlighted the need to ensure that land reforms (such as titling programs) and the advance of agribusiness do not result in loss to communities of common resources (DAWNnet.org 2011).

A small portion of the total labor force, estimated at about 10 percent and primarily male, are salaried employees in the private or public sector (GP). The few women who are educated hold government positions, own small businesses, work in hotels or restaurants, head local non-profit organizations or work for international development technical or funding partners.

The private sector is composed of a few finance, trade, transport and service enterprises, primarily in Bissau. Industrial production is small-scale and largely limited to the processing of agricultural products, with men as owners and managers and women at the bottom of the value chain.

## Agriculture and gender

Women in sub-Saharan Africa have the highest average agricultural labor-force participation rates in the world. Cultural norms in the region have long encouraged women to be economically self-reliant and traditionally give women substantial responsibility for agricultural production in their own right. Regional data for sub-Saharan Africa conceal wide differences among countries and among different ethnic groups.

Cashew is grown exclusively for export, and rice and horticulture crops (vegetables and fruit) are grown for consumption and national market sales. Despite the importance of agriculture to the economy, the majority of farmers – especially women – work at primitive levels, with little or no tools, equipment, training, access to water or decent roads. Since men control decisions over land and resources and often allocate these first to their own work, women farmers are especially disadvantaged (GP).

Labor division in agriculture is widely gender biased. Women's roles are concentrated at the low end of the value chain. For example, the farming and harvesting of the cashew nuts is done largely by women (peak season March to May), whereas the land is owned by their husbands or fathers. The nuts are sold by male farmers to a trader, exporter or processor (also male), or stored for later sale or exchange for family income and consumption items as decided by men. (GP). Women also work at peeling and sorting nuts. The cashew stem or fruit ("apple") is only processed on a very small scale (less than 1%), almost entirely by women.

Rice, the staple base of household consumption, is farmed by both women and men. Among most ethnic groups clear labor division is the rule. Rice farming is labor intensive and most work burden lays on women´s shoulders. In rice cultivation, men dig the fields, while the women sow the seedlings and do most of the harvest. They are also the ones who must peel the rice, usually done entirely by hand. Among the Papel ethnic group, women do not participate in rice cultivation. Most expertise in wetland rice production have the Balanta women, the traditional rice cultivators of Guinea-Bissau who were able to gain surplus in the colonial time for rice export until 1950ties (Temudo in Green, 2016). Much of their bolanhas were destroyed during the liberation war and not repaired after independence. Increasingly, families have converted fields to the low labor-intensive cashew crop, trading cashews for rice through a bartering system rather than producing it, with the result that families often do not have enough rice throughout the year. The continued reliance on mono-culture cashew crop bears high economic and food risks.

Horticulture (vegetables) is a smaller sector of Guinean agriculture, directed to subsistence production and small business on the regional markets. It is exclusively done by women with an overall weak level of organization and lack of marketing strategies. *Badjiki* (roselle leaves), *djagatu* (African eggplant), *kandja* (okra), *malagueta* (chilli) and *sukulbembe* (West African pepper) – as well as palm oil and groundnuts – are used to prepare the sauces for Guinean *bianda* (rice meal). A few larger production units exist with some NGO projects and associations. This activity could very much support the economic empowerment of rural women, if technical and financial means, irrigation and marketing were improved.

Trade with local agricultural and forest products, such as *yam*/ *cassava,* palm oil, fruits (orange, lemon, banana, ananas, dried fruits from the forest, such as Guinea gumvine (*fole*), baobab fruit (*kabasera*), néré (*faroba*) and velvet tamarind (*veludo*) and their transformation on the local, national and regional level are practiced by women and men, but the sector is underdeveloped through the dominance of commercialists from neighboring countries and lack of appropriate technical equipment.

## Fishing and gender

Guinea-Bissau has highly productive fishing waters, and fish and other seafood are a second principal export good, mostly through international commercial fishing, i.e. the payment of licenses to the Guinean state. Fishing is also the second leading occupation after agriculture, although political instability over the last years increased illegal fishing (by international companies and neighbors) as well as corruption, and as consequence of this diminishing fishing activity of the population (male and female) and cutting household income as well as employment.

The coastal ecosystem covered by Mangrove is in the origin of an alimentary chain that reveals all the vulnerability of this system. Leaves of mangrove create a phytoplankton that feeds a rich zooplankton whose growth is favored by the type of soils and by tides movement. This zooplankton feeds young shrimps, crabs, oysters and some fish, before their becoming adults and moving for high sea. In turn fish predators, birds and men feed from these species.

Besides mangrove, coastal ecosystem offers, at low tide, a favorable soil where shrimps, clams - *combé*, *lingron* - and crustaceans - *cacri*, crabs -, oysters and some fish species are collected. It is here that most of fish capture artisan activities are done.

Most of the *moranças* (households) of the coastal area practice subsistence fishing, using traditional means, different kinds of hamper traps (*cambuas*) and of baskets, the hand net or the basket network. In this type of fishing only the surpluses are marketed.

The most captured or collected species are the *bentana* (Thilapia), accompanied by the mollusks in Creole called: *combé, oyster, cunthurbedja, gandin* and *lingron*. (Vieira, 2009).

Women fish mainly in mangrove areas, in river estuaries and its tributaries and lakes, in *bolanhas* and in slimy lands between two low tides. This particularity, the presence of women in all phases of fishery, so far has not been properly analyzed; studies are more concentrated in the activities of processing and marketing fish as women activity (see Fernandes 2012).

The non-recognition of fish capture by women means to undervalue a feminine know-how essential to the sustainability of this ecosystem from which adult species depend in the high sea, where men exert adult fish capture. This know-how must be understood in its multiple - material and spiritual - dimensions. Clams, combé (*Anadara senilis*) are one of the main protein sources for many communities, and, at the same time, a cultural element essential to ceremonies of initiation and traditional cures. Combé collection is subject to rules that vary greatly between communities. In some places it is even subject to interdiction of collect, or transport to other places duly warned to bring about shipwrecks and storms. Undervaluing this know-how could lead to failure of environmental protection strategies and may represent a severe risk for the future Guinea-Bissau food security (Fernandes, 2012).

*Bideiras* also work in fish and mollusks transport and dominate the fish selling and commerce. Fishing is an important source of economic activity for women in Bissau as elsewhere who also work cleaning and selling fish at the capital´s markets. Fish-vending women, like women in other sectors, work long hours without infrastructure support to make the labor more productive and less onerous, such as roads and transport to take goods to other markets, or cooling machinery for storage.

The World Bank estimated that well- managed commercial fisheries in Guinea-Bissau's could yield potential annual public revenues of almost $30 million. In a gender-sentive approach is taken, the expansion of the fishing sector could provide important new opportunities for women as well as men (GP).

## Gender, political representation and policy making

Despite women´s huge economic importance in the rural areas and informal sector and despite their core role in household management, education, health issues and social care at the family and community level, women in Guinea-Bissau are still suffering from many inequalities, including discrimination in terms of decision-making and governance. Gender issues have started only recently to find their way into national policy considerations.[51]

[51] http://www.crin.org/docs/resources/treaties/crc.30/guinea.bissau_ngo_report.pdf

The Second National Poverty Reduction Strategy of 2011 (DENARP II)[52] is the first national development document that links structural gender inequalities to the economic development of the country and applies gender analysis and gender indicators to explain the situation of Guinean women. The integration of gender issues in a systematic way in the DENARP II has improved the promotion of gender equality and equity in Guinea-Bissau. Gender issues and gender sensitive indicators are included in both the analysis of the situation of the different development sectors and the strategic axes and actions planned for the next 5 years in all the priority areas for intervention. The DENARP II sets (i) a specific objective for the promotion of gender equality and equity, which aims to "eliminate structural inequalities between men and women"; (ii) genders most of the specific objectives, explicitly differentiating men and women as targets of the proposed action; (iii) integrates the gender dimension into planning and follow-up indicators; and (iv) projects budgeting that takes into account gender structural disparities and inequalities.

The "National Policy on Gender Equality and Equity" (PNIEG) was elaborated and validated in 2014. It was developed with participation of all stakeholders over a period of two years. On one side, it is the product of the work of the *National Institute for Women and Children*, created as an operational structure for the development and coordination of policies on women's rights, gender equality and the advancement of women in Guinea-Bissau, and on the other site, the fruit of tireless engagement of strong civil society women's organizations, supported by committed international donors. The PNIEG for the first time takes into account the role of women in the different sectors of the society as well as in the decision-making spheres. The document which also emphasizes the priority of sustainable development is the most important roadmap for gender equality in Guinea-Bissau, providing thorough and comprehensive analysis and recommendations.

The PNIEG finds that women and girls have been especially disadvantaged by the years of crisis since they are allocated by gender to a secondary status in all spheres of household, community and national life. They face gender-based restrictions on their access to scarce resources (such as credit and land) and to education, and the double burden of household work to care for and feed their families along with market work to contribute to family income. Additionally, girls and women in Guinea-Bissau face the gender-specific risk of maternal mortality, and gender-specific abuses such as domestic violence, female genital mutilation (FGM), and early/forced marriage (PNIEG, 2014).

## Underrepresentation of women in political life and government positions

According to the PNIEG, men hold 69% of government positions and are over-represented in key ministries related to women such as Agriculture and Education, where women hold just 14% and 26% of positions, respectively (GP).

The right of women to participate in political life is recognized in the Constitution of Guinea-Bissau. There is currently no legislation in place (such as ***quotas***) to ensure more equal representation of women in politics, and women are underrepresented in decision-making positions in Guinea-Bissau: only 14% of delegates to the National Assembly are women and only few women hold high functions in the political parties (UNIOGBIS, 2013). Some data even indicate that representation, at the national level, had been better before the millennium turn due to the then influence of the first generation of women freedom fighters on active politics. For example, Carmen Pereira, one of the most important women fighters for independence, became the first woman National Assembly President (1984-1989).

The low representation of women in political life is all the more astonishing as women played an outstanding role in the Liberation war. Women "supported PAIGC because they saw in it the potential for their own liberation" (Urdang, 1979, p. 123). While at first, women grew and cooked food for the movement, they later began to transport supplies for the fighters or worked as nurses in the liberated zones. Others eventually took up arms as part of the regular army or local militias. The women were extremely capable in mobilizing the population, and likewise some were made political commissars or were elected to village committees and the People's Tribunals. Without the participation of women in the liberation of the country would not have been achieved. At the party level, women were quickly integrated into leadership positions and a quota system

[52] The DENARP II is part of the Development Vision, called "Guinea Bissau 2025 Djitu Ten", adopted by the Government in 1996. It is the reference framework for strategic planning, programming and budgeting of development actions, as well as for dialogue with technical and financial partners.

was in place for the [PAIGC] tribunals and councils, in an effort to ensure that at least two of the five elected members were women" (Urdung 2013, p. 275).

There is a strong network of NGOs, umbrela organizations, networks and civil society platforms active in Guinea-Bissua that are involved in women's issues, such as Women's Political Platform (PPM - *Plataforma Política das Mulheres*); *Rede Paz e Segurança para as Mulheres do Espaço da CEDEAO* (REMSECAO); *Rede Nacional de Luta contra Violência Baseada no Gênero e na Criança* (RENLUV); Association of Women of Economic Activity (AMAE - *Associação das Mulheres com Actividades Económicas*); *Comitê Nacional para o Abandono das Práticas Nefastas* (CNPN); *Associação das Produtoras Agricolas e para a Luta Contra a Fome* (APALCOF, Contubuel). There are also associations for specific areas of women's work such as women fish-vendors, who are linked as members of the umbrella association of economically active women AMAE.

The PNIEG now needs to be operationalized and prioritized, with resources and targets. Some progress has been made to incorporate a gender perspective in new policies and priorities. Cases of FGM were brought to justice for the very first time in 2015, and debates to establish a minimum of 30% female representation in Parliament unfolded. Nevertheless, the challenges are huge given the country`s chronical instability and very restricted public resources in financial and institutional terms and in human capital.

## *2) Gender Action Plan*

***Table 21. Gender Mainstreaming Multiyear Action Plan (v. 28.10.2017)***

| Objective | Action 1 | Action 2 | Action 3 | Action 4 | Action 5 | Action 6 | Years (1,2,3,4,5) |
|---|---|---|---|---|---|---|---|
| **Objective 1:**<br><br>**Mainstream gender in all policies, programs and processes of climate change management of Guinea-Bissau** | Gender analysis of the Climate Change Policy and important legislation | Include gender component; gender analysis should be an integral part of national assessments of CC to create evidence of differentiated impacts and inform policy, planning and practice. | Conduct gender and climate change awareness training workshops for different categories of policy and decision makers and stakeholders at all levels. | Multi-stakeholder dialogues on gender and climate change, at national and county level with inclusive and equal participation of both women and men. | Propose revision of PNIEG, addressing the vulnerability of women to climate-related natural disasters | | 1-2 |
| **Objective 2:**<br><br>**Enhance capacities for gender mainstreaming in the overall climate change management at all levels.** | Training and capacity: needs assessments design and implementation of training among gender and climate change focal points in line ministries and all other relevant technical staff and leadership | Create positive organizational environment for gender by<br>developing a comprehensive gender mainstreaming toolkit for project or program cycles;<br>applying existing gender commitments to climate change portfolios;<br>strengthening internal gender mechanisms, for example, by establishing multi-department gender committees | Technical support for mainstreaming gender in climate change at LEAD INSTITUTION, (Ministry of Environment); external experts to support strong gender approach | Undertake planning and fundraising for gender action plan. | Limited number of women involved in decision making at national levels remains prevalent;<br>50% women representation envisaged | Reflection of principles of gender equity through gender representation in all decision-making processes, institutions and financing mechanisms in the governance structures of the national climate change management | 1,2,3,4 |
| **Objective 3:**<br><br>**Generate and disseminate knowledge and information on the differentiated impacts of** | Design and undertake research on social and gendered impacts of | Document and disseminate policy briefs, case studies and documentaries among players in climate change, | Capacity training of National Institute of Statistics for provision of gender disaggregated data | Sensitization campaigns in schools and affected communities | | | 1,2,3,5 |

| Objective | Action 1 | Action 2 | Action 3 | Action 4 | Action 5 | Action 6 | Years (1,2,3,4,5) |
|---|---|---|---|---|---|---|---|
| **climate change on women and men, girls and boys in Guinea-Bissau** | climate change and show the causes of vulnerability among different social groups | | | | | | |
| **Objective 4:**<br><br>**Give strategic attention to gender equality and the empowerment of women in Guinea-Bissau, ensuring that programmatic and operational activities of Climate Change Resilience projects are gender-sensitive in order to accelerate social transformation** | Create a discussion forum to facilitate dialogue on gender issues between the village associations, local authorities, regional and national administration. | Ensure that women's needs and interests are represented in the design and implementation of on-the-ground interventions | Undertake targeted awareness-raising and outreach campaigns to increase women's participation in the design and implementation of project activities as well as decision-making processes. | Apply gender indicators consequently during project design and implementation | Consider lessons learned on the experiences and coping strategies of women and men to climate change and the implications for future project and program design | | 1,2, 4,5 |
| **Objective 5:**<br><br>**Increase gender responsive and sustainable adaptation and mitigation measures in the communities in Guinea-Bissau in order to reduce significantly the risks associated with climate change and natural disasters** | Document and use both women's and men's knowledge and experiences on adaptation and mitigation; synthesis of knowledge of key climate resilient practices | Strengthen through training (agriculture extension) capacities for diversification of livelihoods: crops (especially those that can withstand extreme climate variations); water sources (rain water), energy sources, house protection as means to enhance community resilience | Enhance women´s capacities for diversification of livelihoods through training & implementation of horticulture (including resistant vegetables), functional alphabetization, fruit processing (juice, dried fruits | Explore and implement renewable energy programs at household and institutional levels (biogas, cow dung, ethanol, improved cookers) | Promote women small agribusiness and (informal) entrepreneurship through capacity training, marketing strategies and small grants | | 1,2,3,4,5 |
| **Objective 6:**<br><br>**Promote partnership and cooperation among key actors (state- and non-state, national and international) on gender** | Develop a database of gender and climate experts who can support the engendering processes | Link institutions and NGOs to existing funds to finance gender responsive adaptation activities | Identify and develop partnerships with donor and development partners for training, capacity building, and | Create and strengthen working group for gender and climate change as one of the technical working groups for implementation of | Encourage gender focal points to develop their action plans in collaboration with climate change focal points. | Develop partnerships and collaboration with gender and women's organizations, gender working groups and experts that will enhance the | 1,2,4 |

| Objective | Action 1 | Action 2 | Action 3 | Action 4 | Action 5 | Action 6 | Years (1,2,3,4,5) |
|---|---|---|---|---|---|---|---|
| **and climate change** | | | research activities. | climate change projects | | possibilities of gender responsiveness and benefit the implementation of the strategy significantly by leveraging resources | |
| **Objective 7:**<br><br>**Mainstream gender responsiveness into the monitoring and evaluation systems of climate change projects in Guinea-Bissau through gender analysis and support of the collection of sex disaggregated data on climate change** | Data on adaptation and mitigation should be disaggregated by sex and gender to bring out the differentiated impacts of interventions on women and men | Develop gender indicators to measure vulnerability and resilience | Measure the institutional capacities for mainstreaming gender | Develop effective and accountable monitoring and evaluation of adaptation and mitigation financing mechanisms to show how both women and men are benefiting and how their diverse priorities are being met. | Integrate gender component into the proposed climate change projects monitoring and evaluation system | | 1,3,5 |
| **Objective 8:**<br><br>**Strengthen the institutional framework for gender mainstreaming in Guinea-Bissau** | Support participating institutions to develop engendered data gathering tools and M&E systems. | Establish a cross-sectoral gender and climate change working group to share information and experiences with the implementation of the gender strategy, explore opportunities for learning and scaling up. | Evaluate performance, develop and implement a reward system to recognize good performance on gender mainstreaming | Undertake regular institutional gender audits, gender analysis and other tools for identifying and addressing barriers to gender integration | | | 1,3,5 |
| **Objective 9:**<br><br>**Develop and adapt financing mechanisms on climate change to the priorities and needs of women, youth, men and vulnerable groups.** | Analyze access barriers and constraints faced by women, youth and vulnerable groups | Review climate funding mechanisms so they do not disadvantage poor women and men | Allocate funds for climate activities addressing gender needs and women empowerment, with women decision-makers. | | | | 1,2,3 |

## ANNEX H. UNDP Risk Log

| # | Description | Date Identified | Type | Impact & Probability | Countermeasures / Mngt response | Owner | Submitted, updated by | Last Update | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Enter a brief description of the risk<br><br>(In Atlas, use the Description field. Note: This field cannot be modified after first data entry) | When was the risk first identified<br><br>(In Atlas, select date. Note: date cannot be modified after initial entry) | Environmental<br>Financial<br>Operational<br>Organizational<br>Political<br>Regulatory<br>Strategic<br>Other<br>Subcategories for each risk type should be consulted to understand each risk type (see Deliverable Description for more information)<br><br>(In Atlas, select from list) | Describe the potential effect on the project if this risk were to occur<br><br>Enter probability on a scale from 1 (low) to 5 (high)<br>P =<br><br>Enter impact on a scale from 1 (low) to 5 (high)<br>I =<br><br>(in Atlas, use the Management Response box. Check "critical" if the impact and probability are high) | What actions have been taken/will be taken to counter this risk<br><br>(in Atlas, use the Management Response box. This field can be modified at any time. Create separate boxes as necessary using "+", for instance to record updates at different times) | Who has been appointed to keep an eye on this risk<br><br>(in Atlas, use the Management Response box) | Who submitted the risk<br><br>(In Atlas, automatically recorded) | When was the status of the risk last checked<br><br>(In Atlas, automatically recorded) | e.g. dead, reducing, increasing, no change<br><br>(in Atlas, use the Management Response box) |
| 2 | | | Environmental<br>Financial<br>Operational<br>Organizational<br>Political<br>Regulatory<br>Strategic<br>Other | Text<br><br>P =<br>I = | | | | | |
| 3 | | | | | | | | | |
| 4 | | | | | | | | | |

## ANNEX I. Results of the capacity assessment of the project implementing partner and HACT micro assessment

(attached)

## ANNEX J. Letter of Agreement on Direct Project Cost

**STANDARD LETTER OF AGREEMENT BETWEEN UNDP AND THE GOVERNMENT FOR THE PROVISION OF SUPPORT SERVICES**

Dear Mr Julio Mamadu Lamine Ba,

1. Reference is made to consultations between officials of the Government of [the name of programme country] (hereinafter referred to as "the Government") and officials of UNDP with respect to the provision of support services by the UNDP country office for nationally managed programmes and projects. UNDP and the Government hereby agree that the UNDP country office may provide such support services at the request of the Government through its institution designated in the relevant programme support document or project document, as described below.

