PART I: PROJECT/PROGRAMME INFORMATION

Project/Programme Category: Project
Country : Guinea Republic
Title of Project/Programme: Climate Change Adaptation of Vulnerable Communities in the Sahel Border Zone of the Republic of Guinea
Type of Implementing Entity: Multilateral Implementing Entity
Implementing Entity: World Food Programme (WFP)
Executing Entity: Ministry of Environment and Sustainable Development
Amount of Financing Requested: **10 000 000 USD**

A. Project Background and Context:

1. Geography

Figure 1, eco-climatic zone of Guinea

The Republic of Guinea covers **245,857 km²** in West Africa between Guinea Bissau, Senegal, Mali, Côte d'Ivoire, Liberia, Sierra Leone and the Atlantic Ocean.

Administratively, the country is divided into 7 regions plus the special zone of Conakry: Boké, Kindia, Mamou, Faranah, Kankan, Labé, Nzérékoré and a Governorate of Conakry, 33 Prefectures, 324 Sub-Prefectures, 38 Urban Communes and 304 Rural Development Communities. From and eco-climatic point of view, the country is divided into four major zones[1] (see **Error! Reference source not found.**): Lower Guinea or Guinea Maritime, the coastal area, Middle Guinea or Foutah Djallon extending from the central plateau to the North-west, Upper Guinea in the eastern part of the country and Forest Guinea in the South.

As the water tower of West Africa, Guinea has a strong water network with 1165 rivers in 23 watersheds, 14 of which are international[2]. Four basins are of major importance for the economy and the maintenance of biodiversity in the sub-region.[3] In 2015 the country's renewable water resources were estimated at 226 billion m³. The river system is distributed unevenly across the four natural regions of the country, with most rivers originating in Middle Guinea[4].

The Republic of Guinea's topography varies between the four eco-climatic regions, including several types of ecosystems with high potential for the agricultural sector (see **Error! Reference source not found.**). In Lower Guinea there are mangrove formations and maritime lowlands, followed by stepped plateaus and mountains with elevations between 750 and 1200 m in Middle Guinea, and an arid plateau of savannah and alluvial plains in Upper Guinea. In Forest Guinea, there are humid and well-forested mountains[5].

Arable land covers 62,000 km², i.e. 25% of the national territory, of which only 33,000 km2 (13% of the territory) are exploited. On the other hand, the area currently under cultivation for the main food crops was almost 47,000 km² in 2019,

[1] CDN, 2021
[2] These data, which date back more than a decade, are not up to date and therefore no longer accurately reflect current realities.
[3] CDN, 2021
[4] WFP, 2021
[5] WFP, 2021

suggesting that land with a different vocation is being exploited for agriculture**. Recent combined analysis of topographic, soil, climatic and land use data in a Geographic Information System (GIS) allowed to map and assess Guinea's agricultural land at 13.7 million hectares, or 56% of the national territory[6].**

A land use study carried out in the framework of the NDC, 2021, shows the loss of forests in 2020 compared to 2015. Cleared forests and secondary forests were the most affected by deforestation with deforestation rates of 5% and 16% respectively and deforested areas of about 700,000 ha and 500,000 ha. In the Republic of Guinea, the primary cause of deforestation is the consumption of wood for energy purposes (firewood and charcoal). The demand is expected to grow by 2.7% according to the current demographic trends (2030). The National Climate Change Strategy calls for the introduction of at least 1 million improved stoves by 2030 and the deployment of butane gas, and "assumes that this action will halve the amount of fuelwood extracted from the forest" (SNCC, 2019). The NDC states that "the Reference Emission Level of the Forest (NERF) is estimated at 33,587 ktCO2eq per year. Of this total, 57% is related to deforestation, 42% to wood energy consumption (degradation) and 1% to industrial logging (forest management)."

The Republic of Guinea has significant natural resources, including a large network of river basins and high biodiversity, however its social and economic situation is fragile.

2. Economy and food security

The total population of the Republic of Guinea, estimated around **13.1 million in 2020, is an extremely young population.** The average age in the Republic of Guinea is 19 years and the average life expectancy is 62 years; children under15 years were about 43% of the total population in 2016 and 54% of the population was between 14-64 years old (working age population); less than 5% of the population was 65 years old or more[7]. **With a Human Development Index of 0.477 Guinea ranks 178th out of 189 countries. The GDP per capita was USD 1,194 in 2020[8].**

The country's population is growing rapidly and experiencing a rapid urbanisation, which is sometimes problematic for land management and national land use planning. In 2015, the population growth rate was 2.4%, compared to almost 3% in 2020. In terms of urbanisation, the urban population growth rate is estimated at 4% with an average population density of 51 inhabitants per km². **Nevertheless, the majority of the Guinean population, 63%, is considered rural nowadays.** Apart from Conakry, the country's capital, located on the coast, the largest urban centres are concentrated in the regional capitals and mining towns, which tend to attract rural populations in search of sources of income or better living conditions.[9]

The Republic of Guinea has significant economic potential covering agriculture, livestock, fisheries, mining and hydroelectric resources. Guinea has more than a third of the world's bauxite reserves (40 billion tonnes with a grade of over 40%), significant gold reserves (over 700 tonnes), the world's largest untapped iron ore deposits (20 billion tonnes), with top quality ore (grade of over 60%), and proven diamond reserves estimated at over 30,000,000 carats. This potential is currently only marginally exploited. **In 2019, Guinea's GDP is expected to grow by 6%, with industry and agriculture accounting for 24% and 20% of GDP value respectively.**[10] According to the National Agricultural Development Policy of the Republic of Guinea (2017), **the agricultural sector employs nearly 51% of the country's workforce, and rural population that derives most of its income from this sector.**

Despite its enormous natural potential, the Republic of Guinea is one of the poorest countries in the world. The latest Harmonised Survey on Living Conditions of Households in Guinea (2018/2019) reported that 43% of the population lives below the monetary poverty line, set at 8,875 GNF per day per person, or 1.25 USD[11]. In 2014, multidimensional poverty reached over 68% of households[12]. **In 2019, the Republic of Guinea's unemployment rate was 5% nationally, with 7% unemployment among young people. The literacy rate was 22% for women and 44% for men, giving a national average rate of 32%**.[13] During field consultations, women over 40 years asked for literacy support in order to be more independent

[6] https://www.ignfi.fr/fr/portfolio-item/zonage-agro-ecologique-guinee/

[7] https://donnees.banquemondiale.org/indicateur/SP.POP.TOTL?locations=GN

[8] UNDP, 2020. Rapport de développement Humain 2020

[9] https://donnees.banquemondiale.org/indicateur/SP.RUR.TOTL?locations=GN

[10] CDN, 2021

[11] https://www.stat-guinee.org/images/Documents/Publications/INS/rapports_enquetes/INS_Rapport_Final_EHCVM%20GUINEE_01_03_2021.pdf

[12] https://donnees.banquemondiale.org/indicateur/SI.POV.MDIM.HH?locations=GN

[13] WFP, 2021

in their activities, currently they call on their children when they need to resort to writing or reading.

The Guinean population is considerably affected by chronic food and nutrition insecurity. Between 20 and 26% of the households that depend on agriculture for their livelihoods are chronically food insecure in the Republic of Guinea. This situation mainly affects households that depend on the processing and sale of agricultural products, food and livestock products and agricultural labour. **According to WFP, 71% of the population affected by a severe level of food insecurity practice subsistence agriculture.**[14] Low agricultural productivity, non-adapted farming methods, considerable losses of harvested and unpreserved products, as well as the poor state of roads are factors that contribute to the extreme poverty of many households. The effect of these factors is exacerbated by the hazards of climate change, which accentuate food insecurity in the areas most dependent on agriculture. Consultations held for the development of this concept note showed that in the Koundara prefecture most of the farmers engage in subsistence farming (maize, groundnuts, rice, millet) and sell the surplus when available. However, yields are very low due to use of seeds that are not adapted to decreasing rains, poor mechanisation, reliance on animal traction, lack of storage facilities and, especially in the last three years, lack of water. In 2021, farmers reported a short rainy season of only 2 to 3 months compared to 6 months 20 years ago. Many women reported having harvested less than what they sowed, except for farmers groups that receive technical support such as the cooperative followed by WFP through the FFA programme (harvest of 10 bags of 60 kg of rice per hectare compared to 0 to 3 bags/ha for farmers who don't receive any support, according to the people met during field consultation).

The FAO Harmonised Framework analysis of March 2021 estimated that more than 450,000 people (or more than 4% of the population studied) were food insecure and projected that this number could increase by 30% by the end of 2021, if no remedial action is taken.[15]

In the last decade health epidemics have greatly exacerbated these problems. The 2014 Ebola epidemic severely affected national development efforts, resulting in significant loss of human lives and negative impacts on all sectors of the Guinean economy. Among other things, projects negotiated with partners were postponed, container traffic in the port of Conakry dropped by a third, the lack of labour for the agricultural season caused a decrease in food stocks, and fruit and vegetable exports to neighbouring countries fell by 90% in the north-west of the country, further threatening food security and households' income. Today, the COVID-19 pandemic is having equally negative effects, affecting food and nutrition security and livelihoods, causing a loss of purchasing power that is affecting the most vulnerable, including the poorest households, casual labourers and small-scale traders.[16]

3. Climate

Guinea has a humid tropical climate divided into two seasons: the dry season (with harmattan) and the rainy West African monsoon season. The Republic of Guinea is one of the countries with the highest rainfall in the West African sub-region, with 1988 mm of rainfall per year, but with great disparity according to topography, latitude and continentality: for example, **4000 mm in Conakry and 930 mm in Koundara**. **The north of the country remains the least rainy area with an annual average of 1,200 mm of rainfall and a rainy season of about 3 months, while the west of the country sees up to 4,000 mm of water per year and a rainy season that can extend to 6 months[17].** Maximum temperatures calculated over the period 1990-2010 for the whole country recorded an increase of 0.4 to 1.1°C compared to the period 1961-1990, while minimum temperatures recorded a decrease at six weather stations. **The highest temperature increase (3.0°C) was recorded at the weather stations of Kankan and Labé. Between 1961 and 1990, the average annual temperature of all stations in the country was lower than that of 1981 to 2010. A gradual upward trend began to be recorded from 1987 to the present. A 30-year rainfall analysis (1961 to 1990) for Guinea revealed that the average annual rainfall amounts had decreased for most stations in the country compared to the period 1981 to 2010. The rainfall deficit recorded between the two periods (1961-1990 and 1981-2010 – figure 2) ranged from 1.8% to 7.4% depending on the weather station (SNA 2018), with the lowest and highest deficits recorded in the south and south-east (1.8%) and the north-west**

[14] https://www.wfp.org/countries/guinea
[15] PAM, 2020. Rapport pays
[16] PAM, 2020. Rapport pays
[17] WFP, 2021

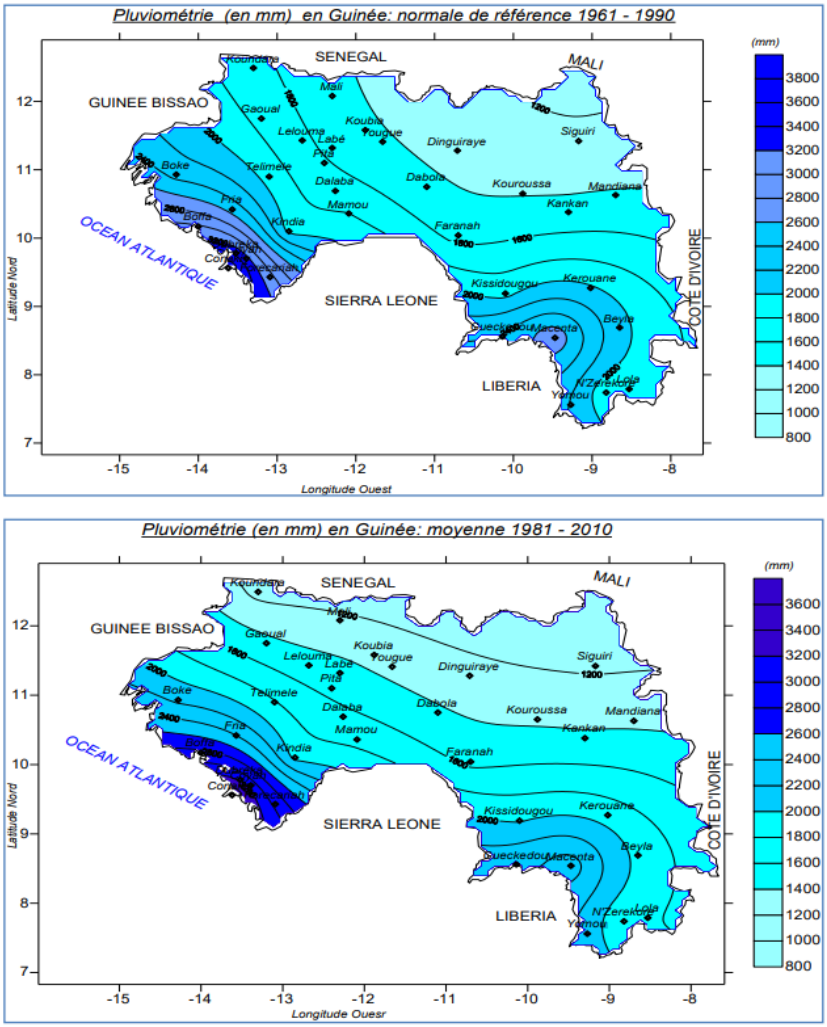

Figure 2, Isohyet map showing the average annual rainfall calculated over the periods 1961-1990 and 1881-2010 with data from 35 stations in the country. Source: Meteorological Department

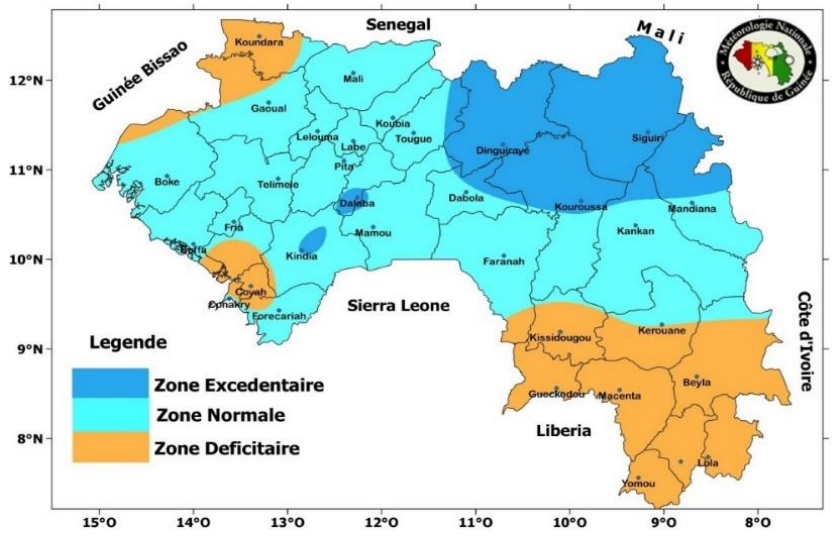

Figure 3, Anomaly in % of annual rainfall totals in 2021 compared to the average for 1991-2020 (source: Meteorological Department)

(7.4%) respectively. The period from 1977 to 1993 saw a reduction in rainfall for all stations (National Climate Change Strategy 2019).

Field consultations in the Koundara area (figure 3) revealed the following: (i) For the past 10 years, the population has reported a considerable decrease in rainfall and the absence of flooding in historically flood-prone areas; (ii) The last three years have been particularly dry - in 2021, farmers explain that there have only been two months of rain compared to 6 historically, and that the rainy season has a long dry spell between two rains and (iii) Streams and wells dry up from January/February/March (depending on the location of the village) until the end of June (the first rains)

Guinea, aware of its vulnerabilities to climate change, mobilized very early on politically and engaged its technical and financial partners. The Republic of Guinea ratified the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol in 1993 and 2005 respectively. Since then, Guinea has developed strategies to combat climate change, including its Initial National Communication (INC), based on a greenhouse gas inventory (GHG) in 2001 (based on 1994 emissions), its Second National Communication (SCN - 2018). Finally, the National Action Plan for Adaptation to Climate Change (NAPA) was developed in 2007 and several projects were developed and initiated for its implementation**. The country is also currently engaged in the process of developing its Third National Communication (TCN) and its National Adaptation Plan (NAP), which should be completed in 2023 and 2024 respectively.** As part of the work on the TCN, a 3rd IGES was developed in the first half of 2021 and forms the basis of the reference data for the revision of its NDC which was submitted in 2021 to the United Nations Framework Convention on Climate Change (UNFCCC).

4. Climate projection and vulnerability

Guinea, its ecosystems and its population are threatened by the magnitude of the drought of the last decade coupled with anthropic actions (deforestation, bush farming, bush fires etc.). The northern, north-eastern and north-western regions of the country are currently experiencing a significant rainfall deficit that worsening soil aridity and causing the drying up or decline of watercourses[18], thus modifying local ecosystems.

[18] https://unfccc.int/sites/default/files/resource/GUINEA%20-%20SCN-1.pdf

Climate projections

According to different emission scenarios from the 5th IPCC report, projections include the following: (i) temperature increases of between 1.1 and 3 degrees by 2060, and between 1.6 and 5.3 degrees by 2090, with a greater increase in the north of the country; (ii) more intense hot spells in the north-east of the country, regardless of the emissions scenario; (iii) an increase in rainfall during the rainy season according to several CMIP5 models, but with strong intra-seasonal variability; (iv) late start to the rainy season, as well as sea level rise (80 cm by 2100)[19].

As part of a vulnerability study carried out in 2021 by WFP[20], an analysis of historical observations and projections of climate data from the EcoCrop model was conducted in Guinea across 4 zones:

Table 1, Characteristics of priority areas in eco-climatic zones in the Republic of Guinea

ZME	Zone 1	Zone 2	Zone 3	Zone 4
Region	Lower Guinea (maritime)	Upper Guinea	Forest Guinea	Middle Guinea
Temperatures	19 – 37°C	20 – 35°C	20 – 35°C	20 – 35°C
Annual precipitation	>1500 mm - 4000 mm on the coast	1200 mm in north – 1600 mm in south	2500 mm	1300 mm in north – 2000 mm in south
Crops	Rice	Rice	Rice	Rice
	Peanut	Maize	Cassava	Peanut
	Fonio, Maize	Fonio	Coffee	Fonio
Livestock	Fish	Cattle	Pigs Cattle	Goat/Sheep
	Cattle	Goat/Sheep	Poultry	Poultry
	Goat/Sheep	Poultry, Fish	Cattle	Fish
Special characteristics	300 km of coastline, mangrove formations; has the biggest production of export crops	Average altitude of 500m, with very low slopes; savannah region with little hills; favours cotton, rice and livestock farming; presence of fish farming	Tortuous hills culminating at 1752m (Mount Nimba); long rainy season (7-9 months); promotion of coffee, rubber and oil palm crops; recent increase in coffee production	Stepped plateaus and savannahs, poorly watered; altitude everywhere above 750m and exceeding 1200m in some places; livestock production; market gardening region thanks to the climate in the Foutah Djalon Mountain

Climate projections were modelled based on the Coupled Model Intercomparison Project (CMIP) and cover the periods 2021-2040 and 2041-2060. For this study, the most pessimistic Representative Carbon Budget (RCP) (RCP 8.5 - which projects a global average temperature increases of 1.4 to 2.6°C by 2050) was used as the baseline assumption for the modelling.

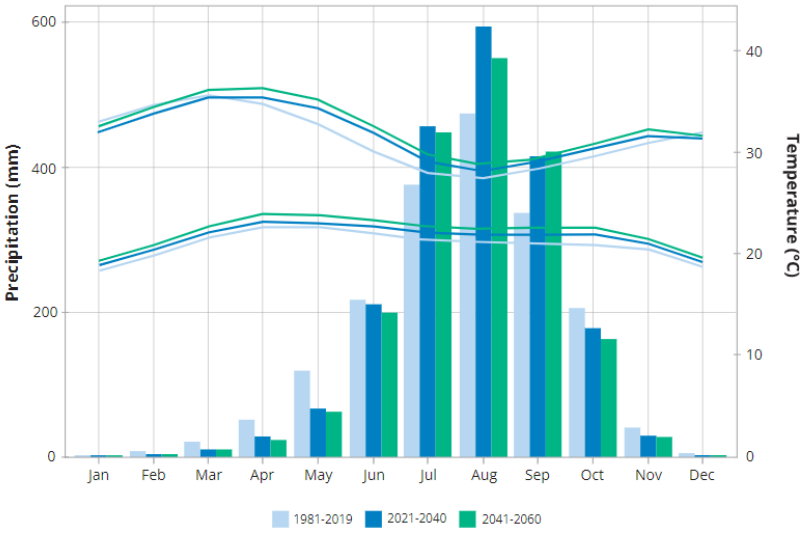

Figure 4. Temperature and precipitation projections

The climate analysis, carried out by WFP, shows the following (see Figure 4: (i) Historical temperature trends between 18°C and 37°C and a long rainy season (April to November); (ii) modelling by 2030 and 2050 shows an increase in average temperatures of 1.5°C to 3°C (with a stronger pronouncement in zones 1 and 4); (iii) modelling by 2030 and 2050 shows an increase in rainfall in the wettest months and a decrease in the least wet months (with a stronger pronouncement for zones 1 and 3 for the increase in rainfall and zones 1 and 4 for the decrease). These changes will affect more severely the coastal zone, as well as the central and northern plateau, with rainfall decreasing at the

[19] CDN 2021

[20] https://www.wfp.org/publications/climate-response-analysis-guinea

beginning and end of the main agricultural season throughout Guinea.

Vulnerability of water resources

The average daily river flow could be reduced by up to 50%compared to the current average by 2100. In addition, water resources face three growing threats in parallel with climate change: i) high population growth which increases pressure on resources, ii) development of economic activities which have a direct qualitative and quantitative impact (such as mining and water infrastructure) and iii) degradation of riparian forests and headwaters which reduce flows (NDC, 2021).

The reduction of water resources will have a direct impact on all the country's activities and downstream countries. Women will be particularly affected, as they are traditionally in charge of collecting water.

In 2018, Guinea developed its National Water Policy, however despite this commitment the country lacks funds and limited coordination among stakeholders hinders the implementation of the policy. However, it should be noted that for the implementation of this National Water Policy, an Integrated Water Resources Management Action Plan (PAGIRE) is being developed, thanks to the financial support of the International Union for Conservation of Nature (IUCN) and the United Nations Development Programme (UNDP).

