ADAPTATION FUND

FULLY DEVELOPED PROPOSAL FOR SINGLE COUNTRY

PART I: PROJECT/PROGRAMME INFORMATION

Title of Project/Programme:	**Building resilience to climate change of the neighbouring populations of the classified forests of Bassila and Penessoulou in the Central region of Benin**
Country:	**Benin**
Thematic Focal Area	**Rural development**
Type of Implementing Entity:	**National Implementing Entity (NIE)**
Implementing Entity:	**National Fund for Environment and Climate (FNEC)**
Executing Entities:	**National Timber Company SONAB (ex-ONAB), Bassila Town Hall, Communal Unit of the Territorial Agency for Agricultural Development 4**
Amount Requested:	**USD 2,934,545**
Letter of Endorsement (LOE) signed:	**Yes ☒ No ☐**

NOTE: The LOE should be signed by the Designated Authority (DA). The signatory DA must be on file with the Adaptation Fund. To find the DA currently on file check this page: https://www.adaptation-fund.org/apply-funding/designated-authorities

Stage of Submission:

☒ This proposal has been submitted before including at a different stage (concept, fully-developed proposal)

☐ This is the first submission ever of the proposal at any stage

In case of a resubmission, please indicate the last submission date: Click or tap to enter a date.

Please note that fully-developed proposal documents should not exceed 100 pages for the main document, and 100 pages for the annexes.

The table of contents and list of tables, figures, photos and acronyms are at the end of the document.

Table of Contents

List of tables

List of figures

List of photos

Acronyms and Abbreviations

ACC	Adaptation to Climate Change
ADF	African Development Fund
AF	Adaptation Fund
AFM	Administrative and Financial Manager
ANCB	National Association of Benin Communes
ANPC	National Civil Protection Agency
ATDA	Territorial Agricultural Development Agency

BOAD	West African Development Bank
CAN-Bénin	Food and Nutrition Council of Benin
CAR	Corrective Action Request
CARE	French association for international solidarity
CC	Climate change
CCC	Communal Consultation Committee
CCNCC/NCCC	National Committee on Climate Change
CEBENOR	Benin Center for Standardization and Quality Management
CF	Community Facilitator
CN/NC	Conceptual Note
CNSC	National Framework for Climate Services
COGEPAF	Participatory Forest Management Committee
CR	Clarification Request
CSA	Climate-smart agriculture
CTB	Belgian Technical Cooperation
CVPA	Village Cashew Nut Producers' Cooperative
DDAEP	Departmental Directorate of Agriculture and Livestock
DGEC	Directorate General for the Environment and Climate
DGEFC	Department of Water, Forests and Hunting
DNA	Designated National Authority
EMICoV	Integrated Modular Survey on Household Living Conditions
EIA	Environmental Impact Assessment
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
ESP	Environment and Social Policy
FAO	Food and Agriculture Organization of the United Nations
FNEC	National Fund for Environment and Climate
FP	Focal Points
GCM	Gender and Communication Manager
GEF	Global Environment Facility
GHG/GES	Greenhouse gas
GIZ	German Society for International Cooperation
GTZ	German Cooperation
IFAD	*International Fund for Agricultural Development*
IIG	Gender Inequality Index
IGN	National Geographic Institute

INSAE	National Institute of Statistics and Economic Analysis
INStaD	National Institute of Statistics and Demography
IPCC	*Intergovernmental Panel on Climate Change*
IUCN	*International Union for the Conservation of Nature*
IWRM	Integrated Water Resources Management
MAEP	Ministry of Agriculture, Livestock and Fisheries
MCVDD	Ministry of Living Environment and Sustainable Development
MCVT	Ministry of Living Environment and Transport in charge of Sustainable Development
MEEM	Ministry of Energy, Water and Mines
MEF	Ministry of Economy and Finance
MEHU	Ministry of the Environment, Habitat and Urban Planning
MEM	Monitoring and Evaluation Manager
MEPN	Ministry of the Environment and Nature Protection
MFSN	Ministry of Family and National Solidarity
MON	Standard operating procedure for communicating and disseminating alerts in the event of climatic disasters
MPD	Ministry of Planning and Development
MS	Ministry of Health
MSD	Inclusive market system (Market Systems Development)
NAP/PNA	National Adaptation Plan
NAPA/PANA	National Action Program for Adaptation to Climate Change
NCCMP	National Climate Change Management Policy
NDC/CDN	Nationally Determined Contribution
NGO	Non-Gouvernmental Organisation
NPC/CNP	National Project Coordinator
ONAB	National Timber Office
ONG	Non-Governmental Organization
ORSEC	National Civil Security Response Organisation Plan
PACOFIDE	Project to Support the Competitiveness of Agricultural Sectors and Export Diversification
PADEFA-ENA	Cashew Nut Sector Development and Agricultural Entrepreneurship Support Project
PADER	Rural Development Support Project
PAE	Environmental Action Plan
PAFILAV	Milk and Meat Sector Support Project
PAG	Government Action Plan
PAGCCB	Benin's Gender and Climate Change Action Plan

PAGEFCOM/ PAFEMCOM	Communal Forest Development and Management Project
PAM	World Food Program
PAMRAD	Support project for the rural world in the Atacora and Donga departments
PAN/LCD	National Action Programme to Combat Desertification
PANGIRE	National Action Plan for Integrated Water Resources Management
PAS-PNA	Scientific Support Project for National Adaptation Plan Processes
PSC	Project Steering Committee
PASTR	Rural Transport Sector Support Programme
PC2D	Growth Program for Sustainable Development
PDC	Communal Development Plan
PFR	Rural Land Plan
PIFSAP	Project for the Integration of Sacred Forests in Benin's Protected Areas
PMASN	Multi-Sectoral Food, Health and Nutrition Project
PMU/UGP	Project Management Unit
PNC	National Culture Policy
PND/NDP	National Development Plan
PNDD	National Decentralization and Devolution Policy
PNGCC	National Climate Change Management Policy
PNIASAN	National Plan for Agricultural Investment and Food and Nutritional Security
PNUAD/UNSCDF	United Nations Sustainable Development Cooperation Framework
PNUD/UNDP	United Nations Development Program
PNUE/ ONU-Environnement	United Nations Environment Program
PONADEC	National Decentralization and Devolution Policy
PONADER	National Renewable Energy Development Policy
PPFR	Policy for the Promotion of Women in the Agricultural and Rural Sector
PPE	*Personal Protective Equipment*
Prodoc	fully-developed proposal document
PROFI	Agricultural Sectors Development Support Programme
PSAAB	Project to support food security through the development of lowlands
PSC	Project Steering Committee
PSDAN	Benin's Strategic Food and Nutrition Development Plan
PSDSA	Benin’s Strategic Plan for the Development of the Agricultural Sector
PTC	Project Technical Committee
RGC	Gender & Communications Manager
RGPH	General Population and Housing Census

SAP	Early Warning System
SDG/ODD	Sustainable Development Goals
SGM	Ministry's General Secretary
SLM/GDT	Sustainable land management
SNDAF	National Strategy for the Development of Fruit Growing
SONAB	National Timber Company
SWC	Soil and Water Conservation
UNFCCC/CCNUCC	United Nations Framework Convention on Climate Change
TCN	Benin's third communication on climate change
VAC/CVA	Value Added Chain
WEE	Women's Economic Empowerment
WMO	*World Meteorological Organization*

A. Project/Programme Background and Context:

Provide brief information on the problem the proposed project/programme is aiming to solve. Outline the economic social, development and environmental context in which the project would operate.

Among the challenges of the 21st century, climate change (CC) is among the most pressing and alarming ones. West Africa, to which Benin belongs, is one of the most vulnerable regions to the effects of CC, which constitutes an additional constraint in the fight against poverty.

Indeed, Benin population suffers from the effects of climatic hazards as evidenced by (i) the exceptional floods of 2010 which cost the lives of 46 people and caused damages estimated about 80,778,431 US dollars, (ii) the widespread floods of 1985, 2006, 2011 and 2019 that left thousands homeless, and (iii) the severe meteorological and agricultural droughts of the years 1958, 1977, 1983, 1984, 2000, 2001, 2013-2015, responsible for severe food shortages, catastrophic water and fodder deficits, and significant losses in agricultural export earnings (Benin, 2011; MCVDD, 2019). In order to ensure the country's socio-economic development and the food and nutritional security of the poorest communities, adaptive measures are urgently needed.

The central region of Benin, in this case the commune of Bassila, which is the most forested in the region, is not spared by climate variability. In addition to the flooding episodes, there is the persistent late start of rainfall, the early onset and cessation of rainfall, their poor distribution and the recurrent pockets of drought which, combined with the increased frequency and severity of excessive heat and strong winds, have a negative impact on the livelihoods of the populations (agriculture, market gardening, livestock, local processing units for agricultural products, etc.). In order to cope with the degradation of their livelihoods, certain bangs of the populations living near the forests, who benefit from the ecosystem services provided by these forests (medicinal plants, fruit picking, collection of dead wood for energy, etc.), tend to take more

resources from the forests, at the risk of breaking, in the context of CC, the fragile balance between the sustainable satisfaction of their essential needs and the services provided by the ecosystem. This is the case of the communities living in the classified forests of Bassila and Penessoulou.

Benin's commitment to contribute to the mitigation of CC and the adaptation of vulnerable communities to its adverse effects was made with the ratification of the United Nations Framework Convention on Climate Change (UNFCCC) on June 30, 1994, and that of the Kyoto Protocol and the Paris Agreement respectively on February 25, 2002 and October 31, 2016. Three national communications on climate change (MEHU, 2001; MEHU, 2011; MCVDD, 2019), a national adaptation programme of action (MEPN, 2008) and a national adaptation plan (MCVDD, 2021) have been developed. Benin even adopted a law on climate change in 2018 and a National Climate Change Management Policy (NCCMP) in February 2021. The fourth national communication on climate change is currently being prepared.

Recently, a vulnerability study on flood risks in the Ouémé basin identified, among others, the arrondissement of Penessoulou as vulnerable (Sintondji *et al*., 2019). The exploitation of the results of this type of study, which respond to the concerns of vulnerable populations, should facilitate the implementation of initiatives on the ground. Ultimately, this project will make it possible to map the most vulnerable groups of farmers, market gardeners, beekeepers, livestock breeders and local processing units for agricultural products in the two arrondissements of Bassila Centre and Penessoulou, to establish priorities for intervention with village communities and to develop a portfolio of urgent measures (integration of climate information, mechanism for revolving seeds and plants adapted to climate change, water and soil conservation techniques, monitoring of technical itineraries and adoption of resilient technologies, training of local communities on modern beekeeping techniques, etc.). The project also plans to reinforce the local governance framework in relation to CC by building the capacities of communal actors.

Geographical framework of the project

Located in the central region of Benin in the department of Donga (Figure 1), Bassila, the third largest commune in Benin, covers an area of 5661 km2 and is subdivided into four (4) arrondissements whose demographic characteristics are given in Table 1.

The Bassila Forest (classified by Order No. 2843 SE of August 5, 1943) and the Penessoulou Forest (classified by Order No. 2394/S/E/F of July 7, 1946) are located in the arrondissements of Bassila Centre and Penessoulou, respectively (Figures 1, 2 and 3). These two classified areas located in Benin's Agro-ecological Zone 5 (Cotton Zone of Benin Central region) provide important ecosystem services to the neighbouring populations.

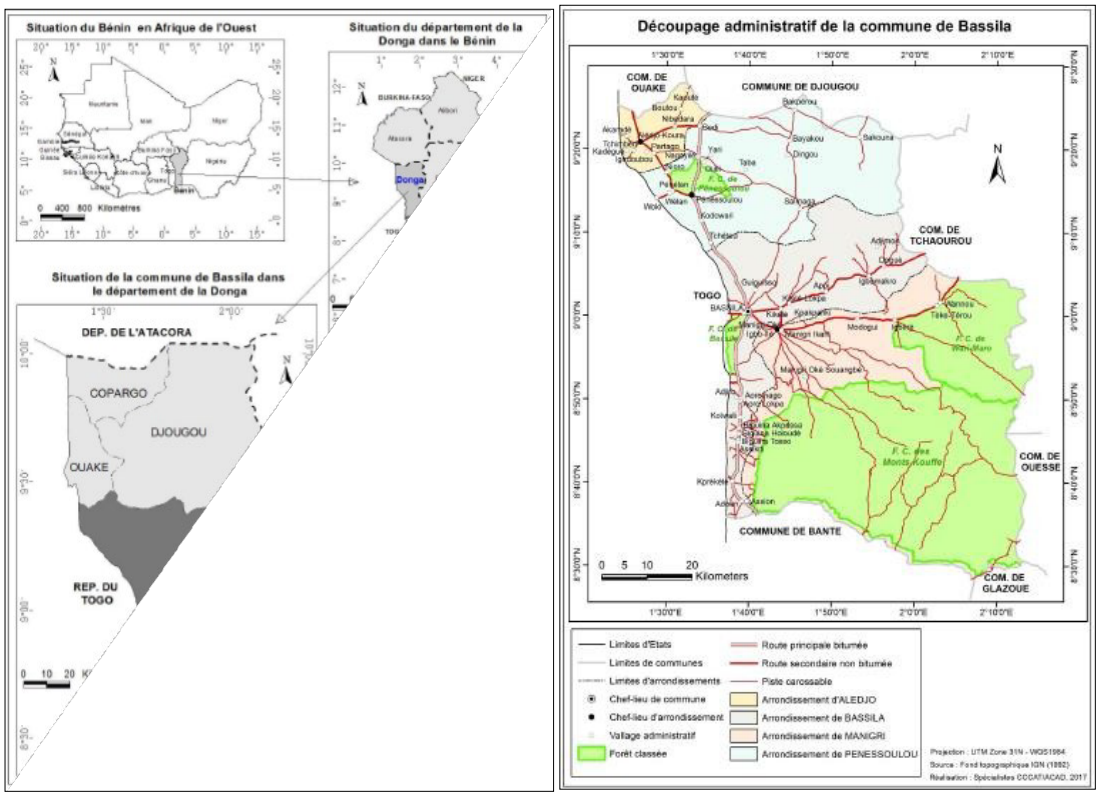


Figure 1: Location of the commune of Bassila

***Source** : PDC3 Bassila (2017).*

Table 1 : Arrondissements of the commune of Bassila

	Pop. in 2013	**Growth rate**	**Pop. in 2020**
Aledjo	23 238	3,96	23 924
Bassila	46 569	3,96	47 943
Manigri	26 409	3,96	27 188
Penessoulou	33 875	3,96	34 875

***Source**: PDC3 Bassila (2017).*

The classified forest of Bassila (3,320 ha) borders Togo and extends between parallels 8° 52' and 9° North latitude on the one hand, and meridians 1° 37’ and 1°39' East longitude on the other hand (Figure 2). As for

the Pénessoulou Classified Forest (5,470 ha**),** it extends between parallels 9°14' and 9°18' North latitude on the one hand, and meridians 1°30' and 1°37' East longitude on the other hand (Figure 3).

The dominant plant species in these two forests are *Khaya grandifoliola* (Welw), *Aubrevillea kerstingii* (Harms) pellegr and *Erythrophleum suaveolens* (Guill. & Perr.) (Adomou, 2005). In addition, some animal species that were still present until recently have practically disappeared (buffalo, buffon cob, hyena, panther, lion, bushpig, sitatunga).

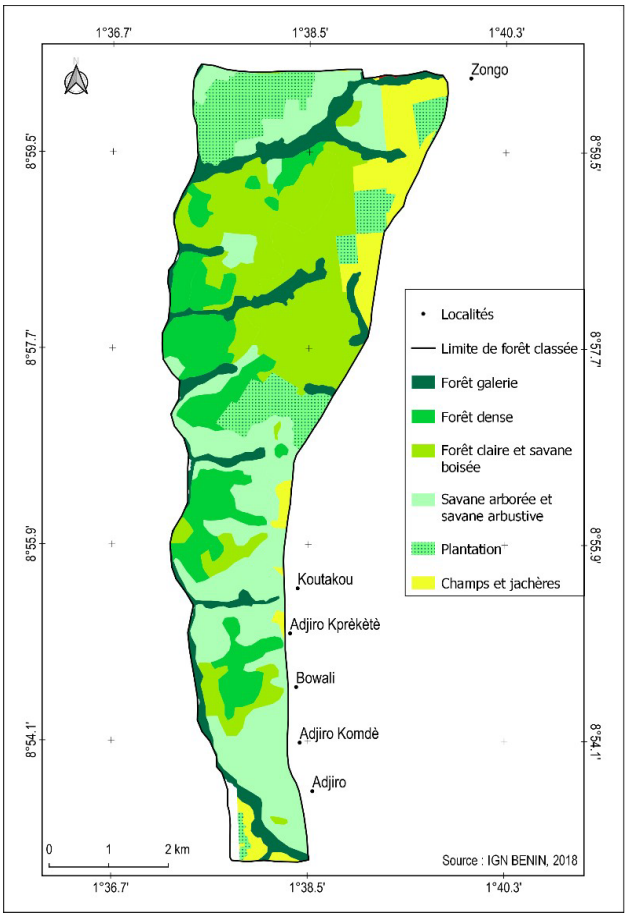


Figure 2 : Classified forest of the Central of region of Bassila in 2018

Source: *IGN-Benin (2018)*

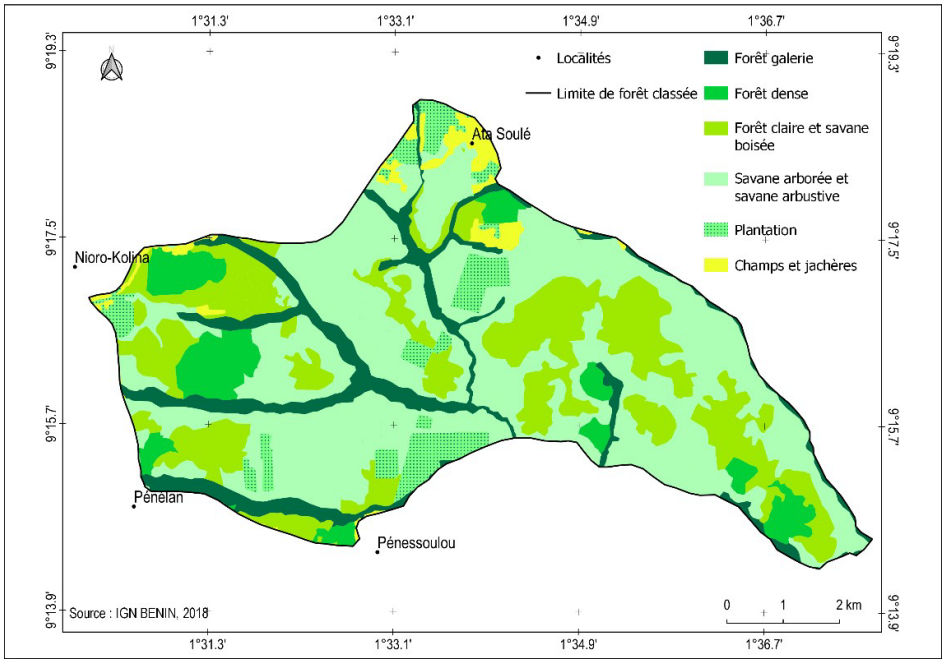


Figure 3: Pénessoulou classified forest in 2018

***Source**: IGN-Benin (2018)*

Socio-economic context

In Benin, a recent survey conducted by INSAE (National Institute of Statistics and Economic Analysis) revealed that the department of Donga, to which the Commune of Bassila belongs, was, between 2015 and 2019, the most affected by the worsening of the monetary poverty index[1] which rose from 36.4% in 2015 to 43.3% in 2019 (INSAE, 2020). During the same period, the non-monetary poverty index[1] increased from 18.6% to 22.9% (INSAE, 2020). As the majority of the department's population is rural, these INSAE figures corroborate the deterioration of the livelihoods of rural populations, which are mainly based on agriculture, livestock, and the exploitation of non-timber forest products.

In Bassila, more than 80% of the active population works in agriculture, fishing and hunting; trade, catering and accommodation, manufacturing, transport and communication and, building and public works occupy the rest of the population (INSAE, 2013).

In the neighbouring zones of the classified forests of Bassila and Pénessoulou, crop production activities mobilize 95.7% of households; they are followed by animal production (4.0%) and the other sub-sectors share less than 1% of jobs. Crop and livestock production activities are essentially dependent on the spatial and temporal distribution of rainfall and are therefore exposed to hydro-climatic variations and other extreme weather phenomena. In general, the farms are of the family type with 60% of the cultivated area not exceeding 3 ha (Table 2). These farms fall into two categories: (i) farms without livestock (neither small ruminants nor cattle), and (ii) agro-pastoral farms.

[1] ''To measure income poverty, the standard of living of individuals (annual consumption per capita) is assessed and a poverty line is defined by which each individual is categorized according to his or her position (below or above the line). This approach is analyzed according to the usual indicators that are the incidence, depth and severity of poverty. According to the EHCVM 2019, the overall annual poverty line is estimated at USD 411. This threshold is composed of a food component (USD 245) and a non-food component USD 166) '' (INSAE, 2020). ''From a non-monetary point of view, poverty is apprehended through a composite index of living standards. This indicator reflects the general comfort in which households live (housing, possession of durable goods and hygiene). '' (INSAE, 2020)

Table 2 : Area of land cultivated during the 2016/2017 season in Bassila

	<1 ha	1 to 2 ha	2 to 3 ha	3 to 4 ha	4 to 5 ha	5 and more
Bassila	12,0	28,7	19,3	17,3	7,3	15,3

***Source** : INSAE & PAM, 2017*

The main annual crops are maize, yam and cassava, followed by small millet, rice, sweet potatoes, taro, cowpeas, soybeans, voandzou, goussi, sesame, tomatoes, chili pepper, okra, cotton, and tobacco. The exploitation of cashew trees has taken on a particular importance since the 1990s with the boosting of the cashew nut export trade.

Poultry and small ruminants are raised by the majority of the population, while cattle are raised by a minority of Fulani. Cattle breeding by indigenous people is marginal compared to transhumant breeders from the northern region of Benin and neighboring countries who have the largest herds.

The exploitation of wood products from forests (timber, firewood and charcoal) is governed by current national regulations (national forest policy of June 2012; Law No. 98-030 of February 12, 1999 on the framework law on the environment in the Republic of Benin, etc.). The number of loggers in the classified forests of Bassila and Penessoulou is limited because of the investment required for this activity.

Timber is produced in the form of planks, bastings, rafters and boards. The species generally sawn are *Khaya senegalensis*, *Khaya grandifoliola*, *Milicia excelsa.* The exploitation and commercialization of the timber drained to the south of the country constituted a very important source of income for the minority who were in charge of it. These species are practically extinct in the area and now species such as *Isoberlinia sp Diospyros mespiliformis*, and *Anogeissus leiocarpa* are exploited. *Afzelia africana* and *Pterocarpus erinaceus* are prohibited from exploitation.

Firewood comes from cleared fields and sometimes from tree and shrub cuts in the savannahs around the villages. The sale of firewood in piles (sometimes in steres) - bound for the South (Bohicon, Cotonou), the North (Djougou, Natitingou) and even Burkina Faso - along the main roads is the activity of the women.

Charcoal is exploited in wood processing units installed in the region since the 1990s. In addition to dead wood, which was exclusively transformed, green wood is currently used more and more because the market is 3 flourishing. The price of a 75 kg to 100 kg bag of charcoal has risen from USD 0.67 - 0.83 francs in 1993 to USD 3.33 in 2010 and USD 5.00 in 2017. Increasingly perceived as a profitable activity, the manufacture of charcoal induces a strong deforestation that has adverse effects on private forests.

The non-timber products exploited by the local populations of the classified forests of Bassila and Penessoulou are essentially leaves, flowers, fruits, medicinal products, lianas, honey and game.

The roots of *Zanthoxylum zanthoxyloides* have medicinal properties, especially for the mother in labor. They are sought after in the forests and their exploitation would hardly harm the life of the tree. They are exported to urban centers (Cotonou, Djougou).

Saba senegalensis vines are regularly harvested and transformed by women into sponge and sold on local markets and elsewhere (Cotonou in Benin, Sokode and Afem in Togo). The honey, obtained in a traditional way, by treating the bees with smoke in the cavities of tree trunks or in the hives installed in the forest, is sold on the local market and in the South of the country.

Game hunting is part of the habits of the neighbouring populations. It is practiced in all seasons, particularly during the dry season, because the conditions for movement and observation are more favorable during this period. The means used vary from metal jawed traps to rifles. In addition to self-consumption, game constitutes a significant source of income in the household economy.

Processing activities are carried out by women. They involve the fruits of the néré, shea and Pentadesma trees, from which néré mustard, black soap, cosmetics, shea butter and Pentadesma butter are respectively produced and sold on the local and international markets. Shea, tamarind and oil palm fruits are also sold without processing on the local market and even on the international market for shea.

Women interviewed during the stakeholder consultation for the preparation of this full project document emphasized the difficulties of néré and shea fruits. Indeed, compared to the last thirty years, it is necessary to travel longer distances for a less abundant harvest.

Environmental context

With a natural vegetation cover of 5643.89 km² in 1979 (open forests, islands of dense dry forests, forest galleries, classified forests, wooded savannahs, tree savannahs, shrub savannahs, and grassy savannahs), i.e., 499.7% afforestation, the Commune of Bassila was found in 1986, 2006, and 2017 with afforestation rates of 90.7%, 86.3%, and 73.2%, respectively (Akondé, 2015; Commune of Bassila, 2017; Gbedahi *et al.* 2019, DGEFC, 2019 and Figure 4). This strong regression of natural formations (26.5%) in about forty years is justified by the establishment of human settlements (villages and hamlets), the extension of anthropogenic plant formations (plantations, mosaics of crops and fallows), and the adverse effects of climate variability and extreme weather events to which many plant species have not been able to adapt.

According to the same sources, the population of the Commune of Bassila doubled between 2002 and 2017, while the national population increased by barely half. The area of villages and other settlements, and that of fields and fallow land and plantations have increased by 150%, 342% and 528% respectively. As for climate variability, it has manifested itself in the rarefaction, or even disappearance in some places, of species such as *Afzelia africana* and *Khaya senegalensis, which* are already on the Red List of the International Union for Conservation of Nature (IUCN) and are critically endangered in Benin.

The regression of natural formations is accompanied by a reduction in the ecosystem services provided by the forests to the local populations.

In order to limit the loss of ecosystem services, the Forest classification bylaws, issued by the colonial administration, limited the use rights of the local populations essentially to the collection of dead wood and the harvesting of fruits and food and medicinal plants. The access of the populations to the forests for other uses was prohibited. It was therefore difficult for these populations to respect the law outside of their vital interests. Thus, the consequences of the anarchic incursions of certain individuals into classified areas were damaging to both the forestry administration and local communities.

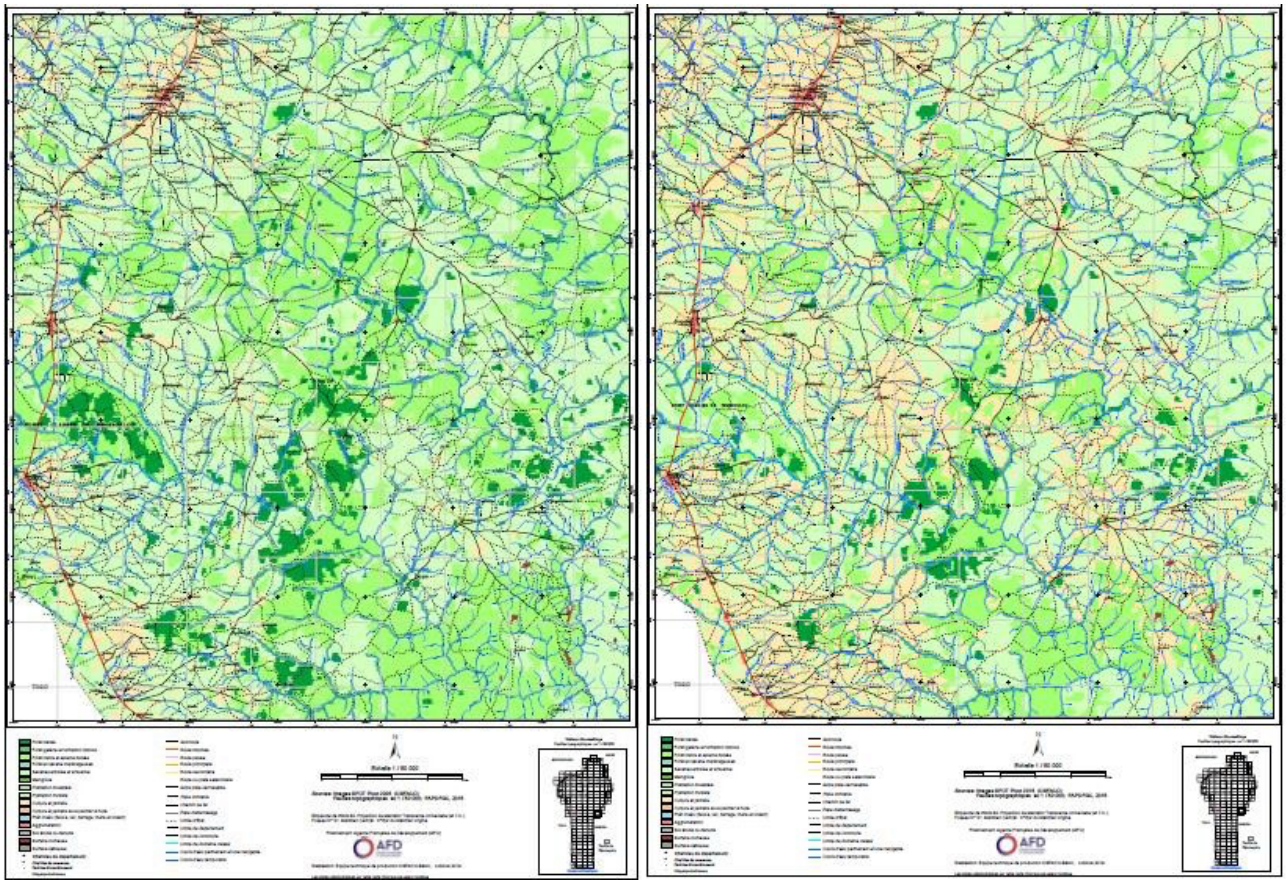


Figure 4 : Land use of the Pénessoulou classified forest between 2005 (left) and 2015 (right).

Source: *DGEFC (2019)*

This is why Law No. 93-009 of 2 July 1993 on the forest regime in the Republic of Benin instituted the principle of participatory management of classified forests. The implementing decree[2] outlines the purpose of it. According to Article 26 of the decree, "sustainable and participatory forest management must, in an integrated manner, make it possible to (i) meet the country's current and future socio-economic, cultural and ecological needs, in the interest and with the assistance of the population, and (ii) ensure the preservation of the environment and the conservation of biological diversity in the long term. Local communities are thus empowered to situate the satisfaction of their current and future needs within a framework that integrates their own interests, the interests of the environment and the interests of the nation as a whole, regardless of the sectors of activity considered: food or cash crops, market gardening, livestock, fishing, beekeeping, processing, etc. In addition to the ecosystem services provided by the classified forests of Bassila and Penessoulou, these communities have access, among other things, to the products of thinning of forest stands. These are the poles from the first two thinnings and the slash from the third thinning, the thinning of trees, and the regeneration cuts. However, in classified forests, practices such as the harvesting of teak leaves in young plantations, the traditional harvesting of honey using fire, and

[2] Implementing decree of the law on the forestry regime in the Republic of Benin: Decree n°96-271 of July 2, 1996

phytosanitary control using pesticides are still subject to safety precautions for plantations, plant stands and animal biodiversity.