2. The UNDP country office may provide support services for assistance with reporting requirements and direct payment. In providing such support services, the UNDP country office shall ensure that the capacity of the Government-designated institution is strengthened to enable it to carry out such activities directly. The costs incurred by the UNDP country office in providing such support services shall be recovered from the administrative budget of the office.

3. The UNDP country office may provide, at the request of the designated institution, the following support services for the activities of the programme/project:

(a) Identification and/or recruitment of project and programme personnel;

(b) Identification and facilitation of training activities;

(a) Procurement of goods and services;

4. The procurement of goods and services and the recruitment of project and programme personnel by the UNDP country office shall be in accordance with the UNDP regulations, rules, policies and procedures. Support services described in paragraph 3 above shall be detailed in an annex to the programme support document or project document, in the form provided in the Attachment hereto. If the requirements for support services by the country office change during the life of a programme or project, the annex to the programme support document or project document is revised with the mutual agreement of the UNDP resident representative and the designated institution.

5. The relevant provisions of the [Insert title and date of the UNDP standard basic assistance agreement with the Government of Guine Bissau in 1975 (the "SBAA"), including the provisions on liability and privileges and immunities, shall apply to the provision of such support services. The Government shall retain overall responsibility for the nationally managed programme or project through its designated institution. The responsibility of the UNDP country office for the provision of the support services described herein shall be limited to the provision of such support services detailed in the annex to the programme support document or project document.

6. Any claim or dispute arising under or in connection with the provision of support services by the UNDP country office in accordance with this letter shall be handled pursuant to the relevant provisions of the SBAA.

7. The manner and method of cost-recovery by the UNDP country office in providing the support services described in paragraph 3 above shall be specified in the annex to the programme support document or project document.

8. The UNDP country office shall submit progress reports on the support services provided and shall report on the costs reimbursed in providing such services, as may be required.

9. Any modification of the present arrangements shall be effected by mutual written agreement of the parties hereto.

10. If you are in agreement with the provisions set forth above, please sign and return to this office two signed copies of this letter. Upon your signature, this letter shall constitute an agreement between your Government and UNDP on the terms and conditions for the provision of support services by the UNDP country office for nationally managed programmes and projects.

Yours sincerely,

_____

Signed on behalf of UNDP

Gabriel Dava

Deputy Resident Representative

_____

**For the Government**

Julio Mamadu Lamine Ba,

General Director of Sustainable Development

Ministry of Environment and Sustainable Development

**[Date]**

Attachment

## DESCRIPTION OF UNDP COUNTRY OFFICE SUPPORT SERVICES

1. Reference is made to consultations between *Ministry of Energy and Mineral Development*, the institution designated by the Government of Guinea-Bissau and officials of UNDP with respect to the provision of support services by the UNDP country office for the nationally managed ***Project entitled: Strengthen the adaptive capacity and climate resilience of Guinea-Bissau vulnerable coastal communities to climate risks, PIMS 4978, Award number 00095375 and Project number 00099383.***

2. In accordance with the provisions of the letter of agreement signed on _____ and the *project document*, the UNDP country office shall provide support services for the *Project* as described below.

3. Support services to be provided:

| **Support services** | **Schedule for the provision of the support services** | **Cost to UNDP of providing such support services (where appropriate)** | **Amount and method of reimbursement of UNDP (where appropriate)** |
|---|---|---|---|
| 1. Recruitment of an International Consultants ($ 325,000) | To be recruited as per AWP | As per Universal Price List (UPL), the service fee is estimated at USD 1,330.31 | ATLAS billing |
| 2. Recruitment of Local Consultants ($ 359,000) (5/year for 5 years) | To be engaged as per AWP | As per UPL, the service fee is estimated at USD 8,022.25 | ATLAS billing |
| 3. Contractual service (Individual contracts for Project staff) ($ 56,000) (5/year for 5 years) | To be recruited as per AWP | As per UPL, the service fee is estimated at USD 8,022.25 | ATLAS billing |
| 4. Contractual service companies ($ 7,172,00) (Following up 4 contract/ year for 5 years | To be recruited as per AWP | As per UPL, the service fee is estimated at USD 159,645.24 | ATLAS billing |
| 5. Grants and Equipment ($ 1,200,000) | To be engaged as per AWP | As per UPL, the service fee is estimated at USD 7,789.89 | ATLAS billing |
| 6. Events/ Trainings ($ 41,000) (4/ year for 5 years) | To be engaged as per AWP | As per UPL, the service fee is estimated at USD 7,061.60 | ATLAS billing |
| 7. Communication equipment ($ 30,000) | To be arranged as per AWP | As per UPL, the service fee is estimated at USD 3,103.40 | ATLAS billing |
| 8. Travel ($ 89,000)- (4/ months *5 Years | To be arranged as per AWP | As per UPL, the service fee is estimated at USD 5,899,20 | ATLAS billing |
| 9. F10 settlement ($11,000)- 4/ months *5 Years | To be arranged as per AWP | As per UPL, the service fee is estimated at USD 5,538.40 | ATLAS billing |
| 10. Asset disposal and closure - | To be arranged as per AWP | As per UPL, the service fee is estimated at USD 3,587.00 | ATLAS billing |
| | | **Estimated – USD 210,000** | |

Line item in project budget

| Atlas Budgetary Account Code | ATLAS Budget Description | Amount Year 1 ($) | Amount Year 2 ($) | Amount Year 3 ($) | Amount Year 4 ($) | Amount Year 5 ($) | Total ($) | See Budget Note: |
|---|---|---|---|---|---|---|---|---|
| 74596 | Direct Project Costs | 52,500 | 35,000 | 35,000 | 35,000 | 52,500 | 210,000 | 36 |

4. Description of functions and responsibilities of the parties involved:

Functions and responsibilities of Ministry of Energy and Mineral Development and Responsible parties shall be to:

- Prepare TORs and Specifications for procurement of services, goods and equipment and request UNDP to procure the International / Local Consultants,
- Prepare Job descriptions and request UNDP to advertise and recruit Project staff,
- Set up Grant management committees and request UNDP to disburse grants/ procure equipment,
- Request UNDP to procure services for some events,
- Request UNDP to procure some communication equipment

Functions and responsibilities of UNDP

- Procurement of services, goods and equipment and request UNDP to procure the International / Local Consultants,
- Advertise and recruit Project staff,
- disburse grants, monitor and evaluate them/ procure equipment,
- Procure services for some events,
- Procure some communication equipment

# XIV. OTHER ANNEXES (W, X, Y, Z)

## ANNEX W. Letters of confirmed Co-financing

| # | Date | Issuer (English) | Program and funder (original language / French) | Period | Type (acc. to GEF typology) | Amount (EUR) | Amount USD or USD equivalent | Rate, if applicable |
|---|---|---|---|---|---|---|---|---|
| 1 | 13 Mar 2018 | United Nations Development Program (UNDP), core funds | n/a | 2019-2023 | grant | - | 500,000 | |
| 2 | 16 Mar 2018 | Ministry of Agriculture, Forests and Livestock, in connection with Project 'Global Alliance for Resilience (AGIR) - Sahel and West | *ALLIANCE GLOBALE POUR LA RESILIENCE - AGIR SAHEL ET AFRIQUE DE L'OUEST, European Union, Club Sahel / OECD* | 2018-2022 | grant | 44,000,000 | 51,729,172 | *1.175663* |
| 3 | 16 Mar 2018 | Ministry of Agriculture, Forests and Livestock, in connection with AfDB's Rice Value Chains Project | *Projet de Développement de la Chaine Valeur -Riz (PDCV-Riz), BAD.* | 2018-2020 | grant | - | 6,000,000 | - |
| | | | | | in-kind | - | 400,000 | - |
| TOTAL | | | | | | | 58,629,172 | |

*[Refer To Separate File In PDF]*

# ANNEX X-1. Project Baseline

## *0) Introduction: Drivers behind the Climate Problem*

In articulating the project's ToC, concepts such as **'vulnerability'**, **'resilience'**, **'climate impacts'**, **'climate risk'** and **'exposure'** were explored. The specific analytical framework for vulnerability within Guinea-Bissau's coastal zone revolves around the following elements: the **'coastal geography'**, **'natural assets'**, **'demographics & land-use'** and **'infrastructure and emerging coastal sectors'.** The analysis of how these elements then become drivers of climate risk and vulnerability, and which elements can strengthen resilience (the presence of mangrove e.g.) is presented in the Figures and Boxes that follow:

***Box 5. Concepts adopted: risk and vulnerability***

**FROM PPG REPORT 011- GEO-BASED VULNERABILITY ASSESSMENT**

Risk is expressed as a functional relationship of hazard and vulnerability of the exposed elements, a definition for risk is also used in the IUCN – SDLAO study of the West African Coast:

**RISK = HAZARD X VULNERABILITY X EXPOSURE**

In the specific contextual drivers of coastal vulnerability to climate change, mostly the hazards coastal flooding, inland flooding, storm surges, droughts and salt intrusion could be considered as important for its potentially damaging effects. The vulnerability of a system can furthermore be broken down into components such as:

- Social vulnerability
- Economic vulnerability and
- Physical vulnerability.

Vulnerability can subsequently be expressed in terms of sensitivity and capacity:

**VULNERABILITY = SENSITIVITY (TO THE DAMAGING EFFECTS OF A HAZARD) / CAPACITY**

Sensitivity of the elements exposed (people, infrastructure…) to the damaging effects of hazards will be assessed using *physical, economic and social* indicators, which can be combined together into indices. Sensitivity of the exposed elements is influenced by both generic factors and by hazard-specific factors. The vulnerability assessment therefore would need to be done for each type of hazard considered in the study

Consequently, vulnerability is dependent on three aspects:

1. the exposure to the hazard
2. the sensitivity to the impact
3. the resilience to recover from the consequences

A glossary of key concepts has been included in PPG REPORT 011, in addition

Ancillary concepts:

- Hazard = natural event (meteorological, seismic, epidemic, other) that creates the impacts.
- Vulnerability = susceptibility to be affected by the hazard. This is a function of resistance against the effects of the event and the reliance (coping with the impacts and recover).
- Exposure = Physical component of vulnerability. 'Directness' of the impacts of the Hazard

Source: PPG Report 011: Geo-Based Vulnerability Assessment of the Coastal Zone (2017).

***Box 6. Sectoral vulnerability to climate change: from effects, hazards and risks***

**VULNERABLE SECTORS:**

*With climate change, the viability of traditional methods and techniques for (i) fisheries and fisheries control, as well as (ii) agricultural production (rice, cashew), will be put to the test.*

**The vulnerability of the agricultural sector related** includes mostly to mangrove swamp-rice cultivation, which as a subsistence character, but it may soon affect the commercially-oriented cashew plantations. Family-tendered cashew orchards are increasingly becoming a source of income to the rural poor. Previously concentrated in the interior of the country, the orchards are now widespread in the entire coastal zone.

**CASHEW PRODUCTION:**

Investments in **agro-industrial technologies** or in the **verticalization of cashew production** are basically non-existent in Guinea-Bissau.

**Existing agronomic know-how are rarely put to use in cashew plantations.** With the low levels of investment in production, these conditions result in a sub-optimal development of cashew value chains.

Comparatively, there is a high degree of **wastage** in the production. It may be said that sectoral practices are not just **maladaptive**; they make the entire country vulnerable, given the economy's dependence on cashew exports. If unaddressed, Guinea-Bissau's raking as one of the top-10 producers of cashew in the world can be eventually threatened.

**Increases in household's revenues from the sale of cashew nuts** had recently a positive impact on local communities' resilience. Yet, commodity prices are susceptible to sudden price variations and the current bonanza may not last long. A recent World Bank study on the cashew market showed e.g. that the commodity's price is highly dependent on rainfall patterns in producer countries.[53] Production of cashew nuts in Guinea-Bissau remains for now rather inelastic. So, the sector is not resilient. Hence, Guinea-Bissau is ill equipped to handle climate-driven changes to production conditions—and even less so, if possible external shocks from the cashew market will be ultimately felt by rural producers.

**ARTISANAL FISHERIES:**

Not just the coastal areas, but also entire **seascape habitats** will be significantly affected by climate change. The **effects of climate change on the marine environment** manifest themselves as rising sea temperatures and changes in the oceans' other dynamics are predicted to reduce fish populations. These consequences include ocean acidification and loss of nursery areas for fish. In seascapes with abundant fisheries such as the Bolama-Biajós Archipelago and surroundings, coral bleaching and mangroves degradation are known to destroy fish spawning grounds, decreasing the availability of mature fish for capture. This will, in turn shrink, the livelihood options of artisanal fisher-men and -women.

As an ecosystem-based economic activity, artisanal fisheries in Guinea-Bissau are as vulnerable as land-based sectors. Past observations often show that ecosystem collapse follows a cascade-like effect. The demise of a few keystone species in Guinea-Bissau marine environment—however economically unimportant these species may be—can have a devastating effect on fisheries resources.

In terms of **coastal land uses**, rice paddies[54] and mangrove forests dominate the landscape and "compete" with each other for space in a dynamic cycle of land-use succession, influenced by factors such as culture, availability of local labor and type mangrove—the latter influences e.g. the time investments needed for desalinizing the soil. The cycle is such that famers clear native mangrove for establishing coastal rice fields and exploit it for a few years using non-mechanized techniques. Farmers maintain production to basically to supply own needs (rather than producing to the market), but only until such point when **saline intrusion makes rice cultivation unviable** (or too costly in terms of labor for keeping brackish water out of the field). When not viable, rice fields are then abandoned and gradually invaded by secondary mangrove vegetation.

Until recently, **natural mangrove restoration** has served to deter the bulk of saline intrusion in crop fields, while also enriching the soil and creating good conditions for fish reproduction. A system of dikes and sluices, often built with local materials, serves to ensure the correct water flow and filtration functions.[55] These traditional agro-ecological practices have lasted for a few centuries

[53] Hanusch / WB (2016).

[54] According to Wikipedia, a paddy field is a flooded parcel of arable land used for growing semiaquatic rice (accessed on 15 Jan 2018).

[55] PPG Report 009b on 'Coastal Sector: Low-Land Rice Cultivation' provides a description.

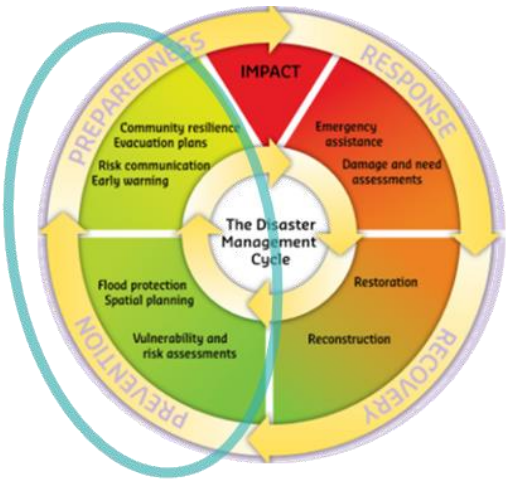
and, apparently, in reasonable balance with nature—until now. **With sea level rise**, the coastal protection provided by natural habitats may not be enough to fend off coastal erosion. Phenomenon such as excess flooding and saline intrusion will become more frequent and intense in various locations along the coast, especially in areas where mangroves have been mostly cut down (as in Varela Peninsula in the north).

**Beyond sea level rise,** other climate change driven impacts on coastal livelihoods include **decreased availability of fresh water,** in particular for human and livestock consumption, different types of **natural hazards** and specific, but poorly studied **impacts on ocean dynamics**, involving e.g. ocean acidification and changes to marine currents and fisheries productivity. The issue with drinking water is linked to drought and the gradual **salinization of aquifers**.

As for storm surge, it will likely be **the most common type of climate related natural hazard affecting the coastal zone**, but not the only one. A higher incidence of **forest fires may affect cashew orchards,** and even result in disrupting consequences to cashew nuts' supplies chains, affecting the income households that depend on it. Decreased productivity of mangrove-rice may have a tangible impact on the country's reserve of grain, and therefore also on food security. The shocks can be worse for Guinea-Bissau, if there are gl as those that affected food prices e.g. in 2007/2008.

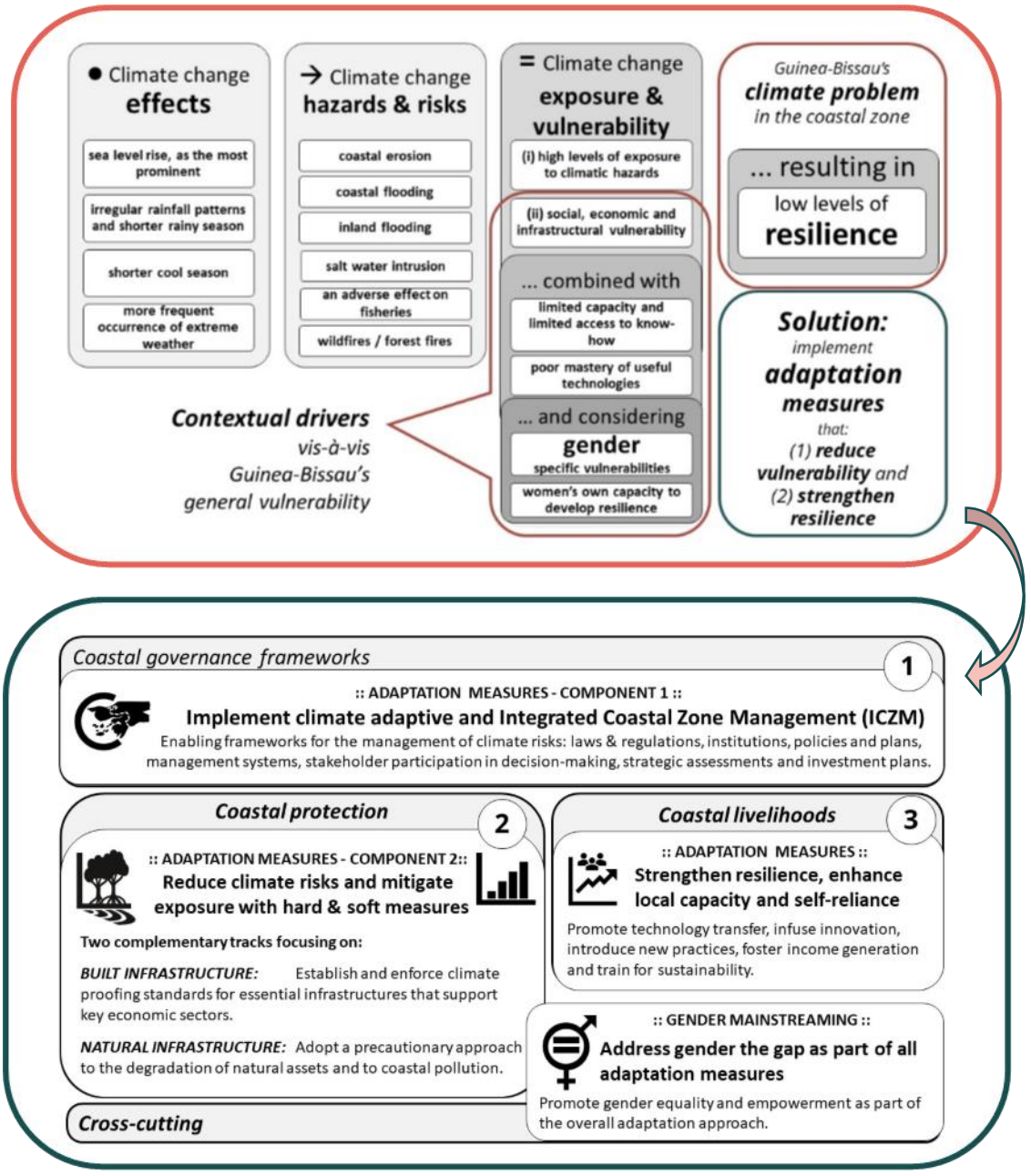
Graphic representation of the project scope vis-a-vis DRRM