Agriculture vulnerability

Given the importance of the agricultural sector for food security and its high vulnerability to climate change, agriculture represents one of the most suitable sectors for mainstreaming adaptation in the Republic of Guinea. The Guinean agricultural sector, which is already underdeveloped in relation to its potential, faces numerous risks and climatic hazards (disruption of the rainfall regime, disruption of the watercourse regime, etc.) which further destabilise the agricultural activities. However, the country's significant agricultural potential and abundant natural resources offer great potential for integrating adaptation to climate change. Projections of climate trends over the next few decades (by 2050) suggest that the negative effects of climate change on agricultural activities will increase threatening the country's potential to achieve food security. **Consultations in the Koundara area highlighted that faced with the increased difficulty of climate change, many young people (aged between 15 and 30) are discouraged and no longer wish to farm as the efforts and investment yielded very poor harvests in the last three years (2021, 2020, 2019) due to lack of water. Many young people leave the villages for Senegal or Conakry in search of work to feed themselves and send money to their families in the village to buy rice.**

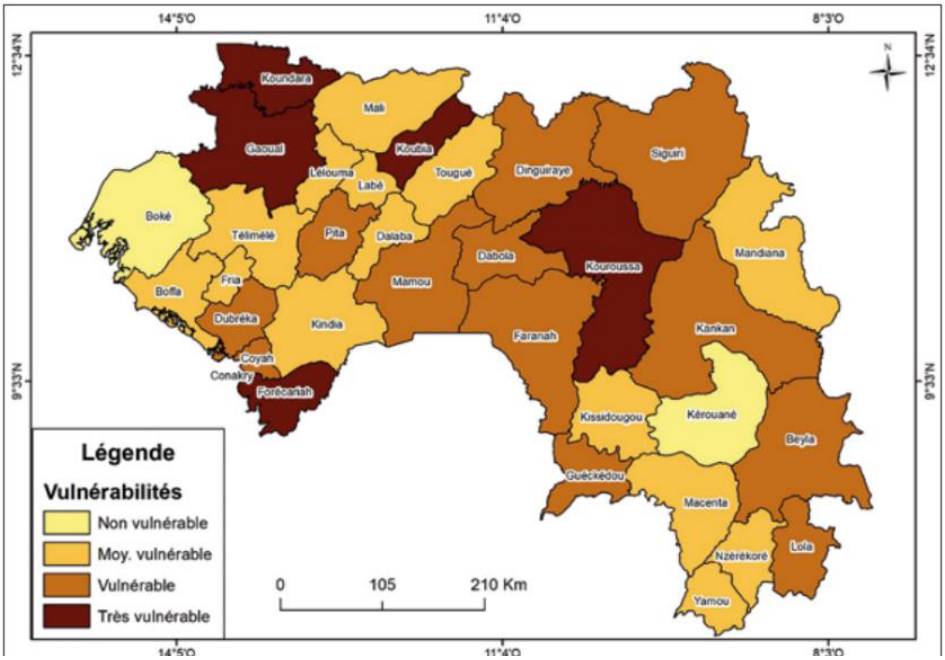

Figure 5, Vulnerability of agricultural ecosystems in Guinea (source: National Strategy on Climate Change)

The integration of climate change considerations into the livestock sector has enabled the government to set up a system for the conservation and protection of local breeds of domestic animals such as the N'Dama breed, the Djallonké sheep, the African dwarf goat and a network for the epidemic-surveillance of livestock diseases, as well as the emergence and professionalization of private operators in the sector. Some NGOs, farmers' associations or groups have then developed the breeding of small ruminants (sheep, goats) that are less vulnerable, more resistant and better able to adapt to the harmful effects of climate change.

As can be seen in the figure above, Koundara and Gaoual are among the five prefectures most vulnerable to climate change in terms of agriculture and livestock.

Challenges to climate change adaptation in Guinea

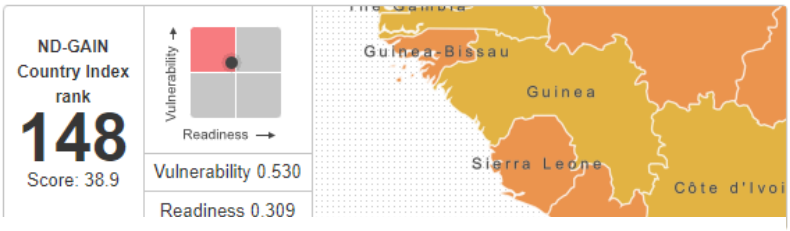

Figure 6, ND-Gain index pays

Climate risks, coupled with other vulnerability factors in the country and the economic situation, make Guinea extremely vulnerable. As the WFP study and Guinea's ND-Gain show, there is an urgent need for major action if the country is to cope with current and future climate hazards. **Guinea is the 29th most vulnerable country and the 42nd least prepared**. Its high vulnerability score and low preparedness score place it in the upper left quadrant of the ND-GAIN matrix.

The country's capacity to adapt

Climate change poses a direct threat to people's livelihoods and the country's food security. The Republic of Guinea has many policies and strategies that explicitly recognise the link between climate change and food security, and the intermediary role that the agricultural sector plays in this relationship (primary livelihood). **However, the implementation of these policies and strategies requires robust and consistent investments, including from development partners and agricultural and private sector actors.**

The political situation[21] is impacting on the capacity of the state to respond and implement these policies. Guinea is currently in transition after a reshuffle of ministerial teams (in 2021). On one hand, this allows the teams to be revitalised with the retirement of former agents and the arrival of new, younger people, but on other hand, it makes it difficult to follow up on the various initiatives and requires time for the new teams to adapt and take ownership. In addition, some state services, such as the meteorological department, are severely understaffed and some services that exist on paper have no office or staff at present.

Government officials consulted for the preparation of this concept note highlighted the urgent need for the government to take ownership of the various projects implemented in the country. While recognizing the beneficial actions of the United Nations agencies and other partners, they report limited sustainability due to a lack of ownership by the government services. Better communication between the partners and the government is needed, as well as better control and monitoring of actions by the government in order to be able to capitalize and sustain the efforts of the country's partners. As of today, many projects aimed at implementing the country's climate strategies have not delivered as expected due to a lack of capacity of the state services to ensure continuity of said projects after their completion, but also due to limited communication between the government and country's partners. The new government is currently in the process of putting in place monitoring and capitalization mechanisms.

Limited human resources and operating budgets remain a constraint and do not allow the government to be fully involved in field operations. This is particularly true for the decentralised state services, which find it difficult to play their role in the field despite their mandate and motivation. The lack of infrastructure, personnel and operating budget are the causes of the absence of effective government action in the country.

Adaptive capacity of the communities

At present, farmers are having great difficulty producing their own food, as the limited resources available at household level do not allow them to adapt to climate shocks such as the drought that hit the country in 2021. During community consultations, women explained that this year they harvested less than what they had sown or nothing at all: rice, millet, maize and even groundnuts lacked water before harvesting at fruiting time. Women living next to those streams that did not dry up started market gardening activities earlier in the year than usual to compensate. However, in half of the villages visited during the consultations, the lack of water prevented farmers from cultivating their market gardens properly. This had a direct impact on their nutrition, forcing them to consume only one meal a day instead of two or three. As a coping strategy, farmers resorted to selling small ruminants to purchase staple grains such as rice or millet, thus eroding their limited capital. According to the survey conducted by the National Institute of Statistics - INS in 2018 -2019, 76.9% of rural households at national level and 79% in Middle Guinea were worried about not having enough food due to lack of

21 Coup d'état on 5 September 2021 by special forces soldiers under the supervision of Colonel Mamady Doumbouya,

resources in rural areas, and 53% at national level and 55.5% in Middle Guinea skip meals due to lack of food. After several years of poor harvest many young people have become discouraged and have left the villages for Senegal or Conakry. Several women and men also left the village for a few months between January and May in search of temporary jobs, leaving their children with family or neighbours who stayed behind. The table below outlines the perceived changes, impacts and reactions reported by the communities during the consultation process:

Table 2, perceptions and adaptations of the communities encountered

Perceived changes	Impacts	Coping mechanisms
• Reduction of the rainy seasons • Reduction in water quantity in the rainy season • Prolonged dry spell during crop germination and flowering (rainy seasons) • Rivers dry up from January • Wells dry up from February • Increased temperatures	• Poor or no harvest • Difficulties in feeding the family adequately • Difficulties in producing seed for the next season • Conflicts between community members and with animals over access to water • Some domestic animals die of hunger/thirst/hot weather • Bush fires • Pressure on women responsible for crops/sales and water supply • Removal of children from school or transfer to Islamic schools (free of charge)	• Youth migration • Voucher system for cashew nuts: sale in advance of production, at a lower price • Increased shea and nere bush harvests to compensate • Market gardening earlier from September/October (compared to December previously)

Factors limiting people's ability to adapt to climate change:

- The alphabetisation rate of people over 40 years old is very low (only 13.6% of rural women are literate - INS 2019).
- High level of poverty (Poverty index of 66% in Labé region and 46% in Boké region - average in rural areas of 55.4% - INS 2019).
- Reduction of natural resources: e.g. bushmeat is increasingly difficult to find as it is also a victim of water shortage.
- Deforestation: contributing to climate change but also reducing natural resources (e.g. firewood).
- Inappropriate local practices (use of bushfire for hunting, over-cultivation).
- No electricity coverage (4.4% of rural households have access to electricity network – INS 2019), no access to water and little public service and infrastructure (especially health and roads).
- Youth migration to Senegal and Conakry.
- Low (or no) mechanisation of agriculture and access to inputs (and materials such as fencing).
- Lack of technical knowledge in agriculture and animal husbandry (composting, crop rotation, fodder etc.).

Factors contributing to people's ability to adapt:

- Cultural practice of planting a mango tree in the village at the birth of a child (brings shade to the villages and produces mangoes).
- Cashew plantations on the outskirts of villages provide shade, but also an alternative source of income and encourages people to fight against bush fires for fear of seeing the plantations destroyed.
- Processing of NTFPs (shea and nere) as a source of income.
- Proximity to the Senegalese border which allows for easy trade.
- Access to information through radio and telephone (good network coverage - 90.8% of rural households have at least one telephone - INS 2019).
- Hardy breed of oxen that is relatively resistant to water shortages, although some losses occur every year in the dry season.

Communities are currently not able to put in place sustainable mechanisms to adapt to climate change due to a lack of financial and material resources, as well as sufficient technical capacity and information. Some of the coping strategies they adopt provide some relief in the short term but might exacerbate poverty in the long term. One example is the sale of cashews before the harvest for a lower price of 3,000 GNF as opposed to the normal 6,000 GNF, which also makes them dependent on the goodwill of buyers.

However, consultation showed that they have clearly identified what is needed for them to adapt to a changing climate: firstly, stable access to water in the villages, protection of the watercourses to allow market gardening activities and technical and material support to adapt staple crop production to the shortening rainy season. Communities also prioritized planting trees around the village in order to diversify the sources of food and income (cashew, fruit trees) and protect the village from violent winds, and support for the processing of NTFPs and crops (groundnuts) to increase their financial capacity.

5. Target area and groups

The project aims to strengthen the country's food and nutrition security through climate change adaptation measures. To this end, those most affected by climate change, poverty, conflict, inequality and food insecurity are the priority targets of this project.

Figure 7, target area

While the whole country is affected by the impacts of climate change, the coastline in Lower Guinea, Middle and Upper Guinea are particularly vulnerable. In order to maximize the impacts of the investment and avoid diluting its efforts, the project will only focus on few prefectures in the North of the country. Selection criteria for target prefectures include the level of vulnerability to climate change and the existence the presence of WFP or other development partners on the ground, to ensure that the project can build on and enhance current efforts through and integrated approach. Based on these criteria, the project will target primarily the prefectures of Koundara and Gaoual, and potentially Mali, Siguiri and Mandiana. The selection of the prefectures will be confirmed during the preparation of the full funding proposal.

In the same logic, the project will intervene in villages where WFP is already present to reinforce the sustainability of the project's actions and efforts. The project will target 20 villages, 20 schools and 50 farmers' groups, with a total of approximately 30,000 indirect beneficiaries and 15,000 direct beneficiaries.

B. Project Objectives :

The overall objective of the project is to improve the adaptive capacity of vulnerable communities to climate change and its impacts on food security. The project's actions will contribute to reducing climate vulnerabilities and strengthening the adaptive capacities of vulnerable communities and the ecosystems they depend on, promoting food security, nutrition and gender equality. The project will achieve this by pursuing the following 3 specific objectives:

Component 1: Improve knowledge and data to support adaptation to climate change in Guinea

Activities under this component aim to address knowledge related barriers identified during stakeholder consultations: existing knowledge and climate information doesn't reach the most vulnerable. Availability of adequate adaptation tools and methods is key to provide the best possible support to communities. Many stakeholders are investing in research for community climate change adaptation, including adapted agricultural practices, more suitable and draught tolerant seeds, among others. However, synergies among all these different actors are lacking and information is not yet available to most communities in Guinea. There is a need to capitalize and implement the results of the different studies. The project will encourage collaboration among different research centers such as IRAG, CERE, ISAV -VGE/F, the meteorological and hydraulic l departments, the national center for the management of environmental disasters and emergencies, among others, aiming to optimize their efforts. In addition, the project will focus on the dissemination, communication and implementation of available climate change adaptation methods to the final beneficiaries.

In parallel, the project will also ensure communities' access to climate information. Agrometeorological tools are essential for farmers to adapt to climate change (cropping calendar, anticipation of drought periods etc.). In coordination with key partners such as the Directorate of Meteorology, the directorate of hydraulic, AFD and UNDP, and through a participatory approach, the project will identify the specific climate and weather information needs of women and men in the targeted communities and develop tailored advisory services to allow for informed decision-making for climate risk management.

The project will build on existing investments, tools and habits made by the Government and development partner in this field. The Meteorological Department already has several relevant agro-meteorological tools, but their dissemination and use by communities is not yet operational throughout the project's target area. Thus, the project will strengthen the dissemination, understanding and use of these tools. The project will also draw on WFP's experience in other countries, where integrated participatory programs linking climate services with community planning tools have been developed.

By identifying a set of suitable adaptation tools and options, and by providing communities with the information they need to better plan their work, this first component will set the basis for a better appropriation and implementation of concrete adaptation activities under components 2 and 3.

Component 2: Improve the adaptive capacity of communities by restoring ecosystem services and increasing access to water

Based on the technologies, methods and tools identified under component 1, activities planned under component 2 aim to provide concrete solutions to deal with climate change at the village level. This component aims to address the barriers related to the degradation of the ecosystem local communities rely on for their livelihood and the lack of water resources. Deforestation and forest fires are threatening the forest ecosystem targeted communities depend on, contributing to the sahelization of the climate, with direct impact in terms of access to water, hot spells, reduced availability of non-timber forest products, etc.

Under this component, the project will address climate change adaptation from the community angle. First, it will raise community awareness using schools as an entry point. It will then aim to restore the ecosystem services on which targeted communities depend to improve the communities' capacity to withstand a changing climate in the long term, and will implement activities to improve access to water at the village level in the short term to respond to the most urgent challenge communities face in the target area. An integrated watershed approach will be implemented, including context-appropriate forestry, agroforestry, riverbank plantation, micro and macro water harvesting structures measures. Existing surface and ground water resources will be developed and utilized for irrigation farming under component 3. In each village targeted by this component, schools will be involved in the project, through the implementation of specific workshops on climate change, adaptation techniques, nutrition, climate services etc. (in connection with the other activities of the components of this project). In addition, a one-year project will be proposed to schools to involve students in the village plantations implemented under this component.

Component 3: Improve farmers' resilience including promoting climate-resilient agriculture (including the use of drought-resistant and short-cycle seeds), establishing market linkages, savings and credit systems for income-generating activities and sustainable livelihoods

Component 3 will target farmers' groups to help them adopt climate resilient agricultural practices and increase their incomes by establishing market linkages and promoting financial services to enable more resilient income generating activities. It aims to overcome the barriers identified for most of the farmers in the targeted communities: lack of appropriate equipment and infrastructure, lack of knowledge and financial resources and capacities that would allow them to adopt and maintain climate-adapted practices and diversify their livelihoods. This component is closely interconnected with the previous two. While building on and implementing in the field the research developed under Component 1, the activities under component 3 will help test and fine-tune the findings of said research. The success of the activities under this component relies heavily on the results achieved through Component 2 in terms of ecosystem services and access to water.

Activities will focus around three main areas of work:

- Support to subsistence agriculture: rice, groundnuts, millet and market gardening. The objective is to adapt agricultural practices to cope with the reduced rainy season and access to water to make production more resilient. The project will support farmers' groups in adapting but also in increasing performance (increasing yields, ensuring conservation and transport, supporting processing, securing the sale of surplus production etc.).
- Support has complementary activities. To cope with climate change, communities have already put in place mechanisms to compensate for agricultural losses. The project will support and strengthen these initiatives (NTFP processing, mango, cashew development).
- Support financial empowerment, especially for woman, through savings.

Overall, the project strategy has been developed aiming to overcome a set of cross-cutting barriers such as weak technical

and organizational capacity of national and local institutions which leads to limited adoption of climate resilient practices and technologies, and the lack of ownership of adaptation interventions promoted in the past by different development partners both at institutional and community level.

C. Project Components and Financing:

Project Components	Expected Outcomes	Expected concrete Output	Amount (US$)
1 - Knowledge and climate services	Enhanced knowledge on climate change adaptation for evidence-based adaptation solutions	Synergy among research institutions, capitalization and adaptation of existing studies to the target area	350 000 $
	Strengthened capacities to ensure access to last mile climate services for vulnerable communities	Communities access and understand climate information	650 000 $
2 - Strengthening villages	The adaptive capacity of communities is enhanced through the restoration of ecosystem services and improved access to water	Integration of schools into project activities through an awareness raising/training plan on climate adaptation	166 977 $
		Establishment of community forests and reforestation actions in degraded areas	1 700 000 $
		Asset creation to improve water availability and management	1 500 000 $
3- Supporting farmers through agricultural groups	Vulnerable smallholder farmers have diversified and strengthened livelihoods	Support for improved agricultural practices and innovative technologies in agriculture	2 000 000 $
		Livelihood diversification through the support to transformation and commercialization of NTFP	1 500 000 $
		Support for savings and credits to enable farmers to invest in adapted livelihoods	550 000 $
Total activities			8 416 977 $
Project Execution cost (9,5%)			799 613 $
Total Project Cost			9 216 590 $
Project Cycle Management Fee charged by the Implementing Entity (8,5%)			783 410 $
Amount of Financing Requested			**10 000 000 $**

D. Projected Calendar:

Milestones	Expected Dates
Start of Project Implementation	January 2024
Mid-term Review	June 2026
Project/Programme Closing	January 2028
Terminal Evaluation	First semester 2028

PART II: PROJECT JUSTIFICATION

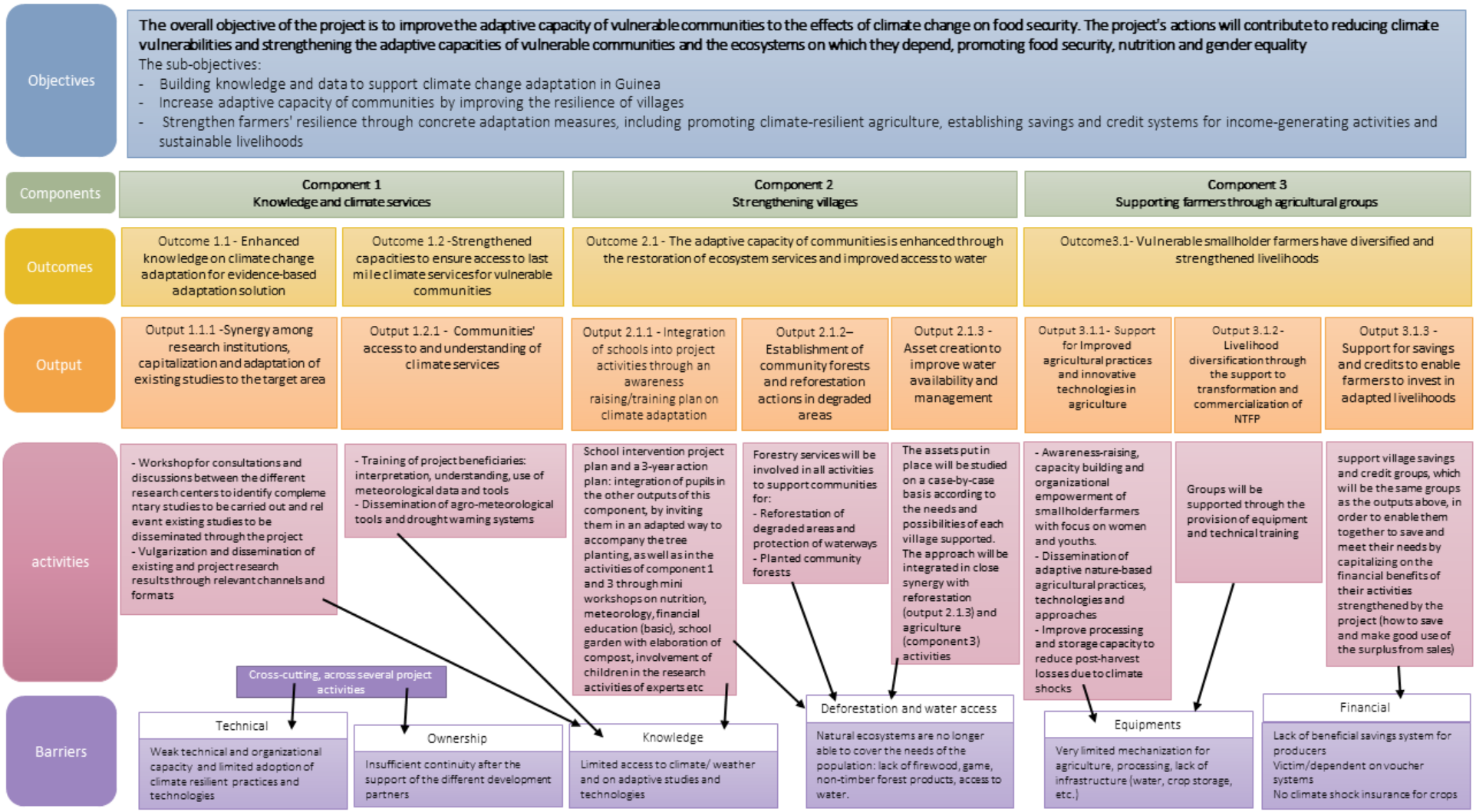

Figure 8, Project Theory of change

A. Project components

The project aims to implement an integrated approach, where different activities under each component are interlinked and create synergies to maximize the impact of the intervention. Outputs are deigned toto complement each other and provide cross-cutting support to the different needs of communities to enable better adaptation and resilience to climate change. The project has been designed based on consultations with local communities, aiming at creating synergies with ongoing actions of the government and technical and financial partners, and building on WFP's experience.

Component 1 – Knowledge and climate services

This component aims to enhance synergies between research institutions to improve knowledge for climate change adaptation and capitalize on innovations and adaptation techniques. It will also allow to establish a link with the meteorological department, by including the agreements of the sub-prefectures in the complementary research. Finally, this component will respond to the needs of farmers in the project area on the issue of climate services, in collaboration with UNDP and AFD. The deconcentrated services will play a key role in ensuring that local needs are taken into account and the Meteorological Directorate the main source of climate data and climate services.

Outcome 1.1 - Enhanced knowledge on climate change adaptation for evidence-based adaptation solutions

Building on existing research activities, the project will stimulate exchanges between the public services concerned. The results of this effort will form the basis for the implementation of the activities under Components 3 and 2, but information will be systematized and made available to all climate actors in Guinea. In order to increase the ownership of local communities and to ensure that the researchers meet their needs, the studies will be carried out in close coordination with the villages and farmers' groups supported under components 2 and 3.