Climate change context

Past and current climate variability

As outlined in the **Project Overview** section, Benin-wide efforts have been undertaken to document climate change occurrence, impacts, and adaptation and mitigation efforts. Benin's climatology over the last 100 years shows a succession of wet (1921-1960), dry (1970-1980), transitional (1990), and a tentative trend towards the rainfall of the wet decades (2000-2010) (Badou *et al*., 2021). A reduction in the number of rainy days correlated with an increase in the length of pockets of drought and the severity of extreme rainfall has been reported in the literature (TCN, 2019, Agbossou *et al*., 2012; Obada *et al*., 2017). Concomitantly, an increase in average temperature of about 1.3°C compared to the 1981-2010 normal is observed (TCN, 2019). In northern Benin, over the period 1970-2010, minimum and maximum temperatures increased by 2.4°C and 1.2°C respectively suggesting a twice as rapid increase in minimum temperatures (Badou *et al*., 2016) and presaging warmer night temperatures.

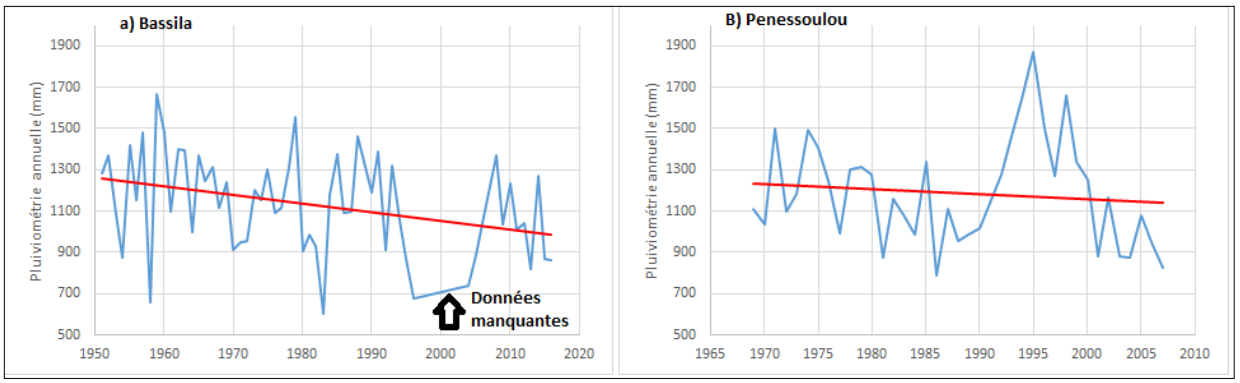


Figure 5: Interannual variability of rainfall at Bassila (a) and Pénoussoulou (b) according to available data. In red, the trend curve.

***Source**: Agence Méto-Bénin*

The interannual variability of rainfall in the commune of Bassila is similar to that observed at the national level. As shown in the figure below, for the rainfall stations of Bassila and Pénessoulou, with a few exceptions, the wet decades of the 1950s and 1960s were followed by less wet to dry decades.

At the Bassila station (see Table 3), there is a frequent decrease in annual rainfall compared to the 1981-2010 climate normal of up to 250 mm and a less frequent increase in annual rainfall of around 205 mm compared to the climate normal. This suggests frequent droughts in the case of a decrease in rainfall and a few floods in the case of an increase in rainfall.

Table 3 : Annual rainfall deviation from the climatic normal (1981-2010) at Bassila station

Period/Year	1981-2010	2011	2012	2013	2014	2015	2016
Annual rainfall (mm)	1069	1009.1	1040.9	822.2	1273.7	871.5	863.1
Deviation from normal (mm)	-	-59.9	-28.1	-246.8	204.7	-197.5	-205.9

As for temperatures, the synoptic station at Savè (the closest to Bassila, which has only rainfall stations) shows that minimum and maximum temperatures have increased with average amplitude of about 2.5°C (Figure 6).

Over the last decade, the minimum and maximum temperature departures from the climatic normal (1981-2010) have reached peaks of 0.9 °C and 1.9 °C respectively (Table 4).

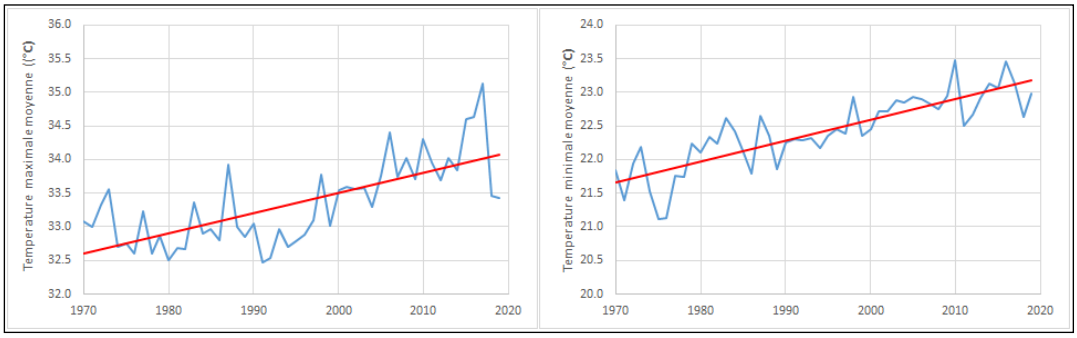


Figure 6 : Interannual variability of maximum (left) and minimum (right) temperatures at the synoptic station of Savè.

***Source** : Agence Méto-Bénin*

Table 4 : Minimum temperature and Maximum temperature

Period/Year	1981-2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Minimum temperature										
Average min. temperature (°C)	22.5	22.5	22.7	22.9	23.1	23.1	23.5	23.1	22.6	23
Deviation from normal (°C)	-	0	0.1	0.4	0.6	0.5	0.9	0.6	0.1	0.5
Maximum temperature										
Average max. temperature (°C)	33.3	34.0	33.7	34.0	33.8	34.6	34.6	35.1	33.5	33.4
Deviation from normal (°C)	-	0.7	0.4	0.8	0.6	1.3	1.4	1.9	0.2	0.2

Statistical analysis shows that compared to the climate normal, the last decade has seen a frequent decrease in annual rainfall and an increase in average minimum and maximum temperatures. The perception of climate variability by the populations consulted corroborates the statistical analysis of climate data. Indeed, compared to the last thirty years, for the said populations the last ten years have been marked by the scarcity of rainfall, late rains[3], increased frequency and severity of heat waves and strong winds.

[3] «Climate change is the mess of rain» (words of the former Chief of arrondissements of Pénésoulou during the consultation session of stakeholders in Pénessoulou on March 26, 2021)

Effects of past and current climate variability

The vulnerability matrix below (Table 5) summarizes the effects of past and current climate variability as perceived by the neighbouring populations of the Bassila and Penessoulou classified forests. Three hazards are mentioned by the populations: (i) the random onset and cessation of the rainy season associated with an increase in the length of pockets of drought that can reach 3 to 4 weeks even during the wettest months of July and August, (ii) the increase in the frequency and severity of excessive heat, and (iii) the increase in the frequency and severity of violent winds. The effects of these hazards are amplified by the sensitivities of deforestation induced by extensive agriculture, charcoal manufacturing and excessive pesticide use.

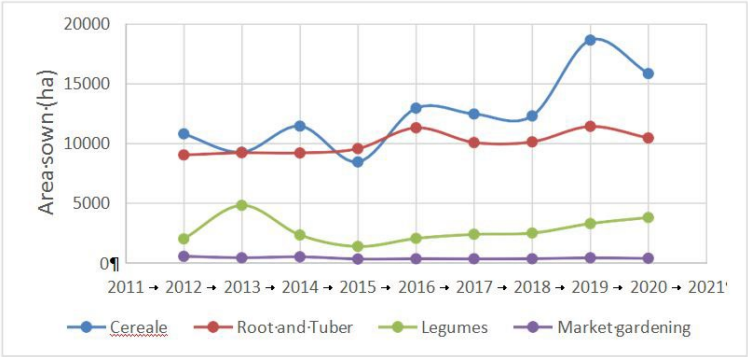
Table 5 : Vulnerability Matrix

Climatic variable	Hazards / Population perception	Elements of sensitivity	Direct and indirect impacts
Rarity of rainfall Late rains	Changes in the timing of the rainy season that have become so random that people are confused about planting and harvesting Thirty years ago, people made a clear distinction between the rainy season (June to September or even October and November), the dry season (February to May) and the harmattan period (mid- November to January). Over the past ten years, this calendar has been disrupted, with the rains starting early (now in March or April) and ending early (now in September). Increase in the length of dry pockets (3-4 weeks during the rainiest months of July and August)	On crop production (soybeans, corn, shea, yams, sorghum, market garden produce, cashew nuts)	
		Leasing of rural land to individuals or groups of individuals called "agricultural settlers" who clear forests and practice extensive agriculture.	• Disruption of planting and harvesting activities resulting in reduced yields of priority crops • Sorghum: abandonment of sorghum cultivation (high sensitivity to water stress), which was previously sufficiently produced in the commune • Maize: 30-37% decrease in maize production (18 bags/ha previously vs. 11-12 bags/ha today for some producers; 33 bags/ha previously vs. 20-26 bags/ha today for other producers) • Cassava: 60% decrease in the production of cassava used by women who transform cassava into gari (before, 3 feet of cassava allowed them to obtain 2 to 3 bags of gari, whereas today, 3 feet only allow them to obtain 1 bag of gari) Nowadays, 3 feet of cassava only allow to obtain 1 bag of gari) • Cashew: Early rains in March (like the one on March 10, 2021) disrupted the ripening process and were therefore harmful to cashew nuts • Vegetable growing: now only possible on the banks of waterways • Shea: a decrease in harvesting of about 80% (it is now necessary to travel about 10 km to fill 2 bags, whereas previously it was necessary to travel just 1 km to fill 10 bags) • Honey: drop in honey production of about 57% (nowadays a hive produces 5- 10 L against 15-20 L before) • This drop in yield forces the population to storm the surrounding forests.
Temperature	Increased frequency and severity of excessive heat (heat wave) Thirty years ago, the heat peak covered the period of March-May, but, for the last ten years, already in February the heat peaks are reached) It is felt 12 months out of 12 even during the harmattan (cool but dry wind) which was previously associated with high minimum temperatures Only March was the month of excessive heat Previously, the months of December to February were the harmattan period with intensive cold. This is no longer the case today	On crop production and forest resources	
			• Increased evapotranspiration and water needs of crops which are not met leading to a continuous decrease in yields forcing populations to storm the surrounding forests • Exacerbation of vegetation fires (in terms of damage and area) • Greater difficulty in controlling the spread of wildfires
		On animal production	
			• Increased evapotranspiration and water needs of animals forcing pastoralists to drive their herds to the forests • Decreased laying capacity of guinea fowl due to excessive heat and poor watering

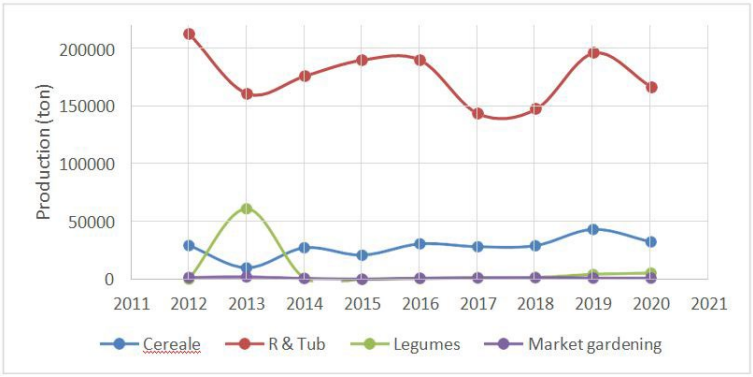
Strong winds	Strong winds/ Increased frequency and severity of strong winds) In the past, strong winds were cyclical (3 to 5 years and at the beginning of the season); today they are more regular and violent due to the regression of the vegetation cover which plays a role of windbreak.	Pesticide Use; deforestation	• Fall of mahogany flowers and unripe nuts leading to a decrease in cashew harvesting. Despite plant improvement, the yield today is only 500-600 kg/ha compared to 390 kg/ha before. As a comparison, (before) and today. () in Ivory Coast, nowadays, the yield is about 1200 kg/ha. • Negatively impacts the flowering process and, in turn, the possibility for bees to produce honey • More pronounced uprooting and destruction of crops

As indicated in the last column of Table 5, people's livelihoods (crop and livestock production, processing activities) are severely impacted. These results of the stakeholder consultation are in line with those of the 3rd generation Commune Development Plan of Bassila according to which the agricultural sector is the most vulnerable to the effects of climate change followed by wetlands (rivers, water bodies and lowlands), forests and finally human settlements and health (Commune of Bassila, 2017). Also, agricultural statistics from the Departmental Directorate of Agriculture and Livestock (DDAEP) corroborate the decline in food crop yields noted by the populations consulted (Figure 7). Indeed, as shown in Figure 7, the increase in plantings (Fig. 7.a) has not been translated into an equivalent increase in production (Fig. 7.b), which translates into a decrease in yield or, in some cases, a stagnation of yield (Fig. 7.c).

(a)



(b)



(c)

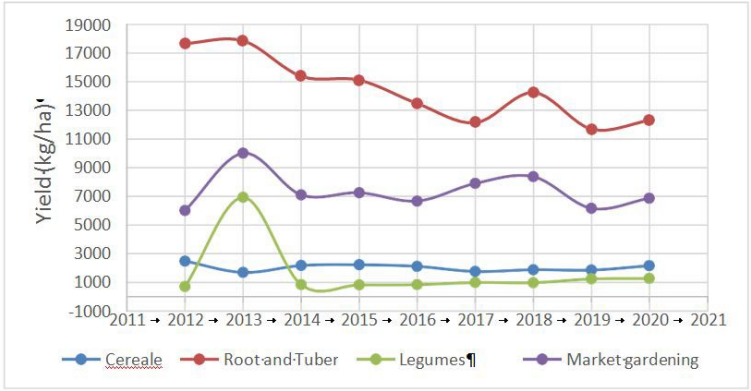


Figure 7 : Changes in areas planted (a), production (b) and yield (c) of food crops in the commune of Bassila between 2011 and 2020.

***Source**: Commune of Bassila (2017) DDAEP/Atacora, Natitingou data (2021)*

Since the agricultural sector occupies the vast majority of the populations surrounding the classified forests of Bassila and Penessoulou, climate change, by negatively impacting the livelihoods of the populations, is therefore a major factor in the disruption of the balance between the satisfaction of the essential needs of the surrounding communities and the standards of sustainability of forest resources. This disruption could worsen in the coming decades depending on future climate variability.

Future climate variability

In general, compared to the normal period 1981-2010, climate models project a delay in the onset of the rainy season and an early end to the season, as well as an increase in monthly rainfall during the rainy season, under the RCP2.6, RCP4.5 and RCP8.5 scenarios by 2030, 2050, 2070 and 2080 (Figure 8). Under the same conditions, the projected monthly temperatures show an almost continuous increase in maximum temperatures at the same horizons and a smaller decrease in minimum temperatures, except for the pessimistic scenario RCP8.5 where an increase in minimum temperatures is also projected (Figures 9 and 10).

With regard to precipitation, the outputs of the CCCMA-CANESM2 and CSIRO-mk3.6.0 models[4], used in the framework of Benin's Third National Communication on Climate Change, give a good qualitative indication in the Bassila and Penessoulou arrondissements (Figure 8). Due to the still weak capacities of the CMIP5 and CMIP6 models to reproduce the characteristics of the West African monsoon, the uncertainties on the projected precipitation in West Africa are still too high to draw quantitative conclusions, as the actual values can be between -40% and +80% of the values produced by the models (Flato *et al.*, 2013 ; Deme *et al*., 2015 ; WMO, 2018). The same is true at the national level.

Indeed, under the reference climate scenarios RCP2.6, RCP4.5, RCP8.5 and the socio-economic scenarios SSP1 and SSP2, the climate projections carried out in Benin by means of the CSIRO and CCCMA climate models reveal, for the different exposure units considered (agro-ecological zones, watersheds, tourist zones, health zones, etc.), annual rainfall amounts that show an overall downward trend by 2050 and an upward trend in the more distant future, except under the RCP4.5 scenario, where the two (2) scenarios show an upward trend.), annual rainfall heights show an overall downward trend by 2050 and an upward trend in the more distant future, except under the RCP4.5 scenario, where the two (2) models show the opposite situation and in some cases where CCCMA shows a trend that is the opposite of that of CSIRO (MCVDD, 2019, 2021; MAEP and GIZ, 2020). The singularity of the RCP4.5 scenario is further demonstrated in the framework of the GIZ PAS-PNA project where Akponikpè *et al*. (2019) established that, globally in Bassila, annual rainfall would experience an upward trend of around 1 to 20%, while a downward trend of around 1 to 5% is possible[5].

Regarding the future changes in annual precipitation in the project area, the national consensus based on the three climate scenarios RCP2.6, RCP4.5 and RCP8.5 and the two socio-economic scenarios SSP1 and SSP2 is the continuation of the current downward trend until the 2050s followed by an increase that could continue until 2100 (MCVDD, 2019, 2021).

[4] Projections are the average of the cccma-canesm2 and CSIRO-mk3.6.0 model outputs

[5] Among the four regional climate models that were used in the study, three (REMO/MPIESM, RCA4/IPSL, and RACMO22 T/ECEARTH) indicate an increasing trend while only one (CCLM4.8/HADGEM2) indicates a decreasing trend of 1 to 5% in annual rainfall.

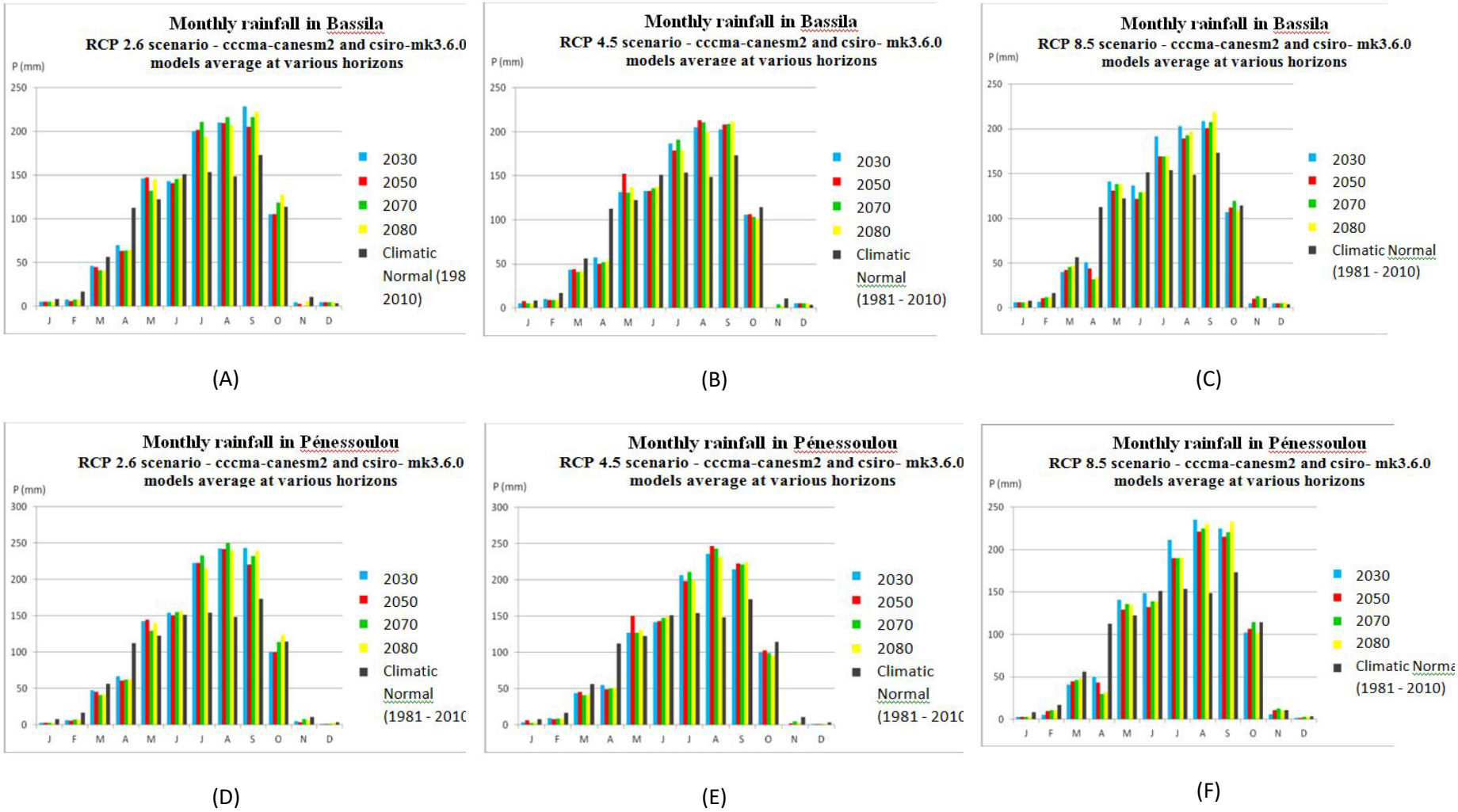
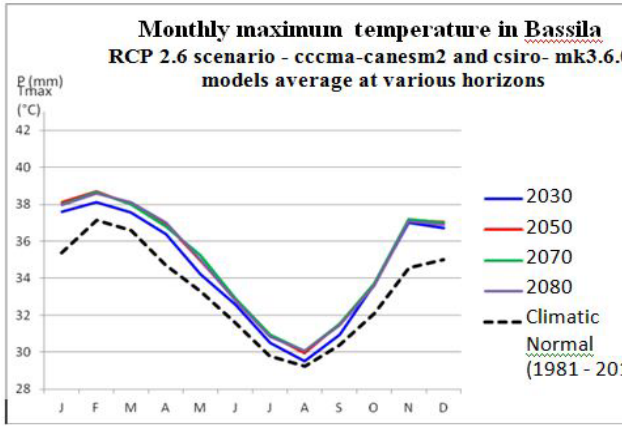
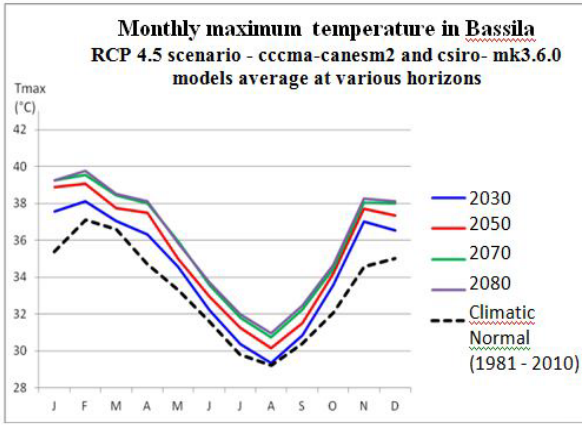


Figure 8 : Monthly rainfall of the climate normal (1981-2010) and average rainfall projections from the CCCma-canESM2 and CSIRO Mk3 6.0 climate models under the *RCP.2.6, RCP.4.5 and RCP.8.5 scenarios* at Bassila and Pénessoulou.

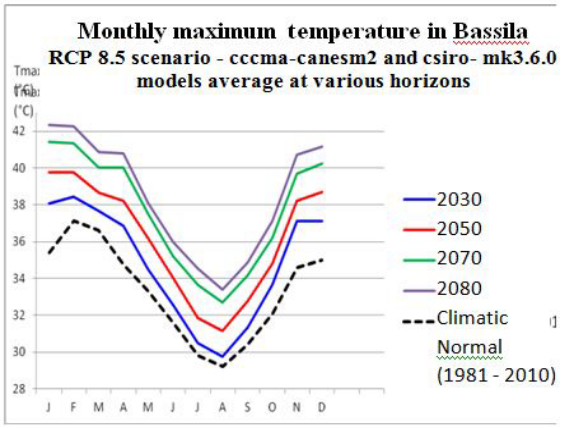
As for temperatures, the upward trend observed over the past decades could continue in the future, in this case for maximum temperatures as shown in Figures 9 and 10. Departures from normal could reach a minimum of 1°C and 2.5°C respectively for the months of August and January.



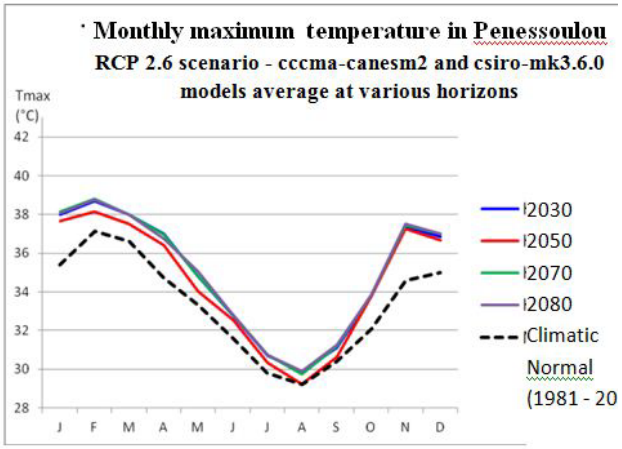
(A)



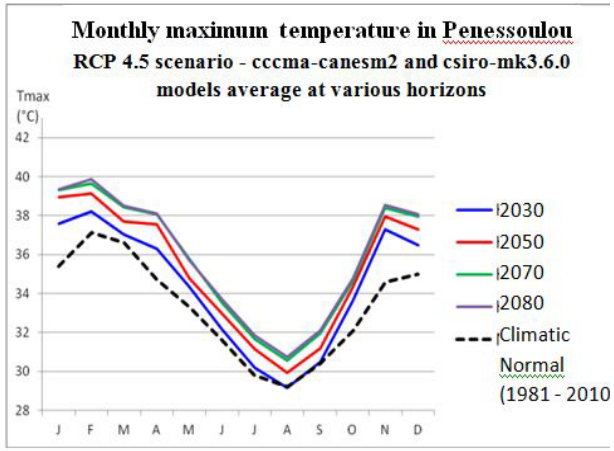
(B)



(C)



(D)



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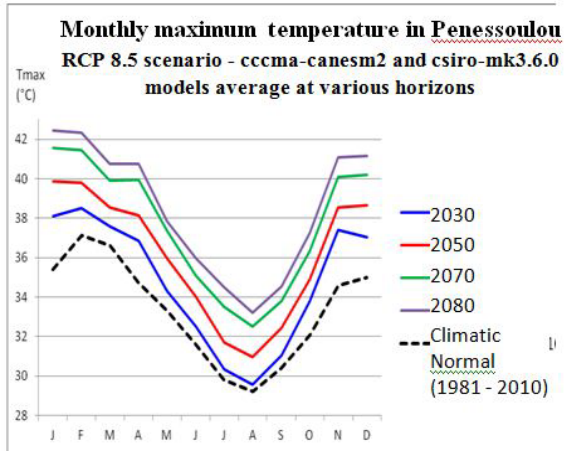

(F)

Figure 9 : Monthly maximum temperature of the climate normal (1981-2010) and average monthly maximum temperature according to the CCCma- canESM2 and CSIRO Mk3 6.0 climate models under the RCP.2.6, RCP.4.5 and RCP.8.5 scenarios at Bassila and Pénessoulou

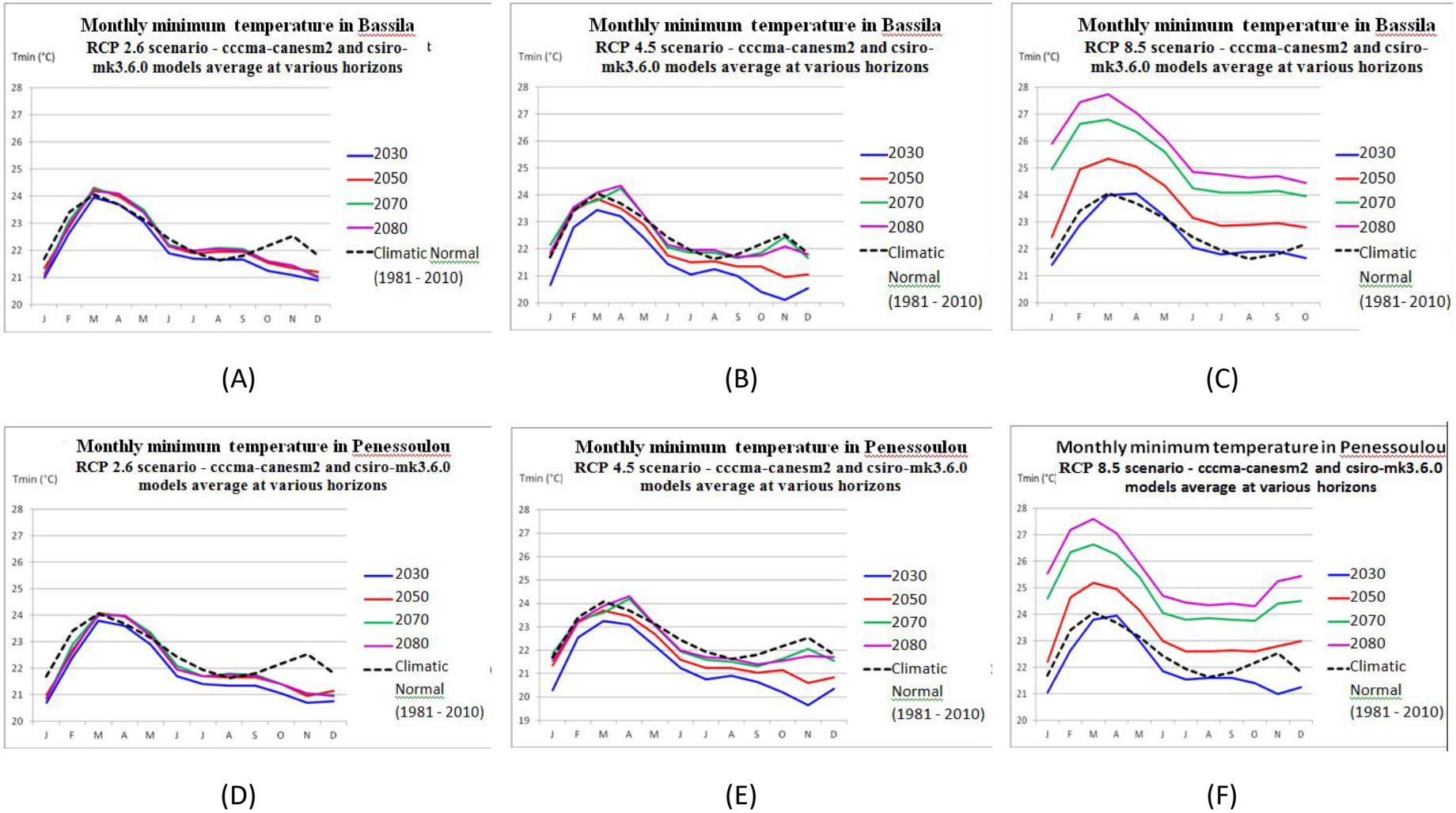

Figure 10 : Monthly minimum temperature of the climate normal (1981-2010) and average monthly minimum temperatures according to the CCCma- canESM2 and CSIRO Mk3 6.0 climate models under the *RCP.2.6, RCP.4.5 and RCP.8.5 scenarios* at Bassila and Pénessoulou.