***Disaster Risk Reduction and Management (DRRM) into the Project***




Source: Adapted from http://coastal-management.eu/strategies, accessed on 30 Mar 2018

*Figure 9. Analytical framework of climate risk behind the project strategy*



***Box 7. Elements of coastal vulnerability in Guinea-Bissau and underlying causes***

| TOPIC | DESCRIPTION |
|---|---|
| Coastal geography<br>---<br>Complex and exposed | The own nature of the geological and geomorphologic formations along Guinea-Bissau's coast, as well as the dynamics of the coastal zone, make the country vulnerable, as follows:<br>• **An intricate, meandering shoreline** bordering the Atlantic Ocean, containing numerous estuaries that penetrate far inland creating a complex, but yet highly exposed geography.<br>• **The relatively large extent of the coastal zone** vis-à-vis the country's territory also contributes to vulnerability. The official coastal zone, as defined by the Coastal Planning Office (*Gabinete de Planificação Costeira*), covers almost two thirds of the country, where much of the flat terrain reaches average elevations of just 20 to 30 m above sea level.<br>• **The coastal perimeter formations** are mainly sedimentary, and alluvial with a low relief and of recent (quaternary era) deposits as is the case for the whole of the delta of the Guinean coast and the Bijagós Archipelago, while inland the geological and geomorphologic formations are much older (first and second era).<br>• **Natural phenomenon such as beach erosion** has notably severely affected the locality of **Varela** in a severe way. Varela Beach and vicinity holds a small but not negligible potential for tourism development. It is assumed from NAPA scenarios that: (i) climate change is already affecting the strength of wave surge and ocean currents on that coastal spot where Varela Beach is located; and (ii) natural beach erosion processes will be increasingly exacerbated by climate change along the coast; (iii) similar phenomenon in similar estuarine settings is likely affect other beaches along the coast in Guinea-Bissau. |
| Natural assets<br>---<br>Pushed beyond their use threshold, leading to 'collapse' of ecosystem services which are essential to sustain people's economic activities | The concentration of the country's most significant biodiversity resources in the coastal zone, coupled with the fact that coastal populations are highly dependent on natural resources and services for their livelihoods.<br>In such settings, the resilience of natural ecosystems go hand-in-hand with people's resilience. As these ecosystems are degraded and destroyed, this directly contributes to people's vulnerability.<br>Natural assets in Guinea-Bissau's coastal zone, such as the large swaths of mangroves and wetlands can also be seen as a positive "drawing card" in the face of climate change. The analysis around natural assets along the coast and climate change vulnerability is as follows:<br>• **Coastal ecosystems are generally resilient and fishery resources in Guinea-Bissau are considered highly productive.**<br>• The presence of significant natural assets has historically **attracted population to the coast**. As settlements grew, this resulted in **strong demographic pressure on limited resources**.<br>• **Important ecosystem services that contribute to people's resilience include**: e.g. availability of fishing resources, wood for household consumption, fertile land for cultivation, a favorable water cycle, soil retention, among others.<br>• Climate change is likely to affect sea water chemistry and biological processes that contribute to **fisheries' productivity.**<br>• Currently, resource use tends towards **unsustainable practices**, which, in the future, are **likely to reduce the range of adaptation options,** contributing thereby to vulnerability. |
| Demographics and Land & resource Use<br>---<br>The coastal zone | The majority of the population (about 82%) work as subsistence farmers. Climate change is already beginning to affect coastal farming systems that have otherwise been sustained for centuries with more or less unchanged methods.<br>The importance of artisanal fishing for coastal livelihoods is undoubtful. Considering the associated |

| TOPIC | DESCRIPTION |
|---|---|
| attracts people, but predominant uses are not sustainable and not vulnerable to climate change | vulnerabilities is equally important. Site level assessments confirmed this.<br><br>These land use systems will be affected by climatic stressors such as increased flooding and, due to global sea level rise, stronger than usual saltwater encroachment into people's rice paddies (NAPA, INC, 2NC).<br><br>There are both hazards and opportunities linked to demographics and land & resources use from a climate change vulnerability perspective:<br><br>• A predominance of **coastal valleys** that flood regularly (also liked to the complex geography element) means that large swaths of arable coastal lands are conducive to rice cultivation. (CILS, 2016).[56] These geomorphological characteristics are also favourable to coastal erosion -- notably of the annually cultivated soils due to sand build-up in low-lying areas (in particular, in rice fields and watercourses). These conditions will be worsened under the climatic challenging conditions of rising temperatures and the associated rising sea level.<br><br>• **Saline intrusion** has been constant risk in rice cultivation systems, contributing to decreased productivity. Much of the work of a typical coastal farmer's work. With climate change, the pressure will be exacerbated, leading to land abandonment due to the high costs of restoring and maintaining land productivity.<br><br>• Valuable **top soil can be easily washed off and lost**, if flood control is not adequate.<br><br>• While coastal lands under cultivation are subject to degradation, including due to water erosion, the **sustainability of these systems—in particular coastal rice—**depends, to a large extent, on adequate land-use management.<br><br>• **Collaborative cultivation and land & resource use management** at community level tend to increase land productivity, optimize the use of natural resources and strengthen the resilience of coastal communities and their livelihoods. |
| Infrastructure and emerging coastal sectors<br>---<br>Not climate proof and no enabling policies to ensure a sustainable pathway towards it. | Virtually all coastal infrastructures in Guinea-Bissau are run down, maladapted and at risk from climate change. They include: ports, embarkments, roads, fishery wharfs, coastal hotels and, not least also, people's dwellings.<br><br>This situation is the result of a long-term under-investment and limited management efforts and can be thus explained:<br><br>• Because Guinea-Bissau has faced **significant governance and capacity challenges**—and it still does—coastal sectors that would otherwise hold promise in terms of economic growth and income (e.g. **commercial fisheries and tourism**) remain **largely underexploited**.<br><br>• The emergence of an **offshore oil and gas sector** may become a reality in Guinea-Bissau in the upcoming years. There are signs that point out to it. The investments that are normally tagged along with **such developments could quickly change the sectoral profile of Guinea-Bissau's coastal zone** and at a very rapid pace. New infrastructures would be built, and **the Government will be challenged** to share potential benefits arising from such economic transformation, while also regulating, taxing and monitoring the activities of the sector.<br><br>• Policies of **climate proofing sectors and infrastructures** are not yet a reality in Guinea-Bissau – but they should be. Otherwise, the development gains |

In turn, the 'capacity to adapt' and to apply measures and strategies that build resilience implies fostering a combination of strengths, attributes and resources available within a community, society or organization. And herein it also means a focus on capacity that that can be used to achieve agreed goals, e.g. to cope with disasters, face climatic challenges, adopt new technologies and ways of working.[57] The role of coastal governance in enabling the coastal population's capacity to adapt comes strongly into play.

[56] See e.g. CILSS (2016). Landscapes of West Africa – A Window on a Changing World. U.S. Geological Survey EROS, 47914 252nd St, Garretson, SD 57030, UNITED STATES.
[57] From UNISDR, (2009).

A thorough analysis of all of these elements and how they apply to the different 'coastal sectors' is included in this project's Baseline Assessments – See Annex Y for an overview of these studies and for accessing the respective files.

## *1) Governance frameworks for Coastal Zone Management*

**Background: Introduction to Component 1's Baseline: Coastal Governance**

### *Institutions*

Summary of relevant institutions in Guinea-Bissau (refer also to Box 8 further down):

- The General Directorates of the Environment and Durable Development DNADD (GPC) do not have representation in different regions of the country to help regional governments better consider environmental issues and to develop concrete activities to protect or restore the environment. It takes place only in regions where protected areas are located. This lack of specialized technicians in the environmental area in the different regions of the country constitutes a great constraint to the implementation of environmental policy at national level, especially when the exploitation of natural resources takes place in the regions and it is often the rural populations that are most affected;
- Under the Coastal Zone and Biodiversity Management Project, a Competent Environmental Assessment Authority (AAAC), funded by the World Bank and with IUCN technical support, whose objectives are: (i) to strengthen the capacity of response through legislation, (ii) strengthen the capacity of the Government to implement the Environmental Impact Assessment (EIA); (iii) to ensure the professional capacity of lawyers in Guinea-Bissau in matters of environmental law; (iv) dissemination of laws and regulations in order to raise awareness of the different sectors of society towards the environment;
- In turn, the Coastal Planning Office, established in 1994, now integrated with the Ministry of the Environment and Sustainable Development, continues to be responsible for coordinating conservation and development actions in coastal wetlands, covering an area of 18,000 $km^2$;
- The Institute of Biodiversity and Protected Areas (IBAP), also integrated with MADS, is responsible for the management of marine protected areas, but remains a reasonable level autonomy for pursuing its mandate.

### *Policy Baseline Assessment*

Summary of national regulations and programs:

- Government Program for Guinea-Bissau 2015-2025 "Terra Ranka": The program presented by the Government at the Donor Roundtable in March 2015 sets out the broad guidelines for the development of Guinea-Bissau. Under this program, the Government considered Guinea-Bissau's biodiversity and natural capital as a pillar for development, which is a strong signal and an opening for environmental governance to be improved;
- The Intended Nationally Determined Contributions (INDC), as submitted for the United Nations Framework Convention on Climate Change (UNFCCC) in 2015
- National Program of Action to Adapt to Climate Change (NAPA), developed in 2006 to implement the guidelines of the United Nations Framework Convention on Climate Change (UNFCCC). The NAPA and made it possible to assess the main impacts of climate change on Guinean society and economy. This assessment revealed that the sectors most vulnerable to climate change are the agrarian sector, the water sector and the fisheries sector. The Program set several priorities directly connected to the CZM, such as reducing pressures on forestry and fishery resources, addressing climate risks in the coastal zone or improving access to drinking water for human consumption and for livestock;
- The Tropical Forest Action Plan (PAFT) establishes the principles of sustainable forest management in the context of the forest sector;
- The Forest Action Plan establishes the principle of sustainable forest policy, in addition to the specific measures for the institutional strengthening of the sector and the creation of conservation zones in different areas of the biosphere of the country;
- The National Environmental Management Plan (PNGA) is a tool that should guide Guinea- Bissau's environmental policy in integrating the vision, objectives, strategies and actions necessary for its implementation;
- The Second Poverty Reduction Strategy Paper (PRSP), a development plan, aiming at combating poverty in Guinea-Bissau
- PAN/LCD (2012) Guinea-Bissau's strategy to fight land degradation
- The National Biodiversity Strategy and Action Program (NBSAP) is a policy framework for the sustainable management of biodiversity resources and conservation policies.

The Key institutions, the decision-making mechanisms defined by the Laws and Regulations of each sector and project's fit with NAPA priorities (summarized in the tables below).

***Box 8.Description of core entities for coastal zone management in evidence***

The Ministry of Environment and Sustainable Development (MADS) is the focal institution for this project, due to its environmental entry point. MADS holds a broad mandate for environmental management and function as focal point to several international environmental conventions. Other subordinate entities that also play an important role in the environmental field, including coastal zone management include: the Competent Environmental Assessment Authority (AAAC), the Institute of Biodiversity and Protected Areas (IBAP) and the Coastal Planning Office (GPC).

The Competent Environmental Assessment Authority (AAAC) was established in 2004 to ensure that environmental and social considerations are better taken into account in decision-making on investment and development projects in the country. The AAAC should contribute to the promotion of sustainable development and ensure economically viable investments that are socially acceptable and ecologically balanced. Its purpose is to facilitate the application of the Law on Environmental Assessment of 2010 that aims to assess and mitigate the potential impacts of a project on the environment. Environmental assessment is a very important tool to ensure good environmental governance at the national level, ensuring that all projects and investments are subject to environmental impact assessments, providing consultation and participation of stakeholders and identification and implementation of mitigation and compensation measures impacts. In addition to the environmental assessment of a specific project, the current Environmental Assessment Act creates the necessary conditions for Environmental Strategic Assessments to be carried out to assess the impact on the environment and other sectors of the implementation of development policies, plans and programs.

The Institute for Biodiversity and Protected Areas (IBAP) was created in 2004 to continue the dynamic begun in the 1990s with a coastal planning program and proposals for establishing a network of protected areas for Guinea-Bissau. IBAP's mission is to manage protected areas and strategic biodiversity resources, valuing scientific knowledge and traditional knowledge, favoring participation and synergies at local, national and international levels. Since the creation of IBAP, the national protected area system has expanded from four to five parks and a community protected marine area and is in the process of reaching the eight major protected areas in the short term. The area covered by the national protected area system had thus seen an increase of 26.3% in a decade. The national network of protected areas encompasses a diversity of ecosystems and strategic natural resources that are managed in a participatory manner with stakeholders and national and local actors. With the ongoing creation of terrestrial protected areas, IBAP seeks better the representativeness of protected ecosystems as well as the connectivity between protected areas.

Coastal Planning Office (CPG)
It started as a Coastal Planning Project, was the first initiative to consolidate National Conservation Strategy in GB. It emerged in 1994 at the request of the government and the UINC, funded by the Swiss Cooperation was coordinated at the national level by the Directorate General of Forestry and Hunting (DGFC) of the Ministry of Rural Development and Agriculture. Therefore, the Coastal Planning Office, now integrated with the Ministry of the Environment and Sustainable Development, continues to be responsible for coordinating conservation and development actions in the coastal wetlands, which cover an area of 18,000 km2. But with the mandate weakened, because it lacks the technical and financial capacity to play its part.

Other institutions have their own policies supported by their respective legislation. The main ones related to coastal development are the Ministry of Transport (Ministry of Transport and Mariculture), Ministry of Agriculture and Rural Development (Directorate General of Forestry and Wildlife), Ministry of Fisheries (FISCAP) and Ministry of Natural Resources and Ministry of infrastructures (planning of the Territory and register).

Delegated / Devolved Environmental Management?
Currently, there is no explicit government policy of decentralization, but the country is preparing itself to move in this direction. Since, for better management of the activities of local stakeholders, there are regional and local offices that include: (i) the Office of Coastal Planning became, under the responsibility of the Minister, a key participant in conservation (ii) "Casa do Meio Ambiente" is a body that brings together all stakeholders of the Bolama-Bijagós Biosphere Reserve, aiming at: (i) better management of natural resources, (ii) conservation of biodiversity, (iii) promotion of sustainable development activities, and (iv) research, with important and growing participation of local populations.

Key national NGOs that intervene in the coastal zone are:
- Tiniguena supporting actions in sectors linked to the sustainable management of resources and local development actions,

such as: (i) sustainable management of the coastal areas of certain archipelago islands and their resources, (ii) sustainable small-scale fisheries, (iii) transport and communication between the islands with Bissau.

- **Development Action (AD)** is dedicated to the development of key actions such as food security, creation and support of radio communities, art training and other professions and environmental actions to protect the forests of Guinea-Bissau and conducting bio-ecological studies in the forest of wetlands of Cantanhez.
- **Nantinian** is dedicated to community-based and environmental-based development, while civil society and is engaged in the environmental field with awareness activities

**Research and Academia**

The sector is very small in Guinea Bissau, contributing to the limited capacity development at systemic level, already referred to further up.

Some semi-public institutions have done research, such as the National Institute of Research and Studies (INEP), which incorporates the Center for Environmental Studies and Relevant Technology (CEATA) and natural science domains, as well as the adoption of technologies that reduce the impact ecosystems and biodiversity resources. CEATA has a Geographic and Remote Sensing Institute (with the Coastal Planning Office), responsible for the management of the Bolama-Bijagos Biosphere Reserve (with IUCN and GPC) and socioeconomic studies.

All these institutions maintain good complementary relations in the planning of programs and exchange of information.

**Private sector**

The private sector is a group of actors of extreme importance for coastal management, despite the low level of investment and involvement in coastal management, which is a reflection of governance problems.

There are some institutions related to the environment such as the Cell of Environmental Studies and Appropriate Technology, the Geographic Information System, the National Institute of Applied Technological Research, the Applied Fisheries Research Center and the National Institute of Agrarian Research

## *Detailed Baseline Finance (overview)*

***Table 22. Baseline Finance Project Break-down per Project and Component, plus Co-financing from baseline***

| Agency | Title | Confirmed Co-financing ($M) | *Component 1* | *Component 2* | *Component 3* | TOTAL Baseline ($M) |
|---|---|---|---|---|---|---|
| UNDP 1 | Capacity building for local governance, including e-governance, | | $2.9 | | | $2.9 |
| UNDP 2 | Capacity for natural resource management (national level) | | $0.8 | | $0.8 | $1.6 |
| UNDP 3 | UNDP-EC Management Capacity Building Program (improved public administration) | | $2.0 | | | $2.0 |
| UNDP 4 | Peace Building Fund / UNDP Development Assistance (governance, sustainability, job creation, gender) | | | | $5.4 | $5.4 |
| UNDP future Program Baseline | Extrapolated relevant baseline finance expected during LDCF project implementation (approx). | | $11.5 | | $12.6 | $24.1 |
| WB 1 | Participatory Rural Development Project (P117861) (2009-2019, $5M); | | | | $5.0 | $5.0 |
| WB 2 | Rural Community-Driven Development Project (P090712, P146746, P151443), including the first and second additional funding (2009-2019, $30M); | | $5.0 | $5.0 | $20.0 | $30.0 |
| WB 3 | Private Sector Rehabilitation & Agribusiness Development (PSRAD) (P127209) (2014-2020, $8.2M) | | | | $8.2 | $8.2 |
| WB 4 | Guinea-Bissau Public Sector Strengthening Project (P150827), excluding the pipeline project for additional finance (2015-2020, $5M) | | $5.0 | | | $5.0 |
| WB 5 | Pipeline: Second Additional Finance to Rural Community-Driven Development Project for Guinea-Bissau (P151443) ($23.5M, of which $10M is considered as baseline to this project) | | | $3.0 | $7.0 | $10.0 |

| Agency | Title | Confirmed Co-financing ($M) | *Component 1* | *Component 2* | *Component 3* | TOTAL Baseline ($M) |
|---|---|---|---|---|---|---|
| FAO 1 | GCP /GBS/034/EC - Support to producers for improving productivity and quality of cashew production in Guinea-Bissau (2016 - 2018) at $396K. | | | | $0.4 | $0.4 |
| FAO 2 | TCP/GBS/3601 - Support for the establishment of technical and organizational systems for multiplication of commercial food crops' seeds in Guinea-Bissau (2016 - 2018) at $359K; | | | | $0.4 | $0.4 |
| FAO 3 | TCP/GBS/3602 - Improving resilience of livelihoods to threats and crises (2016 - 2018) at $301K; | | | | $0.3 | $0.3 |
| FAO 4 | TCP/GBS/3603 - Support to small producers for improving the productivity and commercialization of cashew (2016 - 2018) at $100K; | | | | $0.1 | $0.1 |
| FAO 5 | TCP/GBS/3604 - Validation and dissemination of integrated aquaculture - agriculture systems (rice-fish culture + others) through the "Farmer Field Schools" approach (2016 - 2018) at $299K; | | | | $0.3 | $0.3 |
| FAO 6 | GCP /GBS/035/EC - For a Responsible Land Governance (Project "N`Tene Terra"): Support for the Implementation of the Land Law in Guinea-Bissau (2016 - 2020) at $3,450K; | | $3.4 | | | $3.4 |
| EC 1 | UE-ACTIVA - Eixo 1: Governação territorial - Desenvolvimento Regional através do Reforço da Sociedade Civil) | | $1.7 | | $1.7 | |
| EC 2 | UE-ACTIVA 2 - Projet de désenclavement des zones rurales pour faciliter la commercialisation de la production agricole et améliorer l'accès aux services sociaux de base | | $1.7 | | $1.7 | |
| EC 3 | Projet de Développement des Chaines de Valeur Riz — Reference: P-GW-A00-003, (2018 + 6 years, i.e. recently started), providing co-financing to the LDCF project. Baseline amount is $10M, including $6M in parallel (cash/collaborative and assigned to component 2) co-financing, plus another $0.4M as in-kind co-financing (assigned to component 3). | | $0.1 | $0.1 | $0.1 | |
| EC 4 | EC \| 2017 - 2021 \| Labradur de n futuro: fortalecimento da formação profissional na região de Cacheu | | | | $0.3 | |
| EC 5 | EC \|2016 - 2020 \| No Intchi Mbemba - Reforço da fileira de sementes de arroz | | | | $0.8 | |
| EC 6 | EC 2015 - 2018 \| Firkidja di bida digna di n mindjeres ku jovens i purduto di no tchon | | | | $0.6 | |
| EC 7 | EC \| 2015 - 2018 \| Kópóti pa cudji n futuro | | | | $0.0 | |
| EC 8 | EC 2016 - 2018 \| Pdil Pecixe: Projeto de Desenvolvimento da Ilha de Pecixe | | | $0.3 | $0.3 | |
| EC 9 | EC \| 2016 - 2019 \| Projet d'appui à la diversification agricole et au développement d'une offre en noix de cajou de qualité en régions de Oio et de Cacheu | | | | $0.3 | |
| EC10 | EC 2016 - 2020 \| Áreas protegidas e resiliência às mudanças climáticas; | | $1.1 | $1.1 | $1.1 | |
| AfDB 1 | Projet d'Appui au Renforcement de la Gouvernance Economique et Financière (PARGEF) - Ref.: P-GW-K00-005, (2010 - ongoing). Estimated amount is $20M, of which half is accounted for as baseline finance, i.e. $10M | | $5.0 | | $5.0 | $10.0 |
| AfDB 2 | Projet d'appui au renforcement des capacités d'administration - Reference: P-GW-IAD-001 | | $5.0 | | | $5.0 |
| AfDB 3 | Projet de Développement des Chaines de Valeur Riz — Reference: P-GW-A00-003, (2018 + 6 years, i.e. recently started), providing co-financing to the LDCF project. Baseline amount is $10M, including $6M in parallel (cash/collaborative) co-financing, plus another $0.4M as in-kind co-financing. | $6.4 | | $6.0 | $4.0 | $10.0 |
| Multi-Partner - Baseline and Co-financing | Global Alliance for Resilience Initiative / Sahel-West Africa (AGIR), European Union through Club Sahel / OECD - at least $100M, of which $51.7 represents Guinea-Bissau's baseline and co-financing. | $51.7 | $10.3 | $20.7 | $20.7 | $51.7 |
| | TOTAL BASELINE | | **$65.2** | **$36.3** | **$106.6** | $208.0 |
| | TOTAL CO-FINANCING FROM BASELINE | **58.1** | | | | |