Output 1.1.1 - Synergy among research institutions, capitalization and adaptation of existing studies to the target area

The project will encourage the research centers (IRAG, CERE, ISVG etc.) to work together to carry out studies to strengthen the country's adaptive capacities and particularly agriculture, ecosystems and food security. Existing studies that can contribute to the project's efforts as well as of the different research centers and project leaders will be identified, and the solution they propose will be adapted to the project target area for implementation under components 2 and 3.

The following areas of work will be prioritized: agricultural innovation (agroecological) and climate smart agriculture, improved seeds (more climate resilient and early maturing), adaptation to the decreasing rainy season and dry spells during this period, best practices in advance of and during drought periods, community nutrition in a context of climate change adaptation and understanding the impacts of climate change on local ecosystems

This output will capitalize on the research already carried out (literature review and discussions with researchers - including studies carried out by the country's technical and financial partners such as AFD, WB, UNDP, etc.) by working on the dissemination and use of their results: (i) setting up an online climate platform, accessible by the country's development partners, under the supervision of the climate focal point of the Ministry of Environment and (ii) through components 2 and 3 of the project, disseminating the findings of the studies among the project beneficiaries through relevant channels and formats for their implementation int the field.

A consultation workshop between the different research centers and the meteorological and hydraulic departments will allow to identify synergies between the experts on their research work, to discuss the hydrometeorological data and services needed and additional studies to be carried out in coordination with the beneficiary communities under component 2 and 3. During the preparation of the full proposal, communities will be consulted to better identify their needs in terms of knowledge and information.

To ensure financial sustainability of the proposed actions, the project will strengthen CERE's capacity to access additional climate funding.

Outcome 1.2 - Strengthened capacities to ensure access to last mile climate services for vulnerable communities

Vulnerable populations in the project's target areas do not have access to the information they need to better manage climate variability and change. This lack of information often leads to decisions that negatively affect people's livelihoods

and food security. Climate services support decision-making at different levels: farmers, communities, and local and national authorities. When people are provided with adequate information, they can make informed decisions, better manage climate variability and strengthen their capacity to cope with climate risks and adapt to the impacts of climate change.

In the framework of this outcome, the project will therefore support the Meteorological and Hydraulic Departments in theirs functions in order to improve the services made available to the communities. The project will seek to strengthen the link between the deconcentrated meteorological services and the final beneficiaries and will train farmers in the use of agro-meteorological services. This outcome will complement existing project implemented by UNDP and synergize with AFD's actions. UNDP/FEM project (5,350,000 USD) “Strengthening climate information and early warning systems for climate resilient development and climate change adaptation in Guinea” closes at the end of 2022. In particular, the project strengthened the structures of the Meteorological and Hydrological Directorate. AFD has planned to support the Meteorology and Hydraulics Directorate with 10 million euros starting from end of 2023. Their support will focus mainly on strengthening and diversifying the national climate network (infrastructure), strengthening the technical and scientific capacities of the agents, institutional and organizational strengthening of the directorates with the possible creation of a meteorological agency and finally a pilot phase of support for agriculture through climate services in Northern Guinea. It is on this last point that this project will collaborate closely in the implementation of activities.

Output 1.2.1 - Communities' access to and understanding of climate services

Under this output, the Meteorological and hydraulic Departments, the National Center for the Management of Environmental Disasters and Emergencies, WFP and AFD will work together to build the capacity of last mile users to understand and use climate information services through, for example, participatory scenario planning sessions. The project will build on the above-mentioned investments of UNDP and AFD that will strengthen the capacity to produce climate information services tailored to national and local needs. This proposed project will focus on the final beneficiaries and the dissemination of agrometeorological climate services. AFD has planned to support, through its component 3, users and intermediaries in the agricultural sector in the Upper Guinea region as a pilot area, mainly through capacity building.

In order to ensure good synergy of the actions of the different actors in the framework of the implementation of climate services, specifically for this output, a kick-off meeting of the project will be organized, and periodic meetings in the field and in the capital will be organized throughout the project. The project managers of the AFD project and the proposed project will work closely together on climate services and actions to be implemented with the communities.

WFP's action will complement this initiative by proposing complementary activities in AFD's areas of intervention, as well as replicating these activities in other areas of the region targeted by this project, in agreement with the Meteorological Department. The support of intermediaries by the AFD project will ensure the presence of well-trained people on whom the AF project can capitalize in order to improve the availability of climate services for final beneficiaries. AFD will focus on training on various products and services including data use, forecast bulletins, hydro-climatic atlases and crop monitoring systems. WFP will extend this effort by increasing the number of beneficiaries, e.g. the farmers' groups supported under Component 3 and the monitoring committees under Component 2 will receive training in the interpretation, understanding and use of meteorological data and tools. Under the AFD project, training will be provided to farmers through a mobile caravan, radio broadcasts on local media and practical workshops through field schools on integrating climate services into daily activities and decision making. Consultations at project preparation stage will identify the most suitable channels to extend these training to the villages targeted by this project.

The main objective of the proposed project will be to strengthen the link between the deconcentrated services of the Meteorological and Hydraulic Departments, the National Center for the Management of Environmental Disasters and Emergencies, intermediaries, and the final beneficiaries in order to allow a better dissemination of seasonal climate forecasts and to improve the adaptation capacities of farmers. Thus, through this output, the project will work on the development of distribution channels for climate services. Options to be explored include community radio, WhatsApp messages, schools, farmers' organizations, community relays, among others.

Component 2 – Strengthening villages

This component aims to support the communities through the strengthening of the villages' capacity to adapt to climate change. To ensure the sustainability of the investments, the selection of activities and the location of each asset will be based on Community Based Participatory Planning exercises and village committees will be set up to monitor the implementation of the project as well as the management of the assets created. Village committees will be trained in the management, upkeep, operation and maintenance of the assets created. Each village committee should include at least two women, two elders, two young people (18-25 years old), students and the relevant authorities (mayor, school director etc.). In case village committees already exist in the project areas, whenever this is appropriate and feasible, the project will rely on existing committees. The project will closely coordinate with the ANAFIC project implemented by a WB and AFD to make sure the community development plans developed under this initiative are fully aligned with the activities of the proposed project.

Where activities require the involvement of villagers in asset construction works, WFP's Food Assistance for Assets - FFA approach will be implemented. Project beneficiaries who participate in the creation of community assets will receive cash transfers to fill a short-term food gap during the lean season.

To strengthen the long-term impact and involve the new generations, this component will seek linkages with the village schools (primary, secondary and high school depending on the institutions present), under the assumption that by involving children and adolescents in project activities will raise their awareness of the importance of adapting to climate change and improving the resilience of the village.

Outcome 2.1: The adaptive capacity of communities is enhanced through the restoration of ecosystem services and improved access to water.

Output 2.1.1 - Integration of schools into project activities through an awareness raising/training plan on climate adaptation

Schools are central in the community model of the target area: all the people in the community know the school and the teachers, school premises are often used for meetings such as village councils for example. Therefore, schools are the primary channel to easily reach the community as a whole. For this reason, the project will use the schools as the entry point for raising awareness and provide training on climate change adaptation.

The project will target those schools that are currently benefiting from the WFP school feeding program in the project intervention area. These are mostly primary schools, whenever possible the project will also try to integrate middle and high schools.

For each targeted school a school intervention plan and a 3-year action plan will be prepared and approved. The activities will include the participation of pupils in project activities such as tree planting workshops on nutrition, meteorology, financial education (basic), school garden with elaboration of compost, involvement of children in the research activities of experts etc. Their participation in project activities will be design in a way that is adapted to the interest, needs and conditions of children. To facilitate the implementation of the project, synergies between the actions of the different schools will be put in place.

During the preparation of the full proposal, the project team will explore the possibility of adopting WFP's CHILD approach. CHILD stands for Children in Local Development; it is a community-led participatory planning approach that aims to position the school as a center for local development in the community.

Output 2.1.2: Establishment of community forests and reforest actions in degraded areas near villages

Forests are an important source of income and livelihood for rural communities: they provide firewood for domestic use or for economic activities such as baking bricks, smoking, or other economic activities; they are used for transhumance or source of food for livestock; source of game and non-timber forest products (NTFP) etc. In addition, forests provide a set of ecosystem goods and services such as contribution to soil fertility and structure, preservation of water resources, habitats of rare or protected species. Climate change is adding to human pressures to threaten these forest ecosystems. The more the ecosystems are degraded, the more vulnerable the communities are to climate change which in turn leads to increased pressure on the ecosystems, setting in a vicious circle.

The project aims to contribute to strengthening the adaptive capacities of the communities by preserving the ecosystem services provided by the forests. This will in turn contribute to improve the livelihoods and resilience of the communities that depend on the forests. The project will contribute to the improvement of forest governance through the joint intervention of community members, forest and fauna services and local authorities.

Reforestation of degraded areas and protection of waterways: This activity will be led by the Forest and Fauna Services of the Ministry of Environment. Through participatory approaches, communities will be involved in the selection of species, identification of localities, participation in planting (FFA). School community (pupils, teachers, school committee etc.) will also be consulted and workshops will be organized with them as part of the nursery and reforestation activities, in connection with output 2.1.1. To help the community make informed decisions, awareness-raising/training workshops will be held in schools and will involve community members and teachers who will then disseminate the information to their pupils. The workshops will focus on the following topics: function of the different trees, planting techniques (including timing), interest for water courses, good practices for the use of forest ecosystems, etc.

The capacities of the field forest agents will be strengthened through a learning by doing approach. For example, when setting up or improving nurseries to produce local forestry species, based on the needs and expectations formulated by the agents, a pilot nursery will be set up which can then be easily replicated in all localities with the same characteristics as the project area.

The village committees will be responsible for the long-term management of the forest's ecosystems around the village. The village committee will be in close contact with the forest and fauna services in order to identify priority areas for reforestation around the village considering technical recommendation and community needs. The village committee will organize several consultations with the villagers, considering the recommendations of the forest and fauna services, to determine the best locations (after the workshops given to the community). The maintenance and monitoring of the plantations will be led by the village committee under the supervision of the forestry department.

Depending on where they will be located, the nurseries will be under the supervision of either the water and forestry services or the village committees when located in the villages. Community members will be involved in the establishment and maintenance of the nurseries through the FFA mechanism.

The plantations will be orchestrated by forestry officers who will be present and will involve volunteer labor and project beneficiaries through Food Assistance for Assets schemes. In coordination with output 2.1.1, schoolchildren will be associated with the activity for educational purposes.

Planted community forests: In response to the increased need for communities to turn to forest resources for their livelihoods, and to limit human pressure on natural forests, community silvopastoral systems will be promoted on common village land. This will, in part, meet the community's need for firewood and grazing and shading areas for domestic animals. Under Output 1.1.1, a study will be carried out to identify suitable species and relevant silvopastoral itineraries. The project will learn from previous UNDP initiatives that have established plantations for this purpose with fast-growing species.

The Forest and Fauna Services of the Ministry of Environment will be involved to help set up community nurseries, the first plantations and train communities on good management and sustainable practices. School children will be involved in nurseries and planting actions for educational purposes in line with output 2.1.1.

The project will support the community in setting up mechanisms for the sustainability of the intervention, under the responsibility of the village committees of the activity in each village which will be in charge of the supervision of the collection of firewood, supervision of grazing periods, organization of maintenance and planting after project completion.

In addition, the project will seek to encourage the decrease of consumption of firewood and sensitize the populations to good practices to preserve forest ecosystems: use of fuel-efficient stoves, change of practices on bush fires, etc. At present, for each new birth, a mango tree is planted, and it may be possible to propose the planting of other species or to extend the tradition to weddings and other events, and to donate a tree to the community forest, for example. The mitigation potential of these activities might be assessed through the studies promoted under Component 1.

Output 2.1.3: Asset creation to improve water availability

While reforestation and restoration activities under the previous output will protect the water sources in the long run, other investments are needed to respond in the short term to meet the urgent needs of targeted communities. Thus, activities under this output aim to provide villages with water collection and storage infrastructure to ensure sustainable access to water. Assets put in place will be studied on a case-by-case basis according to the needs and conditions of each village. The approach will be integrated in close synergy with reforestation (output 2.1.2) and agriculture (component 3) activities.

During the consultations, communities reported that one of the major constraints is the unavailability of water throughout the year even during the rainy season. In 2021 the rice and groundnut crops (grown during the rainy season) were mostly unsuccessful because of a lack of rainfall at flowering time and many plants did not survive. Some villages were able to compensate by growing vegetables earlier (from September onwards) at the watercourses, but from January onwards there is stiff competition with livestock, which also migrate to the watercourses. The hardest period in terms of availability and access to water is from January to June, as the rains are weaker, and the streams and wells dry up earlier.

Since 2018 WFP has been working closely with governments and partners to scale up resilience interventions, in different countries of the sub-region. As water is a fundamental component of food production and ecosystem services, its collection and management are at the heart of WFP's integrated resilience program.

The project will build on the technological innovations of the Technology Needs Assessment project launched in 2019, one of whose priorities is access to water. One of the technologies identified is boreholes with solar pumps. "To promote small-scale irrigation, access to domestic drinking water, and livestock farming, it is necessary to build boreholes equipped with solar pumps. This technology consists of collecting water from the borehole and storing it in an elevated tank. This water will be reused by gravity for small-scale irrigation of plots, drinking water supply and for livestock activities. The drip irrigation technique will be used for better water use efficiency. The Small-Scale Irrigation Management Unit (SSIMU) is usually a plot of less than 0.5 hectares. Small-scale irrigation management systems can be managed either by an individual farmer or by groups or communities. The guiding principle of sustainable small-scale irrigation management is water use efficiency. This can be achieved through greater efficiency in (1) collection and diversion; (2) storage; (3) distribution; and (4) application of water to the field. The implementation of this proposed technology will improve the adaptation of populations to climate change, given the vulnerability of Guinean water resources." Moreover, farmers will also get access to water sources from shallow wells (only from September to December, because after that they dry up) which will be dug by the community and integrated with upper catchment water harvesting measures such as deep trenches, percolation pits and tree plantations to limit the effect of yield reduction during the dry season.

Component 3 – Supporting farmers through agricultural groups

Activities under this component will focus on supporting farmers in adapting to climate change. Farmers will be reached through farmers' groups and support will be delivered on production, storage, processing, transport and marketing. Activities will build on and complement the investment made under the previous components. In addition to technical support, farmers will receive tailored climate advisory services, which will include advice on how to further reduce disaster risk, increase productivity and capacity to cope with climate change and variability (component 1). They will also benefit from and contribute directly to the studies and results developed under component 1. Finally, target farmers will participate in the reflections under component 2 (where to install reforestation, how to improve access to water). This will allow them to couple the support presented below with the benefits brought to the overall resilience of their village (component 2)

In each village, specific options will be chosen in a participatory manner to ensure that the specific context and needs are taken into account.

Delivering support through farmers' groups will provide several benefits. First, it allows the inclusion of vulnerable people such as those who do not own land (for example charcoal burners) or those who are not able to work alone such as illiterate or people living with disabilities for example. It will also allow to reach a larger number of households by pooling material investments, thus increasing the cost effectiveness of the intervention, and ensure continuity of the intervention in case a person decides to leave the group, as another farmer could take that place and allow the action to continue.

Some groups will be supported in synergy with other WFP resilience projects in the area, on complementary activities. In addition, the activities of this component will learn from ongoing resilience projects in the area.

This component will contribute to address gender inequalities. In general, women have a much heavier burden of household chores and, according to the consultations, most of the women are also responsible for managing household money and water. One of the objectives of this component would be to promote a better balance in household tasks and access to resources so that men become more involved, and women have more free time, taking into account their culture and consulting both men and women to avoid any negative effects and do no harm. This component will help men and women to improve the profitability and efficiency of their time through technical support for each activity proposed.

Outcome 3.1: Vulnerable smallholder farmers have diversified and strengthened livelihoods

Component 3 aims to strengthen climate change adaptation and resilience building by strengthening and diversifying livelihoods and promoting climate resilient value chains. This outcome will build on the technology, tools and innovation identified under component 1, in line with the needs and wishes of communities. An approach of sharing experiences and developing pilot activities in the project's target villages will allow communities to learn from each other and see effective results on the ground.

For the implementation of the activities under this component, the project will call upon the expertise of several local and international NGOs currently working on these topics in Guinea. The project will seek to strengthen the existing efforts by building on the work of those NGOs that already have expertise and recognition in the field. It is crucial that activities are implemented locally with a regular presence in the target villages. In addition, joint supervision missions with the decentralized services of the Government will be regularly implemented. This will ensure capacity building for the agents, as well as strengthening relations between the groups and the services concerned (environment, agriculture, livestock, meteorology, hydraulic, etc.).

Output 3.1.1 Improved agricultural practices and innovative technologies in agriculture

The activities will build on the knowledge and experience of WFP, UNDP, the deconcentrated services, as well as on the knowledge generated under Component 1: not only the finding of the studies will be tested and put into practice and researcher will be able to collect relevant data from the field.

This output is key to ensuring that communities become more resilient to climate change. In order to address climate vulnerability across the food system, issues such as production, storage, processing, transport and marketing will also be examined and specific activities will be identified per village to create sustainable and resilient food systems. This output will focus on supporting and improving the production of rice, millet, groundnut and vegetable crops, but will also encourage the diversification of agricultural and varieties adapted to climate change using local knowledge coupled with IRAG research.

During the consultations, it emerged at several levels (NGOs, government, farmers) that the beneficiaries of the past projects had not necessarily succeeded in maintaining or performing their activities at the end of the support, due to a lack of know-how and managerial and organizational tools. Also, lessons learned from other initiatives in country show that communities tend to become over-reliant on external support and fail to become independent once the project support ends. As a crosscutting activity for all groups, and in order to ensure long term sustainability of the intervention, the project will work on strengthening the groups' capacities by providing training for the groups on topics such as internal governance, management, leadership, conflict management, accounting, profitability, optimization, marketing etc. In addition, groups will be formed in such a way that each includes people who are able to read, write and count. The project will also make efforts to favor the self-reliance of the groups and an exit strategy for each group will be developed as part of the broader project exit strategy to ensure the sustainability of the intervention. Awareness will be raised on the objective of the project support and its finite nature in terms of resources and time.

Other mechanisms to ensure long-term sustainability will be explored. For example, during the field consultations, people referred to a very interesting system for collaboration on seed supply. Large cooperatives support small-scale farmers by providing improved seeds at the time of sowing and the farmers pay back the cooperative when they harvest/sell. The improved seeds are efficient, and they have more than enough money to pay for the seeds after the harvest and even to

see them through for 2 months. During the consultations, some of the men asked for this system to be formalized every year, therefore the project will explore solutions to accompany and strengthen this mechanism, and to replicate throughout the target area and beyond.

Specific activities under this output will be further defined during the preparation of the full proposal through consultations with stakeholders and beneficiaries. An indicative list of potential activities crop type is provided below.

Table 3, Indicative activities output 3.1.1

Crosscutting activities	Identification and/or creation of groups - Mechanisms for group independence following the project: Training of groups in governance, conflict management, good agricultural practices, profit optimization and use of common funds etc. Nutrition aspects: sensitization on the production of malnutrition sensitive crops, cooking practices of these foods for better nutritional profitability (as harvest is smaller due to climate change, there is a need to capitalize on what can be harvested): sensitization of beneficiaries on the adoption of better food and hygiene practices through cooking demonstration sessions Value chain: establish linkages with WFP supplies for school feeding programs to provide a more profitable market for surplus produced by project beneficiaries. Transformation and valorization of organic waste (compost, animal husbandry, manufacture of ecological charcoal based on residues etc.).
Rice, millet and maize	Practical training on good agricultural practices during the activities Revision of agricultural practices and processes (link to outcome 1.2) Adapted equipment to be able to work from the first rains Yield improvement through improved inputs, soils and access to water: adapted and high yielding seeds (link to outcome 1.1), compost, use of ox dung (grazing during fallow), crop rotations (soil structuring and improvement and nutritional diversification), improved fallow with species such as *Andropongon spp, Sesamum indicum, Chromolaena odorata* etc., hydro-agricultural development, link to component 2. Reduction of post-harvest losses - transport - storage system - drying system. Carry out energy needs assessments to identify appropriate energy providers and technologies for these services, as well as ensuring access to technical capacity for system maintenance
Groundnut/ peanuts	Practical training on good agricultural practices during the activities Revision of technical itineraries for crops (link to outcome 1.2) Equipment to be able to work from the first rains - see production equipment for ploughing Yield improvement through improved inputs, soils and access to water: seed (link to outcome 1.1), training in the manufacture and use of compost, use of ox dung (grazing during fallow), hydro-agricultural development, etc. Agroforestry - cashew, fruit trees to provide a complementary source of income and food to compensate for crop losses due to CC Reduction of crop losses - Transport - Storage system - drying and processing system. Carry out energy needs assessments to identify appropriate energy providers and technologies for these services, as well as ensuring access to technical capacity for system maintenance
Vegetable growing	Practical training on good agricultural practices during the activities including organic inputs (compost, biological pest control, crop association etc.). Revision of technical crop itineraries (climate-smart agriculture) and selection of crops and varieties adapted to CC (link to component 1). Support to beneficiaries (groups) in the implementation of activities for the development, enhancement and fencing of 1 ha of market gardening perimeter with access to water (link with component 2) - link with the protection of watercourses at the group level and integration of trees on the market gardening plots. Reduction of post-harvest losses - transport and conservation (provide training and processing equipment in this regard).
Livestock	Forage and improved animal nutrition (link component 1). Practical training on good animal husbandry practices (in 5 sectors). Support for beneficiaries (communities or groups) in the development and management of pastoral units and fences of 10 ha (water points, fodder production, etc....), to minimize the risk of conflicts between people and animals and between farmers and livestock breeders (link component 2).

Output 3.1.2 Livelihood diversification through the support to transformation and commercialization of NTFP

Under this output, the project will support communities in the diversification of their livelihoods by supporting the

processing and commercialization of NTFPs. Several products will be explored, including Mangoes, nere, shea nuts.

Mangoes from the region are in great demand, with buyers coming from Senegal and Conakry. Mangoes are harvested during le lean season; some communities have already started to process the fruit. The project will support these initiatives and assess the possibility to promote the replication in other villages. A market study will be carried out to assess internal and external demand for products such as dried mango, jam among others. Traditionally, women process nere and shea nuts for household needs. However, with climate change and the loss of crops two years in a row, women have started to increase their production so that they can sell it to buy food. Processing machines are usually available in the villages where the market is located and women have to pay a commission in order to use them.

After thorough market and regulation studies, the project will support the groups through the provision of equipment, technical training and administrative support for the processing of mangoes, nere and shea nuts. Depending on the villages, the possibility of setting up support for the collection and processing of honey through the establishment of beekeeping adapted to local practices will also be studied. As with output 3.1.1, emphasis will be placed on assisting the groups to become autonomous in their activities in view of the end of project support. Some of the groups supported under this output may be groups supported under output 3.1.1, which will optimize the action and allow the groups to be active throughout the year. Particular attention will be paid in the framework of output 2.1.2 to promote the availability of non-timber forest products such as nere and shea.

Output 3.1.3 Support to savings and credits to enable farmers to invest in adapted livelihoods.