The analysis of future climate variability therefore indicates a future trend of increasing precipitation and maximum temperatures. The trend is mixed for minimum temperatures, except in the most pessimistic scenario (RCP.8.5) where it is clearly increasing.

Effects of future climate variability

While the general trend in annual rainfall has been downward in Bassila Centre and Pénessoulou arrondissements since the 1960s (Figure 5), the monthly rainfall projections show a systematic upward trend by 2030, 2050, 2070 and 2080 during the main months of the rainy season (May to September). Although projected rainfall is lower in March-April and October-November, reflecting the delayed rainy season, its early ending and the shortening of the rainy season, a phenomenon already observed by the populations (Table 5), we are led to note the break in the trends of observed and projected rainfall.

According to Roehrig *et al*. (2013) and Deme *et al*. (2015), this could only be due to the biases caused by the uncertainties common to all CMIP5 models that guided the 5th IPCC report in modeling the West African monsoon and that limit the quality of projected rainfall. It is therefore difficult to rely directly on these projections to anticipate climate change and its impacts on rainfall in West Africa.

A recent study of the vulnerability of the agricultural sector to CC in Development Pole 4 (PDA4)[6] which includes the commune of Bassila, showed that production of most crops would increase in the future, with the exception of groundnuts, soybeans, and cowpeas, for which production could decline (Table 6).

Table 6 : Effects of climate change on the production trend of selected crops in the future (2050 time horizon) compared to the 2011- 2015 period.

Crop	Maize	sorghum	millet	rice	groundnut
Projected production trend*	+	+	+	±	-
Crop	Soybeans	cowpeas	yams	cassava	sweet potatoes
Projected production trend	-	-	±	+	+

**The signs +, - and ± mean an increasing, decreasing and mixed trend respectively*.*

***Source** : Akponikpè et al., 2019.*

Apart from the outputs of climate models dealing with slow weather phenomena, with high uncertainties on projected precipitation and its effects, natural systems and human activities such as agriculture are essentially vulnerable to extreme climatological phenomena and variations in precipitation and temperature during the active vegetation period (MEPN, 2008; IPCC, 2014).

The projected increase in temperature, in this case maximum temperatures (of the order of 2.5°C), combined with an increase in the frequency of strong winds (see Table 5 of the vulnerability matrix) will induce an increase in evapotranspiration and, in turn, an increase in the water requirements of crops and livestock that could cancel out the effects that would be expected from the increase in rainfall. In other words, the increase in water needs of crops and livestock (induced by the increase in temperature) may not be compensated for by the increase in rainfall, especially in the case of poor distribution as indicated by the populations (see Table 5 of the vulnerability matrix).

[6] PDA4 includes the departments of South Borgou, Donga and Collines

On the scale of the commune of Bassila, future climate variability will affect approximately 512,162[7] people, essentially consisting of farmers, herders, beekeepers, nurserymen and women who process agricultural products (shea butter, cassava, soybeans, etc.) by 2050. Indeed, the activities of more than 90% of the population are dependent on the climate (rain in particular). In spite of the forecast increase in rainfall, increase in temperature could exacerbate the already difficult situation of people living near the classified forests of Bassila and Penessoulou and lead to food insecurity, provided that measures are taken to build their resilience.

Project targets and beneficiaries

The populations of Bassila are already experiencing the consequences of CC. Climate projections indicate that in a context of population growth[8], the situation could worsen in the future. This project aiming at building the resilience of the populations living in the classified forests of Bassila and Penessoulou will have direct and indirect positive impacts. By making people's livelihoods resilient to CC, the entire local and regional economy will be positively impacted. The same applies to the pressure on forest areas, which will be significantly reduced thanks to the National Environment and Climate Fund (FNEC), which supports environmental protection and climate change initiatives in Benin. This will benefit the National Timber Company SONAB (formerly the National Timber Office ONAB), which is in charge of the management of the classified forests of Bassila and Penessoulou, and the General Directorate of Water, Forests and Hunting (DGEFC). Similarly, non-governmental organizations (NGOs)9 operating in the two arrondissements in the area of environmental protection and sustainable management of natural resources and involved in adaptation to CC will be indirect beneficiaries. Direct beneficiaries will be community-based organizations such as:

- the Participatory Forest Management Committees (COGEPAF) of the Bassila and Pénessoulou arrondissements,
- Food crop producers, including market gardeners in the two arrondissements;
- the Village Cashew Nut Producers' Cooperative (CVPA) of Pénessoulou
- Groups processing cassava into gari and derivatives; groups of shea nut collectors; groups processing shea nuts into butter and groups of producers of plants and seeds (nurserymen);
- the Association of Beekeepers of the two arrondissements;
- the collectors of medicinal plants in the two arrondissements;
- the association of breeders including hut breeders[10] and the association of hunters of the two arrondissements.

[7] Figure determined by projecting the 2013 population (latest census in Benin) to 2050. In 2013, Bassila had 130,091 inhabitants with a growth rate of 3.96 (RGPH4). It is assumed that 90% of this population is engaged in a climate- sensitive activity

[8] With a natural growth rate of 3.96% in 2013 (RGPH4), the population of Bassila will quadruple by 2050

[9] This is the case of Alpha et Omega Environnement, Centre International d'Ecodéveloppement Intégré (CECODI), Association de Gestion Durable des Ressources Naturelles (AGEDREN), Association pour la Protection des Forêts Naturelles du Bénin (APROFONB - BENIN)

[10] « Hut breeders are categories of breeders who buy young ruminants (cattle, sheep, goats), fatten them for a time in pens to resell them » (PDC, 2017).

It should be noted that the beneficiary community organizations will be able to share the lessons learned from this project with community organizations in the other two arrondissements of Bassila (Manigri and Alédjo) and beyond.

Specifically, the project actions that will impact the beneficiaries include:

1) capacity building of the most vulnerable small-scale farmers (farmer, breeder, fish farmer, beekeeper) on good practices of adaptation to CC;
2) development of value-added chains of the sectors to improve and diversify the sources of income of the most vulnerable communities;
3) reinforcing the local governance and management framework for adaptation to CC.

The project is therefore structured around three components or three major phases.

Phase 1: By negatively impacting the livelihoods of small farmers, CC is an additional constraint in the fight against poverty and calls for urgent actions to reverse the situation. The National Agricultural Census was carried out in 2018-2019 (MAEP 2021). Based on the data collected in the Commune of Bassila, a minimum area of 3,300 ha was set for all the samples of small farms to benefit from Project interventions in the two Arrondissements, in order to be statistically satisfactory. These interventions will focus on the rehabilitation of degraded soils, land and water conservation, improved production techniques and water management on irrigated perimeters. They will also include innovative techniques for managing water deficits in fields of maize, sorghum, cassava, yams, soybeans, cowpeas and other food crops for which small-scale farmers rely exclusively on rainfall as their sole source of crop water. Based on the structure of the farming businesses, it is estimated that 1,000 players will be directly involved in the implementation of this phase of the Project[11]. The stakeholder groups concerned are :

- Producer groups: training/retraining on measures to adapt the agricultural sector to CC, in particular Climate Smart Agriculture (staggered and repeated sowing, use of short-cycle varieties; modification of the order of sowing), water and soil conservation techniques (stone barriers, half-moons, dikes, zaï), integrated water resource management to limit conflicts of use of the reservoir (see above) and limit pollution, and innovative techniques for managing water deficits in rain-fed agriculture (increased easily usable moisture in the soil);
- Producer groups (including market gardeners): Provision/support of equipment and materials (irrigation kits, small tools, bags of compost, etc.) for the implementation of good practices for adaptation to CC ;
- Producer groups: reinforcing their supervision for the monitoring of technical itineraries and the adoption of SAP (Improved Production System) practices,
- Vegetable farmers, livestock breeders, women's groups that process agricultural products: construction of a water reservoir with market garden development to take advantage of the projected increase in rainfall, to buffer flooding, and to build up the storage necessary to compensate for irregular rainfall. On the basis of criteria defined during the consultation of the

[11] See Annex 13.

populations (proximity of the forest, presence of a stream or river to ensure the filling of the reservoir, and existence of a group of market gardeners), several sites are eligible ;

- Nurseries, seed growers and producers of food products: the establishment of a mechanism for revolving seeds and plants adapted to CC (corn, cassava, soybeans and market gardening). The two arrondissements have associations and individuals in the field of seedling and seed multiplication.

Phase 2: The development of value-added chains of the sectors aims at improving and diversifying the sources of income of two thousand people from the most vulnerable communities through:

- supporting producers in the creation of innovation platforms for the maize, cassava, soybean, market gardening and cashew nut sectors in collaboration with the Bassila Town Hall;
- training members of beekeeping groups and independent beekeepers in the two arrondissements on modern beekeeping techniques that respect the environment;
- providing beekeeping groups with kits (Kenyan hives, protective suits, etc.) to boost honey production in the two arrondissements;
- Support for the promotion of the shea butter sector for the benefit of women's processing groups (structuring of groups, increase in the capacity to collect shea nuts, and provision of tricycles and semi-industrial units to increase collection and processing capacity).

Phase 3: Reinforcing the local governance and management framework for adaptation to CC has a dual purpose. First, it allows the sustainability of the achievements of this project. Second, the project's achievements can be capitalized on for other projects and with other actors and stakeholders on other themes and for other localities in the commune. This phase, which will have an impact on approximately 100 people, will include:

- training communal actors on CC-agriculture-forestry issues. In order not to repeat what is already known, such training will be tailored and based on the training needs expressed by the beneficiaries themselves;
- integrating gender approach into CC adaptation at the local level;
- developing a guide for the implementation of adaptation to CC for the benefit of actors and rural populations living near classified forests;
- raising awareness among teachers, schoolchildren, opinion leaders and community radio hosts on good practices for adaptation to CC;
- setting up or improving the community early warning system with the aim of periodically disseminating climate information and preparing for action in the event of floods or prolonged droughts;
- promoting communal, community and private forests as an adaptation measure to the projected increase in rainfall to limit flooding.

Climatic justification for the Project's activities

It has thus emerged that the communities living alongside the Bassila and Penessoulou classified forests are facing current climatic risks that will become more acute in the future, in relation to the major factors of water, temperature and wind. The way in which these factors are combined, whether they manifest themselves slowly or violently, and the time of year at which they occur, determine the severity of the risks

to ecosystems and human communities. Drought and floods are the first climatic hazards to attract the attention of the region's populations. In second place comes the wind, characterized either by its violence, responsible for the fall of trees, the lodging of cereals or the lifting of the roof of dwellings, or by the humidity of the air, the dry wind favoring the fall of flowers and fruits, certain climate-sensitive diseases, and vegetation fires.

Drought and floods are the cause of severe water deficit in cultivated plants, often resulting in yield and production losses, and sometimes the death of the entire crop. The effects of severe water shortage are the same, and are feared by all small-scale farmers, either because the water available to the roots is not available in the soil (drought), or because the roots are asphyxiated in waterlogged soils where water takes the place of air (flooding): failure to meet crop water requirements In the context of long-term climate change, adaptation options must aim to control the interface between the climatic factors that control crop water deficit, in particular through agro-climatological practices adapted to local conditions, within the reach of the most vulnerable small-scale farmers, livestock breeders and women's groups, who are the direct beneficiaries of this Project.

Depending on the local context, strategies for identifying concrete adaptation measures should aim to (i) either reduce the sensitivity of communities' livelihoods to current and future climate stimuli (soil, water, biodiversity, crops of maize, yams, cassava, groundnuts, sorghum, soya, vegetables, forest seedlings, etc.), (ii) or (iii) develop activities for processing cassava (gari, shea butter, palm nuts (red oil, palm kernel oil), livestock, beekeeping, fish farming, etc.), processing of cassava (gari), shea nuts (butter), palm nuts (red oil, palm kernel oil), livestock, beekeeping, fish farming, etc.), (ii) or strengthening the capacity of organised groups to respond to the current and future negative impacts of climate change (degradation of land, soil and water, loss of biodiversity, disruption of the agricultural calendar, degradation of habitats, drying up of water bodies and watercourses before the start of the rainy season, etc.), (iii) or strengthening the capacity of organized groups to respond to the current and future negative impacts of climate change (degradation of land, soil and water, loss of biodiversity, disruption of the agricultural calendar, degradation of habitats, drying up of water bodies and watercourses before the start of the rainy season, etc.).), (iii) or both strategies at the same time, through training and information sharing, so that the beneficiaries take ownership of the links between the Project's activities and climate factors and are able to continue beyond the Project and independently, the actions initiated within the framework of the Project.

All the activities proposed in this document come under at least one of these strategies.

B. Project/programme Objectives

This project is in line with the objective of the Adaptation Fund «to reduce vulnerability and increase adaptive capacity to respond to the impacts of CC, including variability at the local and national levels». It is also part of the achievement of the vision of the Bassila Town Hall, one of whose major axes for period 2018-2022 and beyond is the «Reduction of the effects of CC and the strong pressure on natural resources».

Indeed, the project aims to build resilience of the local populations of the classified forests of Bassila and Penessoulou whose livelihoods continue to deteriorate significantly due to CC and despite existing endogenous methods of adaptation.

By directing solutions to both producer groups directly impacted by CC and communal agents, integrating both CC adaptation techniques at the farm level and CC adaptation governance at the communal level, the project aims to contribute to solving the problem in its entirety.

The project proposes concrete solutions tailored to the various actors and groups concerned (producers, beekeepers, processors, etc.).

For example, in response to the projected increase in rainfall combined with the irregularity of rainfall and the increase in temperature, it is proposed that rainwater be stored and that water and soil conservation techniques be used to cope with pockets of drought. In doing so, the specific objectives of the project are worded as follows:

1) building the capacity of the most vulnerable small farmers on good practices for adaptation to CC;
2) developing value-added chains (VACs) in promising sectors in order to diversify the sources of income of the most vulnerable communities,
3) reinforcing the local governance and management framework for adaptation to CC.

C. Project components and financing

The project for building the resilience of the local populations of the classified forests of Bassila and Pénessoulou is organized around three components, namely:

- capacity building of the most vulnerable farmers on good practices of adaptation to CC (Component 1),
- development of value-added chains (VACs) in promising sectors in order to diversify the sources of income of the most vulnerable communities,
- reinforcement of local governance and management frameworks for adaptation to CC (Component 3).

Table 7 below presents these components, the related results, outputs and budget.

Table 7 : Project components

Project/Programme Components	Expected Outcomes	Expected Concrete Outputs	Amount (US$)
Component 1 : Capacity building of the most vulnerable small farmers on good CC adaptation practices	**Outcome 1.1**: On-Farm Resilience is built through the adoption of water and soil conservation and land restoration techniques	**Output 1.1.1**:: Farmers are trained on water and soil conservation and land restoration techniques	**284,111**
		Output 1.1.2: The technical itineraries and practices of the improved production system (SAP) are adopted by the farmers.	**230,111**
		Output 1.1.3 : The material capacities of producers are built through support for various equipment (small tools, personal protective equipment, composting bags, sprayers, etc.)	**268,084**
	Outcome 1.2 :Water resources are managed in an integrated	**Output 1.2.1**:Improved storm water storage capacity through the construction of a water reservoir for the benefit of farmers in each arrondissement.	**644,711**

	manner for the benefit of farmers	**Output 1.2.2**:Market gardening developments are carried out in the vicinity of the water reservoirs for the areas allocated to market gardening.	**91,188**
		Output 1.2.3: Farmers are trained on good integrated water resources management (IWRM) practices and on how to manage water use conflicts	**70,611**
	Outcome 1.3: Climate-resilient seeds and plants are available on time	**Output 1.3.1**: Setting up a mechanism for the revolving of seeds and plants adapted to climate change (maize, cassava, soya and market gardening).	**19,188**
		Output 1.3.2: The mechanism for supplying seeds and plants to producers is operational.	**16,688**
Total Component 1			**1,624,692**
Component 2 : Development of value- added chains (VACs) in promising sectors in order to diversify the sources of income of the most vulnerable communities	**Outcome 2.1**: Sources of income of the local populations are diversified through the promotion of corn, soya, cassava and market gardening	**Output 2.1.1**: Producer groups are better structured and are committed to the maize, soybean, cassava and market gardening VACs	**60,438**
		Output 2.1.2:The management mechanism of the innovation platforms of the maize, cassava, soybean, cashew nut and market gardening sectors are in place and operational.-	**52,033**
	Outcome 2.2 : Sources of income of the local populations are diversified through the promotion of the beekeeping sector	**Output 2.2.1**: Modern beekeeping techniques are mastered by beekeeping groups in both arrondissements	**83,111**
		Output 2.2.2 :Increase honey harvesting capacity for beekeepers through the acquisition of kits	**98,688**
	Outcome 2.3 : Sources of income of local women's groups are diversified through the promotion of the	**Output 2.3.1** :Women producers' groups are better structured and are committed to the shea butter VACs	**54,938**
		Output 2.3.2 : The material capacities of women's groups are built for the collection and processing of shea butter through the acquisition of tricycles and semi-industrial shea butter production units.	**78,344**

	shea butter industry		
Total Component 2			**427,552**
Component 3 : Reinforcing the local governance and management framework for CC adaptation	**Outcome 3.1** :The local governance and CC adaptation framework is operational	**Output 3.1.1**--:Communal actors are trained on the adaptation of the agriculture and forestry sectors to CC	**24,205**
		Output 3.1.2 - The guide for the coordination of the local governance and adaptation to CC framework is validated and used by communal actors and communities bordering the classified forests of Bassila and Pénessoulou	**229,540**
		Output 3.1.3 : The gender approach is taken into account in the adaptation to CC at the level of the two arrondissements	**26,344**
	Outcome 3.2 : CC adaptation management is effective in both arrondissements	**Output 3.2.1** : The community early warning system is functional, allowing appropriate measures to be taken in time, in anticipation of extreme weather events	**28,954**
		Output 3.2.2 : Teachers, schoolchildren, opinion leaders and community radio hosts have become aware of and have taken ownership of good CC adaptation practices	**53,369**
	Outcome 3.3. : Enrichment of communal, community and private forests with climate change resilient species	**Ouput 3.3.1 :** Indigenous tree species resilient to climate change and adapted to the edaphic conditions of Bassila are identified and their seeds and seedlings are produced	**43,344**
		Output 3.3.2 : Communal and community forests are enriched and private forests established using CC resilient species.	**12,000**
Total Component 3			**417,756**
4. Total Project cost			**2,470,000**
5. Project execution cost (9,5%)			**234,650**
6. Overall cost of the project			**2,704,650**
7. Project cycle management charges requested by the implementing institution (8,5%)			**229,895**
8. Amount of funding requested			**2, 934,545**

Projected timeline for project implementation

Project duration: 4 years (48 months)

Steps	Projected dates
Start of project implementation	July 2024
Mid-term evaluation (if any)	July 2026
End of the project	July 2028
Final evaluation	October 2028

PART II: PROJECT/PROGRAMME JUSTIFICATION

A. Project components, concrete adaptation activities

Describe the project/programme components, particularly focusing on the concrete adaptation activities of the project, and how these activities contribute to climate resilience. For the case of a programme, show how the combination of individual projects will contribute to the overall increase in resilience.

Through its three successive Communal Development Plans (2005-2009; 2011-2015 and 2018- 2022), the Commune of Bassila has marked its commitment to improving the living conditions of disadvantaged populations (Commune de Bassila 2004, 2010, 2017). The strategic orientations and objectives such as «Distribute wealth equitably», «Improve the quality and accessibility of basic social services for the population» and «Reduce the effects of CC and the strong pressure on natural forests» reflect the willingness of the communal authorities to support the most vulnerable communities in their efforts to fight for survival in the context of CC. These include communities living along the Bassila and Pénessoulou forests, whose livelihoods have deteriorated over the past few decades, largely due to the negative impacts of climate change.

It is reported that 30% of the population of this region live below the poverty line and 49% are under 15 years of age (Commune of Bassila, 2010). Fifteen years earlier, the incidence of food poverty was 23%, placing the region at the top of the list of agro-ecological zones with food problems in Benin (Larivière *et al.*, 1997). In 2013, for the Commune of Bassila, the Human Poverty Index was 43.6% and the multidimensional poverty rate was 46.2%.

The present project, whose purpose is to build resilience of the populations living in the classified forests of Bassila and Penessoulou, the most vulnerable to CC, is in line with this logic. The project is structured around 3 components which are: (1) capacity building of the most vulnerable small-scale farmers on good practices of adaptation to climate change, (2) development of value-added chains of promising sectors in order to diversify the sources of income of the most vulnerable communities and (3) reinforcing the local governance and management framework for adaptation to CC.

Component 1: Capacity building of the most vulnerable small farmers on good practices for -adaptation to climate change

Rainfed agriculture is dependent on climate, and the slightest climatic shock has a direct impact on crops, soils (which are the support, water reservoir and food source) and livestock. The implementation of climate-smart agriculture techniques, including water conservation, soil conservation, and land restoration techniques, and the mastery of climate-smart seed technology, requires material and know-how support that the project will provide to small farmers.

The aim of this component is to support farmers in sustainably adopting water and soil conservation and land restoration techniques, methods for managing water requirements in rain-fed and irrigated farming, and

supply chains for seeds and seedlings that are resilient to climate change. The activities involved are training in water conservation, soil conservation and land restoration techniques, technical itineraries and improved production system (SAP) practices, support for small tools, personal protective equipment, composting bags, sprayers, etc. for all producers, and the development of 2 multi-purpose reservoirs for market gardeners, fishermen and livestock breeders in the surrounding villages. The Bassila town council, Territorial Agricultural Development Agency (ATDA) and farmers growing food crops (maize, cassava, soya, market gardening, etc.) are the key players in this component. Its successful implementation should lead to a substantial improvement in food production through the sustainable management of basic resources (soil and water) and the regular supply of reference production factors such as resilient seeds. Food security for people living near the Bassila and Pénessoulou classified forests, the empowerment of women market gardeners and the reduction of conflicts over the use of water in the context of climate change will be the main positive impacts of component 1.

The component's activities are planned on the basis of concrete adaptation products broken down by expected results as follows:

Outcome 1.1: On-farm resilience is enhanced through the adoption of water and soil conservation and land restoration techniques

Output 1.1.1: Farmers are trained in water and soil conservation and land restoration techniques.

Activity 1.1.1.1: Identify, among the small farms bordering the classified forests of Bassila and Pénéssoulou, those whose state of degradation of water, soil and land justifies the training of farmers in techniques for the conservation, improvement and restoration of these resour**ces**. Some farms could be used as training fields.

Activity 1.1.1.2: Provide customized training modules on water conservation, soil conservation, land restoration and other relevant techniques. These trainings will be mostly practical and will be conducted in selected training fields in the two arrondissements

Activity 1.1.1.3: Follow up on the application of good practices by the beneficiaries during the implementation of the project.

Output 1.1.2: The technical itineraries and practices of the improved production system (SAP) are adopted by the farmers

Activity 1.1.2.1: Identify with the neighboring farmers of the classified forests of Bassila and Pénessoulou the technical itineraries and practices of the improved production system (SAP) that are technically feasible, economically profitable and socially acceptable on their farms. Identify farms that can serve as training fields for specific technical itineraries.

Activity 1.1.2.2: Provide tailored training modules on technical itineraries and improved production system practices. The training will take place on selected fields in the two arrondissements

Activity 1.1.2.3: Monitor the application of good practices by the most vulnerable farmers.

Output 1.1.3: The material capacities of producers are built through support for various equipment (small tools, personal protective equipment, composting bags, sprayers, etc.)

Activity 1.1.3.1: Identify with stakeholders (selected from the two arrondissements) the specific material needs of the organized groups.

Activity 1.1.3.2: Provide equipment to the farmers' groups and train them in its use when necessary

Outcome 1.2: Water resources are managed in an integrated manner for farmers

Outputs 1.2.1: Improved stormwater storage capacity through the construction of a water reservoir for farmers in each arrondissement

Activity 1.2.1.1: Organize consultations with water users (market gardeners, livestock breeders, fish farmers, households, etc.) to specify the modalities for joint use of the water reservoirs.

Activity 1.2.1.1.2: Construct water reservoirs

Output 1.2.2: Market gardening developments are carried out in the vicinity of the water reservoirs for the areas allocated to market gardening.

Activity 1.2.2.1: Organize a consultation with market gardeners to specify the locations suitable for their specific activities on sites shared with other users

Activity 1.2.1.2: Develop the areas allocated to market gardening for the benefit of market gardeners.

Output 1.2.3: Farmers are trained in integrated water resources management (IWRM) best practices and how to manage water use conflicts

Activity 1.2.3.1: Organize consultations (focus groups, interviews) with stakeholders (selected from the two arrondissements) on local water resource management practices, water use conflicts, and ways to improve practices or reduce conflicts in the two arrondissements

Activity 1.2.3.2: Provide tailored training modules on IWRM best practices and water use conflicts.

Activity 1.2.3.3: Monitor farmers' adoption of integrated water resources management (IWRM) best practices and water use conflict management.

Outcome 1.3: Setting up a mechanism for the revolving of seeds and plants adapted to climate change (maize, cassava, soya and market gardening).

Output 1.3.1: Setting up a mechanism for the revolving of seeds and plants adapted to climate change (maize, cassava, soya and market gardening)

Activity 1.3.1.1: Organize nurseries into seed and seedling chains corresponding to the needs of farms bordering forest areas

Activity 1.3.1.2: Organize the production of seeds and plants adapted to climate change according to the campaign plans of the neighbouring communities (corn, cassava, soybeans and market gardening).

Output 1.3.2: The mechanism for supplying seeds and plants to producers is operational.

Activity 1.3.2.1: Define with stakeholders (Town Hall, ATDA, and farmers) the mechanisms for making seeds available to farmers

Activity 1.3.2.2: Organize the supply of seeds and plants to farmers on time.

Component 2: Development of value-added chains (VACs) in promising sectors in order to diversify the sources of income of the most vulnerable communities.

The municipal authorities of Bassila have observed that the lack of horizontal organisation of producer groups and other direct and indirect stakeholders in the value-added chains (VACs) of the maize, soybean, cassava, cashew nut and market garden crops sectors considerably limits the potential benefit of improving yields and agricultural production in the Commune (Commune de Bassila, 2017). Other stakeholders in these sectors include processors, traders, consumers, input suppliers, transporters, equipment manufacturers, researchers, agricultural advisers and local decision-makers. All parties stand to gain from the synergy of their collaboration on an innovation platform.

Indeed, the agricultural sectors as they are currently organized (production and sale of crops in their current state, which are sometimes sold off) do not allow for an optimal profit from agricultural production. This is particularly worrying as the trend in agricultural production has been downward over the last few decades due to climate change (see Vulnerability Matrix). The development of VACs, by diversifying the sources of income, would help to make a greater profit from production. In the perspective of improved production (Component 1), farmers' incomes would increase and new jobs would be created. In addition to the maize, soybean, shea butter and market gardening sectors, the local populations of the classified forests of Bassila and Pénessoulou have the comparative advantage of being able to develop beekeeping VACs.

However, the development of VACs cannot be achieved without better organization of producers, their training, the setting up of management mechanisms, and their provision of appropriate materials and equipment.

In addition to Component 1, which will sustainably improve the performance of the maize, soya, cassava and market garden crops sectors, the aim of Component 2 is to stabilize and diversify the sources of income of people living near the Bassila and Pénessoulou classified forests by promoting innovation platforms for climate-smart agricultural value chains and promoting the beekeeping and shea butter sectors. The main actions are consultancy, training and capacity building. The main beneficiaries are women, who are particularly active in agri-food processing activities. The experience already acquired by other communities in the Commune of Bassila in terms of value-added chains and the promotion of sectors such as honey are assets that the project team will have to exploit. The activities proposed under this component are presented in terms of expected results and concrete adaptation products, as follows:

Outcome 2.1: Sources of income of the local populations are diversified through the promotion of corn, soya, cassava and market garden crops

Output 2.1.1: Producer groups are better structured and are involved in the maize, soybean, cassava, cashew and market gardening VACs

Activity 2.1.1.1: Organize consultations (focus groups, interviews) with producers in the corn, soybean, cassava, cashew and market gardening sectors to identify groups and their operating methods

Activity 2.1.1.2: Provide support for the setting up of a platform bringing together the different groups and equipped with a group operating system developed by the groups, which will promote better management of the VACs of the maize, soybean, cassava, cashew and market garden crops sectors.

Output 2.1.2: The management mechanism of the innovation platforms of the maize, cassava, soybean, cashew nut and market gardening sectors is in place and operational.

Activity 2.1.2.1: Ensure that the stakeholders define and validate the management mechanism of the innovation platforms of the maize, cassava, soybean, market garden and cashew nut sectors, and ensure their coordination.

Activity 2.1.2.2: Monitor the running of the innovation platforms of the VACs of the maize, cassava, soya, market garden and cashew sectors

Outcome 2.2: Sources of income of the local populations are diversified through the promotion of the beekeeping sector

Output 2.2.1: Modern beekeeping techniques are mastered by beekeeping groups in both arrondissements

Activity 2.2.1.1: Organize consultations (focus groups, interviews) with beekeepers (selected at the level of the two arrondissements) on local beekeeping techniques used by beekeepers living in the classified forests of Bassila and Penessoulou

Activity 2.2.1.2: Provide training modules tailored to modern beekeeping techniques that respect the environment. Relay beekeepers will be trained for a duplication of the training to other beekeepers

Activity 2.2.1.3: Follow up on the adoption by beekeepers of the taught modern beekeeping techniques

Output 2.2.2: Increase honey harvesting capacity for beekeepers through the acquisition of kits

Activity 2.2.2.1: Organize consultations (focus groups, interviews) with beekeepers (chosen at the level of the two arrondissements) to define the needs of the groups in beekeeping kits (Kenyan hive, protective suit, and other equipment).

Activity 2.2.2.2: Make beekeeping kits available to beekeeping groups and independent beekeepers

Activity 2.2.2.3: Install honey factories for honey refinement

Outcome 2.3: Sources of income of local women's groups are diversified through the promotion of the shea butter industry

Output 2.3.1: Women producers' groups are better structured and are committed to the shea butter VACs

Activity 2.3.1.1: Organize consultations (focus groups, interviews) with women shea butter producers to identify groups and their operating methods

Activity 2.3.1.2: Create a platform that brings together the various groups and propose a mode of operation for the groups to better manage the shea butter VACs

Output 2.3.2: The material capacities of women's groups are built for the collection and processing of shea butter through the acquisition of tricycles and semi-industrial shea butter production units.

Activity of Output 2.3.2:

Activity 2.3.2.1: Organize consultations with women shea butter producers to define the needs of the groups for materials and equipment for collecting and processing shea butter.