***Table 23. Summary of national legal framework***

| Ministry | Laws and Decrees | Aspects Addressed |
|---|---|---|
| All | The Constitution of the Republic of Guinea-Bissau (hereinafter CRGB) from December 1996 | - Overarching legislation: Article 10 defines that in its exclusive zone, the State of Guinea-Bissau exercises exclusive competence for the conservation and exploitation of resources, both living and non-living |
| Ministry of Environment and Sustainable Development | Law No. 1/2011 approving the Basic Legislation on Environment. | - Definition of the legal bases for a correct use and management of the environment and its components, with a view to materializing a sustainable development policy<br>- The Art. 6 establishes as one of the objectives and measures: (maintenance of terrestrial, marine and transitional ecosystems as one of the; protection of habitats; prevention of soil erosion, inland and coastal. |
| | Law No. 10/2010 on Environmental Impact Assessment Regulation. | - Art. 6 establishes the Population Resettlement Plan as one of the instruments of the Environmental Assessment<br>- Art. 8 - Preliminary examination and conditions<br>- Art. 56 speaks of compensatory measures - restoration of previous environmental conditions |
| | Regulation No. 5/2017 of Public Participation | - Definition of procedures for the public participation of the population in the process of Environmental Assessment |
| | Regulations No. 7/2017 Regulation of Environmental Impact Study | - Definition of procedures for conducting the Environmental and Social Impact Study |
| | Regulations No. 8/2017 Environmental Licensing | - Definition of procedures for Environmental Licensing |
| | Decree No. 9/2017 Environmental Audit Regulation | - Definition of procedures for carrying out the Environmental Audit |
| | Order of 21 March 2011 creating the Environmental Impact Assessment Institution (CAIA)/AAAC | - Objectives of creation and management of protected areas<br>- Emphasizes the importance of participatory and durable management of natural resources within protected areas |
| | Law on plastic bags (2013) | - Prohibition on the manufacture, import, marketing or distribution of plastic bags. |
| | Decree No. 10/2017 Environmental Inspection Regulation | - Art. 35 a) defines sanctions against environmental damage |
| | Decree-Law No. 5A / 2011 - Framework Law on Protected Areas | - Art. nº 2 – object of creation and management of protected areas safeguards of species, endangered habitats, biotypes and natural formations of recognized interest.<br>- Art. Nº6 Process - Obligation to carry out an Environmental License to obtain a forest concession<br>- The art. 24 defines that a strip of forest or natural vegetation must be conserved within the boundary of the protected area on the coast, along the estuary, lake or watercourse margins that are included in the management plan.<br>- Emphasizes the importance of participatory and durable management of natural resources within protected areas<br>- Article 26 defines zones of integral preservation - works are not allowed<br>- Article 29 defines zones of sustainable development - destined to zones of development of the economic activities that benefit the communities |
| Ministry of Agriculture, Forestry and Livestock | Decree-Law No. 5/2011 approving the New Forestry Law. | - The first paragraph of this law establishes, inter alia, a forest regime that applies to fragile areas and riverbanks and prohibits deforestation in these areas, with the aim of preventing erosion, desertification and protection of the ecosystem and its wildlife, as well as the regularization of the hydrological regime and defense against erosion.<br>- Article 22 states that the application for a permit to slaughter must necessarily include (the rules of slaughtering that best ensure the sustainability of the refuse and the protection of soil or the environment.<br>- Art. N24 definition and nature- Obligation to carry out an Environmental License to obtain a forest concession |

| Ministry | Laws and Decrees | Aspects Addressed |
|---|---|---|
| | Decree-Law No. 5/98<br>Land Law | - The art. 5 states that soil protection is of general interest and is a part of environmental protection and sustainable development policies.<br>- Guarantees the local communities' land to the extent that they can give them economic utility;<br>- Incorporates the customary land regime into positive law, as well as the institutions that represent them;<br>- It stimulates investment in land by creating a market value for land.<br>- Defines soil protection as being of general interest and integrates policies for protecting the environment and sustainable development;<br>- Explain that soils are a common heritage and a non-renewable natural resource of vital importance for present and future humanity;<br>- Ensures that land use will take into account the multiplicity of its ecological functions and its consideration as a limited resource;<br>- Defines that the policy of soil protection must be accompanied by a process of information and citizen participation; |
| **MADS, delegated to IBAP** | Decree creating four national parks. | - Management of Protected Areas. More specifically: The Cocoa National Park (PNMC), the Orango National Park (PNO) and the National Marine Park of João Vieira and Poilão (PNMJVP) in Bijagos-Bolama Archipelago Reserve in 1996. |
| **Ministry of Transport** | Transport | - A complex set of laws regulate the sector. Although important for the coastal sector, it is less relevant for the project – hence, not specifically analyzed. [may need review] |
| **Ministry of natural resources** | Oil Law (2014) | - The art. 35º states that during the execution of the research and exploration work, the construction group should conduct petroleum operations with due respect for the protection of the environment.<br>- Regulation of exploration, exploitation, production and transportation of petroleum resources in the national territory |
| **Ministry Tourism** | Decree No. 62/92<br>Legal Regime of the tourist activities | - Regulates the Development and Tourism of the Private Sector |
| **Ministry of Fisheries** | Decree-Law No. 10/2011<br>General Fisheries Law | - Definition of the rules for fisheries management and development and<br>- Points out that the exploitation of fisheries resources must comply with the principle of sustainable and rational development of<br>- It defined appropriate measures for the exploration, conservation and preservation. |
| | Decree-Law No. 24/2011 approving the Regulation on Artisanal Fisheries. | - Defines what artisanal fisheries constitutes, as opposed to commercial and regulates the activities, recognizing the needs of local communities and the role of artisanal fisheries in food security for these communities. |
| **Ministry of Natural Resources** | Decree-Law No. 5-A/1992<br>Water Code. | - The art. 28th states the following "refers to forest and erosion control, whoever wishes to undertake work or to carry out equipment on land susceptible of disturbing the existence or flow of water sources, lakes or streams should request prior authorization from the Ministry responsible for water consult the ministries responsible for agriculture and forestry and for territorial planning.<br>- The art. 32, states that problems with water, such as droughts, water erosion, sedimentation, salinization of water and soil and others, will be subject to regulation by the Ministry responsible for water, adopted in coordination with other interested State departments<br>- Different legal regime of activities reactive to the management of water resources<br>- General regime of use<br>- provisions on various uses (supply, irrigation, fishing, and fish farming and transport |
| **Ministry of Natural Resources** | Regulation of Pedreira 1987<br>Decree-Law No. 3/2014<br>Mines and Quarries Code | - Art. 12 the extraction of any materials can only be carried out provided that conditions are not created that can affect in a radical way: (the conditions of circulation and recharge in the aquifers, the chemical characteristics of the superficial and deep waters.<br>- License of small and large mining and industrial quarry<br>- License for the purchase, sale and transformation of minerals<br>- Obligates to draw up environmental impact studies and environmental management plans |
| **Ministry of Interior** | Decree No. 9/2011<br>Civil Protection Law | - Polities, organic structure of Civil Protection<br>- Establish the Civil Defense Council<br>- Statement of warning, catastrophe or calamities<br>- Alert contingency or emergency |
| **Ministry of Commerce and Business Promotion** | Decree Law No. 22 Inspection of Economic Activities | - Supervision of economic activities<br>- Ensuring standards |

## *Priorities for adaptation according to the NAPA*

***Table 24. Project's fit with NAPA's priorities***

| # | Focus of 2006 NAPA priority projects / measures | Addressed under the project |
|---|---|---|
| 1 | Diversification of food production | Component 3, and Output 3.1 more specifically |
| 2 | Improving water supply in rural areas | Output 3.1 |
| 3 | Prevention and protection of mangrove-rice agro-ecological cultivation systems along the coast | Outputs 2.2, 2.3 and 2.4 |
| 4 | Monitoring the status of mangrove resources | Outputs 1.4, 2.2, 2.3 and 2.4 |
| 5 | Coastal zone erosion monitoring | Outputs 1.3 and 1.4 |
| 6 | Impact assessment of Climate Change in the productive sectors | PPG Baseline Assessments |
| 7 | Promotion of small irrigation schemes on the banks of the Geba and Corubal rivers | - |
| 8 | Prevention of natural catastrophes | - |
| 9 | Protection, conservation and enhancement of fisheries and coastal resources | Output 2.1 in particular, but also Comp 3 |
| 10 | Integrated food security information system (SISA) | - |
| 11 | Environmental education and communication in the coastal zone | Output 1.1 |
| 12 | Rehabilitation of small perimeters of mangrove soils for coastal protection in critical spots | Outputs 2.2, 2.3 and 2.4 |
| 13 | Production of Short-Cycle Animals | - |
| 14 | Reforestation of degraded areas | Outputs 2.3 and 2.4 |

## *Capacity Needs Assessment*

A brief summary of observations:

- In general, all stakeholders in Guinea-Bissau have visible and important capacity deficits within the Coastal Zone Management area;
- The national capacity for climate risk mainstreaming is incipient, but there are good prospects for its gradual development. This could also be instrumental for the emergence of the coordination among stakeholders and institutions, and the integration of sectoral governance and action across coastal land- and seascapes;
- National capacity seems to be unevenly distributed across key governmental stakeholders. Some institutions, such as IBAP and INE appear to have a reasonable level of capacity, based on their ability to attract projects, and therefore qualified staff and everything else that goes along with it (infrastructure, equipment, outreach). Others, such as the Coastal Zone Planning Organization and the Port Authority appear to be very constrained in their capacity;
- With respect to individual capacity, Guinea-Bissau has been active in the Climate Change arena by participating in COPs, in GEF Council, as well as in several capacity building initiatives organized by different partners, either at the regional, global or national level. There is only a handful of individuals in Guinea-Bissau who have a good understanding of climate change matters.

***Box 9. Lessons from the WB GEF Coastal and Biodiversity Management Project***

During the time when the WB GEF Coastal and Biodiversity Management Project was being prepared (1998-1999, then interrupted and resumed in 2000 due to political upheaval), and then later during the project's implementation (2004 to 2010), there has been an intensified effort towards building the national capacity for coastal zone planning, resulting in a strengthening of national institutions.

During implementation, **entities such as the Coastal Planning Office, IBAP and IUCN congregated an important share of the individuals who actually composed this national capacity**. The achievements of the WB GEF Coastal and Biodiversity Management Project are of relevance for the country's conservation agenda. The establishment of the Guinea Bissau's coastal and marine protected areas is by-and-large attributable to the work developed through that project. It was followed on by IBAP more recently, with respect to terrestrial sites and UNDP's assistance. International technical assistance (TA) through various

projects has helped build this capacity and complement it, but because of the high costs, TA should be used strategically.

Today, some 6 to 7 years after the WB GEF project ended, the PPG Team observed that the staff complement of the Coastal Planning Office is much smaller than what it had been during project implementation. Their projects are also of smaller scope. IBAP, has in turn expanded its activities and portfolio. Also, since then, a ministry dedicated to the environment portfolio has been created. In this light, it is instructive to analyze the opinion of the terminal evaluation report for the WB GEF Coastal and Biodiversity Management Project with respect to the institutional outlook and vision, referring to the 'situation' when the project was being developed:

> *"2.1.2 The main challenge in this situation was to build an institutional foundation for the implementation of project activities in a politicized environment where technical considerations were hard to sell, and awareness of the conflict of interest between the protection of natural resources and their exploitation was limited. Institutional studies, commissioned by the United Nations Development Program (UNDP) recommended the creation of a Ministry of Environment to replace the Directorate General of Environment (Direção Geral do Ambiente - DGA) under the Ministry of Energy and Natural Resources with limited capacity (although this did not materialize, at the end). These studies, together with World Bank Economic and Sector Work, also laid the foundation for core project design features, including the creation of: (i) the semi-autonomous Institute for Biodiversity and Protected Areas (IBAP), (ii) the Environmental and Social Safeguards Unit (CAIA); and (iii) the Guinea-Bissau Foundation (FBG). In terms of management of protected areas, an administratively and financially autonomous institution such as IBAP was considered preferable to a labor-sharing arrangement between external organizations and the DGA, or the establishment of a Coordination Council for Protected Areas to be embedded in a line ministry."* [*]

With respect to the institutional set-up, the following lessons are also worth learning:

> *"2.1.11 Institutional arrangements: The Ministry of Finance and Economy took the lead in partnership with the Ministries of Agriculture and Rural Development, Ministry of Fisheries and the Office of the Prime Minister. Even so, the project's institutional set-up was designed to minimize Government's direct responsibility and to weather conflict and Government transitions; in practice, 90% of project implementation rested with the Project Management Unit (PMU) and sector focal points IBAP, FIAL and CAIA. Institutional functions/structures were organized into three types: those providing guidance and monitoring; executive bodies; and bodies for supervision and accountability. These arrangements were quite complex, but they worked well. The goal was: (i) to ensure that project implementation was inclusive, participatory, responded to massive institutional weaknesses through network building and organizational structures responding to every contingency/need, and avoided institutional turf wars; and, (ii) to build a framework, potentially sustainable over the long-term, within an otherwise poorly-functioning institutional and organizational landscape. Financial Management and Procurement staff and functions were under the oversight (i.e., supervision and training) of more experienced fiduciary staff in the PMU for the Private Sector Rehabilitation and Development Project, while the Project's own PMU would coordinate project monitoring and evaluation."* [*]

[*] Source: *Project Report 4, Implementation Completion and Results Report, Guinea-Bissau - Coastal and Biodiversity Management Project* (English), October 26, 2011 - ICR1684.

## *2) Climate-proofing productive coastal sectors and related infrastructures*

**Climate proofing** infrastructures can be seen as the incorporation of climate changes in the design and strategic planning of infrastructure.

During the PPG, various rural infrastructures for the coastal zone with focus on agriculture, fisheries products and passenger transportation were assessed. More specifically, the **B&F Report 009b** **'Coastal Sector: Fisheries and Agricultural Infrastructures'** has directly and indirectly assessed the state of cooling facilities, fishery wharfs and roads in rural areas and illustrated it with **pictures and maps.**

### Fisheries

The coastal states of West Africa are endowed with some of the richest fishing grounds in the world, contributing greatly to people's livelihoods, nutrition and the overall economies. Reported marine fish production amounts to more than 1.6 million

tons in West African waters each year, with an estimated value in the order of US$2 billion, while the value of unreported catch may be more than twice this level. Thanks to coastal upwelling and extensive nutrients from river input, the extensive continental shelves off Guinea-Bissau (38,155 sq km) – one of the largest in West Africa. Its Exclusive Economic Zone covers 106,000 sq km and it is home to an estimated one million tons of fisheries resources, of which 350,000 to 500,000 tons could be extracted annually. Compared with other parts of the world, Guinea-Bissau presents a productivity above the upwelling region of Peru-Chile and is considered the richest in the world.

The fees from foreign fishing access agreements account for 35%-40% of government revenues. This figure, which is among the highest in the world, demonstrates how important fishing is to the country's economy. The fisheries industry, although vital for the economy has been underperforming over the last years due to habitat degradation and overfishing. Weak governance and limited capacity for management underpin both habitat and fisheries degradation. Meanwhile, fish biomass in the Exclusive Economic Zone (EEZ) of Guinea-Bissau appears to have declined to at least 50% of its value in 1963, when the first acoustic survey was conducted. As climate change poses a serious threat to fishery sector of Guinea-Bissau's economy, the adaptation process needs to be adopted.

Based on the general approach indicated in UNDP, 2011, a climate resilience adaptation process for fisheries should involve the following steps:

- Mapping of present and future climate variability and change risks;
- Mapping of critical socio-economic infrastructure;
- Defining acceptable risk levels;
- Selecting non-structural and structural risk mitigation measures.

Refer to PRODOC Annex C3 for additional background.

## Rural Infrastructures

As many as **seven ice factories and cold store facilities in coastal towns**: Cacheu, Ponta Grande (Biombo), Cacine (Tombali) and Gabu (though the latter is not considered a coastal town), and directly assessed the ice factory on Bolama island. Without primary data, the basic conclusion is that the infrastructures for receiving the catch are 'very and far between'.

B&F Report 009b has also assessed the state of fishing wharfs, more in depth and in terms of their vulnerability/climate proofing qualities. Those are the summary results:

- **The artisanal fishery centre in Cacine** - PPG Report 009b found it to have been renovated in 2012 with donor funding, but "Attracting the necessary business volume to this centre, in order to make in economically feasible, has been a challenge."
- **The Bubaque wharf**, directly assessed in October 2017 - PPG Report 009b mentions: "very degraded concrete structure founded on piles, comprising a lower berth platform for small vessels, that becomes submerged during high water tides, and a higher berth, 30 m long."
- **The Port of Cacheu**, with a 30m long wharf, directly assessed in September 2017 - PPG Report 009b describes it as "*a concrete platform founded on piles. The berth has, approximately, 30 m of extension.*" The report also notes that fishermen preferably *"use […] the neighboring beaches as landing ramps for their boats"*.
- **Port of Farim**, found to be - *"equipped with a ramp for fishing boats"*, as of PPG Report 009b
- **Port of Buba**, directly assessed in October 2017 and where the remaining infrastructure [is] of an old pier" and noting that plans for building a deep-water port for shipping bauxite out of Angola-ran mining sites in Quebo zone have been halted, both due to *"political instability [in Guinea-Bissau] and, more recently, also [due to controversies with] the environmental impact study".*

Wharfs and ramps are crucial fishery infrastructures and in Guinea-Bissau's coastal zone they were all found to be highly vulnerable to climate change.

Of all fishery wharfs assessed during the PPG throughout the country, the Commercial Port of Bissau is the only one in the country with adequate conditions for harboring industrial fishing vessels. However, there are many technical constraints (navigation aid, sunken ship hooves) and a very limited or poor level of services (water and electricity supplies are random, heavy bureaucracy, long waiting times, etc.), facts that make it unattractive as logistical base for operations.