At the end of the lean season, when farmers need to purchase rice, millet and groundnuts seeds for the next season, farmers' finances usually run dry. This is particularly true after bad years, when harvests are scarce due to lack of rain. Access to formal credit is difficult and expensive for rural farmers, and women especially are forced to resort to loan sharks or to sell their cashew production before harvest for a lower price to buy rice and seeds.

It is expected that project activities such as the establishment of diversified activities during the dry season (cashew trees, NTFPs, processing, etc.) and the improvement of production and storage techniques will enable farmers to improve their ability to save. Thus, the project will support the setup of village savings and credit groups to enable them together to save and meet their needs. The project will also focus on financial literacy, by providing training for the groups.

Table 4, alignment with the AF's results framework

Adaptation Fund strategic outcomes/outputs	**Project outcomes/outputs**	**Alignment assessment**
Outcome 2 - Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses Output 2.2 - Increased readiness and capacity of national and sub-national entities to directly access and program adaptation finance	All project Outcome 1.1 - Enhanced knowledge on climate change adaptation for evidence-based adaptation solutions / Output 1.1.1 - Synergy among research institutions, capitalization and adaptation of existing studies to the target area	The institutions will be accompanied by WFP and other partners in the implementation of the project activities, which will allow practical "training" of the institutions in the field through the management and activities of the project The government and in particular CERE and other research centers will benefit from the project to improve their competence in accessing adaptation finance
Outcome 3 - Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level	Outcome 1.1 - Enhanced knowledge on climate change adaptation for evidence-based adaptation solutions Outcome 1.2 - Strengthened capacities to ensure access to last mile climate services for vulnerable communities Outcome 2.1 - The adaptive capacity of communities is enhanced through the restoration of ecosystem services and improved access to water	Output 1.1.1 responds directly to Output 3.2 of the Adaptation Fund by enabling the creation of a platform for disseminating research on adaptation to climate change to all development actors present in the country as well as to the decentralized state services present in the field. Output 1.2.1 is consistent with output 3.1 of the AF, as it raises awareness among target groups of the importance of climate services in risk reduction addressing to climate change. Within the framework of the implementation of all outputs of the outcome 2.1 and more particularly the actions on

		water and the rehabilitation of the ecosystems will include activities of sensitization of the key persons of the villages (wise men, teachers, mayors etc.), on the other hand the actions with the pupils and the whole of the population will also make it possible to pass on messages of sensitization for the reduction of the climatic risks at the local level (through the good practices of management of the water, the non-wood forest products etc.)
Outcome 5 - Increased ecosystem resilience in response to climate change and variability induced stress and therefore the / Output 5 - Vulnerable ecosystem services and natural resource assets strengthened in response to climate change impacts, including variability	Outcome 2.1 - The adaptive capacity of communities is enhanced through the restoration of ecosystem services and improved access to water / Output 2.1.2 - Establishment of community forests and reforestation actions in degraded areas	Proposed project will allow to create and improve natural resource assets (around the project's target villages) to withstand conditions resulting from climate variability and change. The objective is to maintain ecosystem services.
Outcome 6 Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas	Outcome 3.1 - Vulnerable smallholder farmers have diversified and strengthened livelihoods	Project aims to provide to households and communities more secure livelihood assets, and to develop sustained climate resilient alternative livelihoods.

B. Economic, social and environmental benefits

Social and economic benefits

Increased community and government ownership and improved relationships among different stakeholders: By using a participatory approach that brings together communities, local governance (at village, sub-prefecture and prefecture levels) and key government entities such as meteorological departments, agriculture departments, meteorological and disaster management services and researchers, the project aims to foster vertical cohesion and inspire a resurgence of trust and dialogue at the community level. The project's bottom-up approach and strong participatory ethos will ensure community ownership, which will result in greater sustainability of project assets. It will also give community members from vulnerable and often marginalized groups a voice in adaptation planning and implementation in the co-production of climate services. In addition, the involvement of government departments at each stage of project development and implementation will help to strengthen their role in project monitoring and will provide a positive link with the communities to ensure sustainability of the actions of technical and financial partners beyond the project life. The project will strengthen village committees and farmers organizations as a means to achieve better ownership of the intervention and ensure long-term sustainability of the benefits generated.

Improving food security and nutrition: The proposed project will secure people's livelihoods by providing support to farmer groups in terms of technical assistance and equipment so that they can better adapt to climate change and improve their agricultural practices. This will ensure more availability of staple food such as rice, millet and vegetables. The project aims to increase the purchasing power of households through increased agricultural yields, diversification of activities and the establishment of savings groups, which will strengthen food and nutrition security by allowing the purchase of different foods and a diversified diet. On the other hand, the project will provide training and capacity development on cooking techniques and other practices so that beneficiaries can maximize the nutritional value of the food the produce and consume.

Improved incomes: Access to climate data, technical support, training and good agricultural practices, including the introduction of short-cycle resistant varieties, improved water management and reduced post-harvest losses will lead to higher yields, which in the long term will translate into improved incomes. Increased production is expected to be sufficient to meet household food needs, thereby reducing their expenditures for food. Activities related to post-harvest loss reduction activity will help households to increase their profits from the sale of surplus. In addition, the project aims to link part of the communities' production to the ongoing WFP school feeding program, providing families with a regular and predictable income. By promoting and supporting income generating activities such as processing of shea and nere,

the project will help women to access complementary source of income.

Increased access to savings and credit and improved financial literacy: Additional income available at group and household level (obtained through improved agricultural production as a result of project activities, output 3.1.1 and 3.1.2) will be optimized through support to the villagers' savings (output 3.1.3). In addition, training in internal group management (output 3.1.1) will provide farmers skills to optimize profits and continuously improve their activity. Finally, by supporting the setup saving and credit groups (output 3.1.3), and strengthening their capacities, the project will enable households to build risk reserves that will allow them to better manage small shocks and to invest in more resilient livelihoods.

Gender and vulnerable groups: Guinea's gender index is 0.439 (OECD SIGI Index), which places the country among the 8 countries (78 out of 86) with the greatest disparities between women and men in the non-OECD region. Women living in rural areas are particularly vulnerable because of their specific role in agriculture and water supply. Their access to inputs, technical advice, improved technologies, land ownership and decision-making processes are limited compared to men, thus constraining their resilience to climate hazards. Activities under component 2, by increasing access to water at village level, will reduce the burden of fetching water for women. The project will also strengthen the economic empowerment of women by supporting them in their income generating activities. Special attention will be given to women's participation in decision-making at the community level, to strengthen their action and active leadership in climate change adaptation. A detailed gender assessment will be carried out during the preparation of the full project proposal to assess the different needs and barriers of men, women, youth and their intersecting identities (age, ability, location, ethnicity, language, gender, social class).

Children and education: The project will directly target, through component 2, children and adolescents through climate change adaptation workshops. This will result in greater empowerment and long-term integration of climate adaptation solutions in the targeted communities. Consultations held for the preparation of this concept note showed that decreasing incomes due to climate change are forcing families to take children out of schools. In 2017, the primary school completion rate was 52.2% and the secondary school enrolment rate was 42.5%.[22] The aim is therefore also to encourage parents to keep children in school and to motivate pupils to complete their schooling, through the implementation of climate change adaptation activities and by placing the school at the center of village development.

Environmental benefits

Preservation and rehabilitation of natural ecosystems: Under component 2, the project will build awareness and support villages in changing practices to preserve natural forests through: (i) reducing the pressure on the natural environment by planting community forests for the needs of cooking wood and grazing of domestic animals, (ii) restoration of degraded forest areas and protection of watercourses by planting local and adapted species and (iii) improving villagers' practices in order to preserve their environment, for example by raising awareness on the negative impacts of bush fires and promoting alternative practices. As a result, ecosystem services and natural resources assets in target areas will be improved. The rehabilitation of degraded forest areas and the planting of village forests will contribute to carbon sequestration.

Promotion of climate and environment friendly agriculture: Sustainable natural resource management will be key to promoting better adaptation to climate change and food security for targeted communities and households, as well as to achieving long-term environmental benefits in the project areas. This approach involves the rational use of land and water resources for optimal production with minimal impact on ecosystems. The project aims to implement farming systems based on crop rotations and associations of crop varieties to improve soil and nutritional diversification. It will support beneficiaries in creating their own organic fertilizers, biopesticides and organic practices. Smallholders will be encouraged to use organic field waste as fertilizer and oxen grazing to fertilize the soil between crops. These recommendations will reduce soil erosion and increase soil fertility. As a result, the use less of chemical fertilizers and chemical pesticides will be reduced. Finally, by increasing the productivity per hectare and reducing post-harvest losses, the project will help reduce the conversion of natural forests for agriculture purposes. The promotion of integrated peanut, rice, millet, maize and

[22] Guinée Document de Stratégie Pays 2018 – 2022, BAD (septembre 2018)

livestock climate resilient value chains will contribute to restoring degraded land, degraded buffer zones and, in the long run, will contribute to land and forest restoration and carbon sequestration.

Avoiding or mitigating negative impacts

The following measures will ensure that project activities are designed and implemented in such a way as to reduce its negative social or environmental impacts:

- Inclusive and representative community involvement in planning and implementing project activities, including monitoring.
- Constant consultation and engagement with beneficiary communities, including vulnerable groups.
- Strong collaboration with national and local authorities, both during activity design and implementation.
- Technical support will be sought from experts whenever needed, for example on gender issues and protection issues, water management and irrigation, reforestation, and integrated resource management.
- All project activities will be implemented in accordance with national standards and safeguards as articulated in national strategies and guidance documents.
- A complaints and feedback mechanism will be established to receive feedback from communities address complaints effectively.
- All project activities will be screened for environmental and social risks in accordance with the AF and WFP Environmental and Social Policies. An environmental and social risk management plan will be prepared during full proposal development.

C. Cost-effectiveness of the proposed project.

In order to maximize the cost effectiveness of the intervention, the project will build on existing national and sub-national structures and processes, as well as current and planes investments from WFP and development partners such as World Bank, AFD, UNDP and IDB. Project areas will be selected taking into account WFP presence and current operations aimed at building resilience. This will not only maximize the impact of the investment by allowing activities funded through different funding stream to reinforce each other and build synergies but will also decrease the logistical costs. Lessons learned and best practices from previous and ongoing interventions will also allow a more efficient implementation.

Under Component 1, Outcome 1.1 will build on existing studies and strengthen collaboration among different research centers and other stakeholders allowing them to share expertise, resources and innovations and limiting the current duplication of efforts, with clear gains in efficiency. Experience and knowledge sharing will strengthen the capacities of national institutions such as CERE, IRAG and SVGA. The focus on evidence-based interventions for the project target areas will allow cost effectiveness: generating knowledge targeted to the livelihood systems in target areas that considers the structural barriers different groups experience (women, men, youth, vulnerable groups) will be key for empowering communities to select and implement the most appropriate concrete resilience building and adaptation measures. This will prevent generic measures being implemented that might result in maladaptation, and thus a waste of the project resources. Although the focus of the research will be to meet the needs of the communities in the project area, the knowledge generated will be beneficial and useful for the entire research community in the country and in the sub-region. The climate research platform will the allow a wide dissemination of the knowledge generated beyond the scope of the project and will be available for all national stakeholders to use.

The Meteorological Department and the Hydraulic Department are in dire need of strengthening their material, technical and organisational capacity, and joining forces with the AFD initiative will considerably reduce the costs of the proposed project. Indeed, AFD has a budget of 10,000 000 euros to focus on the training of services and agents as well as to complete the necessary equipment (computer, weather station etc.) complementing the efforts of the SAP project implemented by UNDP. On the one hand, working on CS, without cooperation with other projects, would not be cost-effective because it would result in duplication of effort and would not be relevant to the country. A possible option of not including any work on climate services has been considered. However, without access to climate information services farmers benefitting from project support under Component 3 would not be able to make informed decisions on their agriculture activities. Not only this would be a missed opportunity to reach a high number of beneficiaries with a relatively limited investment, but it would also jeopardize the investments made under component 3, resulting in a higher overall cost. herefore, the proposed approach is cost-effective because it capitalizes on existing investments and reaches a large number of beneficiaries with a small investment of AF funds.

The cost effectiveness of the proposed activities is evident when compared with the status quo. Regarding the alternative of no project, the recent climate change-related impacts experienced in Guinea has had a strong impact on rural livelihoods, food security and, in turn, response costs. Components 2 and 3 focus on a village and community-based approach that will involve local people in managing natural resources, meeting local needs and achieving sustainable results over time. Under Component 3, interventions will require relatively low investment and produce comparatively high returns, while being more accessible for community understanding and ownership. Apiculture, climate smart agriculture and adequate storage facilities to reduce post-harvest losses are well known examples of low-cost interventions with potentially high returns. Working with farmers groups will allow cost optimization while reaching a higher number of beneficiaries. The implementation of savings and credit activities will enable beneficiaries to be more self-reliant and use their own resources to adopt and replicate the practices promoted by the project, so that this investment will have a greater impact in the long term. Activities under component 2 are key to ensure the success and sustainability of the investment made under Component 3. A detailed cost-effectiveness analysis will be carried, comparing measurable results with all feasible options and risk analysis. Concrete interventions will be carefully costed with community involvement and impacts assessed before decisions on implementation are taken. While some specific assets might require a larger investment, their implementation will have positive impacts for the whole community, thus reaching a larger number of beneficiaries. In component 2, The promotion of the use of gas instead of firewood was mentioned as an important strategy to decrease pressure on local forests for the government. However, given the location of the villages and the current state of the cooking systems in the villages, this activity was considered too costly with no guarantee of household ownership. Households are currently financially unable to buy gas cookers and gas, so it would have been necessary to provide everything with no guarantee that households would actually use it. The project thus decided to take a different approach and focus on restoration of degraded forests, creation of community forests and awareness raising activities. During full proposal preparation, the introduction of improved stoves will be explored. also always in this component, the project decided to carry out the awareness-raising activities for children in relation to the project's actions on the school premises with the teachers and partners already involved in the project through the various activities rather than setting up an awareness-raising program by another provider with awareness-raising activities outside the schools and disconnected from the project. This was considered to be more cost-effective, as well as providing added value and an ongoing framework for children's awareness-raising in relation to the project. As regards reforestation and plantations activities, an option considered was to implement this intervention through a separate service provider. However, recurring to the work of the local communities with the support of the decentralized state services was considered more effective as well as the most appropriate approach, as it will provide several benefits for a similar amount invested, namely strengthening decentralized services capacities, providing food assistance support for the most vulnerable, and ensure better ownership of the intervention at community level and sustainability.

In component 3, two different approaches were considered for the implementation of this component: a household level approach or a farmer group approach. The second approach was considered more cost effective and thus selected: it will allow to reach a larger number of beneficiaries through trainings and capacity development activities, it will allow farmers within a group to share some of the tools, equipment and machineries, and will allow them savings in the future by purchasing inputs as a group (thus increasing their bargaining power) and sharing costs for the maintenance and repair of their assets. In terms of financial inclusion, micro-credits through financial institutions were also considered but deemed too costly to set up given the context of the target areas. Large investments would be needed to incentivize financial institution to offer their services in an area that they currently don’t cover, to a category of clients that have very limited financial literacy and saving capacity. The creation of saving groups was considered a more appropriate measure to start building beneficiaries’ financial capacity. Similarly, micro-insurance solutions were also taken into consideration but discarded as in the target context they would require a too large initial investment to set up the system and insure its sustainability. Therefore, it was decided to intervene on community financing approaches at the level of the agricultural groups supported by the project. The project will intervene through basic training on household financial management and village savings, given the current level of these practices

D. Link with national or sub-national sustainable development strategies

The project contributes directly to the objectives and supports the implementation of key Government policies and programmes aimed at achieving sustainable growth and adapting to the effects of climate change.

The project is in line with the National Strategy on Climate Change (2019) in its Strategic Axis 1: "Promotion of measures

to strengthen the resilience and adaptive capacity of different sectors to climate risks" and responds to the recommendations of the NDC review (2021), as well as other important documents in the country, as listed below:

Table 5: National strategies and policies

Climate and Environment
The National Strategy on Climate Change organizes all climate decisions and issues around the Climate Change Dialogue Platform. The Secretariat of the Platform participated in the design of this concept note. Axis 1 of the Strategy focuses on adaptation, the project is aligned with the following objectives: • Reduce the vulnerability of agricultural systems to climate change risks through direct and indirect support to farmers, including through the establishment of a robust monitoring system to anticipate changes that will affect agricultural production. • Ensure the continued availability of important water resources for domestic, agricultural, energy and recreational needs. • Implement sustainable forest management as a strategy to adapt to climate change. • Strengthen the climate and hydrological observation system which includes a network of synoptic, agro-meteorological, climatological, aviation weather stations and maritime stations. • Strengthen climate forecasting mechanisms in Guinea with adequate means to facilitate wide dissemination of climate information. In addition, some of the activities recommended by the strategy will be implemented under this project: promoting climate-smart agriculture, promoting innovative water and soil conservation techniques, introducing improved varieties, encouraging the conservation and processing of agricultural products, preserving riverbanks and riverbeds, rehabilitating and strengthening the network of meteorological, hydrological and piezometric measuring stations, develop systems for monitoring and forecasting climatic hazards, promote the processing of non-timber forest products (NTFPs), promote reforestation and natural regeneration, build staff capacity in the fields of meteorology, climatology and hydraulic and in data analysis and processing, and establish user-friendly meteorological services.
Project activities are also aligned with NDC commitments: Commitment 1: Implementation of the National Water Policy action plan. Particularly the project will focus on the following actions: Ensuring universal and equitable access to water for the population and Preservation and restoration of riparian areas at the head of springs. Commitment 3: Adaptation of agriculture. The project will focus on the following actions: Diversification and deployment of low-input cultivation techniques adapted to a less rainy climate, Development of conservation and processing techniques for agro-sylvo-piscicultural products and Controlled irrigation.
The National Adaptation Programme of Action (NAPA - 2007) defines the priority activities to be implemented for adaptation to the adverse effects of climate change including improved access to water, agricultural development and training of communities in sustainable resource management. The projects defined by the NAPA were implemented by the UNDP and feed into the National Strategy on Climate Change.
National Action Programme to Combat Desertification (PAN/LCD - 2006): The PAN "aims to identify the factors that contribute to desertification and the concrete measures to be taken to combat them and mitigate the effects of drought". The project intervenes in an area particularly representative of this desertification and through component 2, the project will contribute to the mitigation of the effects of drought.
Development
The National Economic and Social Development Plan (PNDES) 2022-2025 is on hold due to political changes in 2020/2021 and the massive retirement of ministry officials. However, the two major priorities: access to energy and agricultural development are in line with the project activities. Most of the project investment is directed towards improving agricultural practices and harvesting and will integrate sub-activities such as access to renewable energies with regard to agricultural processing. Another key priority of this PNDES is strengthening the coordination and monitoring the support received from technical and financial partners, as extensively reported by state representatives during consultations. In relation to this point, Outcome 1.1 wishes to make available to the government an online tool that will enable the documents of the initiatives of different partners (including the research community) to be systematized and made available to all.
National Strategy for the Development of Public Water Services in Rural and Semi-urban Areas (2012): The project takes into account this strategy, which aims to provide sustainable access to sufficient water for all; a reference for all stakeholders and partners of the public water service in rural and semi-urban areas.
Food security and nutrition
National Agricultural Development Policy (PNDA) - 2017: Updating of the previous PNDA to structure the agricultural development policy around the satisfaction of food and nutritional security needs, and poverty reduction. The project is aligned with this policy through its objective to meet food security needs in the face of climate change.
The National Plan for Agricultural Investments and Food and Nutritional Security (PNIASAN) 2018-2025 is the framework document for planning interventions in the rural sector including agriculture, livestock, fisheries and environment. It includes adaptation actions in Component 3.2, in particular the group of actions 3.2.4: promote Climate Smart Agriculture (CSA) practices, develop a National CSA Strategy, create a CSA stakeholders' platform. The project responds to the promotion of climate-smart agriculture practices through the first part of component 1 and the agricultural activities of component 3, as well as in the framework of the awareness raising of school children in component 2. The project team will ensure that synergies are established with the CSA stakeholders' platform.
Gender

In 2015, Decree N°1257/MFPREMA/CAB on the setup and organization of the Gender and Equity Service. The director of the gender and equity Service of the Ministry of Environment and Sustainable Development was involved in the process of designing this concept note and will continue to be involved in the next phases of project design and implementation.
2017, Revised National Gender Policy (PNG): This revision aims to further reaffirm the Government's willingness to adapt and honor its commitments to the international legal instruments on human rights that it has signed and ratified. This revision considers the Sustainable Development Goals (SDGs).
2017, National Gender Policy Action Plan: Formulates the priority areas, objectives, indicators and responsibilities of each in the implementation of the PNG.
2019, For a gender-responsive National Adaptation Plan (PNA) process in Guinea: This study responds to the two fundamental orientations of the NGP and seeks to highlight the links that exist, or need to be created, between gender issues and climate change adaptation in order to provide recommendations for the integration of the gender dimension in the National Adaptation Plan (PNA) process.

UNDP is currently supporting the government in the implementation of its National Adaptation Plan, which should be finalized by 2024.

E. Link with national technical standards and complies with the Environmental and Social Policy of the Adaptation Fund.

Ongoing consultations with the following entities will take place at all stages of project design and implementation to ensure that all project activities comply with relevant national technical standards Ministry of Environment and Sustainable Development; Ministry of Agriculture and Livestock; Ministry of Women's Promotion, Childhood and Vulnerable Persons; Minister of Energy, Hydraulics and Hydrocarbons; Ministry of Territorial Administration and Decentralization; National Directorate of Meteorology; Civil Society; Decentralized Representation and Research Institutes and Training.

The project will comply with the country's labour code (law n°L/2014/072/CNT[23]) of 10 January 2014 that sets the minimum legal working age at 16 years, a 10-hours maximum working day and a working week of no more than 48 hours, and prohibits the employment of pregnant women within six weeks from delivery

Encouraging measures to aim for equality and equity have been put in place in recent years, such as the law on parity adopted on 2 May 2019 or the establishment of gender focal points in all ministries and the updating of the National Gender Policy (NGP) in 2017. Thus, women's access to the labour market, education and health does not suffer from any legal restriction, however, there are few women in positions of responsibility and early marriages still affect young girls significantly. The project is in line with the country's gender standards and will accompany the implementation of the PNG. Decree D/2001/37/PRG/SGG of 17 May 2001 on land policy in rural areas aims to establish a coherent strategic framework to improve access to and sustainable and equitable management of rural resources. The objective is to secure rural farmers, strengthen equity and social peace, stimulate agricultural production and productivity, promote decentralized management of land resources, and favor access to land for poor people and vulnerable and disadvantaged social groups, particularly women and young people. The process of land reform is being undertaken by the government under the leadership of the Ministry of Urbanism, Housing and Territorial Development. In addition, the Ministry of Agriculture and Livestock is in the process of drafting an agricultural orientation law on land tenure, as well as a reference framework on compensation, indemnification and resettlement through personalized support plans led by the Ministry of Mines and Geology.