Activity 2.3.2.2: Make tricycles and semi-processing units available to groups of women producers to increase their capacity to collect and process shea

Component 3: Reinforcing the local governance and management framework for CC adaptation

Bassila Town Hall is in charge of local governance and must work for the well-being of its citizens. During the stakeholder consultation, communal agents expressed the need for capacity building to better support the promotion of social equity, accessible basic social services for the population and the development of relevant measures for adaptation to CC.

The reinforcement of the local governance and management framework for adaptation to climate change provides an opportunity to capitalize on the achievements of this project and facilitate their sustainability. The population growth indicates that in a status quo context, the pressure of neighbouring populations on the resources of classified forests will be even greater in the years to come. This project will help develop a guide for implementing adaptation to climate change for communal actors and rural populations living near classified forests. Women producers and processors of agricultural products are an important link to consider in the adaptation to CC.

A successful management of adaptation to climate change must be seen as a common concern. Teachers, schoolchildren, opinion leaders and community radio hosts must be made aware of CC adaptation in order to act as relays to other segments of the community. This will provide a basis for the effective functioning of the early warning system and the dissemination of climate information.

Strengthening the framework for local governance and management of adaptation to climate change thus appeared to be a prerequisite for the success of this project and the sustainability of its results. The availability of a guide to local governance and adaptation to climate change and its use by local players and communities living near the Bassila and Pénessoulou forests call for close monitoring by the local authorities. Similarly, the promotion of the gender approach to adaptation to climate change, the operationality of the community early warning system, the promotion of indigenous tree species that are resilient to climate change for the enrichment of forests and the creation of communal, community or private plantations, and the raising of awareness among the general public about good practice in adapting to climate change, are all interventions of great interest during the project implementation phase and whose capitalization and exploitation beyond the project need the support of the communal authorities.

The activities covered by Component 3 are presented by expected results and concrete adaptation products as follows:

Outcome 3.1: The local governance and CC adaptation framework is operational

Output 3.1.1: Communal actors are trained on the adaptation of the agriculture and forestry sectors to CC

Activity 3.1.1.1: Identify the training needs of communal agents on the adaptation of the agriculture and forestry sectors to CC. The training could be extended to the NGO partners of Bassila Town Hall working in the fields of natural resource protection and climate change.

Activity 3.1.1.2: Provide tailored training modules on adapting the agriculture and forestry sectors to CC

Output 3.1.2: The guide for the coordination of the local governance and adaptation to CC framework is validated and used by communal actors and communities bordering the classified forests of Bassila and Pénessoulou

Activity 3.1.2.1: Organize consultations for the capitalization of good practices and lessons learned from this project

Activity 3.1.2.2: Develop the coordination guide for the local governance and CC adaptation framework and have it validated by the stakeholders.

Activity 3.1.2.3**:** Ensure the dissemination of the guide. The guide can be published on the website of the National Association of Benin Communes (ANCB).

Output 3.1.3: The gender approach is taken into account in the adaptation to CC at the level of the two arrondissements

Activity 3.1.3.1 Organize consultations with communal actors and neighbouring communities on the distribution of gender roles in the project results framework, its strengths and weaknesses

Activity 3.1.3.2: Have the gender consultation report validated by stakeholders and take steps

to support strengths and address weaknesses during project implementation.

Outcome 3.2: CC adaptation management is effective in both arrondissements

Output 3.2.1: The community early warning system is functional, allowing appropriate measures to be taken in time, in anticipation of extreme weather events

Activity 3.2.1.1: Organize consultations with stakeholders to choose environmental and climatic risk management methods and strategies adapted to local conditions

Activity 3.2.1.2: Update/develop the community early warning system

Activity 3.2.1.3: Organize training modules on the dissemination of climate information for Town Hall services, community radio stations, and farmers

Output 3.2.3: Teachers, schoolchildren, opinion leaders and community radio hosts have become aware of and have taken ownership of good CC adaptation practices

Activity 3.2.3.2: Raise awareness among the general public in the two boroughs about good practices for adapting to CC (radio programmes, posters, sketches, contests in schools and colleges, etc.)

Activity 3.2.3.2: Produce communication tools that are accessible to speakers of national languages (awareness-raising songs in the local Anii language on good CC adaptation practices, translation of posters and sketches into local languages, etc.)

Outcome 3.3. Enrichment of communal, community and private forests with climate change resilient species.

Output 3.3.1: Indigenous tree species resilient to CC and adapted to the edaphic conditions of Bassila are identified and their seeds and seedlings are produced.

Activity 3.3.1.1: Organize stakeholder consultation for the final selection of tree species that are drought or flood resistant and adapted to the soil conditions of the selected sites

Activity 3.3.1.2: Have nurseries produce seeds and seedlings to meet the needs of communal, community and private forests

Activity 3.3.1.3: Have women's groups produce seedlings to be delivered to forestry planting sites

Output 3.3.2: Communal and community forests are enriched and private forests established using Climate Change resilient species

Activity 3.3.2.1: Organize enrichment operations of communal and community forest plots and installation of private forests.

Activity 3.3.2.2: Ensure the maintenance and follow-up of young plants.

Figure 11 below summarizes the components and outcomes of the project.

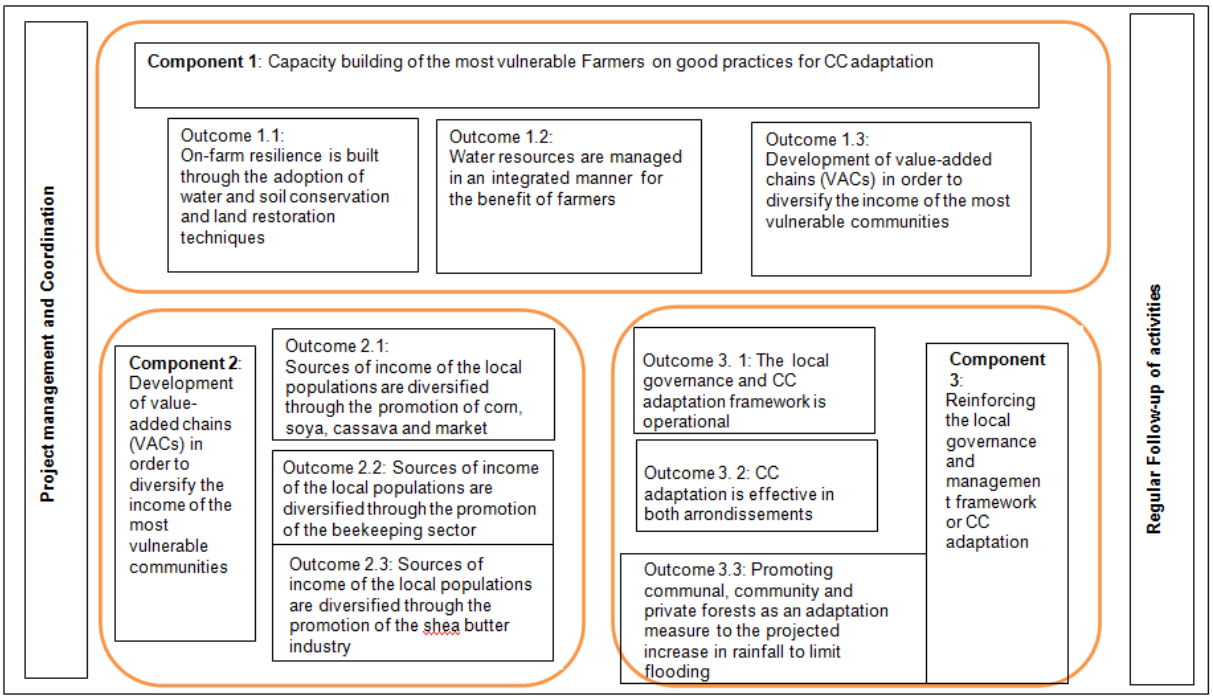

Figure 11: Components and expected Outcomes of the project and links between them

B. Economic, social and environmental benefits

Describe how the project/programme provides economic, social and environmental benefits, with particular reference to the most vulnerable communities, and vulnerable groups within communities, including gender considerations. Describe how the project/programme will avoid or mitigate negative impacts, in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.

The purpose of the project is to address the food insecurity of the most vulnerable farmers neighbouring the classified forests of Bassila and Pénessoulou. To do this, the project reconciles social, economic and environmental benefits.

Economic benefits

The building of resilience to climatic shocks that negatively impact agricultural production and, in turn, the income of producers is the direct economic benefit of this project. In doing so, the project's activities are designed to contribute to the fight against poverty and to the improvement of household and community incomes. Indeed, thanks to these activities, a relatively large number of people will have incomes above the poverty line. In addition, the various interventions will improve the living conditions of the populations, their food security, and will make them more resilient during lean periods. The development of VACs generates additional financial resources and sources of employment in order to reduce unemployment. The activities of seedling production, reforestation or forest enrichment will provide temporary employment for youth and women. Women's agri-food processing and market gardening activities will ensure their economic empowerment, a guarantee of security for children and all household members.

Social benefits

The project aims to support the population in adapting to the societal impacts of CC and is therefore primarily social in orientation. As described in the "Project Targets" section, the number of direct beneficiaries is estimated at more than three thousand producers. Gender has been a major focus since the stakeholder consultation phase, during which women's participation in the exchanges was identified as a key criterion. Similarly, the project plans to specifically support women shea butter producers and to ensure that gender is taken into account in the communal management guide for adaptation to CC. While in general rural women do not participate in decision-making, it is the mothers who decide on the education of girl children and bear the costs in the Commune of Bassila. In rural areas, where school enrollment and health center attendance are limited by household income, the project will improve school enrollment and health center attendance. Indeed, the improvement in household incomes thanks to the project will enable them to meet family expenses. This will improve attendance at health centers and reduce the dropout rate of students, which is over 35% (Commune of Bassila, 2017). From a social point of view, communal agents as well as NGOs working in the field of natural resource preservation will be equipped to participate in the sustainability of the project's achievements.

Environmental benefits

The environmental benefits of this project extend beyond the commune of Bassila alone. Indeed, the project will lead to a significant reduction in pressure on classified forests, with the possibility of extending the experience of the Bassila and Penessoulou districts to other forest areas under the management of SONAB, or other organizations in charge of forest resource management. The project focuses on reconciling vulnerable communities living near forest ecosystems with their physical and biotic environment, through voluntary good practices inspired by a proper understanding of how their interests and the interests of the environment can work together to sustainably meet their basic needs. The project will also help local authorities lay the foundations for participatory governance of climate change adaptation. If implemented, it will make a significant contribution to soil and water conservation, the restoration of microclimates and the maintenance or improvement of soil fertility, as well as mitigating the negative effects of climate change (regulating rainfall, restoring the water cycle, reducing river congestion, restocking wildlife herds, etc.).
The project will promote the empowerment of women and young people to safeguard the environment and its resources, and to pass on good values to future generations.

The cross-cutting importance of gender is reflected in the benefits that the project will bring to stakeholders. Hence the importance of developing an initial gender assessment and an action plan, which are described in the Annexes 10 and 11.

C. Cost-effectiveness

Describe or provide an analysis of the cost-effectiveness of the proposed project / programme.

Given the situation of poor people who depend on natural resources for their livelihoods, doing nothing about the adverse effects of CC is always more costly for ecosystems and human systems than adaptation measures. The cost of inaction can be more expensive than the cost of action (Andrieux and Van Effenterre, 2009). The ratio of additional costs due to the implementation of adaptation measures and additional benefits at the level of ecosystems and human systems in terms of guaranteeing the sustainability of resources, and in terms of reducing poverty and meeting food and health needs, for example, should make it possible to judge the effectiveness of adaptation measures. Oxfam International (2009) estimates that the cost of adaptation in developing countries will be at least $50 billion per year, and much more if global greenhouse gas (GHG) emissions are not reduced rapidly.

In order to reach a larger number of beneficiaries, project activities must be cost-effective. To be efficient, precedence is given to the priorities of the target populations and the proposed actions are essentially the Outcome of consultation with the beneficiary populations themselves. The table below provides a summary of the cost-effectiveness analysis. Table 8 below presents the project profitability analysis.

« Building resilience to climate change of the neighbouring populations of the classified forests of Bassila and Penessoulou in the Central region of Benin » project is an initiative that aims to help the most vulnerable sections of the target communities to sustainably meet their basic economic and social needs, despite persistent climate change, without exacerbating global environmental problems. Insofar as the populations concerned are predominantly agricultural, the Project's activities focus on small-scale agricultural producers and the population's food needs.

During the consultations in January 2023, the criteria proposed by the communities to assess the profitability and effectiveness of the adaptation measures targeted the economic, social, cultural and environmental dimensions of adaptation. The communities confirmed the options and measures set out in the Concept Note. Taking their most relevant criteria into account has improved the community relevance of the actions

envisaged, and strengthened the commitment of the stakeholders to work towards the implementation, monitoring and evaluation of the Project, and above all, the sustainability of the Project's achievements beyond the implementation period.

Reference scenario

The problem to be solved dates back to the 1940s, when the inclusion of forest massifs in the State's classified domain substantially limited local people's access to the forest resources that supplemented their livelihoods. As a result, pressure on land and water increased, leading to further degradation. The manifestations of climate change in the region since the 1950s and their consequences in terms of soil and water degradation have exacerbated the problem. The traditional knowledge, methods and tools applied by farmers to solve the problem have not produced satisfactory results (Commune de Bassila, 2017). The small-scale producers were forced to resume their incursions into the classified forests, thereby engaging in open conflict with SONAB, which had been entrusted with the management of these classified forests. SONAB initiated this project in partnership with the Bassila town council and the Agence Territoriale de Développement Agricole 4, with a view to finding satisfactory solutions.

Under these conditions, not only have agricultural production losses remained high, but people's livelihoods and well-being are under threat, and small-scale producers do not have the means to invest anything other than their labour. They suffer mainly from the consequences of climate change. Their activities do not generate profits that can be invested in measures to adapt to climate change (or in measures to mitigate CC). They are particularly vulnerable and lack resilience. This is why the cost of financial investment by smallholders in improving their working and living conditions in the face of climate risks is considered to be zero.

Scenario with project

The allocations requested from the Adaptation Fund amount to USD 2,934,545, of which USD 2,470,000 will be allocated directly to the operational components of the Project (84%) for the purpose of making productive investments. Vulnerable small-scale farmers and women expect to benefit greatly from these investments in order to cope with the adverse effects of climate change. There are 21 concrete results (or outputs) expected to generate direct or indirect economic benefits.

When it comes to adapting to climate change, an abundance of literature has been devoted to the economic profitability of outputs in the food, agriculture, livestock, forestry and fisheries sectors. In this project, the outputs are broken down by component as follows:

In Component 1, outcomes 1.1.1, 1.1.2 and 1.1.3 will create the conditions needed to improve soil fertility and planting safety, as well as increasing yields and food production. Authors Erenstein et al. (2008), Gathala et al. (2011), Jat et al. (2009, 2012) and Helena Wright et al. (2014) have demonstrated that smallholders in Africa and Asia who have implemented the project's technologies to achieve these outcomes, realize an annual net profit of US$217 per hectare of rehabilitated land. Outcomes 1.2.1, 1.2.2 and 1.2.3 will help small-scale producers gain access to and better manage water on market garden plots and livestock watering sites. They will also enable them to better manage the water deficit by limiting water losses on non-irrigated food crop plots. By controlling crop water requirements (through additional water or by saving available water), benefits can reach 315 USD/ha, for example, in cropping systems where rice is replaced by maize (Helena Wright et al., 2014). As for expected results 1.3.1 and 1.3.2, they will promote sustainable access for farmers to seeds and food plants that are resilient to climate change and guarantee stable yields and incomes. Here, the benefit associated with resilient seeds and plants is 180 USD/ha.

Component 2, which focuses on the development of innovation platforms for value-added chains (VAS) in the food sectors, will support producers' access to the market. Thus, expected results 2.1.2 and 2.1.2 will facilitate access for producers in the maize, cassava, soya, cashew nut and market garden sectors to communal and

national distribution channels. Results 2.2.1 and 2.2.2 will promote the honey sector, while results 2.3.1 and 2.3.2 will promote shea butter, with a view to diversifying farmers' sources of income. In projects supported by the International Fund for Agricultural Development in Benin, Africa, Asia and elsewhere in the world, it has been shown that diversification of crops and development of CVAs have generated between 100% and 600% increase in profits compared with reference practices.

Component 3, which aims to strengthen the local governance and management framework for adapting to climate change, incorporates the issues of capitalizing on and disseminating good practice and lessons learned, and promoting gender issues in districts and villages (outputs 3.1.1, 3.1.2, 3.1.3 and 3.2.2). Even if the benefits of these outputs are not directly monetisable, their knock-on effect in terms of disseminating good practice to other vulnerable communities and the economic and psychological security of women in society remain functions whose positive impact will, beyond the strict framework of this project, enrich knowledge and know-how at regional and international level. But the component also includes early warning activities to secure agricultural production, and activities to produce tree species that are resilient to climate change to support the sustainable enrichment of communal and community forests that are in the process of being severely degraded, and the promotion of private timber and service wood plantations to meet the needs of local populations for wood-based forest products (Annex 8). In addition to the economic benefits associated with resilient trees, it is worth noting here the co-benefit in terms of greenhouse gas mitigation expected from all adaptation initiatives, which is estimated on average at 4.27 t CO2 eq/ha/year (Khatri-Chhtria *et al*., 2022).

The table below provides a summary of the cost-effectiveness analysis, extended to the alternative options, based on the total area of land to be rehabilitated and the number of direct beneficiaries per component.

On the basis of the 3,300 hectares of land to be rehabilitated and the implementation of an objective combination of the adaptation options envisaged in Component 1, the levels of benefits associated with the various options make it possible to estimate at USD 2,349,600 per year the average benefits that this component is capable of regenerating. Within the 100% - 600% range of profit increases due to value-added chains observed across IFAD projects in Benin, Africa, Asia and the world, the application of an average value of 300% would bring the total benefits associated with the first two components of the present Project to more than USD 7 million.

It can therefore be said that the project is profitable.

Table 8 : Project profitability analysis**12**

Components	Component Cost (US$)	Agricultural area (hectares)	Approximate number of beneficiaries	Benefits	Variant project proposals
Capacity building of the most vulnerable small farmers on good CC adaptation practices	**1,624,692**	3,300	1,000	Farmers adopt climate-smart agriculture (CSA), improved production systems (SAP), water and soil conservation (SWC), sustainable land management (SLM) techniques and innovative techniques for managing water deficits in rain-fed agriculture. Similarly, water management can limit water deficits and flooding and promote market gardening and other activities	A variant could be the establishment of a cereal bank, with the limitation of supply difficulties since production only decreases. Taking more coercive measures to reduce pressure on the forests with the disadvantage of endless conflicts
Development of value- added chains (VACs) in promising sectors in order to diversify the income of the most vulnerable communities	**427,552**	4,000	2,000	VACs platforms for maize, soya, shea, cashew and honey are operational, allowing the diversification of producers' income and creating new jobs	The alternative here could be to develop warrantage, with the limitation that when agricultural products are sold, the flow of agricultural products may cause the sale price to fall. In addition, warrantage requires financial institutions to be ready to accompany the process and can only generate a limited number of jobs.
Reinforcing the local governance and management framework for CC adaptation	**417,756**	2,000	100 direct beneficiaries (thousands of indirect beneficiaries)	Adaptation to CC is a common concern from communal agents to opinion leaders, teachers, students, and farmers. The implementation guide for adaptation to CC for the benefit of actors and rural populations living near classified forests facilitates scaling up.	The variant here is to limit the project to the arrondissements of Bassila and Pénessoulou and to vulnerable farmers, thus limiting the possibility of scaling up to other arrondissements of the commune.

[12] : The origin of the areas of land and the number of actors in the table is shown in Annex 14

D. Consistency with national or sub-national development programmes

Describe how the project/programme is consistent with national or sub-national sustainable development strategies, including, where applicable, the National Adaptation Plan (NAP), national or sub- national development plans, poverty reduction strategies, national communications or action programmes, or other relevant instruments, if they exist.

Benin's commitment to mitigate CC and adapt to its adverse effects was made with the ratification of the United Nations Framework Convention on CC (UNFCCC) in June 1994, the ratification of the Kyoto Protocol on February 25, 2002, and more recently, the signature and ratification of the Paris Agreement on April 22, 2016 and October 31, 2016 respectively. This commitment is supported by the National Strategy for the Implementation of the UNFCCC (MEHU, 2003), three national communications on CC (MEHU, 2001; MEHU, 2011; MCVDD, 2019), the National Adaptation Programme of Action for Climate Change (MEPN, 2008), the First Nationally Determined Contribution (MCVDD, 2017), the First Biennial Update Report (MCVDD, 2019), and the National Adaptation Plan for Climate Change (MCVDD, 2022).

Recently, Benin has adopted the National CC Management Policy (PNGCC 2021-2030) and the Law n°2018-18 of August 06, 2018 on CC. This project responds on the one hand to the provisions of these political and legislative instruments in terms of combating global warming and reducing the vulnerability of disadvantaged populations to CC, and on the other hand to the sustainable development strategies, in particular the Growth Programme for Sustainable Development (PC2D) and the Low Carbon and CC Resilient Development Strategy (2016-2025).

The provisions that support the project's activities are, in particular, those of the Law on the Forest Regime and its implementing decree of July 2, 1996, the forest policy of November 1994 and the Framework Law on the Environment of February 12, 1999. All sectoral policy documents and all national development planning tools are anchored in the vision of sustainable development with a particular focus on the protection of forest ecosystems and the participation of local populations in their environmentally sound management.

In the field of environment and sustainable development, the main policies and strategies developed and implemented by Benin and which justify the project are:

- the Environmental Action Plan (PAE) adopted in June 1994 by the government and updated in 2001, which aims to change behavior, in particular by raising the standard of living and awareness of all Beninese, controlling the evolution of natural resources and better management of biodiversity, and improving the living environment of all Beninese;
- the National Agenda 21 adopted on January 22, 1997 and whose objective is to define the orientations and the conditions to reach sustainable development;
- the Long Term Prospective Studies of Benin at Horizon 2025, initiated since 1998, which integrate the concerns of sustainable development and make the rational management of the environment a priority, and defines Benin's vision as follows: «Benin will be in 2025, a flagship country, a well-governed country, united and peaceful, with a prosperous and competitive economy, cultural influence and social well-being». This calls for an environmentally sound management of natural and human resources;

- The National Action Programme to Combat Desertification (PAN/LCD), elaborated in 1998 to identify the factors that contribute to desertification and the concrete measures to be taken to combat desertification and mitigate the effects of drought;
- the National Strategy and Action Plan for the Conservation of Biological Diversity adopted in 2002 and aimed at contributing to the sustainable development of Benin and to poverty reduction through the conservation and sustainable use of biological resources and the fair and equitable sharing of the benefits derived from the exploitation of these resources;
- The National Decentralization and Devolution Policy (PONADEC) adopted in 2009 with three main objectives: (i) to implement a harmonious and balanced land-use planning policy, integrating the entire national territory to achieve sustainable and equitable development, (ii) to ensure the implementation of the principles of good territorial governance through a modernized and efficient administration, (iii) to reduce the level of poverty by improving access to basic services and enhancing the economic potential of the communes.

The proposed project is designed to contribute to the implementation of Benin's commitments in its Nationally Determined Contributions (NDCs) under the Paris Agreement, and to the achievement of the Sustainable Development Goals (SDGs) prioritized by the Benin (MPD, 2017), in particular target 1 of SDG 13 (Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries) and target 2 of the SDG 15 (promote the sustainable management of all types of forests, halt deforestation, restore degraded forests and significantly increase afforestation and reforestation globally), as well as the African Union Agenda 2063 (African Union (2015) The project aligns with the recently validated National Adaptation Plan (NAP) which encourages initiatives aiming at combating climate change impacts on rural development (MCVDD, 2022).

At the local level, the project responds to the concerns successively expressed by the communal authorities of Bassila in the various planning documents (Communal Development Plan of Bassila 3rd Generation (PDC 3) 2018-2022), the Master Plan of Territorial Development for Horizon 2025. These concerns refer to the provisions of national policies and strategies for local development and respond to the aspirations of the populations.

The main national development plans and strategies to which the adaptation options proposed in the Project refer are presented in Table 9 below, by development area.

Table 9 : Main national economic, social or environmental development plans and strategies with which the activities and adaptation measures proposed by the Project must be aligned

Development area	National plans and strategies
Socio-economic development	- - National Long-Term Outlook Study "Benin Alafia 2025 - - Government Action Programme "Bénin révélé" 2021-2026 PAG2) 2021-2026 - - National Decentralization and Devolution Policy. (PNDD) 2009 - - Growth Programme for Sustainable Development (PC2D) 2018-2021 - - National Development Plan (NDP) 2018-2025

Agricultural development	- - National strategy for e-Agriculture in Benin2020-2024 - - Strategic Plan for the Development of the Agricultural Sector (PSDSA) 2025 and National Plan for Agricultural Investment and Food and Nutritional Security PNIASAN 2017 - 2021 - - National Strategy for the Development of Fruit Growing (SNDAF-2020-2025)
Development of water resources	- - National Strategy for Drinking Water Supply in Rural Areas 2017-2030 - - National Action Plan for Integrated Water Resources Management 2016-2020
Health development	- - National Health Development Plan 2018-2022
Energy development	- - National Energy Management Policy 2021-2030 - - National Renewable Energy Development Policy (PONADER) 2020 - 2035
Forestry development	- - Benin's forestry policy 2023-2032. (22 February 2023) - - Inter-ministerial Order 0041/MEPN/MDGLAAT/DC/SGM/ DGFRN/SA of 29 July 2009 on the conditions for approval and the organisation and operation of rural timber markets.
Cultural development	- - National Culture Policy [PNC] 2013-2022
Gender and development	- - Benin National Gender Policy (MFSN, 2008), FNEC Gender Policy (FNEC, 2016)
Local development	- - Municipal Development Plan 2017-2025 (or PDC 3)
Environmental risk prevention and management	- - National Disaster Risk Reduction Strategy (2019-2030) - - 2020-2024 Action Plan for the implementation of the National Framework for Climate Services (CNSC)
Adapting to climate change	- - National Climate Change Management Policy (PNGCC) 2021-2030 - - National Climate Change Adaptation Plan (2022) - - Updated Nationally Determined Contribution under the Paris Agreement (NDC) 2021 - - Low Carbon and Climate Resilient Development Strategy 2016-2025 - - National Platform for Disaster Risk Reduction and Adaptation to Climate Change in the Republic of Benin

E. Compliance with relevant technical standards and policies

Describe how the project/programme meets relevant national technical standards, where applicable, such as standards for environmental assessment, building codes, etc., and complies with the Environmental and Social Policy of the Adaptation Fund.

This project is developed in accordance with the framework and instructions of the Adaptation Fund, the Least Developed Countries Group guidelines for the development of adaptation programmes and plans, as used in the development of Benin's National Action Programme for Adaptation to CC (NAPA) in 2008, the Benin

Agriculture and Food Sector Adaptation to CC Project (PANA1) implemented from April 2011 to March 31, 2016 with funding from the Global Environment Facility, the Project to Build Resilience of the Energy Sector to the Impacts of CC in Benin (PANA Energy or PANA2) launched in 2017, and the National CC Adaptation Plan (NAP) developed in December 2021.

It is also in line with Benin's national guidelines for the development of adaptation projects resulting from the workshop organized by the National Environment and Climate Fund in Cotonou on October 4 and 5, 2011.

Regarding the evaluation of the costs of participatory management works, the standards used essentially concern the definition of the tasks, the monetary value of the man-day, the average yields of certain speculations and the prices on the market, the working time for the realization of the works, the costs related to the maintenance of the plantations, and for the protection of the forest. For this purpose, reference was made to the standards used by the National Wood Office.

For the implementation of the project, the physical interventions on the ground will respect the national and sub-regional standards in the matter. In particular, they will be subject to the environmental impact studies recommended by Law No. 98-030 of February 12, 1999 on the Framework Law on the Environment in the Republic of Benin. Suppliers and operators in charge of all work shall apply the provisions of Law No. 93-009 of July 2, 1993 on the forest regime in the Republic of Benin, Law No. 2002-016 of October 18, 2004 on the wildlife regime in the Republic of Benin, and the normative and technical specification provisions validated by the Benin Center for Standardization and Quality Management (CEBENOR) created by Decree No. 97-520 of October 17, 1997.

At the legislative and regulatory level, we note more specifically:

- Law No. 98-030 of 12 February 1999 on the framework law on the environment in the Republic of Benin;
- Law No. 2018-18 of 06 August 2018 on climate change in the Republic of Benin;
- Law No. 2018-20 of 23 April 2019 on the pastoral code in the Republic of Benin;
- Framework Law No 2014-19 of 07 August 2014 on fishing and aquaculture in the Republic of Benin;
- Law No. 84-009 of 15 March 1984 on the control of foodstuffs in the Republic of Benin;
- Law n° 2011-26 of 9 January 2012 on the prevention and repression of violence against women;
- Law no. 98-004 of 27 January 1998 on the Labour Code in the Republic of Benin;
- Law n°2013-01 of 14 January 2013 on the Land and Property Code in the Republic of Benin, amended by Law n°2017-15 of 26 May 2017;
- Law No 2017-15 amending and supplementing Law No 2013-01 of 14 August 2013 on the Land and Property Code in the Republic of Benin;
- Law No 87-015 of 21 September 1987 on the Public Health Code in the Republic of Benin;
- Law no. 91-004 of 11 February 1991 on phytosanitary regulations in the Republic of Benin;
- Law no. 2010-44 of 21 October 2010 on water management in the Republic of Benin;
- Law no. 87-016 of 21 September 1987 on the Water Code in the People's Republic of Benin;
- Law no. 2002-016 of 18 October 2004 governing wildlife in the Republic of Benin; Decree no. 2012-426 of 06 November 2012 creating the National Civil Protection Agency (ANPC);

- Law N°97-029 of 15 January 1999 on the organization of Communes in the Republic of Benin;
- BENIN: Decree no. 2022 on the organization of environmental and social assessment procedures in the Republic of Benin;
- Decree n°2017-332 of 06 July 2017 on the organization of environmental assessment procedures in the Republic of Benin;
- Decree no. 2001-235 of 12 July 2001 on the organization of the environmental impact assessment procedure;
- Decree No 2015-382 of 09 July 2015 on the organization of environmental assessment procedures in Benin;
- Decree no. 2001-094 of 20 February 2001 on drinking water quality standards in the Republic of Benin;
- Decree no. 2001-109 of 04 April 2001 on wastewater quality standards in the Republic of Benin;
- Decree no. 2003-332 of 27 August 2003 on solid waste management in the Republic of Benin;
- Decree no. 2011-834 of 30 December 2011, on the creation, composition, remit and operation of the national platform for disaster risk reduction and adaptation to climate change;
- Decree no. 97-193 of 24 April 1997, on the creation, composition and remit of the National Committee for Combating Desertification;
- Decree no. 87-408 of 7 December 1987, creating the first National Civil Security Response Organisation Plan or "ORSEC Plan";
- Decree no. 2015.014 of 29 January 2015 on the terms and conditions for developing rural land;
- Decree no. 2015-014 of 29 January 2015 on the terms and conditions for developing rural land;
- Decree No 114 of 09 April 2003 on quality assurance for fishery products in the Republic of Benin;
- Decree no. 2011-573 of 31 August 2011 establishing the water development and management master plan;
- Decree no. 2011-834 of 30 December 2011 on the creation, composition, powers and operation of the National Platform for Disaster Risk Reduction and Adaptation to Climate Change in the Republic of Benin.