The baseline for adaptation regarding the existing road infrastructure in the coastal zone was also briefly assessed and the following is the general assessment:

*"This primary road network is in good conditions and the entity Fundo de Conservação Rodoviária exists with the purpose of ensuring that funds are in fact used to provide maintenance to primary roads. It should be remarked that* ***several paved roads were built without any Impact Assessment Study generating undesirable consequences in the coastal environment and livelihoods****. One example is the stretch of road Ingoré-São Domingos-Varela [directly assessed which], along its course, blocks several streams that were originally connected to Cacheu river. The tributaries have apparently dried up, leading to the death of mangrove and fauna species.*

***Secondary [feeder] roads in the country are in extremely degraded conditions.*** *Extreme weather conditions associated with the rainy season (intensified by climate change), increase the road degradation. Road circulation becomes possible only at speeds lower than 40 km/h and even some regions in the country, especially in the south, become inaccessible during the rainy season, starting from June to October."*

The B&F Report 009b (on 'Coastal Sector: Fisheries and Agricultural Infrastructures') concluded that the project strategy for Component 2 should address the feasibility and impact assessment of structural design modifications such as structural elevation, alignment deflections, shoreline protections, larger drains and additional culverts (to allow higher volumes of run off) and other modifications to withstand heavier rainfall. As for future infrastructure projects, the incorporation of climate changes should be mandatory along with social, economic and environmental impact assessments of the interventions.

## Coastal Rice

Guinea-Bissau is a low lying estuarine country which is very suitable for all types of rice cultivation. In coastal areas, the numerous river estuaries and their tides play an important role providing major channels for transport and irrigation. In the interior, the fresh watercourses diminish substantially during the dry season. Groundwater sources are abundant and of variable qualities. In Guinea-Bissau, rice is currently produced in three ecosystems – rainfed uplands, lowlands (rainfed and irrigated) and mangrove.

Mangrove swamp rice cultivation is the most extensive system of rice cultivation in Guinea-Bissau and is widely practiced in coastal regions. Rice paddies are established by building anti-salt dykes along the banks and parallel to the estuaries with sluice gates. These anti-salt dykes prevent salt water intrusion into the rice fields and retain fresh water from rain necessary for the process of salt and acid leaching. Dykes are usually constructed by manual labor. Mechanical construction has also taken place using a service provided in the past by the Government but is currently unavailable.

It is estimated that there are more than 106,000 ha potentially suitable for mangrove rice production, out of which 50.000 ha have been reclaimed and are partially managed by the farmers. However only 16,564 ha are estimated to be cultivated in 2007 due to poor rainfall conditions with yields of 1,800 to 2,600 kg/ha. Fields are puddled, and rice transplanted. No mineral fertilizers are applied. Mangrove swamp rice has historically provided the bulk of production in the country (80% according to Spencer and Djata 2008) but due to lack of repair and maintenance of infrastructure, especially following the civil war in the late 1990's, now accounts for less than 25%.

Climate change has a profound impact on rice cultivation in Guinea-Bissau mostly in terms of increased risk for salinization of *bolanhas* due to sea level rise (salt and brackish groundwater), changing rainfall patterns and intensity, extreme events (strong winds and waves). In recent years destruction of mangrove swamp rice fields dykes occurred due to exceptionally high tides. In 2011 and 2012 harvests were bad due to irregular rainfall and, in 2012, very strong Harmattan winds during flowering caused reduction of 50% to previous year's output.

PPG Report 009b 'Coastal Sector: Low-Land Rice Cultivation' carried out a careful analysis of the segment. Concrete proposed were made for climate proofing of rice cultivation, while equally ensuring that it is sustainable, innovative (and even includes by re-incorporating ancient traditions) and in gender-balanced manner.

In terms of diversifying productive activities, there are a number of techniques that can corroborate towards increasing production and improving the productivity for mangrove rice in Guinea-Bissau, without additionally reclaiming intact mangrove forests. Some of these techniques are still experimental (e.g. "*rizipisciculture*"[58]), while others are timeless and traditional, except that these traditions are being gradually lost due to their labor intensity.

[58] See e.g. www.fao.org/docrep/field/003/AB847F/AB847F06.htm.

There are several interventions which can be proposed undertaken, in order to adapt rice cultivation to the changing climatic conditions:

- **Improved seed** - Bissau has not had a significant agricultural research capacity for a period of decades. This means that there are significant "off the shelf" improvements which could be readily adapted for introduction at the farm level. While this is obviously not something that can be done from one year to the next, it is equally clear that the potential gains are very large;
- **Infrastructure** - Dykes and sluicegates in the mangrove production system as well as improvements in irrigated perimeters already envisioned in existing project proposals can make a significant long-term difference to Guinea-Bissau's food balance. It is important to note that labor availability is a very important constraint to realization of this potential;
- **Rainwater harvesting** - In many coastal areas in Guinea-Bissau also possibilities exist to perform rainwater harvesting. In a project in the Tombali region studies were done to use the sand dunes as buffer to store fresh water in the rainy season. With simple construction of dykes and low-lift irrigation pumps the growing season can be increased or even extended for a second rice crop;
- **Rural Roads** – Though Guinea-Bissau has an adequate system of primary highways in many areas of the country it would be difficult to overemphasize the abysmal state of secondary and tertiary rural roads, or the importance of improving them. Until this is accomplished it can be taken for granted that many areas in the southern "breadbasket" will remain isolated through the rainy season and accessed only with difficulty the rest of the year. Isolation implies that they cannot respond to incentives and cannot integrate with the larger national economy;
- **Marketing Systems** - the non-existent rural marketing system prevents farmers from even seeing market signals, much less allowing them to respond to them. Even though, in the rural area, there has been established a traditional market system denominated " LUMO", which is a kind of common ground for diversified products and exchange of opportunities. Establishment of a rural marketing system needs the improvements in roads noted above, but also includes additional measures such as improved security in rural transport, better governance and control of petty corruption, improved credit availability and market infrastructure. Use of smart phones and Apps to assess market prices and to anticipate on market fluctuations could assist smallholders in getter better prices for their products.

## Tourism Potential? (nature-based)

The natural ecosystems in Guinea-Bissau support a wealth of biodiversity. Several animal species found in the country are globally significant and are identified on the International Union for Conservation of Nature's (IUCN) Red List as globally endangered or threatened. Recognizing the critical importance of these biodiversity, ecosystem, and cultural assets, the Government, together with national and international partners, has over the past 20 years worked to develop an institutional framework for their conservation and sustainable use.

Most studies have pointed to three to five areas in Guinea-Bissau or niches where tourism seems to be emerging and, with one notable exception (Bissau), they are in and around the existing protected areas. These include the Bijagós Archipelago, the Cantanhez National Park, the Varela/São Domingos/Cachéu region and Bissau, the capital city. However, opportunities remain largely untapped, mainly due to the country's history of instability. Tourism has a real potential to be a source of shared growth in Guinea-Bissau, positively impacting communities, especially if negative externalities are effectively managed.

The rich biodiversity found throughout the country can be combined with strong cultural resources to create a unique tourism offering. Cultural resources in Guinea-Bissau include an interesting and diverse cuisine, many cultural festivals, traditional dance and music, and authentic handcrafts. In addition to its potential nature- and culture-based tourism products, the country is well positioned to receive tourists from Europe. The country has already created an international image based on its natural environmental and ecosystems.

However, island and coastal territories are characterized by a reduced capacity to confront, recover, mitigate or even prevent natural disasters and intense human interventions. The islands of the Bijagós Archipelago are very private and have unique ecosystems, very fragile and with a high propensity for the occurrence of natural accidents. These ecosystems have evolved for several millennia without natural predators, and their fauna and flora have not developed adaptive mechanisms in order to cope with the increasing natural and anthropogenic invasions that their territory may eventually become subject to.

Although insular ecosystems, as biomes, have some degree of internal regulation, they are particularly sensitive to changes in the external environment, over which they have little or no control, making them largely dependent on external factors (biotic,

abiotic and anthropic). Island ecosystems are like island societies, very specialized, dependent and especially vulnerable to direct and indirect externalities, which are beyond their control.

Coastal and soil erosion is another environmental problem with economic repercussions common to most islands. Compared with their surface, island territories generally have a relatively large coastline, causing a large proportion of their areas to be exposed to wind and sea currents. In the Arquipelago dos Bijagós, this reality is further enhanced by the agricultural practices that lead to increasing deforestation, especially rice cultivation on the plateau and by the increasing expansion of the cashew monoculture as well as by the construction along the coastlines to to satisfy the administrative needs of the colonial era and also to increase tourism ventures (especially in the smaller islands), and by increasing the pressure on the underground aquifers to which these spaces are subject.

This island complex is very special not only because of the ecological processes inherent to it, but also because of the great biological productivity that is characteristic of it and that it is based on a very complex and branched trophic chain.

In the case of Guinea-Bissau, coastal areas and island territories are extremely sensitive to the effects of climate change. The shallow islands and the coastline are very susceptible to erosion and flooding, mainly caused by rising sea levels. Many islanders are highly vulnerable to these events. Adaptive capacity for climate change is generally low, although there is traditionally some resilience to these phenomena. The Bijagós Archipelago needs a special focus due to high vulnerability, which is particularly true in island states, where rising sea levels caused by climate change are not only a political priority, but also a matter of survival.

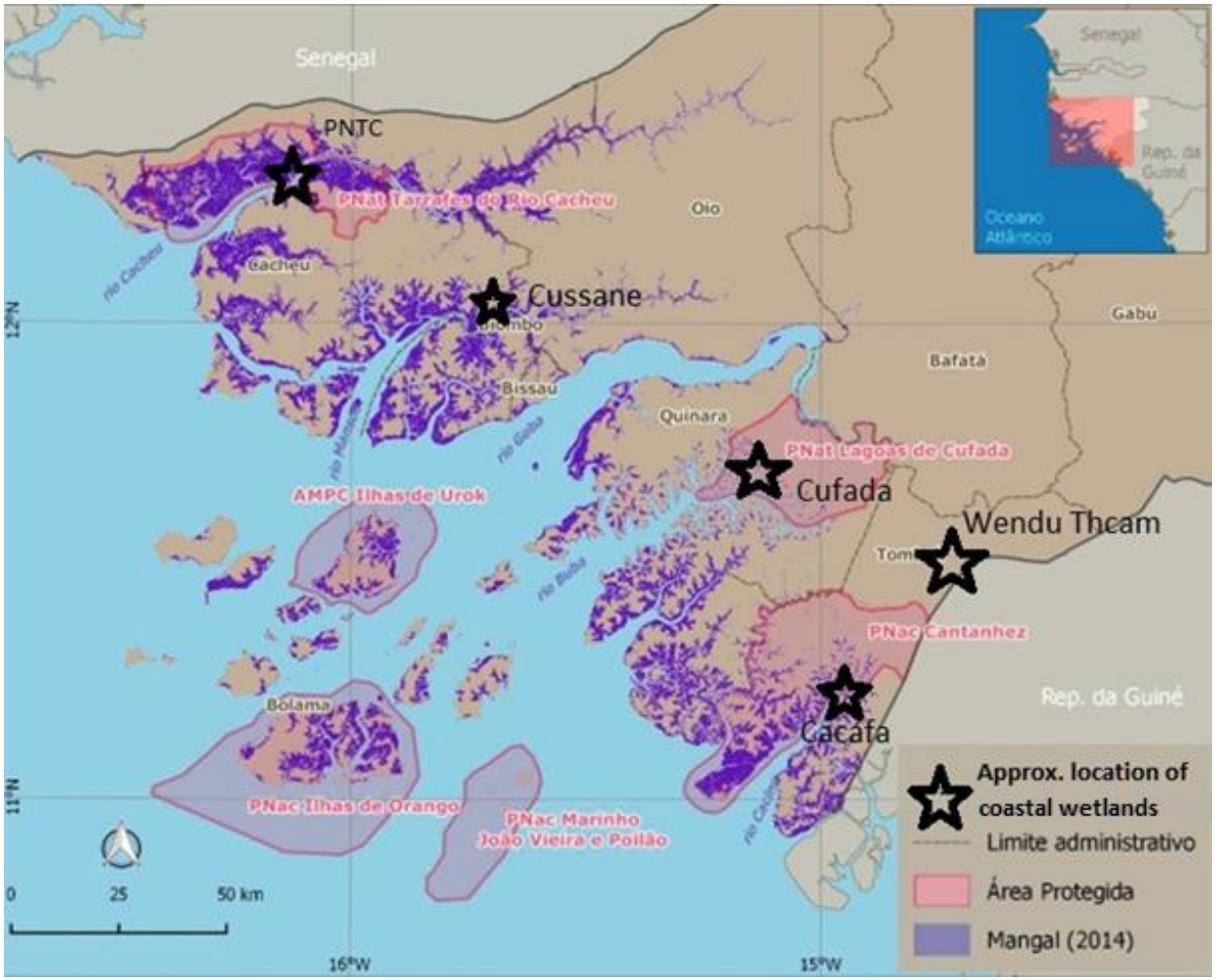
## *3) Climate-proofing natural infrastructure in the coastal zone: Mangroves, Wetlands and Agro-Ecology*

***Table 25. Distribution, functions of and threats to Mangroves and Wetlands in Guinea-Bissau***

| **Ecosystem type** | Mangroves | Wetlands |
|---|---|---|
| **Area covered** | 32,609 sq km | 18,000 sq km |
| **Geographic distribution** | Mangrove areas are present mainly along the coast, in the estuaries, rivers and streams that penetrate inland, in the Bijagós archipelago, including:<br>• Cacheu River Banks: 36.2% of the mangroves, concentrating the largest surface of the Guinea-Bissau mangrove and being the largest such spot in Africa;<br>• The southern regions, containing around 22% of the country's mangroves, located essentially on the banks of the rivers Tombali, Cacine and Cumbidjã;<br>• Bijagós Archipelago, with approximately 460,7 km$^2$ of the mangrove ecosystem (around 14% of the total national mangrove area);<br>• The central regions of Oio and Biombo (Mansoa river banks) and the Bissau Autonomous Sector (Geba River basin) as well as the islands of Jeta and Pexice, representing 16.1% of the total national mangrove area and region of Quinara (Geba channel) with 11.5% of the national mangrove area.<br><br>Biogeographical distribution of mangroves follows a well-defined scheme as in West Africa. Rhizophora racemosa is observed in the coastal fringes and riverbanks; behind it, we find a line of Rhizophora mangle. Avicennia germinans occupies the highest and the flooded area caused by semidiurnal tides. The other associated species, namely Laguncularia racemosa and Conocarpus erectus, are found further south. | In Guinea-Bissau, the wetlands are distributed in the following way:<br>• Rivers: River Geba, which crosses the region of Bafatá before regaining the neighboring republic of Senegal and the Corubal River, which crosses the regions of Bafatá and Gabú before directing to the republic of Guinea;<br><br>• Permanent Lagoons Cufada: (administrative sectors of Buba and Fulacunda), Wendu Tcham (Boé), Olom-Cussentche (Mansoa), Bedaná, Guluga (Cubececo-Bambadinca), Bolanha de Iussi (Quinara), Djassoucó (Bedanda), Bolanha de Braia, Nabedole (Bambadinca);<br><br>• Non-Permanent Lagoons: Bionra and Bedas (Buba and Fulacunda),<br><br>• Stagnant water bodies: made up of Cufada, Bionra and Bedasse lagoons, Iussi bolanha, in Quinará, Cufar lagoons, lagoon of Djassouco, Gã Mela and Flack Amindara in the in Tombali, Olom-Cussantche, Bolanha de Braia, Gã Mamudo-Malafo Bolanha in Oio (Mansoa), Bedaná and Guluga Bolucca in the Cubuceco-Bambadinca, Bolanha de Mato de Cão, Lagoa de Nabedole (Bafatá region), Lagoa de Wendu Tcham (Boé, Gabú region). In the Bijagós Archipelago, on Orango Grande island, there are the Canicussa and Ancanacubê lagoons, next to the taban of Anghor and Madina (tabanca of the same name).<br><br>In Guinea-Bissau two (2) types of wetlands can be distinguished: (i) Coastal and marine wetlands; and (ii) Continental or inland wetlands. |
| **Associated Ecosystem Services and their role** | Generally, mangroves provide various services (provisioning, regulation, cultural and support), fulfilling a number of critical functions:<br>• Coastal protection: mangrove ecosystems protect coastal areas from erosion, floods, storms and their consequences;<br>• Conservation of biological diversity and habitat provision: mangrove areas provide migration zone and habitat for reproduction, growth, feeding and refuge of several species of cultural, emblematic and economic interest, some of them classified, as rare, threatened and / or endangered species.<br>Additionally, decomposing organic matter releases nutritional elements, which are the basis of a complex trophic chain that branches to neighboring | Wetlands fulfill the following important functions:<br><br>• Wildlife habitat provision and conservation: the wetlands are home to various species of fauna, as well as a place of rest and breeding site for migratory species of birds including waders. The wetlands provide protection as well as adequate environment for the reproduction and feeding of fish species;<br>• Regulation of water levels, $CO_2$ absorption and coastal protection: flow control, mitigating flooding and erosion through retention and absorption of water from large rainfalls; coastal protection against storms;<br>absorption of carbon dioxide, contrary to the greenhouse effect. |

| Ecosystem type | Mangroves | Wetlands |
|---|---|---|
| | ecosystems and to different species;<br>• Timber and non-timber forest production: mangrove wood is used as building and carving material, smoking fish and fuel. Other diverse products, such as fruits and honey for food, leaves, hooves and roots for traditional pharmacopoeia, game meat, etc. are obtained in mangrove ecosystems;<br>• Food and livelihoods provision: mangroves support numerous productive activities, thus contributing to the maintenance and sustenance of numerous families in the coastal zone, as well as to the economy in these regions. In addition to a simple space for economic reproduction and the survival of coastal populations, the mangrove ecosystem fulfils several socio-cultural and religious functions in some communities of coastal animists in Guinea-Bissau. Rice cultivation (riziculture) in mangrove soils, is the main and most important economic activity practiced in the coastal zone. Mangroves provide food in terms of animal proteins. The leaves, flowers, fruits and mangrove roots are also used for food and traditional medicine. | • An important source of supply in quality water: recharge of aquifers, feeding underground natural reservoirs of fresh water; improvement and control of water quality, through purification, retaining nutrients and polluting substances;<br>• Livelihoods provision and enabling economic activities of rural communities: enabling agricultural activities (stocking, watering livestock and irrigation, particularly in lalas and the small valleys (*bas-fonds*), fishing, gathering of mollusks, hunting, shepherding, transportation;<br>• Provision of timber, energy materials, non-wood forest products and other wildlife resources like e.g. raw material from Raphia exica "tara" palm.<br>• Wetlands integrate special attributes as part of the cultural heritage of humanity, related to religious and cosmological beliefs, providing and constituting a source of aesthetic inspiration, wildlife sanctuaries and base of important local traditions. The wetlands also enable leisure, recreation, as well as recreational and tourism activities; |
| **Threats** | There are to main kinds of threats to mangroves: anthropogenic and climatic:<br>• Human population growth that leads to destruction of mangroves: conversion of mangrove habitats into rice fields and the production of charcoal from mangrove wood, fires, logging;<br>• Changing climatic conditions: reduction of rainy season duration resulting in increased salinity of waters and acidity of soils and coastal erosion leading to disappearance of the most exposed mangroves and further acceleration of coastal erosion. | The are several serious threats to the wetlands:<br>• Pressure factors of anthropogenic origin, such as burning plant biomes for agriculture, expansion of cashew orchards, exploitation of timber, overfishing, hunting, urbanization and anthropogenic pollution are associated with wetlands eutrophication, forest degradation, habitat fragmentation and, consequently, loss of biodiversity in the country;<br>• Changing climatic conditions, mainly the reduction of rainfall, that leads to decrease in the surface area of small "Vendos" lakes and the increasing expansion of invasive species. The physical-chemical impact of rainfall on the brackish waters of the estuaries and saltwater of the platform diminish, with consequent impacts on marine biological production. |

***Figure 10. Mangroves, wetlands and coastal protected areas***




Source: Cardoso, 2014, cited in PPG Reports 009c.