All project activities under Component 2 and Component 3 will comply with the Forestry Code, enacted in 2017. The Code disciplines matters related to forests and trees outside the forest and mandates a forest cover target of at least 30% of the national territory, consultation and participation obligations regarding forestry projects, creation of model forest for technology transfer, training and research, ownership regime, provisions for DNEF technical support to rural community forest management, forest use rights according to the protection regime and forest ownership regime (all of the above will mainly concern output 2. 1.1 of component 2), NTFP exploitation (output 2.1.2 component 3) etc. In the framework of NTFPs it is specified: "The exercise of forest use rights is strictly limited to the satisfaction of the family and domestic needs of users. The license for the exploitation and valorization of non-timber forest products of plant origin is subject to the rules of harvesting with low impact on the socio-ecological environment. These sustainable harvesting rules are set by

[23] https://www.droit-afrique.com/uploads/Guinee-Code-travail-2014.pdf

decision of the Director of the Forestry Administration". The project will support groups to comply with the law.

F. Link with other funding sources

To ensure cost-effectiveness, better ownership and sustainability, the proposed project aims to build on existing and ongoing initiatives. An Environment Working Group has been set up by the development partners of the country and meets several times a year and allows the monitoring of each other's initiatives. In terms of climate, most stakeholders in the Republic of Guinea are trying to integrate an approach that combines mitigation and adaptation to climate change into their financing and project management strategies. The current dynamics are favourable to the implementation of joint actions and synergies as recommended by the national strategy documents (notably the NDC updated in 2021). Moreover, the government shows a real willingness to closely monitor all projects in order to capitalise on all actions.

The proposed project is fully aligned with WFP's strategic priorities for the Republic of Guinea 2019-2022. Since 2019, several WFP projects have addressed climate-related issues: (i) School Feeding Programme funded by Japan and the Republic of Korea between 2019 and 2021. Adaptation activities in this project included the manufacture and installation of improved stoves in project-supported schools to limit forest degradation for firewood collection. Also, WFP, GIZ and Plan International are piloting the installation of solar energy for cooking school meals in school canteens to limit the pressure on the forest. (ii) Programme for the resilience of vulnerable communities funded by the European Union (2019-2022) which included the development of agricultural areas through climate-smart agricultural practices. Also in 2020, WFP, with funding from Japan, supported smallholder farmers vulnerable to climate change in accessing market by improving the quality of vegetable production and the quality of parboiled rice. Project activities also included assistance in the development of market gardening areas, the installation of wells in market gardens for access to water for irrigation. Over 80% of the beneficiaries of the resilience projects are women. The proposed project will build on these experiences and complement whenever possible. The next Country Strategic Plan is being developed, also taking into consideration the finding of an analysis on the response to climate adaptation in Guinea conducted by WFP in 2021.The recommendations of this study focus on the use of meteorological information, land management and the promotion of sub-sectors with high potential for food security, the development of processing and conservation industries, as well as the use of renewable energy and the promotion of climate resilient farming methods.

In 2017 the Government of Guinea, in coordination with the Climate Technology Centre & Network (CTCN), developed concept notes for three large champion programmes in the field of climate change adaptation focused on different areas of work. These projects have not yet been funded. Based on the request of the Government of Guinea, this proposed project includes some of the objectives and activities of the three champion projects as follows:

- Integrated management programme for lowland/watershed ecosystems to increase resilience to climate change in Middle and Upper Guinea, aiming to improve water management through the construction of hydro-agricultural infrastructure. Activities foreseen under Component 2, improving water access for household and agriculture purposes, will contribute to this objective. .
- Sustainable management of forest ecosystems programme (GDEF) for adaptation to climate change targeting the entire national territory with the overall objective to contribute to the strengthening of communities' capacity to adapt to the effects of climate change through the sustainable management of forest ecosystems. Activities under Output 2.1.3 will contribute to this effort.
- Programme for the modernisation and extension of hydrometeorological infrastructure and provision of services adapted to users' needs targeting the entire national territory and with the general objective of promoting adaptation to climate change in Guinea and the West African sub-region by developing and strengthening the systems and capacities of the National Meteorological and Hydraulic Directorates to make hydrometeorological services available to end users. Part of the actions prioritized in this programme are being implemented by UNDP and AFD. In synergy with these efforts, the project will contribute to the programme's objectives by providing last mile climate services to targeted communities.

Since 2007, UNDP has been supporting the government in the development of its climate change documents (NAPA, strategies, revision of the NDC).

From 2024 onwards, the EU plans to invest in actions to combat climate change with a focus on the timber sector. During FP design WPF will closely coordinate to ensure synergies are created.

Project	Description	Link with proposed project by component
Technology Needs Assessment (TNA) project – **2019** - with the support of UNEP, the Technical University of Denmark and Enda-Energie	Identification and prioritization of key sectors and technologies: (i) short-cycle or drought-tolerant seeds, (ii) water boreholes with solar pumps for small-scale irrigation, domestic water and livestock, (iii) reforestation of river headwaters, (iv) small dams for lowland and coastal plain development, (v) pastoral wells, and (vi) improved smokehouses. Several reports with guidance and methods are already available at this link: https://tech-action.unepdtu.org/country/guinea/.	These studies will be integrated into the project through Component 1 and the technological tools used in the implementation of Components 2 and 3 - with particular attention to water management under component 2.
Support for the development of aquaculture in Upper and Middle Guinea - under UNDP leadership – Japan an Russian funding - 3 135 725 $ - **Ongoing**	1. The National Aquaculture Agency of Guinea (ANAG) and its deconcentrated services have the technical and operational capacity to provide better technical support and monitoring of fish farmers; 2. 35 fish farming sites (5 per prefecture) are developed and stocked; 3. The availability of fish on the local market is increased.	The UNDP project targets similar areas, promoting activities that have not been included in the proposed project. The actions are complementary to improve community adaptation to climate change - no risk of duplication.
REMECC Project - Strengthening the resilience of livelihoods of farming communities in Gaoul, Koundara and Mali to climate change - **initiated in 2014 and closed in 2020** - $4 016 364	Component 1: Capacity building of the most vulnerable local authorities and decentralized institutions to integrate climate change issues into development planning tools. Component 2: Production and dissemination of agro-meteorological information to the main users in the prefectures of Gaoual, Koundara and Mali for climate change resilient agro-forestry. Component 3: Community livelihoods made more climate resilient in 16 most vulnerable Rural Communes of Gaoual, Koundara and Mali.	Components 1, 2, 3 - The proposed project will build on the lessons learned through the REMECC project, especially on project ownership at the local level. WFP will closely coordinate with UNDP throughout the design and implementation phases to ensure all lessons are captured in the project design and setup.
Ecosystem-based Adaptation in Upper Guinea Project - Faranah, Kouroussa, Mandiana and Kissidougou - under UNDP leadership and GEF/UNDP funding- **2016-2022** - $8 600 000	Outcome 1. The resilience of vulnerable communities to climate change in selected sites through the ecosystem-based approach is enhanced; Outcome 2: Capacities and information systems for integrating climate change adaptation into national, regional and local management plans, policies and practices are strengthened.	Component 1 - at the start of the project, the literature review of climate change adaptation studies and initiatives will consider the work done under this UNDP project. Component 2 - the approach of the UNDP project is more global on ecosystems and target different areas. However, it is interesting to draw lessons from the activities in order to capitalise on the implementation of output 2.1.2. Component 3 - Decisions and guidance developed under outcome 2 of the UNDP project will be taken into account in the design of activities.
Climate Information and Early Warning System (SAP) Project **2019-2022** – UNDP - $5 350 000	Outcome 1. Capacities of national hydrometeorological services to monitor extreme weather events and climate change are strengthened; Outcome 2: Climate products and services are accessible and used efficiently and effectively to produce warnings for the benefit of producers and in the elaboration of medium- and long-term climate-resilient development plans	In component 1, outcome 1.2 builds on the final results of this project. The results will be available during the process of elaborating the full proposal and will inform the definition of activities under Output 1.2.1. In particular, following the change of government last year, some activities were delayed and were still on stand-by in March 2022. Under the UNDP project, meteorological stations in the target areas have been strengthened to enable the collection and processing of climate data which provides a solid ground for the climate services interventions under the proposed project. This investment on infrastructure, coupled with the institutional

		capacity development of the AFD project (see below) will allow the proposed project to focus on training final beneficiaries on the use of climate services.
UNDP **- under development** - for submission to the GCF "Strengthening the resilience of Guinea's rural coastal communities to coastal erosion due to climate change" for an amount of $72 600 000.	1. Improve information, governance and capacity for coastal protection and restoration; 2. Implementation of EBA (ecosystem-based adaptation) solutions and infrastructure to protect coastal zones from further erosion due to climate change; 3. Promoting the transition to climate resilient livelihoods by rural communities on the Guinean coast.	No risk of duplication of effort as the area and specific themes are not common.
Adapt'Action programme AFD	AFD, through its Adapt'Action programme implemented in 17 countries, is supporting Guinea to strengthen its climate governance through consolidation of leadership, ownership and cross-sector coordination on climate issues. To this end, 30 climate change focal points have been appointed in relevant ministries and form part of a national climate consultation platform, integrated into the National Climate Committee. WFP involves these focal points in the conceptualisation of the AF project. Also, through their climate tool, AFD has supported, on a pilot basis, the revision of the local development plans of four communes Sangaredi, Tondon, Tolo and Poredaka, to integrate climate resilience. Based on these four LDPs, the World Bank and AFD have planned to provide additional support to ANAFIC for scaling up. Adapt'Action is also supporting capacity building in the Ministries of Rural Development (Agriculture, Livestock, Fisheries and Environment) and the conduct of participatory vulnerability studies for the cross-cutting integration of adaptation issues in the projects of the National Agricultural Investment, Food Security and Nutrition Programme (PNIASAN) in Upper Guinea. The local adaptation techniques of the populations of Upper Guinea were analysed.	Component 2 - The WFP team will ensure that the project is well adapted to the initiative of WB and AFD with ANAFIC. Component 3 - The WFP Guinea office will ensure that the project's agricultural support activities are consistent with the participatory studies and integrated into PNIASAN.
Republic of Guinea - Support to the development of climate services for the agricultural sector and to the elaboration of the modernisation and extension programme of hydrometeorological infrastructures – AFD – 10 000 000 € **- under development**	Through Adapt'Action, AFD is developing a nationwide project to strengthen observation systems and the production of climate services, which follows SAP – Guinea project (implemented by UNDP and funded by the GEF). Component 1: Infrastructure strengthening of the two institutions Component 2: Technical and scientific capacity building for both institutions through staff training Component 3: Capacity building for end-users and intermediaries (Agriculture sector in the Upper Guinea region as a pilot) *For the end-users, the aim is to ensure a good understanding and use of the information and products through* *basic and advanced training on climate services; a travelling awareness caravan; thematic radio programmes broadcast by the local media; practical training of the "field schools" type.* *For intermediaries, the aim is to help them transmit and communicate climate services to end-users and to help them better integrate them into decision-making via training*	Component 1 – outcome 1.2 – As per government request, the proposed project contribute to AFD's efforts in agricultural climate services to communities (component 3 of AFD initiative). Components 1 and 2 of the AFD project should make existing weather and climate services effective and provide new ones. During the development of full proposal, further consultations will be carried out on the needs and expectations of the communities in terms of climate and weather services, current advantages and disadvantages, adequate dissemination channels etc. , building on the studies already carried out by AFD during the preparation of their CN. This will guide the design of both projects. The target areas of the AFD pilot phase do not overlap with those of the proposed project, so this joint intervention will

	on the following subjects: basic training on climate services; tools for receiving, retrieving and processing information, and for transmitting, communicating and disseminating services; formulation of and participation in the co-design of services; assistance in using and integrating services into decision-making, and assessment of the quality and added value of climate services Component 4: Support to institutional strengthening.	allow to increase the number of beneficiaries through similar actions (methodologies and activities thought together for a better efficiency).
Strengthening the resilience of communities affected by climate change and environmental degradation in the Republic of Guinea - IOM $200 000 **2020- 2021**	Through this project IOM conducted an analytical baseline study on the climatic factors driving migration (in 2020). In addition to the study, IOM strengthened the capacity of governmental and non-governmental actors on understanding the link between migration, environment and climate change (MECC) and the implementation of two community projects with a focus on environmental protection and rural women empowerment in the areas of Boké, Koundara, Lélouma, Forécariah, Siguiri Faranah, Beyla and Conakry. The project focused on supporting women's cooperatives in the agricultural sector providing them with capacity-building training on sustainable agricultural practices and by providing them with adequate materials and equipment.	The results of the IOM study as well as the lessons from the implementation of the project have informed the development of this concept note. Coordination and consultation with IOM will continue throughout the design of the full proposal and to ensure synergies in the implementation of activities under Component 3.
Project for Family Farming, Resilience and Markets in Upper and Middle Guinea (AgriFARM) – IBD – FIDA - 97,1 million $ **2018 - 2023**	The project targets 15 prefectures in the regions of Upper and Middle Guinea that are the most affected by food insecurity. These are the prefectures of: Dabola, Dalaba, Dinguiraye, Gaoual, Kankan, Kérouané, Koundara, Koubia, Kouroussa, Lélouma, Mali, Mamou, Mandiana Siguiri, Tougué. These prefectures were selected on the basis of: (i) the poverty index; (ii) the potential for cereal production and market opportunities (rice, maize); and (iii) the presence of structured economic actors (OPA, private sector). The first component "Strengthening family farming and resilience to climate change" is divided into four sub-components whose activities place the family farm at the center of interventions, through sustainable development of the sub-watersheds (SC1.1. 1), by structuring water control developments in production basins (SC1.1.2), by improving agricultural productivity (SC1.2), by strengthening grassroots rural organizations and associations (SC 1.3) and by improving the nutritional situation (SC1.4); The second component, "Market Access", includes three sub-components whose activities aim to ensure outlets for surplus production, through the construction/rehabilitation of semi-wholesale markets, collection markets and rural tracks (SC2.1), through the establishment of a management system for these economic infrastructures to ensure their sustainability (SC2.2) and through support for the financing of agricultural and rural entrepreneurship (SC2.3). A third component will cover the management and coordination of the program, the monitoring and evaluation system and knowledge management.	Component 3 - Both projects target common areas such as Koundara, with some common activities, such as support to the rice and maize sector. Consultations will continue throughout the development of the full proposal to assess complementarities and synergies, avoid duplications and ensure a coordinate approach to the communities. As the IDB project is already underway, the proposed project will ensure that it does not target the same farmers groups and village in order to increase the number of beneficiaries receiving livelihoods support. In addition, the proposed project will be able to build on the lessons learned from the IDB project in the area which is a real added value for the successful implementation of our activities and ensure better sustainability.

G. Learning and knowledge management

Many activities of the proposed project include knowledge and learning for local government as well as for communities. Indeed, the project aims to develop targeted knowledge and use it to enable and expand an evidence-based approach to implementing locally appropriate adaptation options. Local government staff capacity will be strengthened through the implementation and monitoring of the project's actions across all three components. This will also strengthen the linkages between different government's technical representatives and the project's beneficiary communities.

In addition to this learning by doing approach, concrete learning and knowledge management actions are planned. Activities under Component 1 have a strong focus on knowledge generation and management. Experience sharing between research institutions will allow them to pool their knowledge and learn from each other. The project will encourage collaboration among research institutions and other relevant actors on country and set up an online platform to systematize and disseminate the knowledge generated. The platform will also help systematize and disseminate the experiences and lessons learned generated through the implementation of this project as well as other initiatives, thus allowing replication and scale up. In this way, each project manager will be able to learn from the lessons of past and ongoing climate-related projects. In output 1.2.1, establishment of community relays that will continue to inform, sensitize, and educate communities on environmental protection, but also continue to disseminate agrometeorological information from the meteorological services through the connection that the project will create between the producers of this information and the end users who are the communities at the base.

At the village level, the management committees will benefit from direct training but will also learn through the implementation of this project, providing them with capacities and competencies for the future development of their village. A long-term L&KM strategy will be developed with them to continue the actions after the project based on the knowledge and learning acquired during the project. The involvement of schools and schoolchildren where almost every community is represented in environmental awareness and education activities will allow them to be carriers of the environmental protection message within their families and other families. The interventions of the researchers with the pupils will allow a transfer of the knowledge established through the project to the younger ones.

As far as component 3 is concerned, the project will strengthen farmers' groups capacities through training and by involving them in project monitoring and in the design of the project's exit strategy. Moreover, direct interaction between researchers and farmers' groups in the implementation of complementary climate adaptation studies will allow researchers to interact directly with communities, allowing for effective knowledge exchange that flows in both ways.

H. Consultative process

1. Stakeholders consulted in the formulation of the project concept note

WFP conducted stakeholder consultations at the national level with development partners, NGOs, government entities and the academia to gather information on existing challenges, ongoing and planned projects, experience, and lessons learned by different organizations in addressing the impact of climate change and variability in the country.

Meetings were held with the UNFCCC focal point in Guinea in December 2021 and with the Minister of Environment and Sustainable Development in March 2022 who, verbally approved the approach presented by WFP and mobilized her staff to get involved in the process. Several meetings and exchanges took place from January to March with relevant state entities in order to set up the project: the Meteorological Department, the Technical Department of Agriculture, the Gender and Climate Change Focal Point of the Ministry of the Environment and Sustainable Development, the Environmental Research Centre of Guinea (CERE), the UNCCD Focal Point at the Ministry of the Environment, and the deconcentrated state services in Koundara.

In addition, meetings with development partners allowed the mapping of existing projects and possible connections with the proposed project. In the Republic of Guinea, several development partners integrate resilience, mitigation and adaptation to climate change in their support to the country. A discussion and experience-sharing group on environmental issues meets regularly in order to keep abreast of each other's initiatives and ensure coordination. Within this framework, a first-round table was held on 1 March 2022 with the participation of UNDP, IDB, EU, WB, WFP and IOM. Partners who were unable to attend this meeting were contacted individually, such as JICA, FAO, AFD, GIZ, ADB and IFAD.

A field mission was held in February 2022. The WFP team met with the decentralized state services and NGOs working in the Koundara prefecture. The following key elements emerged: previous and current projects in the area and related

lessons learned, the increase in the scale of bush fires and the need for reforestation, and the recommendations of the decentralized state services and NGOs. The results of the stakeholder consultations are summarised in Annexes 1 and 2.

On 22 July 2022, in the WFP office in Conakry, a meeting was held to discuss and validate the concept note in French, in the presence of relevant government departments and other key partners in the country. The team from the Koundara deconcentrated services was participated remotely by videoconference.

2. Community consultation

Stakeholder consultations were complemented by field visits to local communities to understand their vulnerabilities and needs and to assess what existing adaptation measures are already in place at the local level.

In February 2022, four villages were visited in the locality of Koundara prefecture in the north of the country. A total of 288 people were consulted, of whom 108 were women (37.5%). Women were less represented due to competing duties on field work and water supply. The exercise aimed to gather information on livelihoods, vulnerabilities, climate change impacts, different gender roles and needs. The methodology used was focus group discussions, with different focus groups for men, women, youth and the elderly. The consultations were facilitated in both local language and French as needed and were conducted by a team composed of WFP staff and two people from the Prefectural Directorate of Agriculture and Livestock. Participants were not informed about the project during the exercise so as not to steer them in any direction and to avoid raising expectations. The consultations were conducted with respect for the people, leaving them free to choose whether to participate or to answer questions. At the full proposal stage, further consultations will be held with the targeted communities to further define the activities. A summary of the results of the consultation process is included in Annex 1.

I. Provide justification for funding requested, focusing on the full cost of adaptation reasoning.

Component 1

Baseline scenario

Research and knowledge: Several studies on topic related to climate change adaptation have been carried out or are being produced in Guinea by the country's research institutes, universities, development partners such as UNDP and AFD, among others. However, implementation on the ground and knowledge sharing between different actors remains weak. Country recent government changes also require time for ownership of different policies, strategies and studies. Several documents, such as the revision of the NDC in 2021, highlight the crucial need to establish synergies between different initiatives in order to avoid duplication of studies and actions and to optimise the country's response to climate change. Currently, efforts are dispersed losing efficiency and effectiveness.

Climate services: Consultations in Conakry and in the field have highlighted how reduced rainfall and increased variability in the project area affects the livelihoods and food security of communities. The capacity of farmers to cope with and recover from recurrent climatic shocks, particularly women, has been progressively eroded, as has their ability to adapt to a changing environment. Traditional practices and knowledge are proving insufficient and sometimes inappropriate to manage and plan from one year to the next, particularly regarding erratic rainfall, the increase in extreme weather events and the emergence of new hazards that impact on property, crops and livestock, such as rising temperatures and increased periods of drought. The consultations highlighted that faced with a changing climate, farmers are no longer able to identify the best timing for each farming activity which is having an impact on their ability to continue to grow crops (zero production in 2021 for most households due to dry spells during the rainy season). The Meteorological Department produces meteorological data that is broadcast in the form of weather bulletins on television, radio and in newspapers, but which does not allow farmers to anticipate and adapt to dry spells. UNDP has supported the modernisation of meteorological tools and the setting up of an early warning system (not yet effective). A new meteorological station has been set up in Koundara and other areas of the country, but there is a current lack of internet connection, access to electricity, processing tools (computer) etc. Communities need access to weather information but also to tools to help them in their decision making (when to plant for example). AFD's planned support in 2023 will not be sufficient to meet the needs, as it will be on a national scale and will rely mainly on the support of state services.

Additionality

Research and knowledge: Development partners and the government are committed to building to improve the monitoring of knowledge on climate change in Guinea. The project will provide a tool that will help the government to gather and disseminate all the knowledge generated in the country by public institutions and different partners. In addition, the project will capitalise on existing research results from the country's various partners and research institutes to implement them on the ground through component 2 and 3. This will allow to identify the most suited adaptation options for the target area. Finally, through the project, WFP and the government wish to strengthen the exchange and joint work of experts to increase the profitability of actions in the country.

Climate services: In the absence of this project, the budget of existing initiatives does not allow the development of end-user-oriented climate services. The project wishes to focus on a pilot phase in the project target area building on the actions that will be implemented by AFD, such as the training of meteorological service agents, to reach the end users with targeted information and advisory services. The project will mainly support farming groups and communities (also through children) in understanding, interpreting and using climate data (also for water security). In addition, the project will strengthen the links with meteorological officers and community leaders. Having access to accurate, timely and easily understood information will allow farmers to better plan their activities thus reducing the risks of crop failure and related losses.

Component 2:

Baseline scenario

Rapid deforestation and forest degradation due to current practices and exacerbated by extreme weather conditions leads to increased soil erosion, watershed degradation and loss of valuable ecosystem services. In terms of access to water, village water tanks are often dysfunctional or have a considerably reduced efficiency due to reduced rainfall and increased heat. Wells, for example, run dry as early as January, while the first rains do not return until June. These conditions severely affect communities' livelihoods that mostly depend on natural resources.

Additionality

Communities will be made aware of the negative impact of existing practices, how these impacts could be exacerbated by climate change and how to protect ecosystems. The aim is to encourage communities to develop their own reflections on the negative impacts of current practices (e.g. bushfires) so that they can take ownership of the adaptation process and ensure that the assets created by the project will be designed to take into account future climate patterns (i.e. increased risk of dry spells). The reforestation activity, through the communities and the forestry department, will rehabilitate waterways and improve the living conditions of the communities.

Water capture and storage activities (whether rainwater or groundwater from springs) will be carried out in collaboration of technical experts to enable communities to have access to water during periods of drought. These interventions will promote food security and nutrition by improving ecosystem quality, community resilience and agricultural productivity, considering short and long-term climate threats.