From the point of view of policies and strategies, these include, in particular

- the Government Action Plan (2021-2026);
- the National Development Plan (2017-2022);
- Benin's updated Nationally Determined Contribution under the Paris Agreement (2021);
- the National Climate Change Adaptation Plan (PNA), 2022 ;
- the National Climate Change Management Policy (PNGCC 2021-2030) ;
- the National Renewable Energy Development Policy (PONADER) 2020 - 2035;
- National Decentralisation and Devolution Policy 2016 ;
- National Contingency Plan (2018);
- National Drought Plan (2019-2024);
- National Disaster Risk Reduction Strategy (2019-2030);

- the National Action Plan for Integrated Water Resources Management (PANGIRE 2017-2022);
- Benin's National Gender Policy (MFSN, 2008);
- the Gender Policy of the National Environment and Climate Fund (2016);
- Benin's Gender and Climate Change Action Plan (PAGCCB) 2023-2025 (2022);
- Policy for the Promotion of Women in the Agricultural and Rural Sector (PPFR) 2001;
- the National Action Plan to Combat Desertification (2000) ;
- the National Policy for the Prevention and Integrated Management of Disasters (2016);
- the National Strategy for Disaster Risk Reduction (2018);
- the National Strategy for the Conservation of Protected Areas (1995);
- the National Strategy for Drinking Water Supply in Rural Benin (2005-2015);
- the Alert and Forecasting System (SAP);
- The standard operating procedure for communicating and disseminating alerts in the event of climatic disasters (MON).

F. Duplication with other funding sources

Describe if there is duplication of project/programme with other funding sources, if any.

This project will be implemented with a number of initiatives active in the commune of Bassila that share the same objectives of supporting the development of sustainable livelihoods for vulnerable populations. These include:

a) the Cashew Nut Sector Development and Agricultural Entrepreneurship Support Project (PADEFA-ENA), financed by the African Development Fund (ADF), which covers 19 cashew nut producing communes in the Departments of Borgou, Collines, Donga and Zou. Its areas of intervention are (i) food and nutritional security, (ii) development of the cashew nut value chain, particularly the local processing of raw cashew nuts, (iii) youth and women's employment, and (iv) climate change, building resilience of populations and improving endogenous production systems. The overall objective of the Project is to contribute to poverty reduction and improved food and nutrition security while the key specific objective is to contribute to the sustainable increase of stakeholders' income. It was launched in 2019 for a 5-year period under the execution of the Territorial Agency for Agricultural Development No. 4, (ATDA4).

b) the Ruminant Herd Sedentarization Project in Benin (ProSeR-Benin), which operates in 40 communes in all departments except the Littoral Department. Launched in 2020 for a period of 5 years, with the financial support of the West African Development Bank (BOAD) and executed by the Territorial Agency for Agricultural Development (ATDA) of Hub 2 (ATDA2), this Project aims to improve the living conditions of farmers/breeders and the productivity of the milk and meat value chains, to ensure an increase in the income and entrepreneurial capacities of the actors, as well as the viability of pastoral camps.

c) the Support Project for Communal Forest Management - Phase II (PAFEMCOM-II) which covers the departments of Atlantique, Zou, Collines, Borgou and Donga. Implemented by the Ministry of Living

Environment and Sustainable Development (MCVDD) with funding from the African Development Fund (ADF) and the Global Environment Facility (GEF), this project aims to stabilize forest ecosystems based on the promotion of value chains of green economy products (smart agriculture, promotion of non-timber forest products, promotion of fishery products, development of natural resources, promotion of ecotourism products, etc.), as well as the improvement of the quality of life of local communities.), as well as the improvement of food and nutritional security and the incomes of small and vulnerable producers, the alleviation of the impact of poverty on rural households and the building of resilience of populations, particularly women and youth. It has three operational components: (i) promotion of green economy value chains; (ii) sustainable management of natural resources; and (iii) support for adaptation to CC.

The following is a description (though not exhaustive) of other significant past and current initiatives on which this project can expand its impact.

a) Forest Resource Restoration Project in the Bassila Region (financed by the German Cooperation (GTZ and GFA terra Systems). Between 1988 and 2004, the project was implemented to limit the degradation of ecosystems by targeting specific actions involving the neighbouring communities and including: the management of classified forests, the management of village lands, the control of agricultural practices, the control of pastoral practices, the management of vegetation fires, the management of natural forests in the protected domain of the State, and the economic valorization of forest products.

   The management plan developed within this framework for the classified forest of Bassila has not been implemented. The plan for the Pénessoulou classified forest, developed for a period of ten (10) years, was implemented from 2002 and expired in 2012. These two management plans are updated by the National Forestry Office in 2013, without taking into account and integrating the themes of CC. No funding is yet envisaged for their implementation. Through this project, additional measures to take into account adaptation to CC are targeted to ensure the sustainability of results and lead to the resilience of ecosystems and human systems to CC.

b) Project for the Integration of Sacred Forests in Benin's Protected Areas (PIFSAP) carried out from 2011 to 2016 with the support of the Beninese Government, the Global Environment Facility (GEF) and the United Nations Development Programme (UNDP). The commune of Bassila has benefited from the project.

c) Project to support food security through the development of lowlands (PSAAB): hydro-agricultural development; construction of stores.

d) Rural Development Support Project (PADER): various supports to farmers.

e) The activities of the Communal Unit of the Territorial Agricultural Development Agency (ATDA), including the marketing of 6,000 seedlings at a unit price of US$ 0.18 instead of US$ 1.35, and the reforestation project of 50 ha in the locality of Mbôrôkô. In addition, the maintenance of old shea trees can be a means of boosting the VAC shea trees mentioned above.

f) The initiatives of the Town Hall in terms of reforestation, including 4 days of reforestation during the month of June.

g) Various supports from the PTFs (Belgian (CTB) and German (GIZ) technical cooperation) to farmers through the construction of stores; the development of rural roads; the development of lowlands.

h) The initiatives of NGOs such as GRADIB-ONG (technical support to processors), SOPADA ONG (which intervenes in agriculture) and N3D ONG (Environment; Agriculture; IMS).

This project will build upon the lessons learned from previous projects. Similarly, synergy will be sought with ongoing projects (e.g., those of ATDA).

No other funding sources are being sought for the implementation of this project. The synergy or complementarity links between this project and some past or ongoing projects in the Commune of Bassila are presented in Annexes 5, 6 and 7.

In particular, the initiatives in Annex 7 form a larger whole than those in Annexes 5 and 6. Sharing information with these initiatives may benefit the present project.

G. The learning and knowledge management component

If applicable, describe the learning and knowledge management component to capture and disseminate lessons learned.

In this project, adaptation to CC is seen as everyone's business. This is why the appropriation and dissemination of lessons learned is an important part of the project. As soon as the project is launched, posters on the project will be displayed at FNEC, SONAB, the Bassila Town Hall and the arrondissements offices of Bassila and Penessoulou. A launching workshop will be organized to inform and mobilize stakeholders around the project. This will be an opportunity to update ongoing initiatives with which synergies will be sought.

As for components 1 and 2, a film showing the starting situation, the mid-term situation and the situation three months before the end of the project will be produced to highlight the achievements, lessons learned and constraints overcome in order to use them for future projects.

Component 3 on the governance framework and management of adaptation to CC is the one that requires the most communication activities. Customized training for communal agents, integration of gender in the management of adaptation to CC, the adaptation guide for neighbouring populations of classified forests to CC, awareness-raising for schoolchildren, students, opinion leaders, and the composition of a song in the local language will be disseminated via various channels (community radio, national radio, national television, on the websites of the National Association of Communes of Benin (ANCB) and FNEC, and in the newspapers).

In addition, the members of the Participatory Forest Management Committees (COGEPAF) of Bassila and Pénessoulou will be considered for training on the themes of CC, forestry and agriculture. Local elected officials, notables and decision- makers of the Commune and the Arrondissements will be associated to this training. Each COGEPAF will be responsible for returning the lessons learned to the grassroots community from which it originates, with the assistance of the experts assigned for the

training. The committee presidents will also be responsible for public awareness sessions through appropriate channels (local radio stations, conferences, etc.), under the supervision of the communal authorities.
During the implementation of the project, pupils and students from technical and vocational training institutions, the national universities of Abomey-Calavi and Parakou and private university centers will be welcomed to prepare their dissertations or final theses in the field of CC, the environment and sustainable management of natural resources.

At the end of the project, an end-of-project workshop will be organized to share the results with the stakeholders (FNEC, SONAB, and their partners) as well as with the scientific community. An important channel is also the AF website.

H. Stakeholder Consultations

Describe the consultative process, including the list of stakeholders consulted, undertaken during project preparation, with particular reference to vulnerable groups, including gender considerations, in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.

The consultation process took place in two phases. The first phase consisted of discussions with the town hall and the relevant technical services involved at the town hall (the Mayor and his agents, the communal cell of the ATDA, the Bassila Cantonment, NGOs). Note that this session was chaired by the Mayor of the commune. The second phase consisted of separate meetings with producers from the arrondissements of Bassila and Penessoulou. The meetings took place at the Bassila town hall and the Pénessoulou arrondissement office. Apart from the meeting with the Mayor and the technical units, the two other meetings at the level of the arrondissements took place in local languages. A translator was assigned to the task. Because of the Covid-19 pandemic, a sample of 40 people consisting of women, youth and adults from different villages in each arrondissement was considered. Particular attention was paid to the respect of barrier gestures. Indeed, hand-washing facilities were installed at the entrance to the rooms and protective masks were distributed free of charge to participants who did not have them.

At each meeting, after the greetings, representatives of FNEC and SONAB set the context of the project before leaving the floor to the consultants for the actual discussions. The consultants began by identifying the producer groups present and their origins in order to guide the discussions. At the same time, a list of participants was drawn up. An interview guide serves as a compass for the discussions. The following aspects were discussed The most important hazards and their trends in the locality under consideration, the impacts of these hazards on their activities (agriculture, livestock, fishing, processing of agricultural products) in terms of increased or decreased yields, the endogenous adaptation measures implemented by the populations, the initiatives and projects underway to reinforce endogenous adaptation measures, and finally, their expectations in relation to adaptation to CC. Stakeholder consultation in the Commune of Bassila is presented in the form of a general summary (Table 10) and specific meetings (Tables 10-a and 10-b). The attendance lists are presented in Annexes 3 and 4.

The meetings were organized according to a pre-established schedule (Annex 1).

An average of fifty people attended each of the three days of consultation. The meetings were organised respectively at Bassila town hall level for town hall executives and those of decentralized State institutions and public or private organizations operating in the Commune, at Bassila district level for representatives of associations and professional and social groups active in the communities bordering the Bassila Classified Forest, and at Pénessoulou district level for those of the Pénessoulou Classified Forest.

Discussions with City Hall officials and public and private institutions and organizations are placed under the authority of the Mayor. Consultations with community stakeholders were held under the patronage of the district chiefs and were conducted in four (4) homogeneous groups: (1) young women, (2) elderly women or wise women, (3) young men and people with disabilities, and (2) elderly men or wise men (Photos 1, 2, 3 and 4). Each group appointed a facilitation office made up of three people responsible for directing the work, reporting and acting as secretary. A French-local language translator was provided for each group.

The groups produced their results by following the guidelines in the interview guides supported by the terms of reference. At the end of the work, the plenary feedback sessions enabled each participant to examine and amend the results of all the groups and thus contribute to the general conclusions to which all parties were committed.

During the meeting, the presidents of the socio-professional groups and the district and village chiefs signed letters of intent to support the implementation of the project (Annex 9).

In terms of results, the concerns of stakeholders are presented in Annex 2. These stakeholders have also expressed the changes they would like to see in order to address these concerns. The project has been designed to integrate these concerns and changes, and to ensure the committed participation of all stakeholders in the implementation activities. In particular, at least 50% of women, young people and disabled people are expected to participate in all capacity-building activities and in the validation of implementation plans and results. Women's and youth groups are in the majority among the leaders who have issued letters of intent to support the project.

Table 10 : Summary of consultations

Town Hall	Town Hall of Bassila					
Sex	Man		Woman		Total	
Number of individuals	24		3		27	
Percent (%)	89		11		100	
District	District of Bassila			District of Pénéssoulou		
Sex	Man	Woman	Total	Man	Woman	Total
Number of individuals	23	4	27	36	13	49
Percent (%)	85	15	-	73	27	100
Stakeholders description	-Institutionnal & local actors: deputy Mayor, Borough chief, town hall technical services, Agricultural extension service agency, Departmental Directorate of water, forestry and hunting, National Timber Office, local chiefs,; -NGOs: WE, UCOM, ADRIA ; -women's association for shea butter processing, youth association, hunters association, development association ; -Active participation of stakeholders					
	-Associations & groups: women's association, coal producers, local forest management committee, beekeepers, logger, hunters ; - Active participation of young people, adults, men and women - Discussion in native language with a translator to enable Active participation of stakeholders			-Associations & groups: association of women processors, women nurseries, hunters, seed companies and seedling producers, local forest management committee, ONG ADRIA ; - Active participation of young people, adults, men and women - Discussion in native language with a translator to enable Active participation of stakeholders		

Table 10-a: Meetings with community stakeholders

Working groups	Districts					
	Bassila centre			Pénessoulou		
	Participants			Participants		
	Men	*Women*	*Total*	*Men*	*Women*	*Total*
Young Women's Groups	0	18	18	0	24	24
Wise Women's Groups	01	15	16	0	31	31
Young and Disabled Groups	29	0	29	30	0	30
Wise Men's Groups	16	0	16	28	0	28
Total	46	33	79	58	55	113
Percentage (%)	58	42	100	51	49	100
Participating stakeholders	-Women's processing groups; Association of women gardeners; Farmers', breeders' and beekeepers' groups; Local forest management committees; Youth groups; Association of disabled people; WE-ONG; Radio FM Monts Kouffé. Village chiefs; the King's representative; Departmental Water, Forestry and Hunting Directorate, Société Nationale du Bois, Fonds National pour l'Environnement et le Climat.			-Groups of women who process cassava, shea nuts, palm nuts, cashew nuts and market garden produce; groups of beekeepers; local forest management committees, women nurserymen, seed growers and seedling producers, local forest management committee, NGO ADRIA; Participatory Forest Management Committees; Radio FM Monts Kouffé; Village chiefs; Transporters' Association; Departmental Water, Forestry and Hunting Directorate, SONAB, National Environment and Climate Fund.		

Table 10-b : Meetings with institutional stakeholders

Consultation with institutional stakeholders			
Participants	*Bassila Town Hall*		
Type	*Men*	*Women*	*Total*
Number	*22*	*3*	*25*
Percentage (%)	*88*	*12*	*100*
Participating stakeholders	*Bassila town hall, town hall technical services, district chiefs, territorial agricultural development agency, departmental water, forestry and hunting directorate, Société Nationale du Bois, Fonds National pour l'Environnement et le Climat.*		

Photo 1 : Young women's working group (Bassila, 18th January 2023)

Photo 2 : Working group of wise women (Bassila, 18th January 2023

Photo 3 : Working group on young people and the disabled (Bassila, 18th January 2023)

Photo 4 : Working group of wise men (Pénessoulou, 19th January 2023)

I. Justification for funding requested

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

CC is undoubtedly an additional constraint for developing countries. In the absence of adaptation measures, the current situation could become chaotic for populations powerless to cope with climate hazards and seeing their livelihoods deteriorate. The Adaptation Fund is therefore an opportunity to turn the situation around. This report will contribute at various levels:

Under Component 1: Capacity building of the most vulnerable small farmers on good practices for adaptation to CC

Status quo scenario (excluding this project): increased vulnerability of the local populations of Bassila and Penessoulou to future climatic hazards, accelerated soil degradation, increased pressure on classified forests

Acceptance scenario and funding for this project from the Adaptation Fund: adoption of climate-smart agriculture (CSA), improved production systems (SAP), water and soil conservation (WSC) and sustainable land management (SLM) techniques, support for various materials and equipment to increase the work force, better water management for producers.

Under Component 2: Development of value-added chains (VACs) in promising sectors in order to diversify the income of the most vulnerable communities

Status quo scenario (excluding this project): The way the agricultural sectors are organized (production and sale of crops that are sometimes sold off) does not allow the greatest profit to be made from agricultural production. This is particularly alarming since agricultural production has declined over the past few decades due to CC (see Vulnerability Matrix).

Acceptance scenario and funding for this project from the Adaptation Fund: the development of VACs by diversifying sources of income therefore allows for the greatest benefit to be derived from current production and, with a view to increasing production (Component 1), to significantly increase the income of farmers and create new jobs. In addition to the maize, soybean, shea butter and market gardening sectors, the local populations of the classified forests of Bassila and Pénessoulou have the comparative advantage of being able to develop beekeeping.

However, the development of VACs cannot be achieved without better organization of producers, their training, the establishment of management mechanisms, and their provision with various materials and equipment.

Under Component 3: Reinforcing the local governance and management framework for CC adaptation.

Status quo scenario (excluding this project): Component 5 of the Development Plan of the Commune of Bassila «to reduce the effects of CC and the strong pressure on natural forests» could take a long time to be implemented. Similarly, the few adaptation projects will continue to be carried out in an uncoordinated manner, as the local governance framework does not allow for better coordination of initiatives.

Acceptance scenario and funding for this project from the Adaptation Fund: The Reinforcement of the local governance and management framework for adaptation to CC will help consolidate and ensure the sustainability and capitalize on the achievements of this project. The development of a guide for the implementation of adaptation to CC for the benefit of communal actors and rural populations living near classified forests allows lessons to be learned for scaling up. The consideration of gender and women producers and processors of agricultural products in the adaptation to CC is effective. In addition, the management of adaptation to CC becomes everyone's business, promoting the effective dissemination of climate information for the benefit of farmers and the preservation of the livelihoods of communities living along the Bassila and Pénessoulou classified forests.

J. Sustainability

Describe how the sustainability of the project/programme outcomes has been taken into account when designing the project/programme.

This project is in line with the logic of SDG 13 and SDG 15, and therefore targets and integrates the principle of sustainability. Stakeholder consultation prior to the drafting of the concept note and project document is undertaken to ensure an appreciable level of ownership of the project by the beneficiaries. Similarly, as specified above, activities are largely driven by the aspirations and expectations of stakeholders, ensuring their short, medium and long-term commitments. A monitoring and evaluation mechanism is also planned, in which stakeholders will be involved to ensure that the implementation of the project does not deviate from the initial objectives. This monitoring and evaluation mechanism, if properly implemented, can serve as a springboard to ensure that the achievements of the project are sustained by the stakeholders. Each of the three components is proposed with a view to economic, social and environmental sustainability.

Under Component 1: Capacity building of the most vulnerable small farmers on good practices for adaptation to CC

Activities planned for this component allow for the sustainable building of resilience of target producers. Indeed, the learning of Sustainable Land Management (SLM), Water and Soil Conservation (WSC), Improved Production System (SAP) and Climate Smart Agriculture (CSA) techniques will allow to reconcile production improvement and environmental sustainability. Better water management for the benefit of market gardeners and other users associated with the establishment of a committee for the prevention and resolution of conflicts related to water will allow the sustainability of activities that depend on it. Similarly, the provision of equipment to increase work capacity and facilitate field activities will be a motivating factor for farmers.

Under Component 2: Development of value-added chains (VACs) in promising sectors in order to diversify the income of the most vulnerable communities

As indicated above, the development of the value-added chains proposed in this project will be carried out in conjunction with the producer groups, the town hall and the ATDA's communal unit. The better structuring of

producer groups proposed in the case of the project prior to the establishment of the development platforms for the maize, soybean and shea butter VACs is precisely intended to ensure the sustainability of results even beyond the duration of the project. The synergy to be developed with the town hall and the ATDA communal unit aims to continue the collaboration that has already begun during the stakeholder consultation phase so that the support provided to the VACs development platforms is sustainable.

Under Component 3: Reinforcing the local governance and management framework for CC adaptation.

This component is essentially oriented towards the sustainability of the project. The reinforcement of the local governance framework is planned to this end. Capacity building of communal agents on CC- agriculture-forestry themes will equip them to better play their local governance roles during the project and beyond. The development of the implementation guide for adaptation to CC for the benefit of stakeholders and rural populations living near classified forests is essentially part of sustainability. Similarly, the vision that underlies the management of adaptation to CC in this project, particularly the fact that adaptation to CC is perceived as everyone's business, makes it possible to mobilize different social strata (opinion leaders, teachers, students, etc.) for the project's cause and beyond. The song to be written for the awareness raising of the population will allow for a quick and sustainable dissemination. The same applies to the videos to be produced, which may serve and inspire other projects and actors beyond the life of this project.

K. Environmental and social impacts and risks

Provide an overview of the environmental and social impacts and risks identified as being relevant to the project/programme.

In accordance the Adaptation Fund's environmental and social policy, the present project must reinforce the positive and social benefits of its activities and avoid or mitigate environmental and social risks and impacts. Managing these risks is essential to the success of the project.

The provisions of Decree n°2017-332 of July 06, 2017 on the organization of environmental assessment procedures in the Republic of Benin, which was under revision at the time the project was initiated, had not made it possible to know which project activities could or could not be subject to the environmental assessment procedure. For this reason, the question had not been in the Concept Note. The new regulations, in particular those of the "Guide to the authorisation or declaration procedure for water-related Installations, Works and Activities (IOTA) in Benin - March 2020", and "Decree no. 2022-390 of 13 July 2022 on the organisation of environmental and social assessment procedures in the Republic of Benin ", have clarified that none of the project's activities will be subject to environmental assessment procedures.

Decree no.2022-390 reinforces the "General Guide to carrying out an Environmental Impact Assessment" and the "Guide to the authorisation or declaration procedure for water-related Installations, Works and Activities (IOTA) in Benin", which already excluded from the scope of Environmental and Social Impact Assessments all agricultural or hydro-agricultural developments involving areas of less than 10 hectares, all water reservoir projects with an area of less than 1 hectare, and all reforestation or forestry treatment operations involving areas of less than 100 hectares. The IOTA Guide specifies that a simple declaration is sufficient for all lowland and alluvial plain developments with partial water control, the surface area of which is between 10 ha and 25 ha, provided that the height of the dikes of dams and water reservoirs does not exceed 3 metres. The guide also specifies that an ESIA

becomes necessary when the capacity is at least equal to 1,000,0000 m3 and the dike height is between 3 and 10 m.

In terms of agricultural development, no small farmer in the project area has an estate of more than 10 hectares. Furthermore, no communal, community or private estate that could benefit from the project's support for planting resilient trees exceeds 100 hectares. With regard to the water reservoirs, the additional study commissioned to assess their technical, environmental and social feasibility identified sites for setting up structures in two villages bordering the classified forests. The study concluded that "the construction of the two water reservoirs does not require an Environmental Impact Assessment. An environmental audit is, though, necessary". However, practical measures will have to be taken when the work is carried out to ensure strict compliance with regulatory standards[13].

Although ESIAs are not required, measures to mitigate negative risks or enhance positive risks will be taken in accordance with the Adaptation Fund's environmental and social policy. These measures will also be documented in an environmental and social management plan (ESMP).

The information available makes it possible to complete the table below of the 15 principles of the Adaptation Fund with regard to environmental and social risks and impacts (Table 11).

Table 11 : Environmental and social impacts and risks

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	The proposed project has been developed in accordance with the provisions of the Multilateral Environmental Agreements and the laws in force at the national level, notably the Framework Law on the Environment, the Law on CC, the Laws and regulations relating to food safety, health, soil management, water, biological diversity, etc. During the project, coherence with the texts related to Decentralization will be rigorously respected.	Risk: Low Potential Impact: Low Most of the components and corresponding interventions/activities of the proposed project do not fall within the First Category of projects that require full EIA.
Access and Equity	The project provides equitable access to all targeted vulnerable groups in the beneficiary arrondissements. To ensure that no one is left out, depending on the composition of the communities, selection criteria will be developed and agreed in a consultative manner.	However, certain categories of people (orphans, disabled, displaced, affected by HIV/AIDS or Corona Virus, etc.) may be excluded because of their status. Specific awareness-raising measures will be taken in the communities concerned. Risk: Low Potential Impact: Low

[13] A summary of the results of the additional study is presented in Annex 16.

		Project activities will be accessed equally by the target communities without discrimination..
Marginalized and vulnerable groups	The project gives priority to the most vulnerable farmers, particularly men and women whose livelihoods have deteriorated considerably due to climate shocks. The first two components of the project are entirely devoted to this.	However, some of the target populations who do not know how to read and write may not benefit from certain spin-offs, such as the guide for implementing adaptation to CC for populations living along the banks of classified forests. To overcome this difficulty, an illustrated version of the guide in local language will be produced. Similarly, populations without radios and cell phones may not benefit from climate information. This risk will be overcome by using traditional means of communication (griots, etc.) Risk: Low Potential Impact: Low
Human rights	The project ensures that the rights of direct beneficiaries, i.e. men, women, youth and children, are respected, depending on their involvement in the implementation. The consultation of stakeholders prior to the drafting of this NC was part of this logic.	Risk: Low Potential Impact: Low The project will be implemented using the existing government structures at local, regional, and national levels and observations of human rights are a must.
Gender equality and women's empowerment	In its design, this project fundamentally takes into account gender equality and women's empowerment. Component 2 and 3 provide various activities for women's empowerment.	Risk: Low Potential Impact: Low The project has a special on focus on women and youth groups especially for income generating activities and grants to ensure that they fully participate and benefit from the project. Also, Participation of women will be encouraged in the field schools -
Basic labor rights	In rural areas, work remains largely informal.	Risk: Medium Potential Impact: Medium Inequality of pay between men and women and child labor are risks that could have an impact on the proper execution of activities. The project will remain vigilant to the respect

		of the Labor Code in force in the Republic of Benin. Attention will be paid to the elimination of child labor.

Indigenous Peoples	The Project's beneficiary communities do not have indigenous peoples as defined by the United Nations, but the project will ensure that the activities do not violate traditional customs and practices.	Risk: Low Potential Impact: Low
Involuntary Resettlement	Project activities will be implemented with communities in their own localities and on their own land. No resettlement of populations to new localities is planned.	Risk: Low Potential Impact: Low
Protection of natural habitats	The project aims to make farmers more resilient to climatic shocks and to reduce pressure on classified forests, thus contributing to the protection of natural habitats.	Risk: Low Potential Impact: Low However, the construction of the reservoir planned for component 1 could lead to the destruction of some natural habitats. The ESIA to be prepared during the drafting of the project document will allow better documentation of these aspects.
Conservation ofof biological diversity	The project plans to make farmers more resilient to climatic shocks and to reduce pressure on classified forests, thus contributing to the conservation of biodiversity	Risk: Medium Potential Impact: Low Medium Although the project has many environmental benefits, including improved soil health, water conservation, and reduced use of chemical fertilizers and pesticides, the conversion of land for food crop production may affect biodiversity. Consultations will be required during the development of the environmental and social impact framework to identify appropriate measures and develop training modules that incorporate this concern.

Climate Change	The project is being undertaken to build resilience of small farmers to CC. It also proposes to reinforce the local governance framework and management of CC adaptation.	Risk: Medium Potential Impact: Medium Project activities will be developed to enhance the resilience of ecosystems and populations to Climate change focusing on adaptation to the impacts of floods and landslides in the targeted areas.
Pollution Prevention and Resource Efficiency	The project will contribute to sustainable land management, water use efficiency and water pollution prevention.	Risk: Low Potential Impact: Low
Public Health	The project's activities promote the health of the beneficiaries. The provision of various equipment is intended to facilitate field work. In the same way, the improvement of the financial capacity of the beneficiaries will make it possible to face the expenses of health care)	Risk: Low Potential Impact: Low
Tangible and intangible assets	None of the project's activities have an impact on the physical and cultural heritage of humanity.	Risk: Low Potential Impact: Low
Land and soil conservation	Component 1 of the project focuses on land conservation through soil and water conservation techniques (SWC) and water control to facilitate market gardening and other activities around the ~~+res~~ervoir that the project proposes to build.	Risk: Low Potential Impact: Low

PART III : IMPLEMENTATION ARRANGEMENTS

A. Key Stakeholders and Implementation Arrangement

Describe the arrangements for project/programme implementation.

The Ministry of Livelihoods and Transport in charge of sustainable development (MCVT) is the national focal point for multilateral agreements on the environment and climate change, and the designated national authority (DNA) for the United Nations Framework Convention on Climate Change and for all climate change projects in the Republic of Benin. These functions are performed by the Directorate General for the Environment and Climate (DGEC).

The project will be implemented by the Fonds National pour l'Environnement et le Climat (FNEC), the national institution responsible for implementing Adaptation Fund projects in Benin. The FNEC is responsible for supervising and coordinating project activities in the two beneficiary communes, in close collaboration with SONAB, the project promoter. The FNEC is accountable to the Board of Directors of the Adaptation Fund for the management of the financial resources allocated by the Adaptation Fund, as well as for the quality of the results. It must produce regular implementation reports for the Adaptation Fund (AF).

The project will be implemented by the Société Nationale du Bois (SONAB). Good collaboration will be developed between the FNEC and SONAB to share procedures for managing Adaptation Fund resources and to apply the standards recommended by the Fund Board, as well as national and international technical standards associated with project activities.

The participatory and inclusive approach will be applied. All identified stakeholders will be involved. Capacity building and service delivery activities will be carried out by specified expertise contracted for this purpose. The local communities will carry out direct actions in the field with the support of the technical services of SONAB and the Bassila Town Council, the decentralised structures of the State and other stakeholders, on the basis of the terms of reference that will be regularly validated by the Project's governance bodies.

The governance and implementation bodies will include a Project Steering Committee (PSC), a Project Technical Committee (PTC), a Project Management Unit (PMU) and a Community Consultation Committee (CCC).

The Project Steering Committee (PSC) is the governance and guidance body for the project's activities. Chaired by the Minister for the Living Environment and Transport in charge of Sustainable Development (MCVT) or his representative, the PSC is made up of the Managing Directors of FNEC and SONAB, the Mayor of Bassila, representatives of government institutions and key organizations covering the sectors concerned by the project (environment, agriculture, water, health, decentralization, etc.), representatives of national environmental authorities/agencies, civil society and public or associative structures involved in the management of climate change. It will meet in ordinary session once a year to: (i) define the reorientation of the project's activities, (ii) ensure the

execution of the project as a whole, (iii) evaluate and adopt the results of the previous financial year, (iv) examine and approve the annual Work Plans and Budgets as well as the quarterly plans and budgets, and (iv) make recommendations for the next stages of implementation according to the evolution of implementation activities and sectoral, national and international policies in the area of climate change. It may meet in extraordinary session and call on resource persons if necessary.