***Box 10. Mangrove swamp-rice: Complex agro-ecological dynamics, now at risk from climate change***

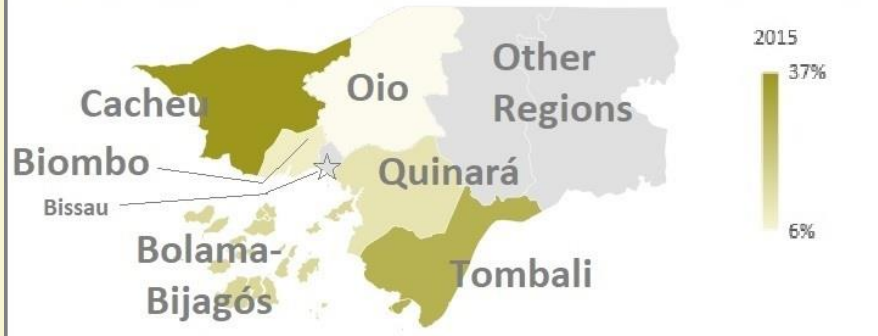
| FROM: [1] TEMUDO & CABRAL (2017): THE SOCIAL DYNAMICS OF MANGROVE FORESTS IN GUINEA-BISSAU, WEST AFRICA. HUM ECOL (2017) 45:307–320; *AND* [2] PPG Report 009b on 'Coastal Sector: Low-Land Rice Cultivation' and 009c on 'Natural Assets: Mangrove restoration'. |
|---|
| A recent paper on the **social dynamics of mangrove forests** in Guinea-Bissau by Temudo & Cabral (2017) stressed that the country has the most significant agricultural use of |

mangrove forests in West Africa.

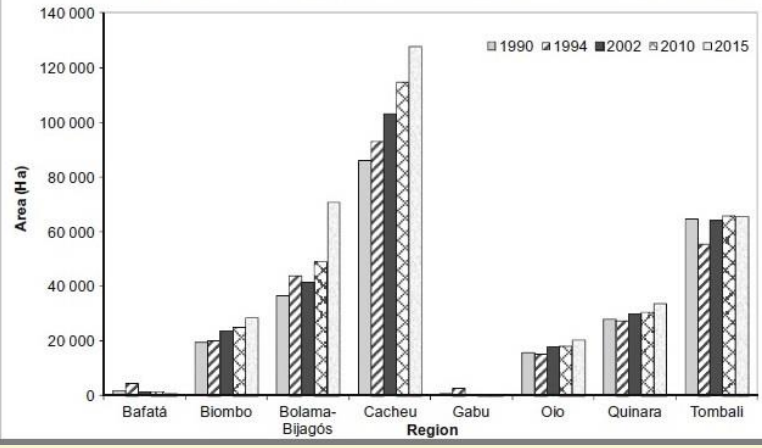
**An interesting and surprising finding of the mentioned study** with respect to land use/cover change (LUCC) is that, with the exception of the South (Tombali Region), mangrove forests have actually been expanding in Guinea-Bissau since 1990—and not shrinking. Figure 2 in Temudo & Cabral's 2017 study (see below) showed that mangrove land cover went from 2,376 sq km in 1990 to 3,495 sq. 2015, reaching levels similar to those of 1978 (see graphic representations in percentages and ha for different regions in this Box). The trend of 'forest gain' (as opposed to 'forest loss') is likely due to abandonment of paddies and the availability of cheap imported rice. Temudo & Cabral's conclusion contrasts with FAO's Forestry Assessment and was based evidence from remote sensing and 37 years of observations.

Percentage of mangrove cover in Guinea-Bissau's coastal regions showing increases
Source: Data from Temudo & Cabral (2017)

| | Cacheu | Tombali | Bolama-Bijagós | Quinara | Biombo | Oio | Other regions |
|---|---|---|---|---|---|---|---|
| ***1990*** | 34% | 26% | 15% | 11% | 8% | 6% | < 1% |
| ***2015*** | 37% | 19% | 20% | 8% | 8% | 6% | < 1% |




Pasted below: 'Figure 2' from Temudo & Cabral (2017)
Mangrove evolution by Guinea-Bissau region between 1990 and 2015




From PPG Report:
Marine hydromorphic soil reclamation for rice copping consists of transforming mangrove virgin land into the rice field, called "bolanhas de agua salgada", by constructing an anti-salt dams or anti-salt dikes not only to prevent a periodical salt water intrusion by tidal action into the desired area, but also to retain rain water, spring, stream water for salt and acid leaching and to provide enough water for whole rice cycle development process. Technically, there are two ways of reclaiming mangrove soils for rice production: traditional and improved way. Traditional land reclamation system consists of constructing main and secondary dikes using the "*arados*". It requires a young and vigorous labor force to sustain its management for a long-lasting rice production system.

A slightly improved system involves the use of claylike soil for building the earth dikes, with concrete (iron reinforced cement) and a few PVC tubes added to the building of a simple sluice system.

*Photo: Maintenance of dikes in Tombali area (D. van den Bergh, 1988)*

BASELINE ASSESSMENT & FEASIBILITY STUDY

# B&F REPORT #009B

## COASTAL SECTOR: LOW-LAND RICE CULTIVATION

*It is important to mention that anti-salt dikes are vulnerable to progressive and regressive erosion needing a periodical maintenance otherwise could easily be destroyed by the tidal action or accumulating fresh water when drainage system is under estimated. Likewise, main anti-salt dike could easily be destroyed when inadequate traditional drainage tools are used.*

BASELINE ASSESSMENT & FEASIBILITY STUDY

# B&F REPORT #009C

## NATURAL INFRASTRUCTURE: MANGROVE RESTORATION


*Mangroves as a key Natural Asset and a drawing card in a climatically uncertain future*

Besides its national strategic importance, this mangroves throughout Guinea Bissau also have international ecological function of great importance, serving as habitat for reproduction, growth, feeding and refuge of several species of cultural, emblematic and economic interest, some of them classified, as rare, threatened and / or endangered species.

In Bijagós e.g., species such as manatees (*Trichechus senegalensis*), hippopotamus (*Hippopotamus amphibius*), Nile crocodiles (*Crocodylus niloticus*), sea turtles: leather T. (*Dermochelys coriacea*), *T. ridley*) *Lepidochelys olivacea*), T. true (*Eretmochelys imbricata*), T. verde (*Chelonia mydas*) and T. cabeçuda (*Caretta caretta*), different species of primates, such as the Bijagó Monkey (*Cercopithecus petaurista*), Fatango (*Polyocolobus badius*) (*Colobus polykomos polykomos*), are part of the ecosystem.

*Protecting the herein mentioned natural assets will create a strong basis for eventually developing an eco-tourism industry in Guinea Bissau, and on the islands in particular. This can potentially help create resilience among local communities through improved income, skills development and participation in the monetary economy. However, if these assets are not conserved now, this option will be foreclosed forever.*

Note: Find the Temudo & Cabral (2017) study in this link: https://link.springer.com/article/10.1007/s10745-017-9907-4.

## *4) Coastal Livelihoods*

**Background: Introduction to Component 3's Baseline: Economic Activities in the Coastal Zone**

### *General information*

According to the results of the Light Survey on Poverty Assessment (ILAP II, 2010) 69.3% of Bissau-Guineans are poor and 33% are extremely poor. The rural economy of Guinea-Bissau is where the country's most profound vulnerability is felt, but it is highly important. The rural sectors of the economy employ 75-80% of the active population and accounts for more than 65% of the country's GDP.[59]

The rural economy is mainly dominated by the agricultural sub-sector, in which two crops dominate the landscapes: rice and cashew:

- Cashew nuts are exported and bring home about 100 million US $ / year, corresponding to 95% of the country's export earnings and 17% of state revenue.
- Although national rice production is important, estimated for the season 2013/2014 at 135,000 tons of rice, it is fully absorbed by the local market and covers about 60% of rice requirements.

Furthermore, at the local level and along the coast, artisanal fisheries play an important role in food security. In several villages, especially in the Bolama-Bijagós islands group, women trade surplus fish in the market and complement thereby their household income.

### *Cashew Cropping*

From 1994 to 2014, the country exported 95 percent of the raw cashew nuts it produced, mostly to India. Cashew exports have been growing at almost 6 percent a year from 1994 to 2013, fueled by increased acreage under cultivation. This is related to availability of vast agricultural lands and the extremely low production requirements of cashews. Existing farming practices, however, represent a risk to productivity in the sector. Poor planting techniques result in lower yields per hectare. Processes such as revitalizing orchards by pruning current trees and replanting old ones with correct spacing are directly correlated with improved yields but are not currently performed.

As the cashew harvest only lasts for three months, it is but a complementary income to most households that cultivate it.

As it is, very few farmers have experimented with inter-cropping systems, which associating tree crops such as cashew with other crops and small livestock rearing. For such systems to emerge, more knowledge, experimentation and rural extension support would be needed.

The next step in the value chain is the production of cashew kernels, but the processing capacity of the country is small. It is estimated that cashew-processing creates about one full-time job for every three tons of processed raw nuts.

Processing 30,000 tons of nuts a year could therefore create about 10,000 jobs, mostly in rural areas. This increase in jobs would particularly benefit women, who make up the majority of factory workers.

Organized communities and a better value chain could significantly raise incomes, address food security, and reduce poverty.

**Background: Alternatives to Cashew and improvements to cashew economy**

### *Increasing production in other agricultural areas: Rice and Fishery*

Notably, Guinea-Bissau also produces groundnuts, which in 2015 was estimated to be 40,000 metric tons. The Government has also initiated steps to encourage sesame production. There is also potential in a diversified range of cereal (rice, millet,

[59] WB Data, retrieved in Dec 2017.

sorghum, and so forth), fruit (mangoes, citrus fruit, papayas, and so forth) and pulse and tuber (cassava and sweet potatoes) crops.

Rice is grown on a subsistence basis although the country was once a net exporter of the commodity until the 1970s.

Nevertheless, even if rice productivity is improved, the rational decision at the household level might still be to plant cashew. This is due both to the role of cashew in securing land tenure and to its higher economic returns. This means that the interplay between rice and cashew should be leveraged when possible to maximize returns while enhancing household food security. Therefore, rural extension service should include sensitization for the importance of income diversification for a robust food security structure.

Fishing is one of the major economic activities undertaken in the western coast of Africa and has great potential in Guinea-Bissau. Estimates confirm that the country has a fishing potential of 120,000 tons, nonetheless, most of the current industry is exploited by foreign companies, with only a small share benefitting locals. Although Guinea-Bissau has a relatively small coastline, 270 Km long (excluding oceanic islands), its waters are rich in terms of abundance and diversity of fish species, sustained mainly by an influx of nutrients from the country's many estuaries which provide 3,400 km of mangrove cover, nearly 10 percent of the national territory. Fishing is a source of income for coastal communities, fulfilling basic needs for animal proteins in Guinea-Bissau.

### *Sustainable tourism and ecotourism*

In Guinea-Bissau, sustainable tourism and ecotourism have the potential to become a source of economic growth and employment. Through tourism, protected areas and ecosystem can gain tangible economic value, helping to further preserve them. Guinea-Bissau is somewhat unique in that it is among the last countries in West Africa where development has had limited negative impact on the environment, and consequently, its biodiversity has not yet been significantly degraded.

Dramatic shifts in community livelihoods can ensue from investment in tourism, helping to raise incomes, create new jobs, and add value to previously inexistent activities.

## *5) Geo-based baseline vulnerability assessment*

The vulnerability assessment for this project built on global, regional/sub-regional and national assessments.

Additionally, a specific PPG study based on available GIS data, assessed the coastal communities' vulnerability to climate change by looking at elements such as altitude, population, presence of vulnerable assets -- including both natural and infra-structural, and elements that would make specific localities more vulnerable, among them a place-specific gender gap.

### *From global comparative assessments to sub-regional, to national*

A recent global assessment on climate change vulnerability, carried out by the consulting outfit Verisk Maplecroft, specialized in global risk assessment, consulted as part of this project's vulnerability assessment. It used a suite of socio-economic, infrastructural and climatic measures to compare and rank countries, using an index – the climate change vulnerability index (CCVI). According to Maplecroft (2017), the countries with the most risk are characterized by high levels of poverty, dense populations, exposure to climate-related events and reliance on flood and drought prone agricultural land.[60] Guinea-Bissau was ranked between High Risk and Extreme Risk, side-by-side with Sierra Leone, Chad, Haiti, Ethiopia and Philippines.

A globally vetted climate change specific assessment of risk at sub-regional scale includes the Intergovernmental Panel on Climate Change (IPCC) in its Fifth Assessment Report (AR5) of the 2014. The AR5 results are summarized in the Box below.

***Box 11. IPCC 5th Assessment Report remarks on sea level rise in West Africa***

| IPCC 5th AR Conclusions: |
| --- |
| • On the regional scale for West Africa and the Sahel, observations show an increase in annual mean temperature over the last 50 years. A statistically significant warming of between 0.5 and 0.8 °C has been observed between 1970 and 2010 over the region using remotely sensed data; |

[60] See: https://maplecroft.com/about/news/ccvi.html (accessed on 07 Dec 2017).

- West Africa is expected to be strongly impacted by temperature increase. The report indicates a warming range of 3 and 6 °C above the late 20th century baseline;
- Also, climate extremes have increased, as between 1961 and 2000 a decrease in number of cold days and nights and an increase in number of warm days and warm nights could was observed;
- Over the Sahel the precipitation has decreased over the course of the 20th century, whereas over the last 20 years a recovery of the precipitation has been observed. In addition to the total precipitation, the onset of the rainy season is of special interest for agriculture. In the past a shift of the rainy season was discussed, but currently a shift cannot be observed for West Africa;
- Due to sea level rise, flooding and salt water intrusion will increase. Wave height and impact on the coast will increase.

Conclusion

"The erosion and flooding (submersion) of coastal areas, which largely contribute to the receding shoreline, will be aggravated in the course of 21st century following an increase in average sea level. Africa is one of the regions in the world whose coastal zones and deltas are the most exposed to flood risks related to the rise in mean sea level. This rise in sea level, combined with the increased intensity or frequency of extreme events, could have serious consequences for coastal development. Many coastal or island areas will be submerged or subject to increasingly frequent flooding, causing considerable damage".

Another relevant sub-regional analysis with a specific focus on the coastal zone included that carried out in connection with the Regional Multi-partner WACA Program West Africa Coastal Areas Management Program (WACA).[61] A number of striking WACA indicators point out to the vulnerability of the coastal population straddling from Mauritania to Nigeria, e.g.:

- 105 million people is the estimated population of West Africa's coast, representing 31% of the total population in these countries, which generates 56% of the regions GDP (in Guinea-Bissau these percentages are significantly higher).
- Half a million people are impacted by coastal flood in West Africa every year, a recurrent and worsening phenomenon that may costs up to $11 billion by 2050 to the sub-region's economy.
- While seafood contributes with two thirds of the protein supply in these countries, fisheries-related jobs are expected to decrease by 50% by 2050.
- Finally, strong coastal erosion has been registered in certain coastal hotspots, where the rate reached 23-30m in a given year.

## *Project specific PPG Vulnerability Assessment*

A key PPG product included a geographically-based vulnerability assessment aims to provide support in the prioritization and selection of sites where measures should be taken to strengthen the resilience of coastal communities vis-à-vis the effects of climate change.

This physical vulnerability is also combined with social and economic vulnerability.

Guinea-Bissau's current economy is highly dependent on its natural resources. The sale of cashew nuts and fisheries licenses are currently the country's two best income earners. Cashew nut exports represents more than 80% of the country's export earnings. Exploitation of non-renewable resources, among them coastal mining and petroleum, is being considered as a development option by the Government, given these sectors' potential to bring fast economic growth.

In fact, there has been increased interest from the oil & gas industry in offshore assets in Guinea-Bissau. An industry news outfit reported in June 2017 that oil and gas "stakeholders" will be "accelerating the development of its hydrocarbon resources."[62] In 2014, the same outfit had reported that only the few blocks that had been assessed back then appeared to hold under 1 billion barrels of oil.

Whether Guinea-Bissau will or not pursue offshore oil and gas exploration in the upcoming years – with all the consequences and benefits that the choice of development path will imply – is matter of strategic importance for coastal zone management. A sectoral analysis, in view of embracing integrated coastal zone management (ICZM) needs to take this into account, even if the emergence of an oil and gas industry in Guinea-Bissau is yet to happen. And from all accounts, it seems to be looming.

[61] See Knowledge Sheets in http://www.worldbank.org/en/programs/west-africa-coastal-areas-management-program. See also their summary in PPG Report 9a, referred to in Annex Y.

[62] See https://www.offshoreenergytoday.com/geopartners-in-jv-with-petroguin/ (accessed on 07 Jun 2017).

Coastal tourism also holds potential – given Guinea-Bissau's natural attractions, in particular the islands. However, the country's tourism industry remains largely underdeveloped. Should the government also decide that it is strategic to pursue tourism as an important economic activity in the coastal zone, there are nearby examples to follow and learn from (e.g. the tourism models already being exploited in the Senegalese coastal zone around Ziguinchor).

While the development of economic sectors, other than agriculture and fisheries, hold promise and potential, within a climate adaptive integrated coastal zone management (Adaptive-ICZM), the impacts of sea-level rise, poses serious risks to the entire coastal zone, to its infrastructures – whether existing or yet to be built. It will also severely affect coastal habitats and essential resources, including the rich and underexploited fishery resources that characterize key natural assets in Guinea-Bissau's coastal zone.

With the impacts of climate change, coastal communities and the whole population of Guinea-Bissau would feel the losses quickly, as they rely on mangrove stands and coastal lowlands for rice cultivation as main sources of incomes and food.

***Table 26. List of selected vulnerability indicators***

| Indicator | Unit | Vulnerability | Ranking |
|---|---|---|---|
| Population | # | The total number of inhabitants. A higher number is considered as making the village more vulnerable. | Rank from high to low |
| Woman | % | The % of women in the total population. Women are seen as more vulnerable. A higher % of women on the total population subsequently increased the vulnerability of the community. | Rank from high to low |
| Female heads of household | % | % of the households headed by women. More female headed households are in indicator for a more vulnerable community. | Rank from high to low |
| Pop. younger than 12y and older that 55y | % | % population which is younger than 12 or older than 55. This is a measure for dependency ration. A higher dependency ration is an indicator for a more vulnerable community. | Rank from high to low |
| Pop older than 60 y | % | % of the population which is older than 60y. Elderly people are more vulnerable. A higher % makes the community at large more vulnerable. | Rank from high to low |
| Illiterate pop 5y and + | % | % of the population older than 5 that is educated to some degree. Education makes people less vulnerable. A higher % of educated people makes a community less vulnerable. | Ranked from low to high |

***Values were ranked for each indicator and rankings where summed. The resulting number is normalized. The resulting values can be grouped into categories from high to low. The result is shown in the table below:***

***Table 27. Vulnerability index per zone***

| Localities | Population | | Woman | | Female heads of household | | Pop. younger than 12y and older that 55y | | Pop older than 60 y | | Illiterate pop 5y and + | | Vulnerability Index | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | # | Rank | % | Rank | % | Rank | % | Rank | % | Rank | % | Rank | ∑Rank | |
| Suzana | 1507 | 4 | 51.0% | 4 | 7.8% | 2 | 48.4% | 1 | 12.7% | 1 | 37.6% | 6 | 18 | 31.03 |
| Varela beach | 597 | 5 | 49.9% | 8 | 5.5% | 3 | 46.7% | 4 | 9.4% | 3 | 41.0% | 4 | 27 | 46.55 |
| Indjasson | 535 | 6 | 54.4% | 1 | 1.1% | 13 | 45.0% | 5 | 6.2% | 7 | 42.1% | 3 | 35 | 60.34 |
| Bruce village | 414 | 8 | 51.0% | 3 | 4.6% | 5 | 43.7% | 6 | 7.0% | 5 | 32.4% | 9 | 36 | 62.07 |
| Ancadjedje | 112 | 13 | 50.9% | 5 | 8.0% | 1 | 42.0% | 9 | 6.3% | 6 | 38.4% | 5 | 39 | 67.24 |
| Catão - Catengui | 303 | 9 | 44.2% | 13 | 3.0% | 10 | 43.2% | 8 | 9.9% | 2 | 52.8% | 1 | 43 | 74.14 |
| Cussane 1/2/3 | 207 | 12 | 51.7% | 2 | 3.9% | 6 | 43.5% | 7 | 5.8% | 8 | 30.0% | 10 | 45 | 77.59 |
| Mansoa | 7996 | 1 | 49.9% | 7 | 3.6% | 7 | 37.9% | 11 | 4.7% | 9 | 23.6% | 13 | 48 | 82.76 |
| Catão - Cassica | 221 | 11 | 49.3% | 10 | 2.3% | 11 | 41.2% | 10 | 3.6% | 10 | 43.4% | 2 | 54 | 93.10 |
| Bubaque | 4299 | 3 | 49.2% | 11 | 4.8% | 4 | 35.4% | 13 | 3.4% | 11 | 16.1% | 14 | 56 | 96.55 |
| Gã Turé | 258 | 10 | 50.4% | 6 | 0.8% | 14 | 46.9% | 3 | 3.1% | 12 | 29.1% | 11 | 56 | 96.55 |
| Buba | 7571 | 2 | 49.3% | 9 | 3.0% | 9 | 37.4% | 12 | 2.4% | 13 | 24.2% | 12 | 57 | 98.28 |
| Tira Camisa | 29 | 14 | 48.3% | 12 | 3.4% | 8 | 48.3% | 2 | 0.0% | 14 | 34.5% | 8 | 58 | 100.00 |
| Catão - Joninque | 474 | 7 | 42.2% | 14 | 2.1% | 12 | 32.5% | 14 | 9.1% | 4 | 34.8% | 7 | 58 | 100.00 |

Finally, the results can be displayed on a map. In order to map the villages, the census data was cross-referenced with the administrative GIS data. In Table 5 it is clear that the project was able to make a near perfect match. The result is shown further down in Figure 3. Summary Map: GEO-based vulnerability for visited sites (based on a ranking method). With red markers showing more vulnerable sites and green markers showing less vulnerable sites. The map is incomplete since not all sites could be located in the available GIS database.