The involvement of the school as the centre of the adaptation activities at the village level will allow a long-term appropriation of the reforestation actions and agricultural innovations.

Component 3

Baseline scenario

One of the main barriers to the development of effective and sustainable livelihoods adaptation measures by communities to address current and future climate risks and impacts is the lack of access to adequate knowledge, tools and technologies. Rural populations are currently experiencing, as a direct or indirect link to climate change: increased crop losses and indebtedness, an increase in the cost of the food basket over the last decade, an acceleration of rural-urban migration, deterioration of environmental quality. The diet is not diversified, and the staple food is rice and sometimes millet. The lack of harvesting leads to a food resource shortage and a cash shortage, making it very difficult to obtain basic foodstuffs and seeds, which poses a major food security risk for households. There are still few adaptation initiatives to diversify production and sources of food and income. During the lean season, shea, nere, cashew and mango production can be observed. These initiatives date back to the last three years and need technical and financial support to allow farmers to cope with the losses of basic agricultural crops (rice, millet and groundnuts). Women are currently using loan sharks to sell cashew production in advance in order to buy rice for the family at the beginning of the lean season.

However, this coping technique is palliative but not sustainable in the long term as it increases household vulnerability.

Additionality

The proposed project will help smallholders to increase the quantity and quality of food supply by improving farming techniques and providing adequate storage facilities to reduce post-harvest losses related to climate change. Better post-harvest handling practices and storage technologies not only allow farmers to retain more of their harvest, but also to store their produce for longer periods of time, allowing them to benefit from higher prices later on. This will help small-scale farmers to become more resilient to climate change. In addition, smallholder farmers will be linked to the local school feeding programme so that there is a continued demand for their produce. This will ensure a degree of crop diversification as well as sustainable income sources. To promote food security and nutrition, the production and consumption of diversified indigenous species will be supported, including the introduction of organic crop production practices, agroforestry measures (groundnut and market gardening), reforestation measures (component 2), natural resource conservation (component 2), and water conservation for agriculture (component 2). Livelihood diversification, income generation and market linkages will enable beneficiaries to be self-sufficient and have sustainable livelihoods beyond the project intervention. Through collective savings, farmers will be able to build a financial base that serves multiple purposes. For example, they provide a buffer for short-term needs, reducing risk within households and communities and increasing their capacity to cope with shocks. Group savings can be lent to individual members with particular needs, providing a self-insurance mechanism for the community. The establishment of multiple savings funds for different purposes, including agricultural investment and risk management, can support the graduation of participants and increase their resilience to climate and other shocks.

J. Describe how the sustainability of the project/programme outcomes has been considered when designing the project / programme.

The project will build on the lessons learned from activities implemented in the area by WFP but also by different partners (UNDP, IDB etc.). The project will also benefit from WFP's experience in implementing climate change adaptation projects in several countries, which will enable it to capitalise on tools and good practices that can be transferred to this project. Community involvement and consultation throughout the project cycle, from concept development to project implementation, is an important aspect of the sustainability strategy. By strengthening community ownership of the proposed interventions, the project will ensure these are continued after project completion.

By developing viable market opportunities and building the capacity of farmers to benefit from them, the activities promoted by the project can become self-sustaining over time. The key studies conducted under Component 1 will ensure that the project's interventions under Components 2 and 3 are culturally sensitive, while providing the government with useful data for planning future interventions and giving communities access to relevant and timely information for better decision-making. Increased awareness and understanding of climate issues will enable communities to take full ownership of Component 2 and 3 activities and ensure their long-term management and maintenance beyond the life of the project. The project will enable the most vulnerable Guineans to better manage their food security in a changing climate. The project will apply an integrated approach that aims to put people at the centre and to ensure that each project activity directly benefits them. Project beneficiaries will:

- contribute to and benefit from increased knowledge about climate change - by being involved in outcome 1.1 studies through farmers' groups.
- benefit from the strengthening of the administrations through better monitoring in the field - by involving the deconcentrated services in the implementation and monitoring of the project.
- receive ready-to-use climate information - outcome 1.2 - which enables them to make better decisions.
- take ownership of the project's adaptation being the driving force behind them - components 2 and 3, during the consultations, communities very clearly put forward their obstacles and needs, and all the proposed activities stem directly from their suggestions.

The project will be used as a tool to enable the government to engage on the ground with communities to ensure institutional sustainability.

Table 6, sustainability of project components

Components	Sustainability
Component 1	The synergies created among different efforts in climate adaptation research will not only form the basis for the

	implementation of activities under components 2 and 3 but will also benefit present and future initiatives throughout the country, beyond the scope of the proposed project. To ensure institutional sustainability, the project will empower the Ministry of Environment to play a key role in the coordination of climate adaptation studies, initiatives and efforts. The platform for knowledge and information sharing will be hosted by the government to ensure ownership and sustainability. Moreover, to ensure the financial sustainability of research activities and development of actions related to climate change, the project will strengthen the capacities of research institutions and more particularly the CERE to to access adaptation funding. The project will build on the ongoing UNDP investment and the upcoming AFD investment that will address climate information at a national scale. Building on these activities the project will focus on the end users, i.e. farmers' groups, developing capacities for the implementation of an approach that can potentially be replicated in other areas of the country. Thanks to the combined actions of UNDP, AFD and the proposed project the climate services will be able to be used beyond the project. Government services will be more efficient and links with communities will be strengthened for a better sharing of climate information to the final beneficiaries. To ensure social sustainability, climate services will be co-developed with communities and will strengthen their capacities to use climate and meteorological services.
Component 2	Component 2 focuses on activities that aim to build long term resilience in beneficiary communities, such as reforestation and improved access to water. All the activities will be selected through a participatory approach to make sure they fully respond to the community's needs and to strengthen the sense of ownership. All physical assets created under the project will be designed to be simple and cheap enough to be repaired and replaced by communities with their own knowledge, skills and resources. The project will design and set up an appropriate exit strategy to ensure that the asset created are properly managed and maintained in the long term. This will include the set up and strengthening of village committees and the close involvement of the water and forestry services to allow the monitoring of actions to continue after the end of the project. On the other hand, the involvement of the schoolchildren will help to raise awareness and give responsibility to future generations so that they are able to make the right decisions for the development of their village and household. Most of the activities in this component will lead to improved environmental sustainability. Indeed, the implementation of the restoration of degraded forests and the protection of watercourses will allow to improve ecosystem services and water resources. In addition, community awareness of good ecosystem management practices and the establishment of community forests will help to reduce pressure on the natural forest to ensure greater sustainability. To ensure social sustainability, component 2 plans to strengthen women's leadership through activity monitoring committees to enable them to make decisions at the community level.
Component 3	Activities under this component will build on AFD's study on local coping practices, in order to propose activities that correlate with communities' social needs and habits. The project will strengthen farmers' technical capacities on production, storage, processing, transport and marketing so that they can count on stable incomes despite the changing climate. Learning on previous projects' experiences, farmers' groups' capacities will be strengthened in topics such as internal governance, management, leadership, conflict management, accounting, to enable the group self-reliance and improve the sustainability in the long ter. The project will also explore options to strengthen and formalize an existing mechanism of collaboration between large-scale cooperatives and farmers for improved seeds supply. In addition, the project will work on the financial empowerment of households through the establishment of village savings and credit groups, which will enable them to count on financial reserves that can be used to invest in the replication and continuation of the practices promoted by the project. By working through farmers groups, the project will improve inclusion of the most vulnerable. The environmental sustainability of the farmers' agricultural practices will be ensured through the implementation of environment-friendly agriculture (use of compost, etc.). The improvement of the yields of agricultural productions and agricultural transformation will allow to reduce the expenses in foodstuffs but also to have complementary incomes for the family. The transformation of new food products such as mango will create a new source of income. Also, the groups will be accompanied to learn to save through training and tools, so that they have more income available for investments in improved practices. All these elements will ensure economic sustainability for the target communities. Moreover, saving will a allow communities to be self-reliant and continue to invest in improved practices without external support, which guarantees financial sustainability.

K. Environmental and social impacts and risks

Project activities will be designed, planned and implemented to minimise any risk of negative social and environmental impacts. Activities will be designed in close consultation with beneficiaries - including the most vulnerable groups - and

stakeholders and will consider the different needs and constraints of these groups. The project team will also ensure that the most vulnerable and food insecure groups have access to and are included in these activities.

Component 1, which mainly includes studies, information sharing and technical capacity building, does not have a negative effect on the environment, but rather provides tools for the implementation of best practices.

Due to the unidentified sub-activities of component 2 and 3, the project is classified as "medium risk", or category B. The table below shows the results of the preliminary social and environmental risk assessment carried out during the development of this project concept note. All future activities will be subject to the WFP Environmental and Social Risk Assessment Tool, in accordance with the Adaptation Fund Environmental and Social Policy and the WFP Environmental Policy.

Checklist of environmental and social principles	**No further assessment required for compliance**	**Potential impacts and risks – further assessment and management required for compliance**
Compliance with the Law	X	Low or no risk: The project will comply with all relevant national laws and policies. The relevant national, regional and district authorities have been and will continue to be consulted during the proposal development process to ensure compliance with all relevant laws.
Access and Equity		Low or no risk: Through extensive consultations with communities and stakeholders during the proposal development process and throughout project implementation, this project will ensure that no activities interfere with access to basic services or exacerbate existing inequalities. This project will promote equitable access to activities and assets for youth, elders and women in the targeted communities. To ensure equal access to the assets created by the project, especially those related to water, the project will support and strengthen village committees which will be in charge of asset management.
Marginalized and Vulnerable Groups		Low or no risk: Marginalized and vulnerable groups - particularly women and landless people - will be consulted during the proposal development process to ensure that the threats, priorities and mitigation measures they have identified are taken into account. This project will enable vulnerable groups to make decisions on concrete adaptation actions. In addition, working with groups in component 3 will allow the most vulnerable (those without access to land, the disabled, etc.) to participate and benefit from the project. The project will ensure that all ethnic groups living in target areas are equally consulted and benefit from project activities.
Human Rights	X	No risk: This project affirms the rights of all persons and does not violate any of the pillars of human rights.
Gender Equality and Women's Empowerment		Low or no risk: Through targeted consultations, the design and implementation of the project will ensure that gender considerations are integrated into every activity. The project will promote women's leadership in public spaces and their decision-making power on climate change adaptation, food security and nutrition. A project's gender mainstreaming strategy which will be further elaborated during full proposal development. A gender assessment will be conducted, and women and women's groups, as well as gender experts, will be intensively consulted during further design and implementation of the project. The Gender Assessment recommendations will be integrated into the ESMP and will inform implementation.
Core Labour Rights	X	No risk: The project will ensure compliance with international and national labor laws and codes, as outlined in WFP policies. In particular, WFP has a zero-tolerance policy for child labour of children below 14 years. The project, through activities under Output 2.2.1, will promote school attendance.
Indigenous Peoples		Low or No risk. No indigenous peoples are reported in the project area, however additional information will be collected during full proposal preparation to thoroughly assess whether indigenous people groups are present in the area. The population of Koundara is made up of several ethnic groups, including the Peuhl (60%), the Foula Kounda (20%), the Badiarankés (10%), the Bassoris (5%), the Koniaguis (2%) and other ethnic groups (3%). The prefecture was formerly populated by the Badiaranké, while the Foula Kounda and the Peuhls arrived in successive waves from Pita, Labé and Télimélé. There are no reports of conflict or domination between the ethnic groups living in the project area. Consultations for project design will be participative and will involve all ethnic groups. The project will also ensure that all ethnic groups will benefit from project activities.
Involuntary	X	No risk: The project will not result in involuntary resettlement.

Resettlement		
Protection of Natural Habitats		Low or no risk: By implementing activities consistent with the ecosystem-based adaptation approach, such as reforestation, agroforestry, water conservation efforts, the project will ensure the protection of natural habitats. In addition, consultations with government stakeholders, community leaders and communities will ensure that conversion or degradation of critical natural habitats is avoided. The selection of project localities will be made in such way that no project activities are implemented in the National Park Niokolo-Badiar. Further consultations with National Park authorities will ensure that any activity implemented in the proximity of the park is in full compliance with relevant national and local laws and regulations and does not affect the area in any way. Component 2 and 3: Carry out a social and environmental screening of the activities.
Conservation of Biological Diversity		Low to moderate risk: Tree planting activities could lead to a deterioration of biological diversity if tree species are not properly selected and diversified. To ensure that this risk is addressed, this project will prioritize local species and multi-species plantations and avoid the use of non-native and invasive species. All reforestation activities will only involve local species. Suitable non-native species might be used for the plantation of community forests provided there is solid scientific evidence that they are locally adapted and not conflicting with the ecosystems and biodiversity of the project's areas. A thorough assessment will be carried out during full proposal preparation. All these activities will be designed in close collaboration with the water and forestry services. Component 2 and 3: Carry out a social and environmental screening of the activities.
Climate Change	X	Low or no risk: The project will not generate greenhouse gas emissions or otherwise contribute to climate change. Many project activities will be designed to be low-emissions, as well as adaptive – for example the increase in vegetative cover under Output 2.1.2. All project components and activities contribute to increasing local capacity to cope sustainably with long-term climate change and short- and medium-term climate variability.
Pollution Prevention and Resource Efficiency		No risk: The project will not release any pollutants. Energy efficiency, reduced use of material resources and reduced waste generation will be integrated into the design of the project.
Public Health		Low risk: The project will be designed and implemented in such a way as to avoid any negative impact on public health. Particular attention will be paid to activities related to water collection and storage so that these do not result in an increase in vector-borne disease. Communities will be sensitized on how to use and store water safely and efficiently. The same attention will be given to nutrition-sensitive activities that are part of the project, ensuring a positive impact on health and alignment with nutrition and health services offered beyond the project. The project will ensure that the targeted populations do not face restrictions in accessing public health care.
Physical and Cultural Heritage		Low or no risk: In all components, traditional and local knowledge will be understood and reinforced with scientific information for environmental management, food security and nutrition. Consultations and engagement with stakeholders and communities will ensure that any physical cultural heritage present on the project site is identified and that potential negative impacts are avoided through project design.
Lands and Soil Conservation		Low to moderate risk: Through the adaptation activities of Component 2 and 3, this project will aim to rehabilitate land and restore degraded soils through natural regeneration, planting of native nitrogen-fixing plants, agroforestry, water harvesting and appropriate agricultural rotations (including oxen). Activities under Component 2 will promote, amongst others, soil and water conservation management practices aiming at restoring degraded land and improving ecosystem-based services. All activities are of small-scale (managed at individual, household, or community level) and any possible impact would be readily remediable. Some assets, such as boreholes for instance, may have a number of environmental and social negative effects if not properly designed, including on land and soil conservation. Possible risks include land degradation around the boreholes (especially if used for livestock water consumption) as well as salinization of plots (depending on water salinity levels), and depletion of groundwater resources. Groundwater could also be contaminated by dung leakages. A thorough environmental and social risk screening will be carried out during the design of the full project proposal to identify all potential risks and their decree of concern. An environmental and social risk management plan will be prepared to include appropriate mitigation measures, indicate clear roles and responsibilities, identify adequate indicators to measure its implementation and relevant sources of information.

PART IV: ENDORSEMENT BY GOVERNMENT AND CERTIFICATION BY THE IMPLEMENTING ENTITY

L. Record of endorsement on behalf of the government[2]

Ms Oumou DOUMBOUYA – DNAPNNC/ Focal Point Adaptation Fund - MINISTRY OF THE ENVIRONMENT AND SUSTAINABLE DEVELOPMENT National Directorate for Pollution, Nuisance and Climate Change	07/26/2022

M. Implementing Entity certification Provide the name and signature of the Implementing Entity Coordinator and the date of signature. Provide also the project/programme contact person's name, telephone number and email address

I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans and subject to the approval by the Adaptation Fund Board, commit to implementing the project/programme in compliance with the Environmental and Social Policy and the Gender Policy of the Adaptation Fund and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project/programme.

Name & Signature:

Hyoung-Joon Lim, Ph.D.
Country Director and Representative
United Nations World Food Program | Conakry, Guinee
Implementing Entity Coordinator

Date: *(August, 03, 2022)*	Tel. and email: Office: [+224]626 26 27 77| Mobile: [+224] 626 26 93 62 - hyoung-joon.lim@wfp.org
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Annex 1 - Consultations in the Koundara prefecture

Meeting with the deconcentrated state services

Communication, passage of information: Community radios (but 15,000 GNF per language and per communication for one pass); whatsApp group with voice messages: community relays in the villages, even if there are villages without network, they will always move to an area with network in the month. All young people have smartphones.

Key facts about the locality: Majority of the population is engaged in agriculture and/or livestock rearing, with a few fishermen and hunters (who are also usually farmers/livestock keepers); many charcoal burners in the area. At least 5 languages, the most spoken is Foula Kounda (Poular), much rice cultivation, vegetables: onion, chilli, tomato, aubergine, carrot, okra. The locality has sandy soil. The temperature can reach 44/46 degrees. The fishing season is December/January (even Senegalese and Malians come). There are two community radios: one in Koundara and one in Gaoual. Working by extended family (patriarchal and matriarchal).	**Past and current projects:** Koundara Mali Integrated Sustainable Development Project (5 years with 3 years remaining) - IDB funding - market gardening and rice and infrastructure. AgriFARM project based in Mamou, 5 years of which 3 years have already passed (WB and IDB funding). Border project (IOM). Support project for farmers' federations (AFD and EU). Weather project: REMECC, GNK (UNDP) and Early Warning System (UNDP): Automatic meteorological equipment (soil temperature, relative humidity, sunshine, rain gauge).; Installation of computers has been vandalised, it is key to figure out how to secure the equipment. Meteorological officer request support for its internal structuring.
The locality and climate change and recommendations for the AF project: Koundara is experiencing climate change effects and are on the red line. Bushfires is a real problem here, people traditionally set fires for hunting. Fires also derive from accidental charcoal burning, accidental burning of mothers' kitchens. There is no equipment to stop the fires, which in the dry season will burn over great distances (even burning new plantations and villages). Practices need to be adapted because today they are obsolete due to the CC (in fact, before the fires did not grow as much but now the climate is drier and hotter because of less rain and humidity) and the fires are increasingly uncontrollable Important in the area to stop deforestation through adaptation of people's practices. The state is setting up eucalyptus, acacia and neem plantations to combat climate change - fast cultivation to compensate in the short term, or else use ANR for local species. Make people responsible for the use of resources to be proposed perhaps adapting firewood and charcoal to fast-growing exotic species to preserve local species (which are disappearing rapidly between bush fires and very active charcoal burning). Importance of combining weather and agriculture - support synergy between services: already working, more a need to revitalize than to put in place. The first rains are misleading, need to help farmers with forecasts to differentiate between the beginning of the rainy season and the beginning of the cropping season. Problem of water resources in the area in the dry season.	**Cross-cutting findings and recommendations for the project:** Often when a project ends, everything stops. Capacity building of local agents but also and especially of the beneficiaries (governance, leadership and technical) is key. It is important to explain that the project is only there to propel. The project can finance at the beginning but a mechanism of independence of the project needs to be set up afterwards. Plan for 1 year of consolidation of the project at the end (really support the training of the follow-up of the activities after the project). Very low alphabetisation rate, but projects do not support the beneficiaries at this level, a request has been made in this direction for the sustainability of the actions: provide reinforcement at this level for project beneficiaries. 4 rainfall stations were given to old farmers to follow up with the weather forecast, but since the project ended 3 people have stopped taking readings and the last one takes readings but no longer passes on the information (unless the prefecture's weather chief goes to see him). It was recommended to choose active people who have a sufficient source of income and who will not expect to be paid in return for taking rainfall readings and transmitting data - raise awareness of the importance for them and the return on their investment. Support micro finance like Riotinto (a mining company that has supported a community in this way), but beware that some banks tax too much Helping to reforest spring heads and riverbanks to prevent them from drying up and to slow down the progression of CC, presenting reforestation as an adaptation to the new climate, to provide shade, sources of wood for construction and cooking, shade for animals and certain crops.

Meeting with NGOs

Guinean Red Cross – CRG (Croix Rouge Guinée): Meeting with the person in charge (Mamadou Oury Diallo) of the area for the former REMECC project

The REMACC project lasted 5 years in the Koundara, Gaoual and Mali area and focused on climate change mitigation: stopping Sahelization. There were several studies at the start of the project. Project carried out awareness raising, training and monitoring of agroforestry plantations.

For 144 households, the following were provided: Plants (state technical agents helped the beneficiaries to plant); Fences (animals roaming around here must be protected from cultivation): they provided fencing and motivated the beneficiaries with a system of bonuses to help each other build fences; 60% of the beneficiaries received support to make wells as well and 25% made wells by themselves.

Tree species: Acacia magium, Acacia oriculum formus, Melina, Eucalyptus (the latter not recommended as it is not adapted to the area because it requires too much water), Mango, several citrus trees (resist well here because of many termites which is a problem for some species).

According to Mr Diallo, people are aware of the impacts of climate change and understand the concept well. There has been weather information support, including training of beneficiaries in the interpretation of climate data.

With sandy soil, it is very important to work on fixing the soil and improving it. Keep in mind the importance of livestock for this (dung).

In the dry season there are real problems with feeding oxen, donkeys and goats. There was a study done on the plant species that would be adapted (climatically and to the soil, but no study on the appropriation of the populations) to make fodder for the animals but no follow up was made due to lack of funding. The local beef species is the N'dama (hardy species).

In another project, the Red Cross tried to disseminate mechanical oven techniques (using the heat of the sun and the soil), but this did not work with the population, as it made the cooking time too long.

Before, there were 5 months of rain, now there are 3 months and this year there were only 2 months. Historically, the rainy season used to start on 15 June, but now it starts in July. It used to run until October, now it stops at the end of September. Note that in the middle of the rainy season, there can be up to 3 weeks without rain, which was not the case 10 years ago.

Does not recommend association work because in his opinion it is not sustainable in the long term, while the household approach is more sustainable. Insists on the importance of reforestation here.

VGD - WFP partner in the area - Meeting with 5 people from the association

The rainfall of the last rainy season was nothing, not even three months and the rainy days were very far apart. Some farmers had no crops at all. It is important to work on the development of lowlands, but not all villages have lowlands or all families have access to them.
In the zone, these are agropastoral communities. Oxen farming (mainly men) may be organised in groups. Some farmers may have 1/2/3 oxen to help in the fields. There is no fodder, during the lean season the animals wander around looking for food (can cause conflicts with market gardens) and water, some oxen fall and die from thirst and hunger. There was a project to build a water reservoir for livestock, but it did not work in some places because the water disappeared after January (a hard period from February to June). How to feed the animals from January to June is an issue that needs to be addressed.
Crops are mainly subsistence (sale of groundnuts and onions): rice and groundnuts in the rainy season; market gardening in the lowlands during the dry season (eggplant, tomato, lettuce, okra, chilli, onion)
Other activities:

- 6-7% of the population harvest honey with traditional hives (men). Some villages have more than others. A support project with Kenyan beehives was implemented for 6 years. During implementation, the project worked well, the NGO bought the honey from the group, but the exit of the project was badly done and when the NGO withdrew it stopped, some kept the hives for themselves and continued their own, but the group closed. VGD believes that there are fewer bees now in the area, because with the bush fires and deforestation there is less pollen.
- Charcoal burners in the area are often men who have no land and cannot farm or do any other work. It's very hard work but you must make a living, it's an activity by default.
- You can find women who make saponification.
- Men make bricks (1ha of wood for 1 kiln of 10,000 bricks, sold at 800 GNF per brick).