The Project Technical Committee (PTC) is made up of representatives of the FNEC, SONAB and the technical departments of the sectoral ministries and other institutions involved in the project (agriculture and food, water resources, health and nutrition, social affairs and gender, etc.), universities and research centres, the National Committee on Climate Change (CNCC), the Commission for the Economic Modeling of Climate Impacts and the Integration of Climate Change into the General Budget.), universities and research centres, the National Committee on Climate Change (CNCC), the Commission for Economic Modelling of Climate Impacts and Integration of Climate Change into the General State Budget (CMEICB), the Benin Standards, Metrology and Quality Control Agency, the National Women's Institute, NGOs and civil society. It will meet once a quarter to: (i) examine and validate the terms of reference of the thematic studies, the consultation reports and all documents produced by the Project Management Unit (PMU) and the consultants, (ii) assess the relevance of the reorientations of activities proposed by the PMU, and (iii) make technical recommendations on all issues submitted to it. Extraordinary sessions may be organized if necessary. The PTC is chaired by the Secretary General of the MCVT or his representative.

The Project Management Unit (PMU) is made up of a National Project Coordinator (NPC), a Monitoring and Evaluation Manager (MEM), an Administrative and Financial Manager (AFM), a Gender and Communication Manager (GCM), and two Community Facilitators (CF) or Focal Points (FP) based respectively in the Bassila and Pénessoulou districts. The premises housing the offices of the Project Management Unit are provided by SONAB or by the FNEC in Cotonou. All the members of the PMU work full time on the Project, except for the Community Facilitators or Focal Points who come under the staff of the Town Hall or the intervention Boroughs and whose status in the Project will be negotiated before they take up their duties.

- **The National Project Coordinator (NPC)** is the expert responsible for the day-to-day coordination of the activities set out in the project document. He is responsible for organizing and structuring all programmatic activities, collecting data and drawing up draft terms of reference and periodic reports. He/she assists the other members of the Management Unit. He/she works under the direct supervision of SONAB and the FNEC, in close collaboration with the Authorities of the Commune of Bassila, the service providers, the Heads of the Arrondissements of Bassila and Pénessoulou, and all the institutions and external bodies collaborating with the Project to achieve results.
- **The Monitoring and Evaluation Manager (MEM)** is responsible for monitoring and evaluating the implementation of the activities set out in the project document. As such, he/she proposes criteria for the physical and financial evaluation of the progress of activities, which will be validated by the PTC. It also assists the NPC in drawing up annual, quarterly, monthly and weekly work plans for activities, and in preparing field activities. It monitors the day-to-day activities of the community facilitators or focal points, and ensures that the work plans agreed with the Project Steering Committee are implemented and followed up. It also

ensures that the project's performance indicators are produced and documented. It draws up a sustainability plan through knowledge management and exchanges and sharing with the communities. It documents good practice and lessons learned. He/she supports and monitors studies and action research to ensure the sustainability of actions at the end of the project.

- **The Administrative and Financial Manager (AFM)** is responsible for the administrative and financial management of the project, working closely with the National Project Coordinator.
- **The Gender & Communications Manager (RGC)** is responsible for mobilizing stakeholders. His basic mission is to design and implement the project's communication strategy in close collaboration with the National Director and the National Project Coordinator. He is responsible for implementing the project's communication plan. To this end, he/she organises events and communication activities to ensure the visibility of the project's activities. It provides input into the development of the Terms of Reference for contracts. It contributes to training activities where necessary.
- **Community Facilitators or Focal Points** are responsible for implementing and monitoring project activities in the field. They are also responsible for collecting and reporting information from the field to the National Project Management and to the NPC. Each Community Facilitator is responsible for monitoring and implementing the project at local level and assisting communities in the field.
- Community facilitators must have at least 10 years' experience in supporting groups in rural development and agricultural production, with a good knowledge of climate change adaptation measures. They must have at least 5 years' practical experience in one or more climate change adaptation projects.
- **Support staff** will complement the members of the **Project Management Unit** as required.
- **The Community Consultation Committee (CCC)** is responsible for monitoring the project's activities at Commune level, assessing the quarterly work plan, playing a facilitating role in the project's implementation and ensuring the synergy of action of all interventions going in this direction at the level of the project's intervention area. It plays a facilitating and monitoring role in the Borough and villages, and ensures that all the project's achievements are capitalized on and that good practice is extended or duplicated at other sites. It is made up of the Mayor of the Commune of Bassila, a representative of SONAB and the FNEC, the CNP and the MEM, as well as the heads of the arrondissements concerned, the representative of the Communal Unit of the Territorial Agency for Agricultural Development, representatives of key organizations covering the sectors concerned by the project (environment, agriculture, water resources, health, decentralization, etc.), two representatives of the beneficiary communities and the community facilitators.

Proposed terms of reference for the key members of the PMU are presented in Annex 13. They will be validated during the Project launch workshop.

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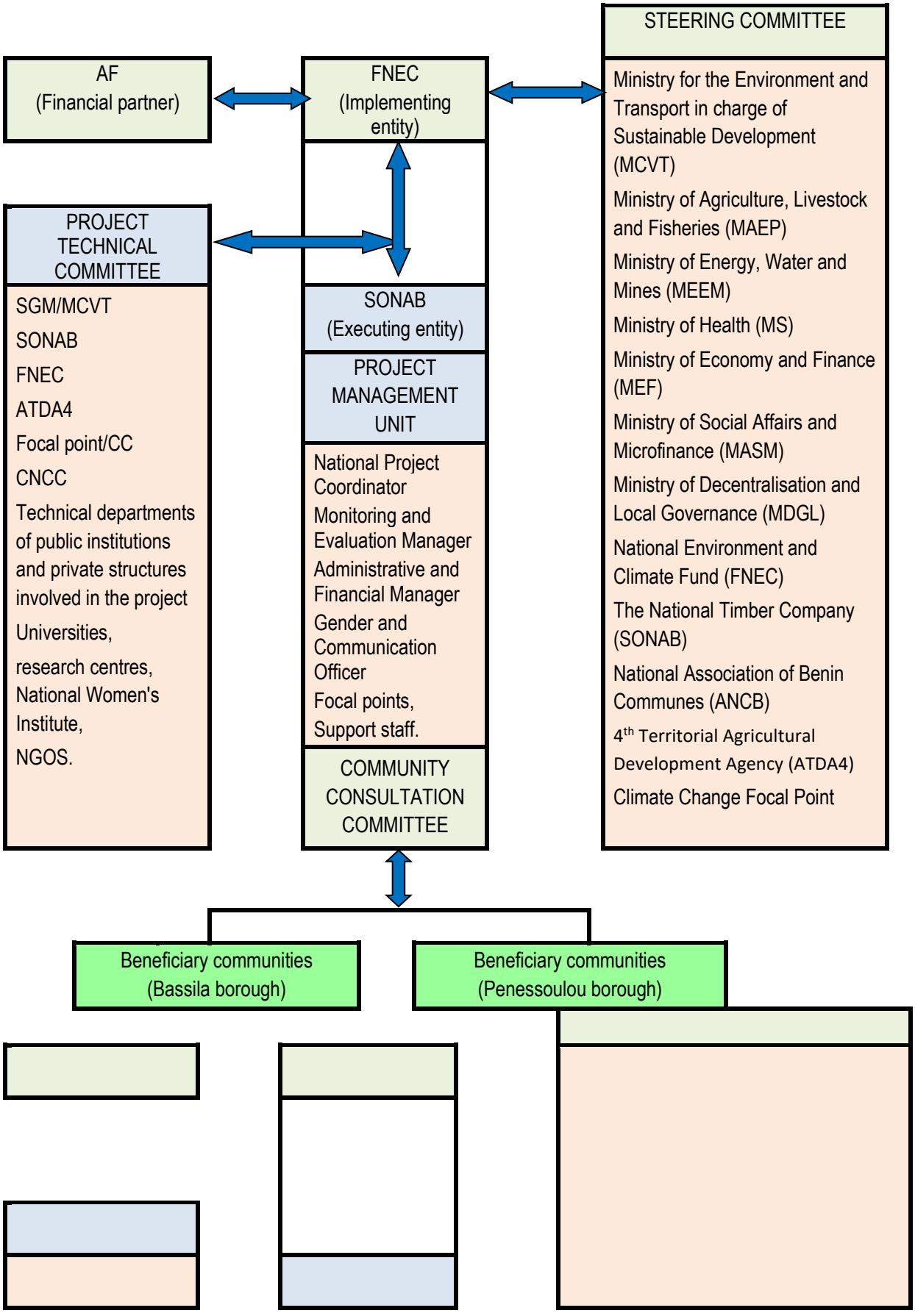
AF
(Financial partner)
FNEC
(Implementing entity)
STEERING COMMITTEE
Ministry for the Environment and Transport in charge of Sustainable Development (MCVT)
Ministry of Agriculture, Livestock and Fisheries (MAEP)
Ministry of Energy, Water and Mines (MEEM)
Ministry of Health (MS)
Ministry of Economy and Finance (MEF)
Ministry of Social Affairs and Microfinance (MASM)
Ministry of Decentralisation and Local Governance (MDGL)
National Environment and Climate Fund (FNEC)
The National Timber Company (SONAB)
National Association of Benin Communes (ANCB)
4th Territorial Agricultural Development Agency (ATDA4)
Climate Change Focal Point
PROJECT TECHNICAL COMMITTEE
SGM/MCVT
SONAB
FNEC
ATDA4
Focal point/CC
CNCC
Technical departments of public institutions and private structures involved in the project
Universities,
research centres, National Women's Institute,
NGOS.
SONAB
(Executing entity)
PROJECT MANAGEMENT UNIT
National Project Coordinator
Monitoring and Evaluation Manager
Administrative and Financial Manager
Gender and Communication Officer
Focal points,
Support staff.
COMMUNITY CONSULTATION COMMITTEE
Beneficiary communities
(Bassila borough)
Beneficiary communities
(Penessoulou borough)

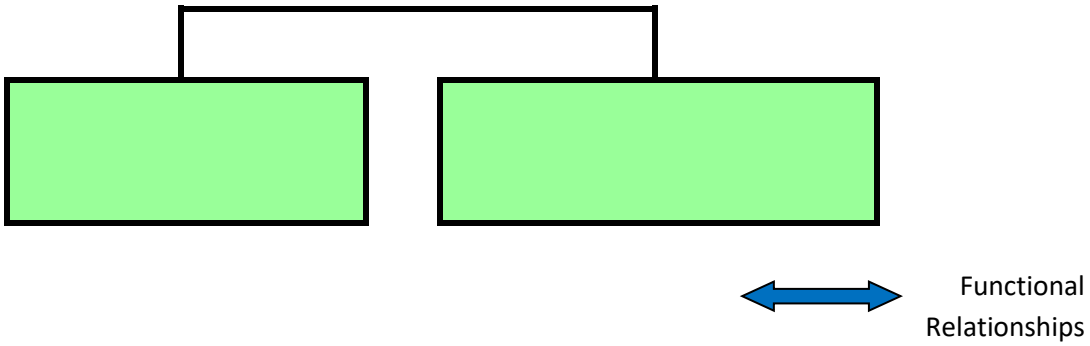

Figure 12: Project Organisation Chart

B. Financial and Management Risks

Describe the measures for financial and project/programme risk management.

The success of the implementation of the project may depend on a certain number of financial risks, the identification of which before implementation will make it possible to anticipate adaptation, mitigation or attenuation methods. The following table presents the identified risks as well as the proposed strategies (Table 12).

Table 12 : **Financial and project risk management**

i	Identified risk	Impact	Probability	Management/mitigation measures	Person in charge
1	Political instability	High	Low	Benin enjoys good political stability despite the disturbances observed in some neighbouring countries. However, the impact of this risk can be limited thanks to the strategy of neutrality of opinion that the key players in the project must observe in the exercise of their role in the implementation of the Project.	SONAB
2	Corruption and embezzlement	High	Low	The anti-corruption strategy put in place in Benin in recent years will discourage any temptations in this area. In addition, the expenditure control and monitoring system provided for in the project arrangement will have to be tested regularly to discourage any temptations.	SONAB
3	Low stakeholder engagement	High	Low	The commitment of the stakeholders is the key to the success of this project. To mitigate this risk, communities were consulted at all stages of the project's formulation. This demonstrates their commitment to implementation. However, it is likely that certain frustrations will arise during the implementation of the project, slowing down the progress of the actions. In addition, the Project Management Unit has a person in charge of mobilising stakeholders, who is the Gender&Communication Manager.	SONAB UGP
4	Political instability in neighbouring countries	High	Low	The project is located in the communes of Boukombé and Bopa. Boukombé borders Togo and Burkina Faso. The instability in this area has been monitored for several years to avoid terrorist threats that could destabilise the population. In addition, migratory movements from neighbouring countries since the occurrence of terrorist threats and the political instability	UGP Town Hall SONAB

i	Identified risk	Impact	Probability	Management/mitigation measures	Person in charge
				which creates waves of displaced persons towards the border Communes can negatively affect the implementation of the project. However, it should be emphasised that the project itself is a measure to prevent and mitigate the impact of the co-option of certain local young people for terrorist actions. The project will contribute to stability in the area and help to prevent any recuperation of vulnerable groups.	
5	Conflicts between breeders and farmers	Medium	Low	Pressure on arable land and the destruction of grasses to create new fields are creating a shortage of grazing space for livestock farmers. This often degenerates into conflicts between herders and farmers. Herders are present in the project area. However, the recent introduction of early warning systems and conflict prevention and management mechanisms, of which mayors and local elected representatives are members, is a means on which the project can build. In addition, the application of the law on transhumance will help to reduce the occurrence of these phenomena by defining transhumance corridors.	UGP, SONAB, Town Hall
6	Delays in making financial resources available	High	Low	Implementing actions to strengthen resilience requires good planning of resources for efficient management. Punching a time clock, or a delay in making financial resources available, can have a serious impact on project implementation. To achieve this, it is essential that requests are well planned and that the means of control play their role fully and impartially, so that resources can be made available on time. The PMU's adoption of management procedures is one of the first actions to be taken.	FNEC UGP SONAB
7	Delays in mobilising human resources for implementation	High	Medium	One of the key pillars of the project's success is the timely availability of human resources, in particular the PMU and resource persons with the key expertise to be mobilised in the implementation. Any delay in their mobilisation may have an impact on the implementation of the project, or even lead to temporary suspension. The FNEC and SONAB will have to be vigilant at the start of the project in this respect.	FNEC, SONAB
8	Low participation of beneficiaries	High	Low	Beneficiaries may have conflicts of interest when carrying out a task or activity. This could lead to disruptions in implementation. This risk has been minimised by including beneficiaries in the	UGP SONAB Town Hall

i	Identified risk	Impact	Probability	Management/mitigation measures	Person in charge
				consultation and monitoring committees at local level. The project team will also need to generate more interest in the beneficiaries to ensure that they continue to attend. The project team must also capitalise on the experience of previous projects carried out in the intervention zone.	
9	Unsuitable profiles for positions in the project management team	High	Low	It very often happens that during recruitment, there are biases which are revealed later during implementation. To this end, the FNEC and SONAB will ensure compliance with the profiles already described in the project document and the terms of reference which will be approved at the start of the project. They must take them into account when suggesting methods or tools likely to reduce bias. By virtue of the nature of the activities, it would be advisable to identify enthusiasts in order to arouse the interest and enthusiasm of the beneficiaries.	FNEC SONAB
10	The occurrence of an epidemiological crisis such as Covid-19	Low	Low	Benin, like other countries, has fallen victim to the Corona Virus pandemic. This pandemic caused a crisis in the mobility of people and goods, resulting in a stagnation of activities and projects underway at the time. Given this consequence, it is clear that such a risk must be anticipated in the future. Although Benin is striving to strengthen its health system, this remains a risk that should not be ignored. For this reason, SONAB and FNEC will ensure that hygiene measures are respected and that health and safety risk analysis is carried out on a quarterly basis to better mitigate the risk.	FNEC SONAB
11	Lack of financial control	Low	Low	Since 2020, Benin has had an electronic invoicing system in place. This system is reinforced at FNEC and SONAB by management procedures that are periodically audited. In addition, on the basis of its annual activity plan, the project will draw up a quarterly call for funds plan with proof of justification for the resources previously made available.	FNEC SONAB

C. Environmental and social risk management

Describe the measures for environmental and social risk management, in line with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.

Article 27 of the Constitution of the Republic of Benin states that "everyone has the right to a healthy, satisfactory and sustainable environment and has the duty to defend it. The State shall ensure the protection of the environment". To ensure this protection, article 88 of law no. 98-030 of 12 February 1999 on the framework law on the environment stipulates that "no one may undertake developments, operations, installations, plans, projects and programmes or the construction of works without following the environmental impact assessment procedure, where this is required by laws and regulations".

The principles of this law are defined as follows:

- Article 3-c: the protection and enhancement of the environment must be an integral part of the economic and social development plan and the strategy for its implementation;

- article 3-d: the various social groups must be involved at all levels in drawing up and implementing the national environmental policy; this principle is decisive in the fight against poverty and promotes the country's development;

- article 3-f: any act prejudicial to the protection of the environment engages the direct or indirect responsibility of its author, who is obliged to make reparation.

These provisions are reinforced by the international commitments made by Benin through the ratification of almost all the international environmental conventions and agreements. Those most directly related to the Programme's objectives are summarized in Table 13.

Table 13 : Ratified multilateral environmental conventions/agreements of direct or indirect relevance to the project/programme

N°	Convention / agreement	Date of ratification (or signature)
01	United Nations Framework Convention on Climate Change	30th June 1994
02	United Nations Framework Convention on Desertification	30th June 1994
03	Convention on Biological Diversity	30th June 1994
04	Convention for Cooperation in the Protection and Development of the Marine Environment and Coastal Areas of West and Central Africa	16th January 1997
05	Kyoto Protocol	25 February 2002
06	Convention on Wetlands and Waterfowl Habitat - Ramsar Convention	20th January 2000
07	Convention concerning the Protection of the World Cultural and Natural Heritage	14 September 1982

08	Convention on the Conservation of European Wildlife and Natural Habitats	1st April 1986
09	Phytosanitary Convention for Africa	1st April 1974
10	Paris Agreement	31st October 2016

This table summarises the elements showing Benin's determination to equip itself with all the legal and political means necessary to manage its environment and, above all, to contribute to the conservation of the global environment, despite its level of development.

Program standards

The compliance standards applicable to the execution of the project are defined by various implementing texts.

Main environmental and social issues induced by the project

By definition, an issue is a major concern that one or more actors can lose or gain on social, environmental, economic and other levels, in a development option or project can influence the decision. The issue makes it possible to define the impacts. As part of the project, after a survey in the various host environments of the project and among the target groups concerned (political-administrative authorities, local elected officials, local residents, community groups, etc.), the main concerns to be taken into account in the execution of the project are determined. A summary of the issues is presented as follows in Table 14.

Table 14 : Project challenges

Project challenges	
Environmental	➢ protection of soil, surface water and groundwater; ➢ water quality; ➢ greenhouse gas emissions; ➢ protecting biodiversity and landscapes.
Social	➢ the participation of communities in their own development; ➢ taking gender and vulnerable groups into account; ➢ risk management; ➢ governance; ➢ social climate and local economy; ➢ quality of life (including conflicts of use and nuisance); ➢ personal health and safety; ➢ reconciling uses of the area; ➢ strengthening the ability of affected communities to develop and adapt.
Economic	➢ knowledge of crop potential and various processes; ➢ assessment of resources; ➢ the economic relevance of the chosen agricultural sectors;

	➢ costs, including externalities; ➢ the sharing of economic rents and benefits.

Analysis of project impacts

Implementation of the project will have negative environmental and social impacts linked to the production and processing of the various crops. These impacts are as follows:

- destruction or modification of plant cover due to the installation of fields and processing plants;
- contamination of groundwater and surface water near the fields;
- insalubrity due to the lack of a sewage and wastewater collection system at the processing units;
- noise emissions from processing plant machinery;
- risk of soil pollution from used oils used in equipment maintenance;
- poor management of the waste produced due to the presence of a large number of plant workers and staff.

The project generates negative environmental impacts that are generally a function of the capacity of the processing equipment (various forms of pollution) and the volume of materials to be processed. In addition, the technology used, the characteristics of the waste generated and potential spills, as well as the specific characteristics of the receiving environments (different production sites and processing units) all condition the nature of the impacts. The production phase of the agricultural products and the phase during which they are transformed into by-products of the project are the most active phases of the initiatives with the greatest impact on the environment.

Since the project will lead to an improvement in yields, and the increase in acreage is based on extensive systems that accelerate environmental degradation and encourage deforestation, the use of chemical inputs and non-biodegradable polyethylene films becomes a necessity to increase yields. In such a context, the emphasis must be placed on popularizing environmentally-friendly production technologies on the one hand, and on sustainable land management (SLM) practices to mitigate the tendentious impacts on land resources on the other.

In addition, the sites where the agro-food processing units are located will lead to a large number of encounters every day between users on the one hand, and between users and the local population on the other. Solid and liquid waste created by users of the various processing units is discharged into the environment, increasing organic, chemical and bacteriological pollution.

Noise pollution from agricultural and processing equipment inevitably contributes to an increase in the inconvenience to which workers and neighbouring communities are exposed.

Finally, workers and equipment are subject to risks of fire and explosion linked to electrical installations and possible equipment failures. There has also been an increase in the number of accidents caused by the movement of vehicles transporting project equipment and personnel, as well as accidents at work to which workers are exposed.

In view of the project's objectives, which are to increase the production and processing of quality agricultural products to satisfy the various value chain markets, SONAB must put in place measures to reduce the risk factors and avoid the negative impacts associated with the activity by opting for environmentally-friendly agro-industrial models and technologies (Table 15).

Table 15 : **Project impacts on the environment and mitigation measures**

Environmental impacts	Possible mitigation measures	Cost of measure (USD)	Person in charge of monitoring
Land degradation associated with intensive agriculture	Implement land conservation measures such as stone barriers and hedgerows to reduce erosion and conserve land	PM	Community Facilitator (CF)
	Promote the use of species adapted to local conditions or species that restore nutrients to the soil	PM	CF
	Practise appropriate crop rotation	PM	CF
	Raise awareness and train producers in environmental protection measures and organic farming	PM	CF
Deforestation of natural flora	Compensatory reforestation with species adapted to the environment	10,000	CF
	Raise awareness of forest protection	PM	CF
Erosion and degradation of the soil due to exposure to the climate and pollution from machinery	Promote SLM practices	PM	CF
	Raise awareness of environmental ethics during construction work	PM	CF
Degradation of vulnerable or particularly valuable sites (water bodies, drinking water sources, steep slopes, sites of cultural importance)	Promote SLM practices	PM	CF
	Position ecological latrines	PM	CF
	Promote IWRM	PM	CF
	Take measures to prevent the dumping of industrial waste on the site and in the surrounding area	PM	CF

Environmental impacts	Possible mitigation measures	Cost of measure (USD)	Person in charge of monitoring
Emission of greenhouse gases and air pollution produced by processing units, lorries and wood burning	Promote the use of alternative energies (e.g. solar energy) rather than fossil fuels	40,000	UGP
	Take measures to prevent fuel leaks and accidental oil spills	PM	CF
	Cover lorries when transporting products	PM	CF
	Comply with noise regulations	PM	CF
	Develop communication on STIs/STIs, HIV/AIDS	4,000	SONAB
Total		**94,000**	

Table 16 : Environmental and Social Risks analysis and mitigate measures

Environment and Social Principles	Identified risks/Impact	Possible measures to avoid, minimize or mitigate Environmental and Social Risks	Monitoring Indicators	Assessment of significance	Period	Oversight officer	Cost
Principle 1: Compiliance with the Law	None	The project is fully consistent with policies, standards and laws. The project is consistent with Benin's environmental protection laws and measures. The project is classified in category B. The project offers every guarantee that the activities to be carried out will have no significant impact on the environment.	Number of sites where environmental and social assessments have been carried out in relation to the 15 principles	Non risk appreciable	During project implementation	UGP, SONAB	Included in the cost of the project
Principe 2: Access and equity	Possible lack of equity in the distribution of resources	The strategy for identifying beneficiaries is based on associations and cooperatives. These associations are made up of men and women. This strategy reduces the risk of unequal distribution of resources. This measure has already been taken into account since the population consultation phase.	Proportion of vulnerable people among beneficiaries	Non risk appreciable	During the selection of beneficiaries	UGP, SONAB	Included in the cost of the project
Principe 3: Marginalized and vulnerable groups	Marginalisation of vulnerable people	The main aim of the project is to strengthen the resilience of vulnerable populations. This principle has been taken into account since the identification of the project's intervention zones. The project does not present any risks of exclusion of vulnerable groups.	Proportion of young people and women who have benefited from the project	Non risk appreciable	During the implementation phase	UGP, SONAB	Included in the cost of the project

Environment and Social Principles	Identified risks/Impact	Possible measures to avoid, minimize or mitigate Environmental and Social Risks	Monitoring Indicators	Assessment of significance	Period	Oversight officer	Cost
Principe 4: Human Rights	Failure to respect human rights during the implementation of certain activities	Since its conception, the project has made respect for human rights a fundamental pillar. SONAB's aim is to reduce inequalities and restore people's human dignity. In so doing, the project aims to respect human rights in all their forms. Thus, the project, from the outset, has avoided any alienating activities that might occur during its implementation. The project is perfectly consistent with Benin's constitution and with the laws and international conventions that Benin has ratified.	Number of complaints received about failure to respect human rights	Non risk appreciable	During the implementation phase	UGP, SONAB	Included in the cost of the project

Environment and Social Principles	Identified risks/Impact	Possible measures to avoid, minimize or mitigate Environmental and Social Risks	Monitoring Indicators	Assessment of significance	Period	Oversight officer	Cost
Principe 5: Gender equality and women's empowerment	Low representation of women in decision-making processes, planning and implementation	In some communities, women are reluctant to speak out in public for fear of reprisals from men or their husbands. In implementing this project, equal opportunities will be given to men and women in carrying out the activities. The inventory revealed that in the project area, men and women complement each other in carrying out their tasks. However, the ultimate aim of the project is to strengthen women's ability to participate in community decision-making processes. Emphasis will be placed on female leadership during training sessions. However, it should be emphasised that Benin has adopted a law for the promotion of gender, and women have an equal opportunity under the law to participate in decision-making positions.	Percentage of women in decision-making bodies Number of complaints received about gender-based violence	Low	During the project implementation phase	UGP, SONAB	Included in the cost of the project

Environment and Social Principles	Identified risks/Impact	Possible measures to avoid, minimize or mitigate Environmental and Social Risks	Monitoring Indicators	Assessment of significance	Period	Oversight officer	Cost
Principe 6: Core labours rights	No formal employment contract	The project will ensure that workers' rights are respected, in accordance with the provisions in force in the Republic of Benin. Employees will work under signed and registered contracts. A payroll register will be kept, including social security contributions. In addition, Benin has introduced supplementary insurance for employees since 1 January 2023. This measure will be systematically taken into account to ensure that workers' rights are respected.	Number of employees benefiting from rights Number of inspections carried out	Low	During project implementation	UGP, SONAB	Included in the cost of the project
Principe 7: Indigenous peoples	No indigiginous in Republic of Benin						
Principe 8: Involuntary resettlement	No appreciable risk	The project will focus on areas that do not require people to move.	Number of sites reassigned	Low	During the selection of project sites	UGP, SONAB	Included in the cost of the project
Principe 9: Protection of natural Habitats	No appreciable risk	The project will ensure that natural habitats are protected and safeguarded and will avoid creating nuisances likely to destroy the natural environment (such as mangroves, spawning grounds, natural watercourses and wildlife reserves).	Number of sustainable practices promoted	Low	During project implementation	UGP, SONAB	Included in the cost of the project

Environment and Social Principles	Identified risks/Impact	Possible measures to avoid, minimize or mitigate Environmental and Social Risks	Monitoring Indicators	Assessment of significance	Period	Oversight officer	Cost
Principe 10: Conservation of biological diversity	No introduction of new species and varieties	The project aims to build on existing cultivation practices without introducing new varieties. However, it aims to improve cultivation practices in order to help beneficiaries achieve higher yields.	Number of technology packages deployed	Medium	During project implementation	UGP, SONAB	Included in the cost of the project
Principe 11: Climate Change	No appreciable risks	The project will promote the use of agricultural equipment and organic soil fertilisation. For crops requiring mineral inputs, the project will ensure that the indicated doses are respected and that crop rotation is practised.	Number of innovative green technologies promoted	Medium	During project implementation	UGP, SONAB	Included in the cost of the project
Principe 12: Pollution Prevention and Resource efficiency	No appreciable risk	The project aims to promote sustainable land management (SLM) innovations. In doing so, it will not resort to the use of pesticides or environmentally toxic pollutants.	Rate of negative tests	Low	During project implementation	UGP, SONAB	Included in the cost of the project
Principe 13: Public health	Covid 19	The project will continue to raise awareness of the need for hygiene and promote national guidelines for the prevention of Covid-19.	Number of sessions held	Low	During project implementation	UGP, SONAB	Included in the cost of the project
Principe 14: Physical and cultural heritage	No appreciable risk	In its implementation, the project will ensure the physical and cultural integrity of the sites in which it operates.	Number of actions	Low	During project implementation	UGP, SONAB	Included in the cost of the project

Environment and Social Principles	Identified risks/Impact	Possible measures to avoid, minimize or mitigate Environmental and Social Risks	Monitoring Indicators	Assessment of significance	Period	Oversight officer	Cost
Principe 15: Soil and land conservation	Poor agricultural practices leading to soil degradation	The project aims to promote good agricultural practices in the intervention areas with a view to preventing soil degradation. The project will focus in particular on SLM measures	Areas benefiting from soil conservation measures	Low	During project implementation	UGP, SONAB	Included in the cost of the project

D. Monitoring and evaluation

Describe the monitoring and evaluation arrangements and provide a budgeted M&E plan, in compliance with the ESP and the Gender Policy of the Adaptation Fund.

A computerized database will be developed during the first year by the FNEC to facilitate the regular production of dashboards showing the results of the project's monitoring and evaluation system. This will involve monitoring environmental parameters in the field, collecting, processing, analyzing and disseminating the information needed to manage the project, project results and lessons learned, for internal dissemination or dissemination to the general public, etc., in accordance with the provisions of the monitoring-evaluation plans contained in tables 17 and 18 below.