# ANNEX X-2. Detailed summary of project design: Outputs and Activities

[UNDP TO PLS ADVISE: WE SUGGEST DROPPING THIS ANNEX, AS ACTIVITIES ARE ALREADY LISTED IN ANNEX A]

## *COMPONENT 1) Policy and institutional development for climate risk management in coastal zones.*

OUTCOME: Policies, regulations institutions and individuals mandated to manage coastal areas strengthened to reduce the risk of climate change. TECHNICAL ASSISTANCE.

**1.1 Capacity building for coastal zone management**

FULL TEXT: Output 1.1) A capacity development program is implemented for climate risk mainstreaming, benefitting key institutions and stakeholders that either manage and use the coastal zone

1.1.1 Development and implementation of an audience-tailored capacity development and training program targeting priority stakeholders and the coastal populations at large

1.1.2 Stakeholder Meetings and Workshops in connection with audience-tailored capacity development and training program

**1.2 Policy and regulations**

FULL TEXT: Output 1.2) Measures to improve the policy, regulatory and administrative environment for climate risk management in the coastal zone are implemented

1.2.1 Consolidating institutional mandates and coordination for and Integrated and Adaptive Coastal Zone Management in Guinea Bissau

1.2.2 A study on fiscal policies, pertaining to the coastal zone, in close collaboration with port authority and other institutional stakeholders, is carried out, in view of proposing solutions for improving and attracting investment to the coastal zone.

1.2.3 Local development plans for project sites are revised to take into account climate change

**1.3 Risk management in the coastal zone**

FULL TEXT: Output 1.3) Institutional coordination is strengthened for improved climate risk management in the coastal zone.

1.3.1 Develop and implement a Geographically-based Information and Decision Support Systems for Guinea Bissau's coast that fully takes climate risk into account

1.3.2 Identify and implement priority research projects on climate change and climate risks.

1.3.3 Carry out a Strategic Environmental Assessment (SEA) at the national level on the potential benefits and risks linked to Guinea Bissau's coastal zone and the likely emergence of an off-shore oil and gas boom.

1.3.4 Develop and validate among key stakeholders and investors a generic but highly bankable multi-partner investment plan for Integrated and Adaptive Coastal Zone Management in Guinea-Bissau

1.3.5

1.3.6 International Technical Assistance: Project Support for addressing gaps in specialized technical capacity, combining intermittent in-country service delivery with remote, desk-based support

1.3.7 Equipment for the PMU

1.3.8 Domestic travel for the PMU

1.3.9 Project Youth Talent Teams: National Junior Fellows: At least 3 x graduate level students, who are willing to combine post-graduate research with project work, are placed at a time in the PMU

1.3.10 The Bissau-Guinean Coastal Forum: Institutional Coordination and Progressive Integrated and Adaptive Coastal Zone Planning

## *COMPONENT 2) Coastal protection investments.*

OUTCOME: Vulnerability of coastal investments to climate risks reduced through the design, construction and maintenance of coastal protection measures. INVESTMENT.

**2.1 Small wharf fisheries**

FULL TEXT: Output 2.1) Climate-proofing, rehabilitation and/or protection of essential fisheries and local transportation coastal infrastructures against sea-level rise and coastal degradation

2.1.1 Screening of local needs in terms of infrastructure, facilities and equipment in the support center for artisanal Fisheries in Cacheu
2.1.2 Preliminary studies and design solution of a climate-proof ramp and ancillary structures
2.1.3 Social, economic and environmental impact assessment studies for all interventions foreseen
2.1.4 Detailed design of the new ramp and ancilary structures
2.1.5 Construction works for a new climate proofing ramp for landing fishing boats, maintainance/repair
2.1.6 Constructions works for ancilary services, facilities and equipments (fueling station, fishing gear warehouses, ice factory, cold store, etc.)

**2.2 Protect 1000ha of lowland rice**

FULL TEXT: Output 2.2) Cultivation of low-land rice is protected from climate risks

2.2.1 Assessment of existing infrastructures, design and upgrade of infrastructure Agroecological studies and soils suitability studies for rice agriculture. EIA of proposed interventions
2.2.2 Rain water management (amongst others in Jeba and Courubal rivers)
2.2.3 Dedicated construction works (rehabilitation and upgrade of existing structures, construction of new structures: dikes, dams and sluices)
2.2.4 Promote the distribution of improved seeds (adapted to mangrove areas) - Project Africa Rice
2.2.5 Strengthen capacity of intervention of INPA and Direcção Nacional de Vulgarização Agricola and development of agriculture education (schools)
2.2.6 Introduction of innovative techniques such as the use of residues in the production of biofertilizers and sustainable energy generation (as an alternative to the use of mangrove firewood and irrigation techniques
2.2.7 Create a village based mutual saving mechanisms and facilitate access to market information
2.2.8 Activity support and technical supervision (including specialized consultancy + travel)

**2.3 Restore 2500ha of mangroves**

FULL TEXT: Output 2.3) A total of 2,500 ha of mangroves forests restored and maintained in selected coastal sites

2.3.1 Identification of threats and opportunities for mangrove conservation and sustainable use as an adaptation measure with multiple benefits
2.3.2 Promote natural regeneration where mangrove ecosystems are self-renewing (1500ha)
2.3.3 Rehabilitate via degraded mangrove replanting (1000ha)
2.3.4 Planning and M&E System
2.3.5 Green coastal belts: Identify protected areas that could be extended or already covers mangrove areas and strengthen their financial baseline
2.3.6 Stakeholders' engagement and training
2.3.7 Independently monitor mangrove health in areas subject to regeneration and rehabilitation on the ground

**2.4 Protect coastal wetlands**

FULL TEXT: Output 2.4) Restoration and management of at least 1,500 ha of coastal wetlands, in view of strengthen the resilience against drying-out risks and salinization

2.4.1 Update the national wetland inventory: carry out wetland assessments: carry out specific studies to characterize the initial status of the functions and assess the functionality of the wetlands concerned
2.4.2 Identify and estimate the value of ecosystem services (ecological, socio-economic and economic) provided by wetlands in support of their rational use, management and decision-making
2.4.3 Development of partnerships with related projects for bringing wetlands restoration activities to scale
2.4.4 Planning and M&E System: Develop an Action Plan for targeted wetlands, taking into account the need for adaptation, (where applicable mitigation) and, most importantly, increased resilience of wetlands to climate change, in particular with respect to water flows.
2.4.5 Restoration of degraded wetlands (installation of infiltration basins, replenishment of old flood maintenance arms, decollotation of sediments and opening of the river below
2.4.6 Sustainable intensification of wetland use: A. Agro-pastoral-horticulture B. Introduction of the mixed system `` rizicultura - peixe``, C. Control of water use, forage and pasture, D. Valuation of non-timber forest products, E. Ecotourism valuation
2.4.7 Stakeholders' engagement and training
2.4.8 Establish and implement effective and efficient mechanisms for participatory wetland monitoring

## *COMPONENT 3) Diffusion of technologies to strengthen coastal communities' climate resilience.*

OUTCOME: Rural livelihoods in the coastal zone enhanced and protected from the impacts of climate change. INVESTMENT.

**3.1 Diversification**

FULL TEXT: Output 3.1) At least 1,500 women rice growers and 500 horticulture producers (400 women and 100 young men) will be organized and supported by adaptation-trained agricultural extension services

~~[NOT CORRECT]~~

- ~~3.1.1 Selection of potential intervention sites for women rice growers and horticulture producers on the basis of competitive bidding for small grants~~
- ~~3.1.2 Installation of water pumping systems powered by new and renewable energies to improve the availability of this liquid in agriculture, horticulture, animal production and meeting human needs and their well-being~~
- ~~3.1.3 Introduction and popularization of improved stoves~~
- ~~3.1.4 Intensification of horticultural production and breeding of short cycle animals, valuing the agro-silvo-pastoral system~~
- ~~3.1.5 Technical equipment provision according to package~~
- ~~3.1.6 Training on technical equipment, solar energy, water pumps and handling of agricultural equipment, taking into account local conditions regarding language and literacy rates~~
- ~~3.1.7 Training to improve production and commercialization strategies taking climate challenges into account~~
- ~~3.1.8 1 st year production circle, supervised by extension services~~
- ~~3.1.9 Functional alphabetization throughout first production year~~
- ~~3.1.10 Continuous supervision of production parameters in years 2-4, assessing additional training needs~~

**3.2 Wetlands Fisheries/ Natural Resources Management**

FULL TEXT: Output 3.2) Climate resilient wetland and fisheries management strategy is developed for the Bijagós Archipelago

**3.3 Livelihood Strategies**

FULL TEXT: Output 3.3) Livelihoods' strengthening is supported through innovation

- 3.3.1 Development and/or updating of local development plans for the administrative sector of Bubaque (covering the Bolama-Bijagós Project Zone) including: (i) the climate proofing of hard infra-structural developments / investments; and (ii) a business plan for sustainable and adaptive coastal tourism
- 3.3.2 Creating the means for the plan's implementation, review and monitoring by levering the needed finance for through validation, detailed budgeting and the levering of grants and investments.
- 3.3.3 PMU procures and subcontracts an international consulting business for developing the strategy and helping leverage tourism investment.

**3.4 Alternative to Cashew & landscape level management**

FULL TEXT: Output 3.4) Alternative agricultural production systems in the cashew nuts production areas in the coastal zone.

- 3.4.1 Promotion of sustainable income generating activities (beekeeping, fishing, oyster harvesting, horticulture, agro-forestry, community-based tourism. Sustainable) -- actual access to funding should be secured though micro-granting activities under Output 3.1
- 3.4.2 Climate proofing community's social infrastructures and transport in partnership with UN agencies, NGOs and investors
- 3.4.3 Innovative and sustainable ways of improving local living conditions -- actual access to funding should be secured though micro-granting activities under Output 3.1

**3.5 Provision of extension services**

FULL TEXT: Output 3.5) National agro-ecological extension services is strengthened for climate resilience and vulnerability reduction, including in the management of bush fire on coastal forests

- 3.5.1 Conception of Training program, selection process
- 3.5.2 Training 3-6 months at "Escola de Arte" (AD) with first contact to project sides and local partners
- 3.5.3 Multiplication in the regions, network-building, other necessary infrastructure
- 3.5.4 Provision of extension services, Phase I, in selected project sites, coordinated with project activities in 3.1. (women rice) and 3.3 (livelihoods), prior or simultaneously to activities

3.5.5 Provision of extension services all over coastal zone, related to activities of this GEF project and other CC projects with regular (bi-annual) meetings / workshop of the extension service group

3.5.6 Dissemination of information, radio programs, production of leaflets (topics: improved seeds, irrigation, importance of horticulture etc.)

**3.6 Access to Finance**

FULL TEXT: Output 3.6) Micro-finance initiatives to support livelihoods climate-proofing activities developed
Activities yet to be developed

i. Conduct an analysis and assessment of the value chains and linkages in the coastal agriculture, artisanal fisheries, to develop alternatives to current livelihoods and research innovative measures to climate proof and wealth creation in the project area.

ii. Use the results of the assessment above to develop an 'Adaptive Coastal Community Investment Program' and implement it, through which economic diversification and livelihoods' strengthening activities contribute to the resilience of vulnerable coastal communities:

iii. For the selected livelihoods, propose recommendations for specific enhancements to key environmental, development and planning policies, legislation, regulations and guidelines that would enable the development of viable livelihood opportunities in face of climate change.

iv. Support adaptation training for agricultural extension services for at least 1500 women rice growers and 500 horticulture producers (400 women and 100 young men);

## *COMPONENT 4) M&E*

4.1.11 Project Inception Workshop

4.1.12 Review of gender mainstreaming strategy, stakeholder engagement approach and plan and the logical framework with indicators (+ development of specific TORs under pilots, review of budget allocations, detailed work-planning etc.)

4.1.13 Generation of missing baseline data for indicators

4.1.14 Measurement of indicators (incl. Local workshop for applying the GEF Tracking Tool)

4.1.15 Internal review (Annual Project Board Meetings) and organization of indicator data

4.1.16 Mid-term review

4.1.17 Final evaluation

4.1.18 Negotiation of details of exit/sustainability strategy

4.1.19 Review/feedback workshop

4.1.20 Project Audits

## ANNEX X-3. Sites visited & communities consulted

Table below lists the sites visited during missions and at the same time summarizes characteristics such as main economic activity per site. During the field visits the local villagers were asked to mention their main challenges and the local adaptation measures that they already take to deal with climate change. Finally, an overview of parallel projects is given to assess the possible level of synergy with ongoing programs. Results are presented below:

Economic activity profile and problem characterization of project localities based on site-level interview conducted during PPG, plus as per site

| Zone | Village (Tabancas) | Main economic activity | Ecologic value including mangroves | Main challenges (interviews) risk due to climate change | Local adaptation measures - proposal of measures | Parallel projects and programs |
|---|---|---|---|---|---|---|
| Zone #3 Varela-Cacheu | Cacheu (urbano) | Trade, transport | Mangrove Natural Park - Cacheu river | Infrastructures not climate proof | NA | To be researched. |
| | Varela beach | Fishing/agriculture | | - Sea level rise<br>- Beach erosion<br>-Loss of rice fields (accession of rice fields salt intrusion)<br>- Unprotected landing of fishing vessels in the beach (higher exposure to extreme climate conditions) | - Beach nourishment<br>- Construction of groins<br>- Fishing infrastructure (landing ramps, wharf or coastal protection for landing area | WB Participatory Rural Development Project |
| | Catão, (Cassica Catengui, Joninque, Butame) | Rice agriculture | | - Ruin of mud dykes to protect rice fields from salt water intrusion<br>- Lack of man labor to maintain/reconstruct the dykes<br>- Desertification of young population | - Reconstruction of mud dikes, sluices and dams to protect bolanhas<br>- Investment in agriculture equipment and machinery<br>- Generate incentives to attract young population<br>- Create agriculture school<br>- Divulgation of improved seeds | WB Participatory Rural Development Project |
| | Suzana | Rice agriculture | | | | |
| Zone #1 Bijagós Islands | Bubaque | Fishing, agriculture, cashew and palm oil extraction | Bijagós Archipelago Biosphere Reserve UNESCO-MAB | - Sea level rise<br>- Reduced and irregular rain falls<br>- Strong winds with dust<br>- Intrusion of salt water in mangroves and lemon trees<br>- Destruction of the fishing Warf<br>- Destruction of fishing equipment<br>- Disappearance of fish species<br>- Unpaved road network in bad conditions exposed to extreme rainy events, droughts and flooding<br>- Difficult access to potable water and basic products and goods: woman have to carry daily those | - Rehabilitation and climate proofing of the wharf<br>- Road rehabilitation and paving<br>- Infrastructures for fish conservation and palm oil processing<br>- Water retention basins and systems for horticulture production and drinking for livestock<br>- Wells equipped with hand pumps | NGO's: ADEMA and NANTINYAN |
| | Ancadjedje | Fishing, agriculture, cashew and palm oil extraction | | | - Road Rehabilitation and paving<br>- Infrastructures for fish conservation and palm oil processing<br>- water retention basins and systems for horticulture production and drinking for livestock<br>- Wells equipped with hand pumps | |

| Zone | Village (Tabancas) | Main economic activity | Ecologic value including mangroves | Main challenges (interviews) risk due to climate change | Local adaptation measures - proposal of measures | Parallel projects and programs |
|---|---|---|---|---|---|---|
| | **Bruce village, (Ilha de Bubaque)** | Rice agriculture, small cultivation of cereals, harvesting of mollusks, clams, sale of cashew nuts and fishing | | basic products for long distances<br>- Sedimentation of the river bottom | -Recovery of the existing water pump<br>- School building<br>- Seed bank<br>- Transport facilities to Bubaque<br>- Storing facilities<br>- Water retention systems<br>- Acquisition of manual agriculture tool | |
| **Zone #3(a) Mansoa-Cufada** | **Buba** | Rice agriculture | Natural Park Lagoas de Cufada | - Unpaved roads in bad conditions aggravated by extreme climatic events<br>- Blockage of water streams due to the improper implementation of road<br>- Difficult access to water<br>- Reduced and irregular rain falls<br>- Loss of bolanhas due to erosion and strong water currents<br>- Strong erosion at the Corubal river | - Road rehabilitation and paving and impact assessment studies and remediation solutions<br>- Solar energy systems<br>- Wells and water pumps<br>- Rainwater storage systems<br>- School material and renovation<br>- Fishing material | ONG's: DUVUTEC and ADS |
| | **Tira Camisa** | Rice agriculture, peanuts, beans and cashew | | | | |
| | **Gã Turé** | Rice agriculture, fishing, peanuts, palm oil, lemon juice, local vegetables production and cashew | | | - Improvement of transport facilities<br>- Road rehabilitation and paving and impact assessment studies and remediation solutions<br>- Improved cookers<br>- Rice peeling machinery<br>- Wells and/or water holes to allow irrigation | |
| | **Indjasson** | | | | | |
| | **Cussane** | Cashew plantation | Wetlands ecosystems (currently, not under protection) | | | |
| | **Mansoa** | Rice agriculture | Mangrove, river ecosystems | [Bridge | | |