Bush fires are no longer made at the right time with the new climate, which causes uncontrolled fires that devastate an entire area. Bushfires by herders are to bring out new shoots and are done at the end of the rainy season, but now it is too dry for this practice.
A lot of pressure on the bush: charcoal makers, honey, hunting, fires that overflow especially on windy days.
Recommend supporting people with: Improved seeds that are fast growing, sufficiently resistant and high yielding; fences made of wire mesh to avoid conflicts between farmers and herders with domestic animals; awareness-raising of the population, especially regarding bush fires; training in governance and internal organisation of groups.
They also recommend relying on local people for projects and not on foreigners who come for 2/3 years and then go home. Perhaps a more sustainable household approach. Project exit strategy is essential.

OCPH - Caritas Guinea - Catholic Organisation for Human Promotion - WFP partner in the area - 4 people - coordinator, supervisor, one facilitator and one animator

From 2012 to 2018 - "Bush school" project to teach children literacy in the border area (where there is a lot of population migration according to the seasons and therefore displacement of children and no schooling). To keep the children in school, the project supported mothers to grow crops (with seeds for example) and there were WFP canteens in most of the bush schools. Some schools closed when the project had no more funding to continue. Some villages had external sponsors (such as foundations or also former pupils). The means of the communities being very weak here, the parents do not often have the capacity to finance a teacher, this has been done in some villages, but rarely. The state has also sometimes seconded a public teacher.
Women's activities, other than cultivation: Shea butter, Gobi oil, 1 village processes dried mango in March/May (which is the lean season), here there are mango trees everywhere but only 1 village does this, Milk (cow, the men take care of the herds, but the women take the milk).
Those who don't have land can rent and must give part of the crops (but at the owner's discretion).
What people need to improve yields: Ploughs, improved seeds, adapted agricultural calendar (but also awareness raising to understand the importance of using a calendar adapted to the changing climate and training on its use), training on the alternation of crops on the plots and the interest of putting oxen (dung) on it when no crop is in progress, compost.
Recommends working around schools with women, making savings systems to buy seeds and schooling for children. Also involve the elders and authorities in the villages to achieve the objectives.
October to December there is no rain, but there are reserves in the wells so it's fine. The real water problem is from January to June.

Visits to WFP FFA sites

Photos 1 and 2: The interior of the shop where the harvest of the 10 ha of paddy rice stacked for the WFP-supported Kandaida Women's Parboiler Union is located. Photo 3: Pond in the Kandaida market garden site. Photos 4-5 and 6: Visit to the WFP-supported Madina-Badiar market garden site

The mission visited: (i) one of the 5 market gardening sites of the Madina Badiar groups with 47 members, including 37 women supported in 2021 , (ii) market garden site with a water addition system with a solar panel of the kandaida group with 110 members, including 100 women supported in 2021; (iii) storage warehouse with a capacity of 30 tons with 150 bags of 60 kilos of paddy rice obtained after the harvest of the 10-ha supported in 2021, i.e., 15 bags per ha. After the consultations, it was noted that this yield was very good compared to the yield of the villages visited where they harvested only 5 bags/ha at most.

Community Consultations

Village 1 - Prefecture: Koundara S/Prefecture: Sareboido District: Besseouro Village: Besseouro Centre

The village of Besseouro was created in 1927 by the KANDE family (stockbreeders) because of the BOUNDOUKOYAN water source which never dried up for the feeding of the herds (cattle, sheep, goats, etc.).

Group 1: 17 woman 16 to 45 years.
Group 2: 50 men 18 to 45 years.
Group 3: 29 men 45 to 90 years.
Group 4: 21 women 45 to 70 years.

Community profile

Population: 888 at the last census in 2020 of which 495 were women
Language: Poular and Foulakounda
Source of energy: solar panel in some families, can be used to charge phones, in addition to use vehicle batteries.
Source of information and communication: radio (national and community of Koundara and Gaoual), phone (including Android, ok for WhatsApp communication), 3 TVs in the village.
Cooking stove: firewood from the bush.
Religion: Muslim with polygamy (1 to 4 wives per man).
Number of children per woman: from 1 to 10 (1 for the 16-year-old, the majority 4 to 7).
Water source: wells but dry from January to June (at the first rains), no active borehole in this village, there is a stream where women and children fetch water for the family and men for the oxen (but the nearest marigot to the village is drying up now). They used to have a water pump for the river, but it is broken. There is a lot of pressure on the water point and sometimes it is better to go in the middle of the night to make sure you have water.
Infrastructure: Mosque, primary school on site, secondary school at the sub-prefecture (8km) (school canteen which provides a meal for school children), weekly Sunday market at the sub-prefecture.
Travel: on foot, by motorbike taxi, by personal motorbike (only one woman in the village has her own motorbike), by cart with donkeys.
Support project: SARRAH (equipment, fertilizer, seeds) supported by the Timbi Federation for a period of 3 years; RESANO in 2006
The head of the household is the man, but it is the women who handle the money. Types of decision-makers in the locality: district president and religious leader.

Livelihoods and income-generating activities

NTFPs and bush: The women collect shea from the bush, firewood, and néré. Some of the men practice traditional honey extraction (8 liters per hive). There are no hunters in the village, but villagers just hunt rabbits for food around the village. NTFPs are mainly for household consumption, can sell if there is a surplus. The amount of néré will change according to the rainfall. If the harvest is good, they can sell up to 70% of what they find (if it is bad, they consume 100%). When the surplus is sold, it is in the form of soumbara and is sold in Guinea Bissau.
Breeding: The men breed oxen among the young people, with an average of 4 head per man. None of the women in the youth group had their own oxen, but the older men do. Each household has chickens and goats, used for: sale to pay for children's school fees and supplies, sale in case of problems (illness of a family member), sale in case of crop failure to buy rice, for consumption in case of an event or need
Crops: Crops are primarily for subsistence and the surplus is sold. Market gardening is done in the dry season (December to May) near the rivers in the lowlands: onions, chilies, combo, tomatoes, eggplants. There are 7 groups (mostly women, 5% men). Rainy season cultivation (June/July to September/November): maize, rice, potato, néré, millet, fonio, sorghum and groundnuts - half a matinee per woman (i.e. the area corresponds to half a matinee of semi), 2 ha for men. Potato was an experiment but did not work due to lack of water.
Transformation: Shea butter/oil for household consumption - takes to the sub-prefecture machine (out of 5L the commission is 1.5L), roasted peanuts or paste for sale, to plunder rice with the machine you must go to other villages, otherwise manually.
Miscellaneous:
There are cashew plantations which may belong to the husband, but some women have planted for themselves, and it is the women who take care of the harvest and sale.
The men do the work: building the huts, fencing, helping to put up the market gardening beds, ploughing etc. There are also donkeys in the village.
There are also donkeys in the village that belong to certain families: they help with ploughing, transporting goods and harvesting.
Young women (with children) aged 16-20 say they do not like farming and would like to run businesses etc.

Perceived changes: Lack of water, reduction of the rainy season (starts later and finishes earlier), increase in temperature, decrease in water quantities.
Before when they were children (10/20 years ago) there were 6 months of rain, now it is 4 to 3 months, and the last season was only 2 months with long gaps between each rain.
The wells did not dry up before during the dry season, now there is no water from the end of January.
No flooding in the village for more than 10 years, whereas before flooding was recurrent.
The women explain the changes by before there were many trees, but they cut them all down to make fences for the fields and carpentry.
Rain falling in other villages without reaching this village.
Rising temperatures leading to extreme heat due to the drying up of the river that surrounds the village and used to provide humidity to the village.

Impacts

Chickens turn all white (skin) and die, grass is very dry, lack of water and food for goats/cattle, some die. The animals are left to roam freely and must find their food on their own.
This year there was almost no harvest to follow the rainy season, perhaps some women were able to get 1 or 2 bags but generally zero or less than the seed invested.
This year, the market gardening seedlings were sown in December, but at present there is no more water, so the women have to dig in the riverbed to find water to water the plants. They think they won't get much.
Women must go further to fetch water when the wells run dry - more than 8 km away.
Conflict among community members and between farmers and animals for water.
Abandonment of agriculture by some women.
Conflicts between farmers and herders because at the beginning of the rainy season the animals are looking for greenery and the farmers are afraid to plant and therefore miss

Appearance of new crop diseases. Increasing lack of NFPs in the bush.	the season.
Adaptation activities: Have planted cashew trees: this reduces bush fires; the women can sell the production in advance (during the season the price per kilo is 5,000 GNF but the system of vouchers for advance sales is 3,000 GNF per kilo) in order to produce rice to feed their children during the lean season. Before they had the choice and sold at high prices (people even came to beg them to sell), but now that they need other crops, they have no choice. Women go into the bush to look for NTFPs to compensate for poor harvests (for humans but also for animals). Pray for water in the next rainy season. Sell small ruminants to buy staple food. The small amount of water that fell during the rainy season and the water level on the river that allows for irrigation in the off-season pushed the women to sell the onion nurseries that should be followed until the harvest, but due to lack of water the women proceeded to uproot the nurseries to avoid losses at harvest time.	**Needs:** Realization of boreholes, Construction of a health post Reforestation: for consumption (cashew, mango, banana, orange, palm) or for use of wood (fencing and firewood e.g. acacia) to avoid going into the bush and to preserve water sources by reforesting along water courses (with local species, which it would be forbidden to cut). Mechanization: machine to process groundnuts. Reforestation along water courses to avoid the shortening of the seasons. Support for the development of rice and market gardening areas. Training and support in equipment and small tools (husker, motor cultivator, steaming equipment, etc.), to have machines for agriculture to allow the cultivation of the soil which is very dry. Support in modern breeding techniques for cattle, sheep, goats and poultry. Support in changing behaviors to adapt.

Village 2- Prefecture: Koundara S/Prefecture: Sareboido District: Sarekaly Village Sarekaly

The village was created by Dembiré Kandé in 1930 because of cattle grazing and the population is estimated at 370 people according to the village chief (850 people at the last census in 2020, including 595 women) - about 50 households (an average of 17 people per household - extended family life)
Anecdote: when we arrive, there is a bush fire going on, a large part of the group has gone to try to put it out (to save the new cashew plantation).
Group 1: 25 women.
Group 2: 25 men 23 to 40 years.
Group 3: 27 men 40 to 78 years.

Community profile	**Livelihoods and income-generating activities**
Source of energy: those who can afford it have solar panels (1,000/2,000 GNF to charge phones). *Infrastructure:* There is a health center, a primary school and a mosque. College/high school and market 7 km away at the sub-prefecture. *Water source:* 1 borehole for 3 villages, wells dry up from February to the first rains (June/July). *Source of information and communication*: simple phone, young men have internet on their Android phone (only 2 women in the village have internet on their phone), radio (national, community of Koundara and Mali), no TV in the village, ok to contact by WhatsApp. There is an adult literacy project, women are very happy with it, now they can use the phones better for example.	*NTFP:* Women shea, laré, néré. Boys (14 - 18 years) go to the forest to collect palm nuts and sell them to women who make the red oil. 3 hunters in the village - Bush meat: gazelle, rabbit, antelope. *Crops:* 1 groundnut cooperative with 4 groups of 34 women. The cooperative has a rice huller, which all the women in the village use for GNF 500 for 1.5 kg. The money collected is used to buy groundnut seeds and to repair the machine. 2 market gardening groups: one with 33 men and one with 35 women. Subsistence crops: rice, millet, some cassava and fonio. Mixed subsistence and sales: groundnuts and NTFPs. *Processing:* groundnuts for sale - roasting (sale unroasted 6000 GNF/kg, sale roasted 10 000 GNF/kg).

Perceived changes: Variation in seasons over the past 7 years. Normally the rainy season should start at the end of May but now it is the end of June, the rainy season is being delayed every year now. This year it lasted only 2 months and still with weeks without a day of rain. Ten years ago, during the rainy season, there were floods, but this has not happened since. This year those who could afford a draught animal of their own were able to plant at the first rains but then there were several long days without rain. The others who waited to hire animals to plough and sow had to wait for the second rains, but then it didn't rain at all. Those who sowed first harvested just enough to pay back the seed, the others could not harvest anything (water stress at the crucial moment of emergence). The pressure of man on nature is too strong, which impacts the climate.	**Impacts:** For the past 3 years, yields of rainy season crops (the basis of subsidence) have been decreasing. This year, the women of the village have not been able to grow onions due to lack of water. The rivers near the village have dried up this year, so women have to go 10 km to fetch water and send their oxen 15 km to the river. There is no water at the health center and school Bushmeat increasingly difficult to find, hunters have to go further and longer, lack of water and food in the bush, so animals flee. Must find a way to buy rice and millet to feed the family (women are very worried about the children). Women used to cook 2 meals a day, now it is only 1 and sometimes very light. Next to the river there used to be trees, now there are none and this has a negative impact on the quality and quantity of water in the river. Lack of employment and increased poverty among young people, massive displacement

	of young people to neighboring countries (Guinea-Bissau-Senegal-Gambia...). With climate change, women no longer have an activity and have to wait for their husband's money to buy things for the children and the house, whereas if they can cultivate, they can do it themselves: "very difficult not to help our husbands, our activity is agriculture, we cannot do anything else ".
Adaptations: If there is a need to eat, men go hunting for rabbits.	**Needs:** Help them to produce every year, drilling, seed, mechanization. We need to plant trees that attract water; Training of farmers; Support in modern breeding techniques for cattle, sheep, goats and poultry; Extension of the number of classrooms and construction of teachers' housing.

Village 3 - Prefecture: Koundara – S/Prefecture : Sambailo – Village : Wadiatoulaye

Group 1: 30 men.

Group 2: 25 women 30 to 55 years.

The village was founded in 1952.

Community organization: religious leader, then the elders and then the local authority (head of sector).

Community profile	**Livelihoods and income generating activities**
Infrastructure: Primary school on site and secondary school at the prefecture. *Travel:* bicycle, motorbike taxi, wait for opportunities, on foot, donkeys with carts. *Source of information and communication*: Radio (community Koundara/Mali/Gaoual, national radio). *Water source:* 3 boreholes. *Source of energy*: Solar panel for some families (possible to charge phones for 1 000 GNF). They had support from the Fouta Federation in 2012, they are very happy with it. The federation had provided improved seeds and fertilizers and they had repaid the money at harvest time and had been able to save for 2 months' food advance.	*Source of income:* Agriculture (rice, cassava, maize, beans, groundnuts); Market gardening; Migration (men go to Senegal in March/April); Work for others (land clearing, construction work). *Agriculture:* Market gardening and crops are mainly for subsistence, except for onions and groundnuts which are sold. There are three groups for onions: 27 people (20 women, 7 men), 27 people (22 women, 5 men) and 17 people (10 women, 7 men). Men in charge of fences, market gardening beds, wells, huts. Women sell and manage the money from agricultural products. *Livestock:* The men have oxen, the largest herd is 100, followed by several between 20 and 30, then between 4 and 7. Some have none or just 1 or 2 to help with farming. During the rainy season they dig water points for the oxen. Hunting/fishing: 2 hunters in the village who are also fishermen, present in the focus group. Hunts deer and rabbit and fishes all year round 30 km from the village (he has a motorbike). *Traditional beekeeping:* there are some harvesters in the village who place traditional hives and then harvest without destroying the hive or killing the bees. *Miscellaneous:* There is a savings group of 32 men and a women's group for buying and reselling groundnuts (buys in the harvest season and resells in the off-season for a higher price).

Perceived changes: There are changes especially in the last three years: crops have not yielded much especially this year - went from 2 meals/day to 1 meal due to lack of food. In 2015 and 2019 there were floods that flooded the groundnut fields, this had not happened for more than 10 years, so they had moved the crops closer to the watercourses, so there was a lot of loss in the 2015 and 2019 floods especially on the groundnut. In the 70's and 80's, there were floods every year that came to the road, they even looked for fish right there in front (they showed us the area). They made observations between 21 May and 6 June: when the wind blows from west to east, it will be a year without much rain. However, if the wind blows in the opposite direction there will be good rain. Women note that market garden sites are invaded by bees, according to them the bees are looking for water (they do not seem to know that they are involved in pollinating the crops). Appearance of new crop diseases and longer dry spells observed within the rainy seasons. For the men, the changes are because there are no big old trees - the government has come to cut too and sometimes people come with official papers saying they can cut some trees to make boards.	**Impacts:** Conflicts between humans and cattle over access to water between February and June: herders fetch water at night from boreholes. Peanut/manioc in May/June normally but as there is no rain, the seedlings have to wait for the first rains, which arrive in June/July. Then, normally in July, they start rice and maize in the lowlands, but they must be organized because they are now overlapping with groundnuts and cassava. Abandonment of agricultural activities by other women who do not find a way out with this activity. Migration of women to Guinea Bissau in search of better opportunities. Lack of money to pay for children's schooling; children drop out of school to go to Koranic schools in Senegal (fouta toro - schooling is not paid for there).
Adaptations: "To adapt, you have to plant trees and refuse to be cut down."	**Needs:** At least 7 boreholes. Help them to organize themselves to do better farming to better provide for their needs and above all increase yields. If it is possible to send machines for ploughing that are more efficient than the animal ploughs: indeed, now that the rain arrives too late, we have to start ploughing before the rains if we want to take advantage of the rains for the lifting of the semi-trailer, but the soil is too hard here if it has not been wetted by the first rains, the oxen can't.

Village 4 – Prefecture: Koudara – S/Prefercture: Sambailo - District: Salemata – Village: Salemata

Group 1: 20 women 29 to 64 years.

Groupe 2: 19 men 16 to 78 years.

Founded in 1958, 700 people at last census in 2020, including 400 women (140 households approx.).

The village is on a tarmac (road) unlike the other three (track). Young people are more literate (and have access to technology). Women over 40 are often illiterate.

Community profile

Language: Poular, Djakanké and Konia

Source of energy: small portable solar panels, usually charge phones at the sub-prefecture otherwise.

Source of information and communication: the network is not everywhere in the village, but there are people who have WhatsApp (especially young people), there is the community radio of Koundara.

Cooking stove: firewood, but it is difficult to get some because the forest next door is forbidden (National Park), but the women still go there to look for wood out of necessity, clandestinely.

Number of children per woman: majority of 7 children in the group (from 4 to 8).

Water source: 3 boreholes but 2 are out of order, wells but dry up in April/May/June, there is a marigot 2 km away which does not dry up now.

Infrastructure: primary school, mosque and health post (but sometimes they go to Sambailo to give birth if there is a complication because there is no midwife here), the market is in the sub-prefecture (13km motorbike taxi), but people come to sell things sometimes at the tarmac (either people from the village to passers-by or people from outside the village to sell things to the village).

Livelihoods and income generating activities

Agriculture: Subsistence farming: women grow groundnuts and men grow maize and millet.

To make money they can roast groundnuts and sell them.

For market gardening, the women have not built a fence due to a lack of funds, but they have to watch over it all day because of animals looking for food.

A group of 40 people including 3 men for market gardening, a project that supported them for this 4 years ago. In the framework of the same project, they had a mill, but it broke down and despite all efforts (even financial), they did not manage to repair it.

Still within the framework of the same project and for the group, there is a groundnut shelling machine (which was working on the day of the consultation), the whole community has access to it for 2,000 GNF for 15 kg, the money is then used by the group (to repair the machines and buy seed).

Fanio is also cultivated by women for subsistence but not this year because last year it did not give any results (1 bag should give 10 bags but last year 1 bag gave 1 bag).

A president of a cooperative gave seeds (groundnuts, onions) to the group.

NTFPs: Women collect shea and néré. They have a machine to process the shea (10 cans with a tax of 2 cans), which was bought by a young man in Senegal.

Men make honey: originally in the forest, but it is now classified as protected area and increasingly difficult to harvest in the traditional way. Now they make their own traditional hives and put them on the trees around the village.

Livestock: Peulhs have oxen, others do not.

Peanut skins are used to feed the animals, but this year there was not enough because of the low production.

Everyone has chickens, sheep and goats.

Some have donkeys to help with ploughing.

Perceived changes

Normally 6 months of rain but this is getting shorter, this year only 2 months of rain with long dry spells between each rain.

If there are a lot of bushfires, no néré.

Impacts

This year women harvested 3 x 60kg bags of groundnuts but they had sown 5 bags.

Women put water in the pots and put it on the fire to pretend to cook to keep the children waiting all day.

No water worries for market gardening, as there is a river that does not dry up and allows for market gardening throughout the dry season (which is quite large).

Women are very worried that if this happens again next year there will be famine.

No money to buy fish or bushmeat (fish is sold by Senegalese on the tar road and bushmeat by hunters from neighboring villages).

The seeds traditionally used no longer hold with the shortening rains

Sale of small livestock to buy rice or seeds (a sheep is worth 400,000 GNF and a bag of seeds 150,000/200,000 GNF, but generally to cover the needs of the family one must plant at least 3 bags).

Adaptation actions

Women saw that the crops were not yielding and went to grow vegetables earlier to compensate. For the last 3 years, women have been growing more spinach to feed the children, before it was just for a sauce but now, they boil it with salt and give it to the children.

Women collect shea in the bush to compensate (this is during the off season in April/May) - there is a lot of shea in their area, no impact there.

Make prayers every rainy season if the season is delayed or if the rains stop early.

Many young people leave the village for Conakry or Senegal.

This year many people have left during the dry season to try to find money, school-aged children are left with a neighbor and small children leave with the mother.

Needs

Fencing to prevent animals from roaming around the market gardening sites and conflicts between farmers and herders.

A machine to make groundnut paste and increase income to buy more rice for the children.

A machine to grind maize.

Machine for processing shea butter.