Table 17 : Evaluation plan

Type of evaluation/ Follow-up activity	Frequency/Period	Participants/ Planned action	Costs (USD)	Budget lines
Stakeholder initial consultation and survey	1 months after the project start	Community stakeholders, beneficiaries, SONAB, FNEC	8,000	FNEC, SONAB
Baseline Evaluation	3 months after the project start	External consultant. Beneficiaries, stakeholders, project intervention area	15,000	FNEC
Mid-term Evaluation	2 year after the project start	External consultant, Beneficiaries, PMU, Stakeholders	16,000	SONAB
Follow-up panel evaluation	Yearly	Community Stakeholders, PMU, Beneficiaries, SONAB, FNEC	10,000	FNEC
Final Evaluation	6 months before of the project end	External consultant, Beneficiaries, PMU, Stakeholders	16,000	SONAB
Impact Evaluation	3 months to the project end	External consultant. Beneficiaries, stakeholders, project intervention area	25,000	FNEC
Operationnal planning Activities	Annual	Develop the Annual Work Plan and Budget, Procurement Plan, Consolidated Dashboard for monitoring indicators	8,000	FNEC, SONAB

Monitoring progress to the results	Quarterly	Organize the validation workshop of the operational documents of the project with stakeholders - Prepare activity reports (quarterly, semi-annual, annual) - Set up and feed a database - Fill in the Dashboard of Follow-up of indicators ; - Prepare thematic analysis reports from the database; - Intervene in case of slower than expected progress - Identify specific risks that may threaten the achievement of expected results. identify specific risks that may threaten the achievement of expected results.	2,000	SONAB
Monitoring and management Risks	Quarterly	Identify and monitor risk management measures by means of a risk register (this register will include the measures and follow-up plans that may have been required according to the project social and environmental safeguards). - Conduct audits in accordance with the project audit procedures to manage financial risks	3,000	FNEC, SONAB
Knowledge Management	At mid-term and at six month to the project end	- Develop training materials based on successful achievements - Organize capitalization workshops - Produce didactic films - Organize study tours for the benefit of farmers	5,000	SONAB
Project review	Annual	- Oversee the implementation of project activities - Create and animate a consultation	6,000	FNEC, SONAB

		framework with the coordination units of all projects with which there is complementarity or it is likely to have complementarity - Manage and control the quality of deliverables		
Operationnal planning Activities	Annual	Develop the Annual Work Plan and Budget, Procurement Plan, Consolidated Dashboard for monitoring indicators	8,000	FNEC, SONAB

E. Project Results Framework

Include a results framework for the project proposal, including milestones, targets and indicators, including one or more core outcome indicators of the Adaptation Fund Results Framework, and in compliance with the Gender Policy of the Adaptation Fund.

The results framework is a tool that can only be modified with the authorization of the project Steering Committee. For this reason, beneficiaries and stakeholders will need to familiarize themselves with it at the launch workshop, at the end of which all stakeholders should have a clear understanding of how the project will be implemented in order to achieve the agreed results.

Table 18 : Project Results Framework

**	Project Objective Indicators	Baseline	Targets	Interim Targets	Means of Verification	Frequency	Risk, Impact, Mitigation	Responsibility
General objective: Improve and maintain the livelihoods of people living near the classified forests of Bassila and Pénessoulou despite climatic shocks.	Number of direct and indirect beneficiaries lifted out of food insecurity (indicators 6.1 and 6.2 of the Adaptation Fund)	0	47,000	18,000	Annual reports Quarterly reports	Annual	Potential risks : Rising prices of agricultural inputs Epidemics like COVID-19 Mitigation measures: Appropriate measures to be taken by the Management Team	FNEC
	Number of populations that reduce their pressure on classified forest resources							
	Percentage of women who have acquired	0	50¨%	50%				

	economic and food autonomy							
<u>Component 1</u> : Capacity building of the most vulnerable small farmers on good CC adaptation practices								
***Outcome** 1.1: On-Farm Resilience is built through the adoption of water and soil conservation and land restoration techniques*	Number of farming households on degraded land whose resilience is fully strengthened (indicator 4.2 of the Adaptation Fund)	0	4,617	2,300	Annual reports Quarterly reports	Annual	<u>Potential risks:</u> Loss of priority due to political turmoil may delay the process of technology appropriation <u>Mitigation measures:</u> Strengthen the participatory and inclusive design of activities to facilitate the appropriation of technologies	FNEC
	Number of farming households on degraded land whose resilience is partially strengthened	0	9,234	4,500	Annual reports Quarterly reports	Annual		FNEC
Output 1.1.1: Farmers are trained on water and soil conservation and land restoration techniques	Number of workshops organised	0	10	5	Workshop reports Quarterly reports	Annual	<u>Potential risks:</u> Producers' disinterest in the activities <u>Mitigation measures</u>: The project team should ensure that producer groups are involved in the choice of equipment and technologies.	SONAB
	Number of farmers trained	0	2,000	1,000		Annual		SONAB
Output 1.1.2 : The technical itineraries and practices of the improved production system (SAP) are adopted by the farmers.	Nombre d'exploitants ayant adopté le SAP	0	1,000	500	Study reports	Annual		SONAB
Output 1.1.3 : The material capacities of producers are built through support for	Percentage of small producers who have benefited from equipment	0	100%	50%	Annual reports	Annual		Bassila City Hall

various equipment (small tools, personal protective equipment, composting bags, sprayers, etc.)	Percentage of women producers who have benefited from equipment	0	100%	75%	Quarterly reports	Annual		Bassila City Hall
***Outcome 1.2** : Water resources are managed in an integrated manner for the benefit of farmers*	Number of farmers who have adopted IWRM in rain-fed or irrigated agriculture	0	9,500	4,250	Annual reports Quarterly reports	Annual	<u>Potential risks:</u> Lack of interest from producers in the activities. <u>Mitigation measures</u> : The Project Team will have to ensure the quality of the practical content of the activities, which will have to respond to the real concerns of the producers.	SONAB
Output 1.2.1: Improved stormwater storage capacity through the construction of a water reservoir for the benefit of farmers in each arrondissement.	Number of water reservoirs developed	0	2	1	Annual reports Quarterly reports	Annual		Bassila City Hall
Output 1.2.2: Market gardening developments are carried out in the vicinity of the water reservoirs for the areas allocated to market gardening	Area of market garden developed	0	10 ha	5 ha	Annual reports Quarterly reports	Annual		Bassila City Hall
Output 1.2.3: Farmers are trained on good integrated water resources management (IWRM) practices and on how to manage water use conflicts	Number of workshops organised	0	10	5	Workshop reports	Annual		FNEC
	Number of farmers trained	0	2,000	1,000	Quarterly reports	Annual		Bassila City Hall
***Outcome 1.3**: Climate-resilient seeds and*	Proportion of CC-resistant seeds and	0	50%	25%	Study reports	Annual	<u>Potential risks:</u>	ATDA

plants are available on time	seedlings in annual sowings						CC-resilient food species may not be adopted by consumers Mitigation measures: In addition to production techniques, attention will need to be paid to the organoleptic characteristics of crops	
Output 1.3.1: Setting up a mechanism for the revolving of seeds and plants adapted to climate change (maize, cassava, soya and market gardening).	Number of seed and seedling supply chains set up	0	15	7	Quarterly reports	Annual		ATDA
Output 1.3.2: The mechanism for supplying seeds and plants to producers is operational.	Number of women's groups set up to deliver seeds and seedlings to	0	10	6	Quarterly reports	Annual		ATDA
Component 2 : Development of value- added chains (VACs) in promising sectors in order to diversify the sources of income of the most vulnerable communities								
Outcome 2.1*: Sources of income of the local populations are diversified through the promotion of corn, soya, cassava and market gardening*	Percentage of target population with sustainable, climate-resilient livelihoods (indicator 6.2 of the AF).	0	50%	25%	Study reports	Annual	Potential risks: Diverging group interests can disrupt the start of value-added chain activities Mitigation measures: Raising awareness among stakeholders can help prevent initial difficulties.	Bassila City Hall
Output 2.1.1: Producer groups are better structured and are committed to the maize, soybean, cassava and market gardening VACs	Percentage of producer groups involved in CVAs	0	100%	50%	Annual reports	Annual		ATDA
Output 2.1.2: The management mechanism of the innovation platforms of	Percentage of CVA platforms operating regularly in the final year of the project	0	100%	75%	Platform activity reports	Annual		ATDA

the maize, cassava, soybean, cashew nut and market gardening sectors are in place and operational.								
***Outcome 2.2** : Sources of income of the local populations are diversified through the promotion of the beekeeping sector*	Percentage of professional groups involved in the beekeeping sector	0	70%	40%	Annual reports	Annual	Potential risks: Indiscriminate application of synthetic pesticides to crops can put beekeeping at risk. Mitigation measures: Raising farmers' awareness of alternative approaches to pest control is one solution.	SONAB
Output 2.2.1 Modern beekeeping techniques are mastered by beekeeping groups in both arrondissements	Percentage of traditional beekeepers involved in modern beekeeping	0	100%	50%	Annual reports	Annual		SONAB
Output 2.2.2 : Increase honey harvesting capacity for beekeepers through the acquisition of kit	Percentage of organised beekeepers benefiting from honey harvesting kits	0	100%	50%	Annual reports	Annual		SONAB
***Outcome 2.3** : Sources of income of local women's groups are diversified through the promotion of the shea butter industry*	Percentage of women's groups involved in the shea butter sector (indicator 6.2 of the AF)	0	70%	40%	Annual reports	Annual	Potential risks: Improving conditions for women's groups may arouse the interest of men who may take the sector away from the women. Mitigation measures: Raising men's awareness of the	Bassila City Hall
Output 2.3.1 : Women producers' groups are better structured and are committed to the shea butter VACs	Percentage of groups of women producers involved in the shea CVA	0	100%	50%	Annual reports	Annual		Bassila City Hall
Output 2.3.2 : The material capacities of women's groups are	Percentage of groups of shea processors benefiting from	0	100%	50%	Annual reports	Annual		Bassila City Hall

built for the collection and processing of shea butter through the acquisition of tricycles and semi-industrial shea butter production units.	transport equipment and semi-industrial units						need to maintain shea stands can shift shea production from gathering to farming, with higher added value for men.	
<u>Component 3</u> : Reinforcing the local governance and management framework for CC adaptation								
Outcome 3.1 *: The local governance and CC adaptation framework is operational*	Number of quarterly meetings of the governance and ACC framework	0	4	2	Annual reports	Annual	<u>Potential risks:</u> The causes behind the lethargy of the previous framework put in place for local governance and ACC could produce the same effects in the future <u>Mitigation measures:</u> A diagnosis of the functioning of the previous framework should be carried out in order to adopt by consensus the measures to be taken to ensure the sustainability of the new framework for local governance and adaptation to CC.	Bassila City Hall
Output 3.1.1 : Communal actors are trained on the adaptation of the agriculture and forestry sectors to CC	Percentage of municipal managers who have received training in ACC	0	100%	50%	Workshop reports	Annual		Bassila City Hall
Output 3.1.2 : The guide for the coordination of the local governance and adaptation to CC framework is validated and used by communal actors and communities bordering the classified forests of Bassila and Pénessoulou	Percentage of local governance and ACC framework activities using the guide	0	100%	50%	Workshop reports	Annual		Bassila City Hall
Output 3.1.3 : The gender approach is taken into account in the adaptation to CC at the level of the two arrondissements	Percentage of activities where gender parity is observed	0	100%	50%	Annual reports	Annual		Bassila City Hall

***Outcome 3.2** : CC adaptation management is effective in both arrondissements*	Percentage of time allocated by district chiefs to ACC issues	Very low	50%	25%	Annual reports	Annual	Potential risks: The virtual absence of early warnings or community events on Adaptation to Climate Change (ACC) in the Boroughs may justify the low level of vigilance among stakeholders. Mitigation measures: The frequent organisation of simulated alerts and community outreach sessions could improve people's level of vigilance.	Bassila City Hall
Output 3.2.1 : The community early warning system is functional, allowing appropriate measures to be taken in time, in anticipation of extreme weather events	Number of quarterly meetings of local players in the warning system	0	4	2	Annual reports	Annual		Bassila City Hall
Output 3.2.2 : Teachers, schoolchildren, opinion leaders and community radio hosts have become aware of and have taken ownership of good CC adaptation practices	Number of quarterly events involving local stakeholders	0	4	2	Annual reports	Annual		Bassila City Hall
***Outcome 3.3**. : Enrichment of communal, community and private forests with climate change resilient species*	Percentage of communal, community and private forests enriched with species resistant to CC	0	100%	50%	Annual reports	Annual	Potential risks: Poor timber or service quality of some resilient species may limit their uptake by people Mitigation measures:	SONAB
Output 3.3.1 : Indigenous tree species resilient to climate change and adapted to the edaphic conditions of Bassila are identified	Percentage of CC-resistant seeds and seedlings produced by nurseries	0	100%	50%	Annual reports	Annual		SONAB

and their seeds and seedlings are produced							Take into account qualities other than climatic resilience when choosing resilient tree species to promote	
Output 3.3.2 : Communal and community forests are enriched and private forests established using CC resilient species.	Proportion of communal and community forests enriched with CC-resistant species	0	100%	50%	Annual reports	Annual		SONAB
	Percentage of private forests planted with CC-resistant species	0	50%	25%	Annual reports	Annual		SONAB

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F. Project alignment with the Results Framework of the Adaptation Fund

Demonstrate how the project/programme aligns with the Results Framework of the Adaptation Fund

Table 19 : Alignment of Proposed Project Objectives/Outcomes with Adaptation Fund Results Framework

Project Objective(s)	Project Objective Indicator(s)	Fund Outcome	Fund Outcome Indicator	Grant Amount (USD)
1. **Strengthen the capacities of the most vulnerable smallholder farmers on good practices for adapting to climate change**	**Number of the most vulnerable smallholder farmers whose capacities are strengthened on good practices for adaptation to climate change**	**Outcome 3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level**	3.1. Percentage of targeted population aware of predicted adverse impacts of climate change, and of appropriate responses	**1,624,692**
			3.2. Percentage of targeted population applying appropriate adaptation responses	
		Outcome 5: Increased ecosystem resilience in response to climate change and variability-induced stress	5. Ecosystem services and natural resource assets maintained or improved under climate change and variability-induced stress	
		Outcome 8: Support the development and diffusion of innovative adaptation practices, tools and technologies	8.1 No. of new, adapted or improved adaptation solutions developed contextually and with the inclusion of the communities most vulnerable to climate change	
			8.2 No. of key findings on effective, efficient adaptation practices, products, and technologies generated and/or "learning and sharing" innovation initiatives undertaken	
			8.3 No. of individuals or organizations (disaggregated by gender) that submit an application to an innovation competition or challenge	

2. Develop added value chains of promising sectors with a view to diversifying the income of the most vulnerable communities	**Number of added value chains of promising sectors developed to diversify the income of the most vulnerable communities**	**Outcome 6: Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas**	6.1 Percentage of households and communities having more secure access to livelihood assets	**427,552**
			6.2. Percentage of targeted population with sustained climate-resilient alternative livelihoods	
		Outcome 3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level	3.1. Percentage of targeted population aware of predicted adverse impacts of climate change, and of appropriate responses	
			3.2. Percentage of targeted population applying appropriate adaptation responses	
		Outcome 4: Increased adaptive capacity within relevant development sector services and infrastructure assets	4.1. Responsiveness of development sector services to evolving needs from changing and variable climate	
			4.2. Physical infrastructure improved to withstand climate change and variability-induced stress	
3 : Strengthen the local governance and management framework for adaptation to climate change	**Number of climate change adaptation management policies implemented** **Number of innovation dissemination strategies developed**	**Outcome 7: Improved policies and regulations that promote and enforce resilience measures**	7. Climate change priorities are integrated into national development strategy	**417,756**
		Outcome 8: Support the development and diffusion of innovative adaptation practices, tools and technologies	8. Innovative adaptation practices are rolled out, scaled up, encouraged and/or accelerated at regional, national and/or subnational level.	

G. Detailed budget

Include a detailed budget with budget notes, a budget on the Implementing Entity management fee use, and an explanation and a breakdown of the execution costs.

Table 20 : Detailed budget by year of disbursement

Expected Concrete outputs	Output Budget	Inputs	Year 1	Year 2	Year 3	Year 4	TOTAL
Component 1 : Capacity building of the most vulnerable small farmers on good CC adaptation practices							
Expected outcome 1.1: On-Farm Resilience is built through the adoption of water and soil conservation and land restoration techniques							
Output 1.1.1: Farmers are trained on water and soil conservation and land restoration techniques	284,111	- Consultancy services ; - Capacity building for stakeholders on climate change and soil restoration; - Community trainers.	84,111	196,000	2,000	2,000	284,111
Output 1.1.2 : The technical itineraries and practices of the improved production system (SAP) are adopted by the farmers.	230,111	- Resilient technical itinerary systems ; - Field schools ; - Advisory services.	74,111	152,000	2,000	2,000	230,111
Output 1.1.3 : The material capacities of producers are built through support for various equipment (small tools, personal protective equipment, composting bags, sprayers, etc.)	268,084	- Strengthening the material capacities of the most vulnerable groups; - Arbitration and monitoring committee for the use of equipment by beneficiaries.	268,084	0	0	0	268,084
Expected outcome 1.2 : Water resources are managed in an integrated manner for the benefit of farmers							
Output 1.2.1: Improved stormwater storage capacity through the construction of a	644,711	- Development of water reservoirs ;	25,861	618,850	0	0	644,711

water reservoir for the benefit of farmers in each arrondissement.		- Training of farmers and livestock breeders on IWRM techniques for rain-fed and irrigated agriculture..					
Output 1.2.2: Market gardening developments are carried out in the vicinity of the water reservoirs for the areas allocated to market gardening	91,188	- Strengthening women's capacity to develop market gardening areas; - Promotion of resilient market gardening; - Consultancy.	24,188	67,000	0	0	91,188
Output 1.2.3: Farmers are trained on good integrated water resources management (IWRM) practices and on how to manage water use conflicts	70,611	- Improving local water management practices; - Adoption of good practice in integrated water resource management (IWRM); - Reduction of water use conflicts.	28,594	38,017	2,000	2,000	70,611
Expected Outcome 1.3: Climate-resilient seeds and plants are available on time							
Output 1.3.1: Setting up a mechanism for the revolving of seeds and plants adapted to climate change (maize, cassava, soya and market gardening).	19,188	- Setting up seed and seedling chains to enable nurserymen to meet growers' needs; - Consultancy services.	19,188	0	0	0	19,188
Output 1.3.2: The mechanism for supplying seeds and plants to producers is operational.	16,688	- Drawing up procedures for making seeds and seedlings available to farmers; - Organising the timely delivery of seeds and seedlings to farms.	16,688	0	0	0	16,688
Component 2 : Development of value- added chains (VACs) in promising sectors in order to diversify the sources of income of the most vulnerable communities							

Expected Outcome 2.1: Sources of income of the local populations are diversified through the promotion of corn, soya, cassava and market gardening							
Output 2.1.1: Producer groups are better structured and are committed to the maize, soybean, cassava and market gardening VACs	60,438	-Setting up an innovation platform for maize, soya, cassava, cashew nut and market garden crops value-added chains; - Equipment	60,438	0	0	0	60,438
Output 2.1.2: The management mechanism of the innovation platforms of the maize, cassava, soybean, cashew nut and market gardening sectors are in place and operational.	52,033	- Animation tools in local languages for CVA innovation platforms in the maize, cassava, soybean, market garden and cashew nut sectors; - Annual monitoring of platform operations;	36,283	14,250	750	750	52,033
Expected Outcome 2.2 : Sources of income of the local populations are diversified through the promotion of the beekeeping sector							
Output 2.2.1 Modern beekeeping techniques are mastered by beekeeping groups in both arrondissements	83,111	- Training and equipping small-scale beekeepers to improve local honey production techniques; - Adoption of modern beekeeping techniques	77,111	2,000	2,000	2,000	83,111
Output 2.2.2 : Increase honey harvesting capacity for beekeepers through the acquisition of kit	98,688	- Setting up modern honey houses in vulnerable groups of beekeepers; - Capacity building	58,344	0	40,344	0	98,688
Expected Outcome 2.3 : Sources of income of local women's groups are diversified through the promotion of the shea butter industry							
Output 2.3.1 : Women producers' groups are better structured and are committed to the shea butter VACs	54,938	- Diagnosis of the operation of groups of women shea butter producers;	54,938	0	0	0	54,938

		- Setting up a functional innovation platform for shea value chains.					
Output 2.3.2 : The material capacities of women's groups are built for the collection and processing of shea butter through the acquisition of tricycles and semi-industrial shea butter production units.	78,344	- Supply of materials and equipment to women's groups producing shea butter; - Monitoring the use of equipment.	8,344	0	70,000	0	78,344
Component 3 : Reinforcing the local governance and management framework for CC adaptation							
Expected outcome 3.1 : The local governance and CC adaptation framework is operational							
Output 3.1.1 : Communal actors are trained on the adaptation of the agriculture and forestry sectors to CC	24,205	- Consulting services ; - Training of municipal staff and NGO partners in the fields of natural resource protection and ACC.	24,205	0	0	0	24,205
Output 3.1.2 : The guide for the coordination of the local governance and adaptation to CC framework is validated and used by communal actors and communities bordering the classified forests of Bassila and Pénessoulou	229,540	- Organization of accountability and capitalization workshops at municipal and national levels; - Elaboration, dissemination and use of a guide for local governance and adaptation to climate change.	33,210	33,210	62,371	100,749	229,540
Output 3.1.3 : The gender approach is taken into account in the adaptation to CC at the level of the two arrondissements	26,344	- Diagnosis of the strengths and weaknesses of the gender approach; - Establishment of a Gender Promotion Committee in charge of measures to be	8,344	6,000	6,000	6,000	26,344

		taken for a proper distribution of roles according to gender.					
Expected Outcome 3.2 : CC adaptation management is effective in both arrondissements							
Output 3.2.1 : The community early warning system is functional, allowing appropriate measures to be taken in time, in anticipation of extreme weather events	28,954	- Activation of local structures involved in environmental and climate risk management and open to the PNRRC-ACC National Platform and its implementation mechanism MON	8,344	16,610	2,000	2,000	28,954
Output 3.2.2 : Teachers, schoolchildren, opinion leaders and community radio hosts have become aware of and have taken ownership of good CC adaptation practices	53,369	- Production of communication tools accessible in local languages; - Community animation sessions to disseminate best practices.	0	0	33,689	19,680	53,369
Expected outcome 3.3. : Enrichment of communal, community and private forests with climate change resilient species							
Output 3.3.1 : Indigenous tree species resilient to climate change and adapted to the edaphic conditions of Bassila are identified and their seeds and seedlings are produced	43,344	- Identification of local tree species resilient to drought or flooding; - Production of seeds and seedlings by nurserymen; - Women's groups organized to produce seedlings for delivery to planting sites.	43,344	0	0	0	43,344
Output 3.3.2 : Communal and community forests are enriched and private forests established using CC resilient species.	12,000	- Support for the organization of communal, community or private planting operations - Support for the maintenance of young seedlings for two (2) years	0	6,000	3,000	3,000	12,000

Operating component costs	2,470,000		953,730	1,149,937	226,154	140,179	2,470,000
Project execution costs (9,5 %)							234,650
Project execution costs		- Project staff salaries	21,600	21,600	21,600	21,600	86,400
		- Communication	4,050	2,400	2,400	2,400	11,250
		- Equipment	12,000				12,000
		- Office supplies	600	800	1,000	1,500	3,900
		- Meetings and workshops	7,600			7,600	15,200
		- Travel expenses	28,000	9,500	7,200	7,200	51,900
	Control and assessment	- Project launch	6,000				6,000
		- Mid-term evaluation			16,000		16,000
		- Final evaluation				16,000	16,000
	Audit	- Project audit				16,000	16,000
- SUBTOTAL			79,850	34,300	48,200	72,300	234,650
Implementation budget							229,895
TOTAL AMOUNT REQUESTED							2,934,545

The detailed activity budget is presented in Annex 12.

H. Disbursement schedule

Include a disbursement schedule with time-bound milestones.

Table 21 : Disbursement schedule

	Upon signature of Agreement	**One Year after Project Start a)**	**Year 2b)**	**Year 3**	**Total**
Scheduled date	July 2024	July 2025	July 2026	July 2027	
Project Funds	1 033,580	1 184,237	274,354	212,479	2 704,650
Implementing Entity Fees	61,613	56,094	56,094	56,094	229,895
Total	**1 095,193**	**1 240,331**	**330,448**	**268,573**	**2 934,545**

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

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

Provide the name and position of the government official and indicate date of endorsement. If this is a regional project/programme, list the endorsing officials all the participating countries. The endorsement letter(s) should be attached as an annex to the project/programme proposal. Please attach the endorsement letter(s) with this template; add as many participating governments if a regional project/programme:

(Enter Name, Position, Ministry)	Date*: (Month, day, year)*

ADAPTATION FUND

Republic of Benin, Cotonou, January 7, 2022

N°023 /DGEC/MCVDD/SD

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

Subject: Endorsement for Building resilience to climate change of the neighboring populations of the classified forests of Bassila and Penessoulou in the Central region of Benin

In my capacity as designated authority for the Adaptation Fund in Benin, 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 regions.

Accordingly, I am pleased to endorse the above project proposal with support from the Adaptation Fund. If approved, the project will be implemented by National Fund for Environment and climate and executed by national executing entity.

Sincerely,

Le Directeur Général

Prof Martin Pépin AINA
General Director of Environment and Climate.

B. 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

[6.] Each Party shall designate and communicate to the secretariat the authority that will endorse on behalf of the national government the projects and programmes proposed by the implementing entities.

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 (……list here…..) 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

Name & Signature Implementing Entity Coordinator	
Date: *(Month, Day, Year)*	Tel. and email:
Project Contact Person:	
Tel. And Email:	

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 (Growth Programme for Sustainable Development (PC2D), National Long-Term Outlook Study "Benin Alafia 2025, Government Action Programme "Bénin révélé" 2021-2026 PAG2) 2021-2026, National Development Plan (NDP) 2018-2025, National Climate Change Management Policy (PNGCC 2021-2030) , the First Nationally Determined Contribution (MCVDD, 2017), the First Biennial Update Report (MCVDD, 2019), and the National Adaptation Plan for Climate Change (MCVDD, 2022)) 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

Implementing Entity Coordinator : Dr Appolinaire D.GNANVI

Le Directeur

Date: (September, 22, 2023)	Tel: +229 97192464 and email: gnanviappolinaire@yahoo.fr
Project Contact Person : DOMINGO M. Marius	
Tel.: +229 97330734 And Email: domingomarius@yahoo.fr	

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Annex 1 : Stakeholders consultation schedule in the Commune of Bassila

Date	Timetable	Activities	Location	Actors
15th Jan 23		Trip to Bassila	-	-
16th Jan 23	8.30am-9.30am	Greetings to the Mayor of Bassila and arrangements for material support	Bassila Town Hall	Experts, Representatives (SONAB, Town Hall)
16th Jan 23	9.30am-1.30pm	Pre-visit to water reservoir sites	Bassila-Centre Arrondissement	Consultants, SONAB and Town Hall representatives, resource persons
16th Jan 23	2.30pm-6.30pm	Pre-visit to water reservoir sites	Borough of Pénessoulou	Consultants, SONAB representatives, Town Hall
17th Jan 23	9am-1pm	Visit to reservoir sites in Bassila	Sites concerned	Consultants and resource persons
	2.30 pm-5 pm	Meeting with institutional players	Town hall	See attached attendance list
18th Jan 23	8.30am-5pm	Exchanges with local people Bassila centre	Bassila Centre Borough	Consultants, FNEC Representatives, SONAB, Town Hall, Populations
19th Jan 23	8.30am-5pm	Exchanges with local people Penessoulou	Penessoulou Borough	Consultants, Representatives FNEC, SONAB, Town Hall, Communities
20th Jan 23	8.30am-10am	Collection of documents at Bassila town hall	Town Hall	Consultants, Representatives FNEC, SONAB
20th Jan 23	10.30am-1.30pm	Exchanges with the people of Pénélan	Pénélan/ Penessoulou	Consultants, Representatives FNEC, SONAB
20th Jan 23	8.30am-5pm	Exchanges with the people of Baka-baka	Baka-baka/ Bassila	Consultants, Representatives SONAB
21st Jan 23		Return to Cotonou		

Annex 2 : Stakeholder concerns.

ECONOMIC CONCERNS	
District of Bassila	***District of Penessoulou***
Young women	
Lack of economic autonomy; *Agricultural activities possible in small degraded plots provided by husbands.*	*Difficulties in accessing opportunities for young boys ;* *Limited access even to "women's" economic activities (processing agricultural products, market gardening, etc.).*
Elderly women	
Continuous decline in women's incomes since the advent of climatic disturbances in the early 2000s; *Women's difficulty in inheriting assets and means of production after the death of the father or head of household.*	*Women's access to land ownership through purchase only;* *Women's inability to inherit material assets such as land;* *Difficulty in financing income-generating activities.*
Young men and people with disabilities	
Problems for training young people and the disabled to develop specific skills for integration into the job market	*Problems of improving the living conditions of young people through training in beekeeping and cassava and cashew nut processing.*
Elderly men	
Accelerated degradation of land where traditional fallow is no longer sufficient to restore fertility and production potential; *Continuous decline in crop yields and increase in population poverty.*	*Economic difficulties for beekeepers, small breeders and market gardeners in a prolonged dry season due to the flight of bee colonies, the lack of grass in pastures and the drying up of watercourses and backwaters.*
Institutional actors	
Reluctance on the part of some members of communities bordering the classified forests of Bassila and Pénessoulou to pay local taxes and duties; *Town Hall resources are often insufficient to meet the needs of basic services in terms of equipment and infrastructure maintenance within the Municipality.*	
SOCIAL CONCERNS	
District of Bassila	***District of Penessoulou***
Young women	
Lack of self-confidence; *Problems managing illnesses of babies and young children in prolonged dry seasons or under persistent flooding.*	*Minimization by men and old women of the abilities of young women to assume important social roles;* *Multiple illnesses of young children.*
Elderly women	
Lack of consideration by men for the role of women in issues that affect the future of the community; *Increased prevalence of climate-sensitive diseases among the elderly (malaria, water-borne diseases, acute respiratory infections).*	*Increase in malaria, diarrhea, and cough in young children and the elderly;* *Exclusion of women from decision-making circles on strategies to fight invaders and for community security.*
Young men and people with disabilities	
Conflicts between breeders and farmers due to lack of grass in pastures during the prolonged	*Increase in illnesses such as meningitis, coughs and colds during prolonged dry periods, and*

dry season and incursion of transhumant animals into farmers' fields.	*malaria and other water-borne diseases during floods.*
Elderly men	
Emergence of new forms of human and animal diseases resistant to traditional or modern remedies; *Conflicts between farmers and breeders that undermine peaceful coexistence between the Peuhl community and others.*	*Young people's eagerness to take on social responsibilities for which they do not yet have the skills, at the risk of undermining the community's basic functioning;* *Problems with the willingness of mayoral officials to repair village pumps whose management they have taken away from the community.*
Institutional actors	
Conflicts between farmers and breeders exacerbated in the context of climate change are often the cause of violence that is difficult to control and which compromises living together within communities.	
CULTURAL CONCERNS	
District of Bassila	***District of Penessoulou***
Young women	
Exclusion of women and young people from discussion circles on village traditions.	*Low importance given by parents to girls' education*
Elderly women	
Exclusion of women from the education of adolescent boys.	*Low confidence in women's access to productive investment.*
Young men and people with disabilities	
Difficulty of young people in asserting their capacity to fully assume responsibilities in the community as long as their fathers are alive.	*Society's doubts about the ability of young people and people with disabilities to assume their responsibilities in the community independently.*
Elderly men	
Desecration of sacred forests and sacred monkeys in Kikélé by followers of certain sects, causing the monkeys to invade people's fields.	*Difficulty of collaboration between local communities and certain migrant populations from different cultures.*
Institutional actors	
Cultural problems not resolved to the satisfaction of the parties by the elders in the villages, nor by royalty and religious dignitaries, continue to disrupt living together at the level of the Districts of the Commune.	
ENVIRONMENTAL CONCERNS	
District of Bassila	***District of Penessoulou***
Young women	
Delayed rains; scarcity of rain; drought which sets in earlier and recedes later; strong winds; intense heat; *Negative impact on crop yields, drinking water supply, domestic chores, health (malaria during hot periods and meningitis during dry periods);* *Drying up of water points limiting market gardening activities.*	*Rainfall has become irregular since 2000, with problems in supplying cassava for gari production;* *Low yields of shea butter, palm oil and cashew nuts;* *Death of small livestock in harmattan when the dry season is prolonged.*
Elderly women	

Disruption of the agricultural calendar and processing activities of agricultural products by the cycles of droughts and floods observed in the region for two decades; *Social groups most impacted by CC are farmers, beekeepers, market gardeners and nurserymen.*	*Strong winds and irregular rainfall observed for around fifteen years, disturbing agricultural activities;* *Women market gardeners and producers of gari, shea butter, palm oil and cashew kernels are particularly affected by climate risks*
Young men and people with disabilities	
Climate risks ranked in descending order of negative impact: *-Increasingly long droughts leading to drying out of backwaters and forest fires;* *-Delayed rains of 2 to 4 weeks, then surplus rains with flooding and an early end;* *-Increasingly violent winds.* *-Strong heat with a peak less spread out than in the past;* ***Main impacts:*** *disruption of agricultural calendars and lower yields.*	*Disruption of the seasons observed from 2000 onwards, with increasing length of the dry season and pockets of drought, flooding in low-lying areas, violent winds and excessive heat;* ***Main impacts:*** *lower crop yields, decline in agricultural processing activities, falling trees and roofs on homes, lack of grass for grazing, livestock mortality, and conflicts between breeders and farmers.*
Elderly men	
• Unpredictable climate since the 2000s: *• Harmattan period changed from November-February to October-February (longer, harsher and starts earlier);* *• Drought extends into May;* *• Shorter heat period: March - May instead of March - June ;* ***Main impacts:*** *• Lower crop yields, with maize barely exceeding 1T/ha, sorghum 600kg/ha and yam 5T/ha;* *• Insufficient fodder for animals and drying up of watercourses;* *• High prevalence of diseases among the elderly and young children (malaria, asthma, coughs).*	*• Increasingly long drought and excess precipitation over an increasingly short period leading to floods;* *• Droughts more recurrent than floods;* *• Later and more irregular rainfall: June to October, instead of May to early November before the 2000s;* *• Strong winds and whirlwinds previously non-existent in the region are observed in May – June;* *• Higher temperature and heat spike observed over a shorter period* ***Same impacts*** *as in Bassila with severe reduction in bee colonies and market gardening activities, and general impoverishment of agricultural populations.*
Institutional actors	
Worsening manifestations of climate change in the Commune's four arrondissements: *- Increasingly violent winds, causing trees to fall and cereals to wilt, and tearing the roofs off houses and classrooms;* *- Increasing lengthening of pockets of drought and dry periods, with streams and marigots drying up before the return of the rainy season;* *- Violent rainfall causing soil erosion and flooding of lowlands;* *- Land degradation due to farming practices not adapted to CC ;* *- Increasing incursions of transhumant animals into classified forests and protected areas in search of grass and water during dry periods;*	

- Tendency to use fast-growing foreign plant species to enrich degraded forests and new plantations, instead of indigenous tree species better adapted to local conditions.