# ANNEX X-4. Project Atlas with Selected Maps

NEXT ITERATIONC

# ANNEX Y. List of PPG Reports

All reports prepared between May by EBDGLO/ANTEAGROUP, Project #038 LDCF for client UNDP Bissau.
In connection with the PPG for the UNDP GEF LDCF Project *"Strengthening the resilience of vulnerable coastal areas and communities to climate change in Guinea Bissau".*

| Date | Purpose of Report in the PPG | Main reports with dark background: | Report Title |
|---|---|---|---|
| 28-Aug-2017 | Planning | CLIENT REPORT 001 | PRE-MISSION WORKPLANING Working Document for PPG Consultants |
| 28-Aug-2017 | Consultations | **CLIENT REPORT 002a** | CLIENT REPORT 002a. COMMUNITY PICTURES. + basis for DEBRIEFING AT UNDP. PPG Inception Workshop + Field visit to Bissau, Cacheu and Varela Zones. 09 – 17 Aug 2017. PROJECT GNB0000103417. |
| 31-Aug-2017 | Consultations | **CLIENT REPORT 002b** | SITE-LEVEL CONSULTATIONS 1. ROUTE FOLLOWED & SITE LOCATIONS. PPG Inception Phase. 11 – 14 Aug 2017. PROJECT GNB0000103417. |
| 04-Sep-2017 | Consultations | **CLIENT REPORT 003** | PPG INCEPTION REPORT. Launching of the project preparation phase: DELIVERABLE 2 - Inception Workshop Report; - Community consultation reports and photos of the communities visited. |
| 31-Aug-2017 | Inception | **CLIENT REPORT 004** | INCEPTION WORKSHOP COMPILATION OF PRESENTATIONS. PPG Inception Workshop. 10 Aug 2017, Hotel Malaika, Bissau. PROJECT GNB0000103417. Main Author: Fabiana Issler, Team Leader / GEF LDCF Specialist and EBDGLO's CEO. |
| 02-Oct-2017 | Planning | CLIENT REPORT 005 | MISSION PLANS AS PRESENTED IN EARLY OCT 2017 Ad hoc client info report towards: DELIVERABLE 3, contributing to: - Baseline assessment report (partial); - DRAFT Feasibility studies report (initial). |
| 27-Dec-2017 | Guidance to client | **CLIENT REPORT 006** | GUIDANCE ON GEF CO-FINANCING Government – UNDP – GEF: PROJECT GNB0000103417. Ad hoc Client Report #006, v. 3 (EN+PT) |
| 29-Nov-2017 | Consultations | **CLIENT REPORT 007** | MISSION REPORT - PPG Second Field Mission Report. APPENDED TO THE REPORT: - Mission Plans Ad hoc Report 005; - Photo Essay from the Mission. |
| 29-Dec-2017 | Baseline & Feasibility | **CLIENT REPORT 008** | DEL3 MAIN REPORT: Climate Adaptive Coastal Zone Management in Guinea Bissau: DELIVERABLE 3. - Coastal Sectors and Investments; - Governance and Capacity for Climate Adaptive & ICZM. Main Author: Fabiana Issler, Team Leader / GEF LDCF Specialist and EBDGLO's CEO. |
| 17-Nov-2017 | Baseline & Feasibility | **CLIENT REPORT 009a** | PPG B&F REPORT #009A (2017) BASELINE ASSESSMENT & FEASIBILITY STUDY on Component 1: Capacities, Policies & Practices for an Adaptive ICZM. Main Author: PPG Specialist Itel Abissa Vieira, National Climate Change Adaptation. Co-Authors: Fabiana Issler, Team Leader / GEF LDCF Specialist and EBDGLO's CEO, and PPG Specialist B.P.J. (Dick) van den Bergh, International ICZM. |
| 08-Dec-2017 | Baseline & Feasibility | **CLIENT REPORT 009b (Fish)** | PPG B&F REPORT #009B (2017) BASELINE ASSESSMENT & FEASIBILITY STUDY on Coastal Sector: Fisheries and Agricultural Infrastructures. Main Authors: PPG Specialists Ilina Rebordão, International Coastal Defense, & Claudia Bethlem, Safeguards. |
| 08-Dec-2017 | Baseline & Feasibility | **CLIENT REPORT 009b (Rice)** | PPG B&F REPORT #009B (2017) BASELINE ASSESSMENT & FEASIBILITY STUDY on Coastal Sector: Low Land Rice Cultivation. Main Author: PPG Specialist B.P.J. (Dick) van den Bergh, International ICZM. |
| 16-Dec-2017 | Baseline & Feasibility | **CLIENT REPORT 009c (Mangrove)** | PPG B&F REPORT #009C (2017) BASELINE ASSESSMENT & FEASIBILITY STUDY on Natural Infrastructure, Mangroves. Main Author PPG Specialist Justino Biai, National Coastal Sector. |
| 16-Dec-2017 | Baseline & Feasibility | **CLIENT REPORT 009c (Wetlands)** | PPG B&F REPORT #009C (2017) BASELINE ASSESSMENT & FEASIBILITY STUDY on Natural Infrastructure, Wetlands. Main Author PPG Specialist Justino Biai, National Coastal Sector. |
| 16-Dec-2017 | Baseline & Feasibility | **CLIENT REPORT 009d (Livelihoods)** | PPG B&F REPORT #009D (2017) BASELINE ASSESSMENT & FEASIBILITY STUDY on Natural Infrastructure, Wetlands. Main Author PPG Specialist Christiane Severo, International Livelihoods & Value Chains. Co-Author: Fabiana Issler, Team Leader / GEF LDCF Specialist and EBDGLO's CEO. |
| 27-Nov-2017 | Baseline & Feasibility | **CLIENT REPORT 010** | PPG B&F REPORT #010 (2017) BASELINE ASSESSMENT & FEASIBILITY STUDY on Gender Mainstreaming. Main Author PPG Specialist Birgit Embaló, |

| Date | Purpose of Report in the PPG | Main reports with dark background: | Report Title |
|---|---|---|---|
| | | | International Gender. |
| 07-Dec-2017 | Baseline & Feasibility | **CLIENT REPORT 011** | PPG B&F REPORT #010 (2017) BASELINE ASSESSMENT & FEASIBILITY STUDY on Gender Mainstreaming. Main Author PPG Specialist Birgit Embaló, International Gender. |
| 27-Nov-2017 | Planning | CLIENT REPORT Ad hoc (no #) | PPG PROCESS: Updated Planning by Nov 2017. |
| 24-Jan-2018 | Progress Reporting | CLIENT REPORT 012 | DEL4 COVER NOTE UNDP GEF PRODOC in DRAFT including SESP. PPG Review & Validation Phase by 24 Jan 2018. Climate Adaptive Coastal Zone Management in Guinea Bissau: DELIVERABLE 4. - Content of project delivered; - Timeline and next steps. |
| 25-Jan-2018 | Delivery of Drafts | **CLIENT REPORT 013** | DELIVERABLE 4. in DRAFT (Version 240118): Project Document United Nations Development Program Government of Republic of Guinea-Bissau. Project Document for nationally implemented projects financed by the Least Developed Countries Fund (LDCF). 154 pages. |
| 26-Jan-2018 | Delivery of Drafts | CLIENT REPORT 013 (reduced size) | DELIVERABLE 4. in DRAFT (Version 240118): Project Document United Nations Development Programme Government of Republic of Guinea-Bissau. Project Document for nationally implemented projects financed by the Least Developed Countries Fund (LDCF). 154 pages. [Same as above. File size reduced.] |
| 28-Feb-2018 | Delivery of Drafts | CLIENT REPORT 013a | DELIVERABLE 4. SUMMARY DRAFT in Portuguese (Version 040318): Project Document United Nations Development Programme Government of Republic of Guinea-Bissau. Project Document for nationally implemented projects financed by the Least Developed Countries Fund (LDCF). 20 pages. |
| 04-Mar-2018 | Baseline & Feasibility | **CLIENT REPORT 009b (Fish - UDAPTED)** | PPG B&F REPORT #009B (2018) BASELINE ASSESSMENT & FEASIBILITY STUDY on Coastal Sector: Fisheries and Agricultural Infrastructures. Main Authors: PPG Specialists Ilina Rebordão, International Coastal Defense, & Claudia Bethlem, Safeguards. |
| 08-Mar-2018 | Consultations | **CLIENT REPORT 014** | DELIVERABLE 5. RELATÓRIO SOBRE O ATELIÊ DE VALIDAÇÃO DO PROJETO. Fase de Preparação do Projeto. |
| 30-Apr-2018 | Progress Reporting | **CLIENT REPORT 015** | END-OF-ASSIGNMENT REPORT. Concluding the Consultancy for the project preparation phase: DELIVERABLE 5 - Final Reporting on Progress; - Closure. Main Author: Fabiana Issler, Team Leader / GEF LDCF Specialist and EBDGLO's CEO. |

# ANNEX Z. Bibliography


| # | Author, Year | Title |
|---|---|---|
| 1 | Abranches, Maria (2013) | The route of the land`s roots: connecting life-worlds between Guinea-Bissau and Portugal through food-related meanings and practices, PhD, University of Sussex. |
| 2 | ACCC's Project 2006 (UNDP) | Responding to Shoreline change and its human dimensions in West Africa through integrated coastal area management. |
| 3 | Addati & Cassirer (2008) | Equal Sharing of responsibilities, un.doc EGM/ESOR/2008/BP.2. |
| 4 | AfDB (2009) | Measuring the Pulse of Economic Transformation In West Africa: Improving The Lives Of Women In Guinea Bissau over the Long Term. Blog, accessed in Dec 2017. |
| 5 | African Development Bank (2011) | The Link Between Climate Change, Gender and Development in Africa, in: The African Statistical Journal, Volume 12, May 2011, pp. 119-140. |
| 6 | African Development Bank (2015) | GUINEA-BISSAU 2015-2019 Country Strategy Paper |
| 7 | African Development Bank, UN-Women, 2015 | Guinea-Bissau Country Gender Profile, AfDB, Abidjan, Ivory Coast (GP) |
| 8 | Anon. (2009), cited in REPORT 009b (Fish) | Anon. (2009) Contrat cadre pour la réalisation d'évaluations d'études d'impact et de suivi concernant les accords de partenariat dans le domaine de la pêche (FPA) conclus entre la Communauté européenne et les pays tiers. et plus généralement sur le volet externe de la Politique Commune de la Pêche : Ex-post evaluation of the current protocol to the Fisheries Partnership Agreement (FPA) between the European Union and Guinea-Bissau and analysis of the impact of the future Protocol on sustainability. Final Report, Final report to the European Commission by Oceanic Dévelopement and MegaPesca Lda, Concarneau, France. 129 p. |
| 9 | Anon. (2010), cited in REPORT 009b (Fish) | Guinea-Bissau. Cashew and beyond: diversification through trade. Diagnostic trade integration study for the Enhanced Integrated Framework for Trade-related Technical |

| # | Author, Year | Title |
|---|---|---|
| | | Assistance. 150 p. |
| 10 | Bayraktarov et al. (2016) | The cost and feasibility of marine coastal restoration. Ecological Applications, 26(4), 2016, pp. 1055–1074. |
| 11 | Belhabib, D. and Pauly, D. (2015) | Fisheries in troubled waters: a catch reconstruction for Guinea-Bissau, 1950-2010. pp. 1-16. In: Belhabib, D. and Pauly, D. (eds). Fisheries catch reconstructions: West Africa, Part II. Fisheries Centre Research Reports vol.23(3). Fisheries Centre, University of British Columbia [ISSN 1198-6727]. |
| 12 | Boubacar-Sid, Barry [editor], Edward G.E. Creppy, Estanislao Gacitua-Mario, and Quentin Wodon. 2007 | Conflict, livelihoods, and poverty in Guinea-Bissau. Working paper 88, World Bank,Washington, DC. |
| 13 | Cardoso, P E (2017) | Os Mangais da Guiné-Bissau: Análise a 40 anos de evolução da sua extensão. Por Paulo Eduardo Cardoso. Tese de Mestrado em Ecologia e Gestão Ambiental. Universidade de Lisboa Faculdade de Ciências Departamento de Biologia Animal. |
| 14 | Chabal and Green (2016) | Guinea-Bissau Micro-State to `Narco-State`. |
| 15 | CHENEAU LOQUAY, Annie (2015) | Monoculture d'exportation et grands domaines en Guinee Bissau : une transition liberale liee au monde lusophone. LUSOTOPIE, 1995, no No special, p. p. 295-314, bibliogr. : 1 p., tabl. : 4, graph. : 3, cartes : 1. |
| 16 | CIA (2017) | CIA Factbook, Guinea-Bissau, accessed in Jan 2018. |
| 17 | CILSS (2016) | Landscapes of West Africa – A Window on a Changing World. U.S. Geological Survey EROS, 47914 252nd St, Garretson, SD 57030, UNITED STATES. |
| 18 | CILSS (2016) | Land cover and avian biodiversity in rice fields and mangroves', Wetlands International of West Africa |
| 19 | Dankelman I.(ed) (2010) | Gender and Climate Change: An Introduction. Earthscan, Washington DC. |
| 20 | DENARP II, 2011, | Guinea-Bissau: Second Poverty Reduction Strategy Paper, English Translation, International Monetary Fund, Publication Services, Washington, |
| 21 | Embalo, Birgit. 2015 | Guinea-Bissau. Conflict Analysis. UNDP Bissau. |
| 22 | Euroconsult (1987) | Projet de développement rizicole de Tombali, pp 30 – 33 - Proposition pour l'amélioration et la mise en culture des sols, 1987, Euroconsult |
| 23 | Fernandes Biai, Itel Abissa Rosa (2009) | Efeitos das Alterações climáticas na Zona Costeira Noroeste da Guiné-Bissau. Dissertação para obtenção do grão de Mestre em Engenharia do Ambiente. |
| 24 | Fernandes, Raul Mendes Jr. (2012) | O Informal e o Artesanal: Pescadores e Revendedeiras de peixe na Guiné-Bissau. Phd, University of Coimbra |
| 25 | Food and Agriculture Organization (FAO) (2011), | Gender dimensions of agricultural and rural employment: Differentiated pathways out of poverty. Status, trends and gaps'. FAO Economic and Social Development Department. Rome. |
| 26 | GEF (2015) | GEF Gender Equality Plan, GEF Secretariat, www.thegef.org, assessed on 28.10.2017. |
| 27 | Gender Index Org | Guinea-Bissau data, assessed on 22.10.2017. |
| 28 | Giri et al. (2011) | Status and distribution of mangrove forests of the world using earth observation satellite data. Global Ecology and Biogeography 11: 154–159. By Giri C., Ochieng E., Tieszen L., Zhu Z., Singh A., Loveland T.,Masek J., and Duke N. (2011). |
| 29 | Gonzalez, J. M. 2015. | Análise da cadeia de valor dos principais produtos da pesca na Guiné-Bissau - Relatório de Final de Missão - Maio 2015 Secretaria de Estado das Pescas e Economia Marítima. Direção Geral de Formação e Apoio ao Desenvolvimento das Pescas. Projeto Regional das Pescas na África Ocidental |
| 30 | Government of Guinea-Bissau, Ministry of Economy (2010) | ILAP survey |
| 31 | Governo da Guiné-Bissau (2001) | CONSTITUIÇÃO DA REPÚBLICA |
| 32 | Governo da Guiné-Bissau (2006) | Guinea Bissau's 2006 NAPA: National Adaptation Plan of Action (English), retrieved from UNFCCC's website |
| 33 | Governo da Guiné-Bissau (DRAFT) | PLANO DIRECTOR FLORESTAL NACIONAL, Rascunho de 2017, em discussão. |
| 34 | Governo da Guiné-Bissau / PNUD (2015) | Projecto de apoio ao reforço das capacidades nacionais da Guiné-Bissau em matéria de gestão sustentável das terras e luta contra desertificação. Guias sobre as boas práticas em matéria de gestão de pastos e corredores de transumância na Guiné. |
| 35 | Hanusch (2016) | Guinea-Bissau and the Cashew Economy. WB, MFP Practice Notes, January 2016, Number 11 (102933). |
| 36 | MADS/UNDP (2015) | Projeto "Reforço da capacidade e do engajamento civil e político na gestão dos recursos naturais da Guiné-Bissau", Relatório sobre Avaliação da Governança Ambiental na Guiné-Bissau. Preparado por Frédéric AIRAUD, Agro-economista especializado em Ambiente e Pescas. Consultor Internacional SEA/DGDD – PNUD. |
| 37 | Maplecroft (2017) | Subida do nível do mar preocupa GuinéBissau, GuinéBissau- DW.COM \| 02.12.2015 |
| 38 | MICS, UNICEF (2015) | Multiple Indicators Cluster Survey. |
| 39 | Ministério da Agricultura e Desenvolvimento Rural_Direcção Geral das Florestas e | Guia sobre as Boas Praticas Agrícolas na Guiné-Bissau |

| # | Author, Year | Title |
|---|---|---|
| | Fauna_Projecto "Apoio ao Reforço das Capacidades Nacionais da Guiné-Bissau em Matéria de Gestão Durável das Terras e Luta Contra à Desertificação" | |
| 40 | Offshore Energy Today | Accelerating the development of its hydrocarbon resources |
| 41 | PANA 2006 GB | National Programme of Action of Adaptation to Climate Changes |
| 42 | Plan Strategique GB 2025 - Rapport Final - 16-03-2015 | GUINEE BISSAU 2025 PLAN STRATEGIQUE ET OPERATIONNEL 2015-2020 « Terra Ranka » |
| 43 | FAO (2009) | Collecte et analyse de données pour l'aménagement durable des forêts -joindre les efforts nationaux et internationaux. Programme d'évaluation des ressources forestières mondiales au Guinée-Bissau 1999 |
| 44 | Republic of Guinea-Bissau (2015) | Intended Nationally Determined Contributions (INDC), as submitted for the United Nations Framework Convention on Climate Change (UNFCCC). |
| 45 | Sally et al. (2011) | Sea-Level Rise and Impacts in Africa, 2000 to 2100. School of Civil Engineering and the Environment, University of Southampton. |
| 46 | SSTS (2015) | Evaluation des capacités des pays d'Afrique de l'ouest pour la mise en œuvre de Systèmes Nationaux de Surveillance des Forets dans le cadre de la REDD+ |
| 47 | Kyle, Steven Cornell (2015) University | Rice Sector Policy Options in Guinea Bissau Working Paper 2015 |
| 48 | CILSS (2008) | PROGRAMME REGIONAL DE PROMOTION DES ENERGIES DOMESTIQUES ET ALTERNATIVES AU SAHEL |
| 49 | Temudo & Abrantes (2015) | Rural Livelihoods and Social Stability in Guinea-Bissau - cited in: Patrick Chabal, Toby Green edt., 2016, Guinea-Bissau Micro-State to `Narco-State`, pp. 87-104, London: Hurst & Company |
| 50 | Temudo & Cabral (2017) | The Social Dynamics of Mangrove Forests in Guinea-Bissau, West Africa. Hum Ecol (2017) 45:307–320 |
| 51 | Temudo, Marina Padrão, and Manuel Bivar Abrantes. 2014 | Changing Policies, Shifting Livelihoods: The Fate of Agriculture in Guinea-Bissau". Journal of Agrarian Change: 13(4): 571-589. |
| 52 | The Government of Ginea-Bissau (DRAFT) | Programme National d´Investissement Agricole (PNIA), Rascunho revisto de 2016. |
| 53 | UM-Women (2015) | GENDER Profile (GP), see AfDB |
| 54 | UNDP Bissau (2006) | Rapport national sur le développement humain en Guinée-Bissau 2006 - Réformer les politiques pour atteindre les objectifs du millénaire pour le développement en Guinée-Bissau |
| 55 | UNDP Bissau (2016) | PNUD Rapport de Projet: Principaux accords internationaux sur l'environnement. 2016 |
| 56 | UNFCCC, Accessed in Dec 2017 | UNFCCC's Capacity-building Portal |
| 57 | UNISDR, (2009) | Disaster risk management Disaster risk reduction Disaster risk reduction plan Early warning system Ecosystem |
| 58 | WARFP (2017) | Project Information Document, West Africa Regional Fisheries Program Phase 2 in Cabo Verde, The Gambia, Guinea Bissau and Senegal. The West Africa Regional Fisheries Program (WARFP). Phase II. |
| 59 | WB (2011) | Project Report 4, Implementation Completion and Results Report, Guinea-Bissau - Coastal and Biodiversity Management Project (English), October 26, 2011 |
| 60 | WB (2016) | World Bank's Diagnostic Study, Food security Project GB, Report for 2016 |
| 61 | World Bank 2016, Guinea-Bissau Country Partnership Framework | Guinea-Bissau Country Partnership Framework, WB Document. Assesed on 21.10.2017. |
| 62 | World Bank accessed on 07 Dec 2017) | World Bank Climate Portal |
| 63 | World Bank. 2016 | Guinea-Bissau. Turning challenges into oppurtunities for poverty reduction and inclusive growth. Systematic country review. June 2016, Report No. 106725-GB. |
| 64 | Zwart, Sander J. (2017) | A DETAILED MAP OF RICE PRODUCTION AREAS IN MANGROVE ECOSYSTEMS IN WEST-AFRICA IN 2013. AfricaRice GIS Report, Affiliation: Africa Rice Center |