Plantation for firewood

Annex 2. Summary of Stakeholder Consultations

Organizations	Topics discussed
Government	
Environment Directorate	UNDP is implementing most of Guinea's adaptation projects. Initiative under discussion with UNFCCC on an adaptation national project that will be submitted to the Green Climate Fund. With the assistance of the secretariat through the CTCN, 5 concept notes for adaptation projects were developed. WFP was encouraged to use these projects as they are currently unfunded and could therefore be integrated into the AF project. CERE (Guinea's environmental research centre, public) is seeking accreditation to the Adaptation Fund. OK with the development of this project by the WFP as long as the Ministry is the Executing Entity. ANAFIC GCF accreditation underway, readiness support. UNDP readiness for the Adaptation Action Plan under development (2023).
Gender and equity unit of the Ministry of Environment	No reliable data to date in the country on the impact of CC on gender. Gender finally included in climate issues since 2021 through the revision of the NDC. The inventory of the 3rd communication must make a small gender study. Request made to UNDP for a gender and climate change strategy, currently looking for a consultant to conduct the preliminary study. National Gender Policy revised in 2009, latest legal document on gender equality in Guinea. The National Sustainable Development Strategy talks a little about gender equality too.
Meteorology Directorate	The new director has been in office since January 2022, a lot of retirements and a lot of vacancies still, renewal is ongoing. They have an agro-ecology section, which tries to support farmers as much as possible. They have data since before 1960, however in the last few years there are shortcomings for some sub-prefectures: some manual stations have been replaced by automatic stations but since there is no electrical network, they do not work. Some areas are not covered at all by stations. 33 stations dated from colonial time (the state of operation is unknown, inventory in progress). A paper agro-meteorological bulletin by region is produced. There are normally also rain gauges that have been entrusted to farmers, but the director must make a field visit to the country to check and see how they are used. Project with UNDP: early warning system (5 years ending in 2023): 12 automatic stations have been installed - but not yet all in operation as internet and electricity coverage is needed (solar panel being installed); 26 stations in stock; 1 areological station and 1 marine station will be installed as well. American project for the reinforcement of storm monitoring: lightning detectors. Project under development with AFD: transforming the directorate into an agency will require organizational support (big gap now, several departments of the directorate are without employees etc.). Within the framework of the Adapt'Action facility, support from the hydraulic directorate and also from the meteorology directorate to the pilot phase underway in Upper Guinea: use of climate data to support agriculture. The meteorological department is currently taking stock of the stations and will provide information when available (number of stations, state of operation, location, needs).
Environment Ministry	Meeting with the Minister of the Environment and her advisors. Explanation of the WFP process and agenda. The subject of national accreditation and project orientations was discussed. The Minister encouraged the WFP approach to submit a project proposal as soon as possible. She also stressed the importance of agreeing on the role of each actor. Orientations on the project were given: Rely on the proposals made by the focal point (the 5 project concepts notes without funding); Have an integrated agriculture approach by relying on model villages; Integrate support for national accreditation and the setup of a project for the Adaptation Fund directly under the general supervision of the country (CERE). WFP indicated that it corresponded with the different departments and directorates of the Ministry of the Environment, but also with other relevant ministries by email or meetings throughout the process of developing the note so that it would correspond as closely as possible to the State's guidelines. In-depth discussions in June on the implementation of the project and the roles of the government and WFP.
Ministry of Agriculture (National Directorate of Agriculture)	Coastal zone: flooding and exploitation of mangroves --> disappearance of villages and some fish. There are ongoing projects on resilience. In Guinea, market gardening is done in the off season (during the dry season). It rains abnormally during the rainy season, with dry spells in some places and sudden excesses of water in others. Risk of new disease outbreaks. Tests should be conducted with IRAG on the creation of new adapted varieties.
Development Partners	
RESADEL and APDAM – Italy	They work on projects related to child malnutrition. In the DRC, development of an enriched flour (tested and effectiveness study ok) containing caterpillar flour and spirulina from the Congo River. Desire to do research in Guinea also on a flour enriched with local products. Currently supporting 20 villages in the Kissidougou area (2,400 beneficiaries in all).
AFD	AFD seeks to integrate climate change resilience into the majority of new projects. Works through loans but also grants in Guinea. Ziama Biosphere Project - integrating elements of community resilience to reduce pressure on natural resources. Meteorology and hydraulic support project under development (concept note stage). 17 million project but AFD has potentially 10 million available. Three components: Infrastructure/capacity building/improvement of information system and data transformation > possible synergy with WFP's AF project - discussion to be deepened on the full proposal - participation in the validation workshop of the AFD project note in April 2022 appui plan de développement communautaire résilient Projet COMIFAFAM : development of a largely female sector of energy-efficient cookers Désenclaver les zones de productions agricoles en guinée maritime et guinée forestière (2017 – 2022)
OIM	MECC (Migration Environment and Climate Change) project being finalised. Pilot project to strengthen the resilience of young people to avoid migration - 8 intervention zones - A study has been carried out: on the climatic factors that lead to migration (in 2020).
WB	Funding and actions interrupted as a result of the political situation but resumed. Natural resources management and mining project $65 million. Several studies have been carried out on the coastal zone (Integrated Coastal Zone Management with ANASA, Kabac and Deltares). Support for the improvement of the governance framework (mining) in connection with environmental impact studies. Support for the development plan for protected areas. PDEG: integrated development project in Guinea.

	PDAC: commercial agriculture development project (USD 200M) > opening of markets for agricultural products, just started ANIES > living conditions of populations very important for adaptation to CC. Major WB international climate programme > motivating the government to make proposals at this level. AFD/BM support ANAFIC > make local development plans more climate friendly and operationalise LDPs version 2. Develop IGAs to encourage conservation of protected areas. SWEDD (with UNFPA): Empowerment of women. https://projects.banquemondiale.org/fr/projects-operations/projects-summary?lang=fr&&searchTerm=&countrycode_exact=GN
EU	• COVID support project which was implemented with WFP (RESIGUI) • Maritime, lower guinea and forestry agriculture project • Biodiversity support through the support of protected areas and national parks (3-year project) (PARC3 project implemented by UNOPS) The EU has notably supported the Badiar National Park on the Koundara side, the Haut Niger Park (Upper Guinea), the Konkouré Mangroves (Dubréka); on internal conservation, but a complement is being considered for landscape support from the first half of 2023 to reduce pressure on the park and which will integrate activities to support the livelihoods of communities living in the parks (possible synergy with the AF project). From 2024 onwards, the EU plans to have actions to combat climate change with a focus on the timber sector (currently being considered for implementation). Guinea TFP Environment Group: Existence of a mailing list including actors working on environment and climate issues in Guinea; Coordination meeting planned for mid-March, Existence of an Excel document on environment projects.
UNDP	Since 2007, UNDP has been supporting the government in the development of its climate change documents (NAPAs, strategies, NDC revision, etc.) - available on the Ministry of Environment website. A conducts projects for the sustainable management of natural capital. After the 2007 NAPA, a number of projects have been implemented such as: Coastal Zone (cosed) - GEF; BIOGAS Project - GEF; Upper Guinea Adaptation Project - GEF; Climate Information and Early Warning System 2020 - 2023 (SAP) - GEF; REMECC Project (closed) - GEF Within the scope of the SAP project: Support to 3 governmental directorates: Direction Nationale de Météo (DNM), Direction Nationale de l'Hydraulique (DNH) and the Service national de gestion des catastrophes naturelles.). The role of data is crucial for proper adaptation and mitigation - but this project cannot address all the needs. First of all, there is a real issue of institutional framework and governance. The Meteorological Department, for example, reports a huge lack of human resources (following the change of regime and retirements, but already before). The state is not recruiting now, but the directorates in the interior of the country are not all staffed, and the same applies to the sections of the Directorate in Conakry. The SAP project is supposed to train 70 people in meteorology, but the staff does not exist, so it is impossible to do the training. Today the issue is: who can collect, process and share the data within the meteorological department - lack of HR resources. For the project being developed for the Adaptation Fund (AF), it is interesting to see how UNDP and AFD actions can be synergized to propose a structuring of meteorological services with a view to long-term operationalization. The SAP project provides the prefectures with meteorological tools (stations, solar panels, renovation of buildings), but does not cover the sub-prefectures, and the climate varies from one locality to another. Ideally, each rural commune should have a system for data collection, analysis and dissemination. Concerning the REMECC project, in the same area as we are targeting learning from the mistakes of this project, especially on the project exit. There was no follow-up at government level and many of the achievements are now invisible. It is very important to work on the post-project period through the appropriation by the State services but also by supporting the government in releasing operating funds for the public agencies on the ground. Many projects compensate for the lack of public resources to support community actions, but once the project withdraws, efforts can fall back very quickly if the state does not take over. Thus, the project that comes afterwards starts from scratch. The sustainability of actions must be the priority of development partners. 300 community development plans (CDPs) exist (valid for 4 years), many of which are now obsolete and do not reflect the actions that have been implemented in the localities. Often, LDPs do not mention the actions to be undertaken in terms of adaptation to climate change. AFD has implemented a pilot project on the revision and implementation of LDPs. The WB is supporting the government in scaling up. See how the AF project should integrate/support the LDP. Support to National Adaptation Plan - ongoing process stopped due to political situation. Support through Green Fund, 3 teams started working: environment and climate change research plan, modelling, CC indicators. • Green Climate Fund country program document - available on the Ministry of Environment website. • Adaptation Fund project - UNDP had initiated steps in this direction and developed a concept note. • ADB/UNDP/ mechanization to combat desertification > concept note.
BID	21 projects in the energy, transport, agriculture, health and education sectors, including 5-year integrated development project (started 2 years ago) – Koundara. • *Observation: rainfall has decreased significantly.* • *Approach: improve producers' yields.* • *Implementation of community reforestation with the Ministry of the Environment.* • *Call for tender underway for recruitment of NGOS for implementation*. Rice value chain project - Koundara/Labé/Mali. Rice value chain project - Labé/ Upper Guinea. Sustainable village project – Banco. • *Livestock/agriculture/energy/infrastructure.* • *2015 to 2022, $2 million*
Civil Society and Academia	
CERE – Centre de recherche Environnement	CERE, member of the CC committee (supported by the Ministry of the Environment). There are several theses and masters on adaptation topics that are finalised and in progress. Agro-ecological Atlas of Upper Guinea finalised but see with WAAP to have access. For 4 years in the process of accreditation to the Adaptation Fund, they hope to have it this year and apply for a project next year (small amount to start). CERE present in all document development processes: NAPA, NDC etc. It is also in charge of GHG measurements in the country.

	Adapt'Action (AFD) has set up the network of adaptation focal points (in each Ministry), Saral Camara is the focal point for the Ministry of Higher Education and is currently conducting a study on the coastal zone on adaptation techniques for the population. She advocates for a study on food security and adaptation to climate change at the national level (with a focus on rice). The two areas subject to CC in particular: Coastal zone and Upper Guinea. Important to intervene on a case-by-case basis for each locality depending on the livelihood habits of the communities and the impacts of CC (which can be very different). Coastal zone: saltwater infiltration, rising waters: population migration, loss of drinking water, destruction of crops by salt. Upper Guinea: disruption of seasons, now more violent rains but shorter duration. Need a project where communities are drivers! Community ownership is essential.
RENASCEDD	Created in 2016. From 2016 to 2019 focused on advocacy on nature conservation, climate commitments etc... They have been participating in all the climate COPs since 2016. Office in Conakry but since 2019 concrete actions on the ground in addition to advocacy. Big topic of the moment: land tenure and land inventory. There is a legal vacuum at present at this level, a real problem especially for communities Superimposition of exploitation titles (mining/forestry for example) and expropriation of farmers' land. Compensation of the population depends on the goodwill of the companies. No master land-use plan. Mining Code dates from 2013 and lacks many implementations texts. No monitoring of the application of laws. Many recently revised texts have no implementing legislation. No inventory of forests in the country, the data that exists is not real. 2019: planting of 34,100 trees 2020: 400,000 plants 2021: 150,000 plants. Community diagnostics. Accompany IGAs and trade in parallel. Protection of mangroves: restoration activities underway and work with women on the issue of salt (salt is made but this degrades the mangroves, research into resilient techniques). Partners: Reforest Action / French Embassy / Tree AP / Ministry of the Environment / ISAV (intern) / Fédération des PNR France (and Massif des Vosges). Adaptation of the French NRP tool to Guinea. Are also interested in the RNA system (assisted natural regeneration of forests). They have focal points in all their intervention zones: Boké, Kindia, Mamou and Faranah. Propose that we look at (i) agroforestry, (ii) agricultural calendar to help people cope with CC. Involving the weather service in the project would be relevant and also sensitize the population to the interest of being interested in the weather. Indeed, the farmers do not have the culture nor the understanding of the interest of the weather for them. They told us about INRAP (National Institute for Research and Action in Education) and a NASA programme on training children with simple tools to understand the weather, a project that is not being implemented (INRAP blockage).

Annex 3 – Preliminary gender analysis

Purpose of the gender analysis: Climate change adaptation strategies need to take into account the socio-economic context, women's and men's roles in agricultural production and in their communities, their livelihoods, their differing levels of access to resources, including knowledge on climate change, their skills and their rights, as all these aspects have an impact on their ability to adapt to climate change. The objective of this preliminary gender analysis is to provide sex-disaggregated information to inform the design of the Adaptation Fund project being developed for Guinea. It aims to provide information on the different needs, capacities, roles and knowledge resources of women and men. A detailed gender assessment will be conducted during the development of the full proposal, in order to refine the project activities to promote gender equality.

National context: recognizing the importance of addressing gender inequality, the Republic of Guinea has put in place concrete actions:

- Creation of the Ministry for the Advancement of Women, Children and Vulnerable Persons.
- In 2015, creation of "Gender and equity" departments in all the ministries.
- In 2017, revision of the National Gender Policy in order to "adapt it to the international, regional, sub-regional and national context in relation to sustainable development by 2030", and to ensure that it is in line with the SDGs, the African Union's Agenda 2063 and the Decade for the Empowerment of African Women. However, although the NGP recognizes that 'women are more affected by climate change than men', it still doesn't address climate change adaptation.
- In 2017, National Gender Policy Action Plan.
- In 2021, gender mainstreaming in the revision of the NDC.

Despite these advancements, Guinea's gender index is 0.439 (OECD SIGI Index), which places the country among the 8 countries (78 out of 86) with the largest gender gap in the non-OECD region. Furthermore, in 2020, Guinea ranks 118/156 with a score of 0.6 on the Global Gender Gap Index[24]. There is a low representation of women in decision-making positions: women are poorly represented in the public administration, both at central and local levels. Despite a law establishing a 30% quota for women on all electoral lists, in 2020 women occupied only 16.7% of parliamentary seats and 27.8% of ministerial positions (GGR 2021).

In 2018, the prevalence of early marriage is one of the highest in the world: on average, 3 out of 5 girls are married before they turn 18. In some regions of the country, such as Upper Guinea, Middle Guinea and Forest Guinea, the prevalence rate of early marriage is over 70%: a figure twice as high as the average

[24] https://www3.weforum.org/docs/WEF_GGGR_2021.pdf

for sub-Saharan Africa (37%).[25]

According to the World Bank[26], reducing gender inequalities in the Republic of Guinea could potentially accelerate GDP per capita growth by 0.6 percentage points per year or 10.2% in total by 2035. The gender priority is included in the National Plan for Economic and Social Development (PNDES) 2016-2020 and in the revision of the NDC 2021. The PNDES intervenes on gender through 5 strategic axes: (a) access to basic social services (education, health, HIV/AIDS, water, hygiene and sanitation); (b) respect for human rights and elimination of violence (fundamental rights, girl child, violence, human trafficking); (c) access, control of resources and equitable sharing of income (economy, poverty and environment); (d) improvement of governance and equitable access to decision-making bodies (power, media, institutional mechanism, armed conflicts, ICTs); (e) integration of gender in the macroeconomic framework. The PNDES also builds on the e Accelerated Programme for Food and Nutrition Security and Sustainable Agricultural Development (PASANDAD) to reflect the need to provide a sustainable response to food and nutrition insecurity. The orientation chosen to achieve this is based on the relationship between men and women in the agricultural sectors as a vector for the changes expected in this area. Thus, within the framework of the PNDES, solutions to food insecurity will be provided in relation to the gender issue in the agricultural sectors. In view of the above, two (2) strategic options are available to the PNDES: (i) the promotion of gender in the agricultural sectors; and (ii) the improvement of nutrition.

Gender and climate change: Women living in rural areas are particularly vulnerable because of their specific role in agriculture and water supply. Indeed, traditionally, women are in charge of the "water chore", so limited availability of water resources heavily impacts women who have to invest significant more time and energy to provide water for their households. Consultations showed that the lack of water in the villages leads women to go further and further away to collect water, and sometimes even at night to avoid the busy times. The duty to fetch water considerably reduces the time they can spend with their families and their children, for other household tasks, and therefore reduces leisure and rest time. In addition, it creates tensions and conflicts between women over the supply of and access to water. It also creates various health problems that primarily affect women and children, such as the lack of water for childbirth. For example, during the consultations, women highlighted the delicacy of giving birth without access to water and the health repercussions that this entails, especially as the number of children per woman is significant, several women aged 40 and over had between 6 and 10 children and young girls aged 16 to 18 already had a child. Women are also responsible for the supply of firewood for cooking meals. The degradation of natural resources leading to a decrease in wood resources has a direct impact on their daily lives. During the consultations, some women explained that the only place in their village where they could still find wood for cooking was in the forest that pertains to a protected area, so they were forced to go and look for the wood in groups (and sometimes at night) and to make surveillance rotations to escape the guards. Thus, they are forced to commit a felony that is punishable by an imprisonment of three months to two years and/or a fine of 10,000,000FG to 50,000,000FG.[27]

In order to adapt to climate change and compensate decreasing yields of subsistence crops, women are harvesting more néré and shea trees to sell on the market and buy rice and millet. However, these non-timber forest products (NTFPs) are also dependent on climate change, and during the consultations women pointed out that when there had been a lot of bushfires one year it was difficult to find néré. This reinforces women's dependence on natural resources subject to climate change. In addition, their access to inputs, technical advice, regulations, improved technologies, land ownership and decision-making processes are limited compared to men, thus constraining their resilience to climate hazards. Although this is 'tolerated', they sometimes unknowingly enter into unlawful situations, particularly in the context of NTFP processing and marketing, which goes beyond the communities' right to use the forest and requires a special permit (see Forestry Code 2017). During the consultations a group of women highlighted that for the first time a project supporting their cooperative had provided them with basic literacy training which had enabled them to be more independent and no longer have to rely on their children to read or write documents for the cooperative. In fact, in 2020, the literacy rate was 22% for women and 44% for men (GGGR 2021). Again, during the field consultations, many women over 40 requested literacy support in order to become more independent in their activities.

Gender mainstreaming in the project

Component 1 - The dissemination of climate information and technical research data will be aimed at all the community members, men and women. In order to ensure that the information is well promoted and disseminated to all farmers, the distribution channels will be carefully assessed so that the information reaches the women equally. For example, while women do not necessarily own a radio, some of them have Android phones that can receive voice messages etc. As part of the development of the full proposal, different information and capacity needs will be assessed, with a particular focus on gender in order to address the full range of community needs.

Component 2 - Special attention will be given to women's participation in decision-making at the community level, in order to strengthen their action and active leadership in climate change adaptation. Thus, the project will ensure that women are represented in the monitoring committees of the activities of this component at village level.

The actions of access to water, reforestation and creation of community forest will have a direct impact on the improvement of women's conditions by improving the availability of resources (wood, NTFPs and water). This will result in increased incomes and more time available for other activities.

Component 3 - Although groundnut and market gardening activities are mainly for women and rice and millet activities for men, there will be no specific activities for women and men under the project. In general, women have a much heavier burden of household tasks and, according to the consultations, women are also responsible for managing household money, water and wood. Men, on the other hand, are more likely to be responsible for heavy work. One of the objectives of this component would be to promote a better balance in household tasks and access to resources so that men are more involved

[25] https://mediatheque.agencemicroprojets.org/wp-content/uploads/Profil-Genre-Guinee.pdf

[26] Guinée -Les avantages économiques d'une société soucieuse de l'égalité des genres, Banque Mondiale, 2019

[27] https://www.assemblee.gov.gn/l2017-ndeg0038an-portant-code-forestier-de-la-republique-de-guinee

and women have more free time, taking into account their culture and consulting both men and women to avoid any negative effects. This component will help men and women to improve the profitability and efficiency of their time through technical support for each activity proposed:

- Support for subsistence agriculture: rice, groundnuts, millet and market gardening, which is strongly impacted by climate change and is currently a food security concern. The objective is to adapt agricultural practices to cope with the reduced rainy season and access to water in order to make the activity resilient. The project will support the groups in adapting but also in increasing performance (increasing yields, ensuring conservation and transport, supporting processing, securing the sale of surplus production etc.).
- Support has complementary activities. Indeed, to cope with climate change, communities have already put in place mechanisms to compensate for agricultural losses. The idea is to support and strengthen these initiatives (NTFP processing, mango, cashew development)
- Support to financial empowerment through savings.

Conclusion and recommendations for the full proposal: The detailed gender assessment that will be carried out during the development of the full proposal will delve into the gender specifics to further develop project activities that respond to the different needs of men and women and contribute to changing gender dynamics. This preliminary gender analysis highlighted a number of opportunities for project intervention to promote greater gender equality, with the following key recommendations:

- Through the project's actions, ensure that nutrition interventions specifically target women and children: Women and children in general are the most affected by the identified nutritional deficiencies. The project should therefore focus on promoting the production of nutritious and climate resilient foods and on adding value to these foods, and ensure that project activities are designed to benefit women and children in a targeted manner.
- Through Component 1, develop and expand last-mile climate services: Women and men have expressed their demand for targeted agro-meteorological advice, developed and disseminated with community participation, to help them be adapt to seasonal changes. Activities should be designed to overcome the fact that women have much less access to information than men, which affects their ability to respond effectively to climate variability
- Ensure equitable participation of women and vulnerable groups in village adaptation planning in component 2. The project should ensure that women and vulnerable groups, including youth, the elderly, female-headed households and people with disabilities, are empowered and supported to participate equitably in community-level adaptation planning processes, and supported equitably to implement identified adaptation solutions. This can be extended to support women and youth to become effective agents of change for climate-resilient livelihoods.
- Through Component 3, integrate labor-saving approaches: Women have expressed a strong demand for labor-saving and self-reliant machinery to reduce the drudgery of processing agricultural products and to help them add value to agricultural products and thus increase their income. This is an opportunity for the project to make a significant difference in the lives of women, and therefore their households. It is recommended that this area be explored further in the detailed gender assessment, to identify labor-saving approaches and machinery, and optimal delivery mechanisms.
- Strengthen sex-disaggregated monitoring: It is recommended that the project keep strict records of sex-disaggregated data and that ongoing monitoring facilitates the identification of differential impacts that the project will have on women and men, and encourages action based on this data.

Annex 4 – Letter of Endorsement by Government

REPUBLIQUE DE GUINEE
Travail–Justice- Solidarité

MINISTERE DE L'ENVIRONNEMENT ET DU DEVELOPPEMENT DURABLE

ADAPTATION FUND

DIRECTION NATIONALE DES POLLUTIONS NUISANCES ET CHANGEMENTS CLIMATIQUES

CONVENTION-CADRE DES NATIONS UNIES SUR LE CHANGEMENT CLIMATIQUE

FOND D'ADAPTATION

N°004/MEDD/DNPNCC/CCNUCC/FA/2022

Conakry, le 26/07/2022

Le Point Focal National

Letter of Endorsement by Government

To: The Adaptation Fund Board
c/o Adaptation Fund Board Secretariat
Email: Secretariat@Adaptation-Fund.org
Fax: 202 522 3240/5

Subject: Endorsement for the Project Climate Change Adaptation of Vulnerable Communities in the Sahel Border Zone of the Republic of Guinea

In my capacity as designated authority for the Adaptation Fund in Republic of Guinea, I confirm that the above national project proposal is in accordance with the government's national priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in the country.

Accordingly, I am pleased to endorse the above project proposal with support from the Adaptation Fund. If approved, the project will be implemented by the Word Food Program and executed by the Ministry of environment and Sustainable Development.

Sincerely,

MEDD Direction Nationale des Pollutions Nuisances et Changements Climatiques
La Directrice Nationale Adjointe

Madame Oumou DOUMBOUYA
DNAPNCC/Focal Point Adaptation Fund

Ministère de l'Environnement, des Eaux et Forêts, Direction Nationale des Pollutions,Nuisances et Changements Climatiques, Quartier Almamya
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