Annex 3 : General list of participants

a) List of institutional stakeholders (Bassila town hall)

MINISTERE DU CADRE DE VIE ET DU DEVELOPPEMENT DURABLE

REPUBLIQUE DU BENIN

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

Etudes complémentaires en préalable à l'élaboration du document du Projet « Renforcement de la résilience aux changements climatiques des populations riveraines des forêts classées de Bassila et de Pénessoulou au Centre du Bénin » à soumettre au Fonds d'Adaptation

Mission de tenue et Consultation des parties prenantes

Date : 17/10/23 Commune : Bassila Arrondissement : Mairie de Bassila (Chambre de commerce)

N	Noms et Prénoms	Sexe	Structure	Fonction	Contact (Tel/Email)	Signature
01	ABDOULAYE Abdoulaye	M	Mairie/Bassila	Point focal	96 04 12 07	
02	TOSSAVI Barthélémy	F	Mairie/Bassila	SAGE	97 61 48 33	
03	ISSA Kassim	M	SG/Bassila	CV Bassila	97 47 69 05	
05	SOSSAVI Kifé	M	Mairie/Bassila	Point focal Agriculture	97 46 76 21	
06	BOUKARI I. Mouaka	M	Mairie	C/Bassila	95 82 90 98	
08	INOUSSA Sakirama	F	Bassila	CV Bassila	97 62 79 87	
07	AGBAYA Kifé	M	SONAB	C/Exploitation	97 43 26 61	
08	SOSSOU E. Sackina	M	SONAB	C/exploitation Bassila	94 43 88 11 96 38 52 00	

MINISTERE DU CADRE DE VIE ET DU DEVELOPPEMENT DURABLE

REPUBLIQUE DU BENIN

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

09	TCHANOU Mr Patrick	M	C/Bassila	C/Bassila	97 11 30 61 97 37 48 33	
10	BAKIN O. Bienvenu	M	Représentant du C/C Adjoint	DD	61 75 93	
11	BIAOU Séverin	M	Rep du C/Bassila	Chef Cab	61 03 62 62	
12	OLOO S Jessica	M	SONAB	C/exploit	97 32 20 17	
13	MAMA MOUSSA Yaya	M	Mairie	2e adjoint au Maire	97 59 00 83	
14	TCHOU BAKARI F.	M	Mairie Bassila	Maire	97 89 63 50	
15	BOUKARI YABI Mamoudou	M	Conseiller Bassila	RSCEFC	97 22 35 67	
16	ZANOU E. Jean	M	C/DAOL SAHAS	C/DAOL	64 14 40 65	
17	TOUSSAINT C. Paul	M	C/SRTV SONAB	SONAB	67 36 49 73	
19	BIAOU Djossé	M	Consultant	UNA	97 07 75 19	
19	AITO Noël	M	Consultant	FNEC	97 37 91 61	
20	BAGAN Thomas	M	4	Exploitant	95 71 45 89	

MINISTERE DU CADRE DE VIE ET DU DEVELOPPEMENT DURABLE

REPUBLIQUE DU BENIN

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

21	ATCHO Kenoh Romain	M	Consultant GR	DAEP	96 35 96 11	
22	NOUMON Cyr Julien	M	DGE/MEE	Consultant GR	97 01 91 77	
23	AGBOSSOU Sylvain	M	CNEE	Maire	97 05 07 81	
24	Prisca JIMASSA ASSET	F	DPRE/PNEL	PNEC/PCVMB	61 45 77 25	
25	TCHABI Gislain	M	Aménagiste Consultant	Administrateur ADC	97 81 94 11	
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b) Community stakeholder consultation list (residents of the Bassila Classified Forest)

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

c) Community stakeholder consultation list (residents of the Pénessoulou Classified Forest)

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

Etudes complémentaires en prélude à l'élaboration du document du Projet « Renforcement de la résilience aux changements climatiques des populations riveraines des forêts classées de Bassi à cheval Pénessoulou sur le Centre du Sénin » à soumettre au Fonds d'Adaptation

Mission de terrain en Consultation des parties prenantes

Date : 13/04/23 Commune : Bassila Arrondissement : Pénessoulou

N	Nom et Prénoms	Sexe	Structure / Groupement	Fonction	Contact (Tel/Email)	Signature
01	Alfa Salimou Imorhalidath	M	COGEBAF	Responsable CA	97615006	
02	MOMOU Madama	F	COGEPAF	Trésorière	51342725	
03	OUSMANE Soumanatou	F	G/Prof. d'Etat N	Transformatrice		
04	SALIFOU N'DATOU	F	COGEPAF	Membre	53408833	
05	ALIDOU TOUSSOU	M	COGEPAF	"		
06	ABOU Moussa	M	G/Mix producteurs	Président		
07	Fousseni Kassoum	M	Groupement Conservation	CA	51027934	
08	ZOUBERI Mariyam	F	Ass. d'Transformateurs de Gari (Bassila)	Transformatrice du Gari	56303504	

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

09	Djedjé Rachidath	F	Association des Transformatrices de Gari	Transformatrice	52459451	
10	ISSA Zeinabou	F	"	"		
11	BAYARI Rahaïtou	F	Association des Transformatrices	Transformatrice	66 147389	
12	SALIFOU Adissatou	F	"	"		
13	ISSIFOU Fousseinath	F	Point de vente de noix de karité	Transformatrice	97032320	
14	HALIDOU Alassanatou	F	Point de vente de noix de karité	Transformatrice	62365361	
15	MOHAMED Amina Bien	F	Point de vente de noix de karité	Transformatrice	61837855	
16	DABOURE Ouattara	M	Point de vente de noix de karité	Transformateur		
17	AYABOU M Saadia	F			68664620	
18	FOUSSENI Mahamadou	M	Point de vente de noix de karité	Transformateur		
19	YAYA Tassia	F	Point de vente de noix de karité	Transformatrice	62582612	
20	SAFIOU Mouhamadou	F	Point de vente de noix de karité	Transformatrice	51900572	

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

21	ALIDOU FILIA	F	Groupement Conservation	Membre		
22	MOUMOUNI Saadia	F	Association des Transformatrices de Gari	Transformatrice	87713304	
23	[illegible]	F	Groupement Conservation	Membre	62 13 1461	
24	ATCHOUGBE Salimatou	F	"	"	62340161	
25	BOUBACAR Zeinabou	F	"	"	56437642	
26	FOUSSENI Mariamatou	F	"	"	96 [illegible]	
27	ABOUBAKARI Mouhidathou	F	Groupement Conservation	Membre	57734418	
28	DAGBE Ida Flora	F	"	"		
29	MOUSSA Zouleikath	F	"	"	53315	
30	ISSAKOU Mariama	F	"	"		
31	SALIFOU Idrissou	F	"	"		
32	[illegible] Zeinab	F	Bolchine Conservation	Membre		

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

33	SOUMANOU Abdoulatou	F	Bolchine (Conservation)	Membre	62132467	
34	AMADOU Soulemanatou	F	Association des Apiculteurs	Apicultrice	96444328	
35	MOUSSA Soumanatou	F	Association des Transformatrices	Transformatrice	96647465	
36	IDRISSOU Salimatou	F	Association des Apiculteurs	Apicultrice	96447026	
37	SALIFOU Soulemanatou	F	Association des Transformatrices de Gari	Transformatrice	96447465	
38	ADAMOU Abdoulatou	F	"	"	53098853	
39	MOUNTALA Moumouniatou	F	Association des Transformatrices	Transformatrice	56452575	
40	IDRISSOU Zeinatou	F	Association des Transformatrices	Transformatrice	97354373	
41	ALIDOU Amina	F	Bolchine Conservation	Membre	96452905	
42	ALIDOU Abdoulaye	F	Coordonnatrice de la Bolchine	Transformatrice	56891003	
43	SIDI Mariama	F	Association des Transformatrices	Transformatrice	96452375	
44	SOUMANOU Moumouniatou	F	"	Apicultrice	97354378	

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

45	BAO Boukissath	F	Association des Transformatrices de Gari	Apicultrice	53161016	
46	ISSA Zeinatou	F	Association des Transformatrices de Gari	Transformatrice	64345958	
47	AMA Rabiatou	F	Association des Transformatrices de Gari	Transformatrice	68973354	
48	ALASSANE Zeinath	F	Association des Transformatrices de Gari	Apicultrice	53161016	
49	CHABI Mariatou	F	Groupement Conservation	Apicultrice	64854063	
50	LAOUSSA Abdoulatou	F	"	"	64 [illegible]953	
51	ZAPARI Aoua	F	"	"	97554284	
52	MAHAMA Mamoudou	F	Bolchine Conservation	Membre	96125105	
53	SALIFOU Latifatou	F	Bolchine Conservation	Membre	90287431	
54	ALASSANE Bamoulou	F	Bolchine Conservation	Apicultrice	64345951	
55	ZOUBEROU Mariatou	F	Association des Transformatrices de Gari	Transformatrice	56030576	
56	ALIDOU Abdoulatou	F	Bolchine Conservation	Transformatrice	96404624	

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

57	KOTOKPO Salimatou	F	Bolchine Conservation	Transformatrice	53852576	
58	AMADOU Abdoulaye	F	Association des Transformatrices de Gari	Apicultrice	67145824	
59	MAGAZI Rabiatou	F	Association des Transformatrices de Gari	Transformatrice	52343466	
60	ZAKARI Bintou	F	"	"		
61	ENOUSSA Abdoulaye	F	Bolchine Conservation	Transformatrice	96446426	

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

Etudes complémentaires en vue de l'élaboration du document du Projet « Renforcement de la Résilience aux changements climatiques des populations riveraines des forêts classées de Bassila et de Pénessoulou au Centre du Bénin » Axe multisite du Fonds d'Adaptation

Date : 19/01/23 Commune : Bassila Arrondissement : Pénessoulou

N°	Nom et Prénoms	Sexe	Structure / Comp. Emploi	Fonction	Contact (Tel/Email)	Signature
01	ALIDOU Rafiatou	M	Asso des agriculteurs	Producteur agriculteur	97360114	
02	ABOUDOU Moutari	M	"	"	97927792	
03	RASSIM Lawan	M	"	"	96010548	
04	ASSO Mamoudou	M	Eleveur de bovins	Eleveur	65624977	
05	SADI Samaila	M	"	"	56683793	
06	TIDA Soulemane	M	"	"		
07	ASSOUFOU Moussa	M	Asso des agriculteurs	Producteur/ Agriculteur	96012046	
08	ALIDOU Djibrilou	M	"	"	97	

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

09	MAMAM Abdoulaye	M	Groupe des éleveurs	Eleveur	97123196	
10	SALIFOU Lia Coulibaly	M	Asso des agriculteurs	Agriculteur	66631413	
11	ALASSOULE Foudou	M	Asso des Producteurs de Vivriers	Producteur	65594638	
12	MAMAM Samaila	M	Groupe des éleveurs	Eleveur	96206712	
13	GLADOU Salifou	M	Asso des agriculteurs	Agriculteur	96319135	
14	AYOUBA Hamza Touré	M	"	Cultivateur	96006458	
15	SEADOU Rachidou	M	Asso des producteurs	Cultivateur	94792334	
16	ADAMETIA Nazaire	M	"	Eleveur	67870977	
17	AFFOUSSOUNA Jesse Fo Agnibo	M	Asso des Agriculteurs	Producteur/ Agriculteur	96054588	
18	MOUMPENE Pierre	M	"	"	/	
19	KOUKPERE Sadou	M	Asso des agriculteurs	Agriculteur	96233726	
20	SOUARA Habibou	M	CV	Agriculteur	97372876	

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

21	ALIHALI Djalilou	M	Coordonnateur Production	Président Commission	96452975	
22	AHAMADOU Moutiou Bio	M	UCTA Bénin	VP Local	94012802	
23	ATTARA Ibrahim	M	Agriculteur	Président	97027770	
24	DASSORI SANI	M	"	Président	97740869	
25	AMINA Mamadou	M	"	Producteur	46760578	
26	ABOUDOU ALIDOU	M	Agriculteur		67846733	
27	THEODORE Kassim	M	Agriculteur	Trésorier	97403778	
28	SOUMAILA Sadou	M	ECOLE NAT. Producteur	Producteur	91607554	
29	MOUHOUNI Mouhamed	M	UCTA Bénin	Directeur	94338068 95467807	
30	TAOUSSA Ibrahim	M	Association des Producteurs	Secrétaire Général	96123035	
31	AFFO Ismaël	M	Association des Producteurs	Eleveur	97315072	
32	ALANDA Ibrahim	M	Association des Producteurs	Président	96594017	

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

Date : 19/01/23 Commune : Bassila Arrondissement : Pénessoulou

N°	Nom et Prénoms	Sexe	Structure / Comp. Emploi	Fonction	Contact (Tel/Email)	Signature
01	SAIDOU Adamou	M	Agriculteur		65582496	
02	IBRAHIM Moussa	M	Agriculteur	Cultivateur	96 30 [illegible]	
03	ARCOU Nafiou	M	Agriculteur	Cultivateur	97 32 [illegible]	
04	Adam Bassim	M	Agriculteur	Cultivateur	97 51 [illegible]	
05	TIDJANI Souley	M	Agriculteur	Cultivateur	97 [illegible]	
06	ASHANTI Mouhamed	M	Agriculteur	Cultivateur	96 33 [illegible]	
07	TI KARIM Nassirou Bono	M	Agriculteur	Cultivateur	96 54 [illegible]	
08	KPANTCHI Malick	M	Secrétaire	Cultivateur	66190367	

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

09	MEMIDAT Sadikou	M	Représentant Gie	Eleveur	96 35 [illegible]	
10	TAIROU Abdoulaye	M	Cultivateur	Cultivateur	91 35 [illegible]	
11	AFFO Seidi	M	Cultivateur	Cultivateur	97 22 [illegible]	
12	YAYI Daouda Hamadou	M	Cultivateur	Cultivateur	96 [illegible]	
13	BARE Sidi	M	Cultivateur	Cultivateur	64 [illegible]	
14	TCHEMBOSSI Frédéric	M	Cultivateur	Cultivateur	64 26 [illegible]	
15	Hinvi Alafia	M	Cultivateur	Cultivateur	96 39 [illegible]	
16	BOURAIMA Yacoubou	M	Eleveur	Cultivateur	52 48 [illegible]	
17	ALANDA Sabiou	M	Eleveur	Cultivateur	96 [illegible]	
18	ALIYARI Amadou	M	Eleveur	Cultivateur	96 [illegible]	
19	ADAMA Gnimdi	M	Membre d'une Coopérative	SG/CPV Coopérative	96 [illegible]	
20	ABIRIMA Abdoulaye	M	Membre Agriculteur	Trésorier	96 [illegible]	

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

21	Ousseni Ibrahim	M	Agriculteur	Cultivateur	96 [illegible]	
22	Lonkani Komalou-Dine	M	Agriculteur	Cultivateur	63 [illegible]	
23	Fou-Seini Abdoulaye	M	Membre des jeunes	Cultivateur	96 [illegible]	
24	Mian Abdoulaye	M		Cultivateur		48
25	Moussa Sidi	M	Agriculteur	Cultivateur	96 [illegible]	
26	ZAHOUDE Jean	M	DHAB	Cadre	[illegible]	
27	[illegible] Edgard	M	Comptable	DHAB/ FNEC	[illegible]	
28	Alto Nestor	M	Comptable	FNEC	[illegible]	
29	Rosine Jingao [illegible]	F	DAAF/FNEC	SMRF	[illegible]	
30						
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Annex 4 : List of working groups

a) Bassila young women's working group

MINISTÈRE DU CADRE DE VIE ET DU DÉVELOPPEMENT DURABLE
RÉPUBLIQUE DU BÉNIN

Groupe des jeunes femmes

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

Etudes complémentaires en prélude à l'élaboration du document du Projet « Renforcement de la résilience aux changements climatiques des populations riveraines des forêts classées de Bassila et de Pénessoulou au Centre du Bénin » à soumettre au Fonds d'Adaptation

Mission de terrain et Consultation des parties prenantes

Date : 19/04/23 Commune : BASSILA Arrondissement : Arrondissement Bassila c

N	Nom et Prénoms	Sexe	Structure	Fonction	Contact (Tel/Email)	Signature
01	CHICHAO [illegible]	F	[illegible]	[illegible]	[illegible]	
02	[illegible]	Témoin	Association COGEPAF	Bevendeuse	57864389	
03	[illegible]	Femme	COGEPAF	Bevendeuse	57 54 19 49	
04	[illegible]	Femme	Association COGEPAF	Bevendeuse	51 64 32 14	
05	[illegible]	F	[illegible]	Revendeuse	96 93 60 48	
06	[illegible]	F	Membre COGEPAF	Revendeuse	56 68 48 83	
07	[illegible]	F		Couturière	63 96 38 62	
08	[illegible]	F		Revendeuse	62 73 38	

MINISTÈRE DU CADRE DE VIE ET DU DÉVELOPPEMENT DURABLE
RÉPUBLIQUE DU BÉNIN

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

09	[illegible]	F	[illegible]	Revendeuse	57 66 44 02	
10	[illegible]	F	[illegible]	Commerçante		
11	[illegible]	F				
12	[illegible]	F		Revendeuse	96 97 93 20	
13	[illegible]	F		Revendeuse	64 97 74 35	
14	[illegible]	F		Ménagère	–	
15	[illegible]	F		Ménagère	–	
16	[illegible]	F		Ménagère		
17	[illegible]	F		Ménagère		
18	[illegible]	F		Ménagère		
19		F				
20						

b) Bassila young men and disabled people working group

MINISTÈRE DU CADRE DE VIE ET DU DÉVELOPPEMENT DURABLE
RÉPUBLIQUE DU BÉNIN

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

Etudes complémentaires en prélude à l'élaboration du document du Projet « Renforcement de la résilience aux changements climatiques des populations riveraines des forêts classées de Bassila et de Pénessoulou au Centre du Bénin » à soumettre au Fonds d'Adaptation

Groupe Des Jeunes et Handicapés

Mission de terrain et Consultation des parties prenantes

Date : 18/04/23 Commune : BASSILA Arrondissement : BASSILA CENTRE

N	Nom et Prénoms	Sexe	Structure	Fonction	Contact (Tel/Email)	Signature
01	INOUSSA Moubarak	M/Han	Association des Personnes handicapé	Informaticien	67172893	
02	KPAKOUTE A. Ibrahim	M/Han	"	Informaticien	61924897	
03	AMOUSSOUA. Raphaël	M/Han	Association des Personnes Handicapé (APH Bassila)	Etudiant	96254724	
05	DJERA Alexandre	M/Han	APH/Bla	Enseignant	96266384	
05	KOUAGOU Thimothé	M	Association des polyvalents	Technicien Agronome	97 14 84 04	
06	BEIDOU ZAKARI Hadinani	M		Socio-Environnementaliste.	64 27 87 21	
07	SIRRIM TALLOU	M		Electricien	90 90 86 35	
08	WORODO Alalo	M	Cameraclar	Agriculteur	91 26 81 67	

MINISTÈRE DU CADRE DE VIE ET DU DÉVELOPPEMENT DURABLE
RÉPUBLIQUE DU BÉNIN

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

09	N'TCHA Mathieu	M	COGPAF	Producteur	52 32 58 03	
10	N'DAH Victor	M		Producteur	96 58 66 74	
11	GNATA M. Yaourama	M		Jardinier	54 27 13 97	
12	YACOUBOU Awalé	M	Coopérative de soja	Vice Président Adjoint	96141928	
13	ABDOULAYE Ibrahim	M	SOYONS PATIENT	Maçonnerie	97999172	
14	HASSIM WASSIOU	M	SOYONS PATIENT	Jardinier	66965774	
15	Bonkan Boniface	M	Conseiller CD	Conseiller	97 35 68 23	CDBA
16	DJAKPATA F. Pélée Razack	M	NATURE PLUS (Reboisement)	Maçonnerie et Agriculteur	97027611	
17	TAIROU Illiassou	M	Agroéconomiste Environnementaliste	Pépiniériste	97321977	
18	GOMON Razak	M	Soyons Patient	Soudeur	97 18 51 64	
19	ISSIAKA Aminou	M	Soyons Patient	Gestionnaire	97027257	
20	ABDOULAYE Garba	M	Soyons Planifiés	Elevage	96405691	

c) Bassila women midwives working group

MINISTERE DU CADRE DE VIE ET DU DEVELOPPEMENT DURABLE
REPUBLIQUE DU BENIN

Groupe des femmes agées

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

Etudes complémentaires en prélude à l'élaboration du document du Projet « Renforcement de la résilience aux changements climatiques des populations riveraines des forêts classées de Bassila et de Pénessoulou au Centre du Bénin » à soumettre au Fonds d'Adaptation

Mission de terrain et Consultation des parties prenantes

Date : 18/04/23 Commune : BASSILA Arrondissement : Arrondissement Bassila Centre

N	Nom et Prénoms	Sexe	Structure	Fonction	Contact (Tel/Email)	Signature
01	ALIDOU Moussa	F	Membre Secrétaire	membre	97027123	
02	INOUSSA Sahama	F	C V	Bassila	97027587	
03	MAMAN ANNA	F	Membre Intendante G/Secrétaire	Membre Trésorière	67272456	
04	AROUNA Adidjatou	F	Membre BG Secrétaire	membre	96908505	
05	SOUMANOU Sylvana	F	Membre Secrétaire	Membre	-	
06	IBRAHIM Zénabou	F	Membre Secrétaire	Membre	-	
07	OUMAROU Alila	F	Membre	Membre	-	
08	AROUNA Mamoudou	F	Membre	Membre	97382490	

MINISTERE DU CADRE DE VIE ET DU DEVELOPPEMENT DURABLE
REPUBLIQUE DU BENIN

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

09	ADAMOU Salifatou	F	Secrétaire Semanada	Secrétaire	66436361	
10	AROUNA Fadjatou	F	Jardinage Tchanhanlé	Membre	97356774	
11	KANTA Hafiatou	F	Membre Semanada	Membre	97555145	
12	AROUNA Bardaissou	F	Présidente Semanada		68900550	
13	MOUSSA Aminatou	F	Trésorière Semanada	Trésorière	97714733	
14	AIDAN Salimata	F	Présidente Tchanhanlé	Présidente Jardinière	97528137	
15	BIAOU Tchabi	M	Tricycle-ONE SME	---	97027865	
16	Yaica Jimata ABLET	F	BMH/FNEL	SMRF	64125725	
17						
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d) Bassila wise men working group

MINISTERE DU CADRE DE VIE ET DU DEVELOPPEMENT DURABLE
REPUBLIQUE DU BENIN

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

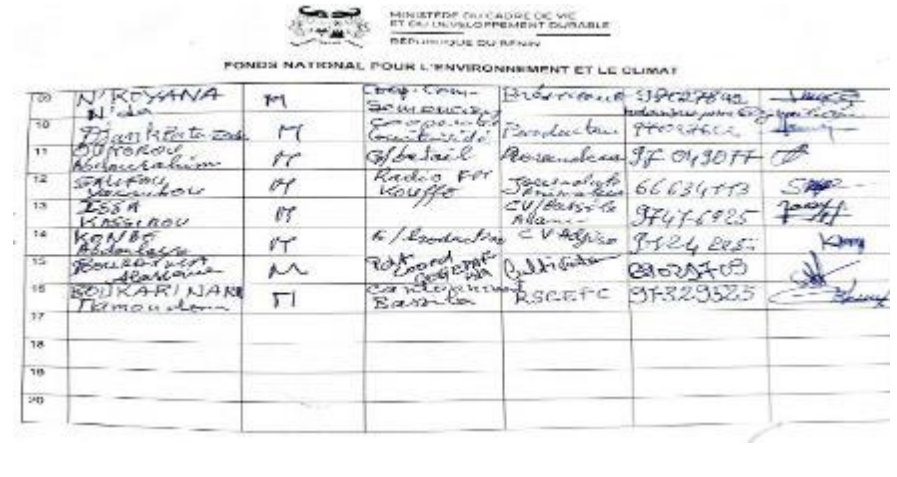
Etudes complémentaires en prélude à l'élaboration du document du Projet « Renforcement de la résilience aux changements climatiques des populations riveraines des forêts classées de Bassila et de Pénessoulou au Centre du Bénin » à soumettre au Fonds d'Adaptation

Groupe Des Sages

Mission de terrain et Consultation des parties prenantes

Date : 18/04/23 Commune : BASSILA Arrondissement : BASSILA CENTRE

N	Nom et Prénoms	Sexe	Structure	Fonction	Contact (Tel/Email)	Signature
01	AIEV Kougbé Mahouna	M		CV Bachelier	96588878	
02	ISSA Bakarou	M	G/Koaité	Sécrétaire	94 34 33 44	
03	SALIFOU Kassim	M	G/Bayanou	Collaborateur	66634357	
05	ATIGOU BERAIMO ABATTOU	M	G/Chasseur	Sécurité	97358410	
06	SALIFOU Mahamadou	M	G/Chasseur	Sécurité	66535812	
06	ABIBOU Rachidi la	M	G/Chasseur	Sécurité	97.59528F	
07	ISSAKA Inoussa	M	G/Chasseur	Sécurité	97541380	
08	SOSSOU E. Sorokine	M	SONAB	Chef Secteur BASSILA	96510100 96942811	



MINISTERE DU CADRE DE VIE ET DU DEVELOPPEMENT DURABLE
REPUBLIQUE DU BENIN

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

09	N'RYANA N'da	M	Chef Commune Secrétaire	Bénévole	97427898	
10	[illegible]	M	Coopérateur Centre de	Coordinateur	97027456	
11	OUMAROU Abdoulrahim	M	G/Le Sol	Responsable	97 01 90 77	
12	SALIFOU Mamadou	M	Radio FM Kouffo	Journaliste Animateur	66634773	
13	ISSA Kassimou	M		CV/Bassila Alimentation	97476925	
14	KONDE Abdoulaye	M	G/Producteur	CV Agricole	97246255	
15	BOURAIMA Abdoulaye	M	Point focal GEPRE	Bibliothécaire	69028470	
16	BOUKARI NANE Tchamoudou	M	Commune Bassila	RSCEFC	97329523	
17						
18						
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e) Bassila women midwives working group

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f) Pénessoulou working group of young and disabled men

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g) Working group of Pénessoulou wise women

h) Working group of Pénessoulou wise men

Annex 5 : Projects completed, in progress or planned for adaptation to climate change and environmental and climate risk management in the Commune of Bassila

Projects	Areas of intervention
Projects from the Development Plan for the Commune of Bassila	
Projects completed or in progress (Stakeholders and the Commune's PDC3)	
Project to support food security through the development of lowlands (PSAAB)	- Hydro-agricultural development ; - Construction of warehouses
Rural Development Support Project (PADER)	Various forms of support for farmers.
Support project for communal forest management - phase II (PAFEMCOM-II)	- Stabilising forest ecosystems by promoting value chains for green economy products (intelligent agriculture, development of non-timber forest products, development of fishery products, development of natural resources, development of ecotourism products, etc.); - Improving food and nutritional security and the incomes of vulnerable small-scale producers; - Strengthening the resilience of populations, particularly women and young people; - Setting up tools and mechanisms for the rational management of natural resources; - Supply of equipment to women's groups processing shea butter (Wannou, March 2021).
Multi-Sectoral Food, Health and Nutrition Project (PMASN)	- Community mobilisation and strengthening of food processing services; - Improving infant and young child feeding practices, - Prevention and management of childhood illnesses in the household; - Strengthening dietary diversification through the production, processing and consumption of diversified foods by households.
Bois de Feu Phase II (2002-2011)	- Promotion of village afforestation; - Promoting energy conservation and alternative energies (gas and improved stoves) to preserve people's livelihoods; - Organising the wood-energy sector
Rural support project in the Atacora and Donga departments (PAMRAD)	Improving living conditions for farmers and villagers in two of the poorest departments in north-west Benin
Support Project for the Milk and Meat Sectors (PAFILAV)	- Runway development - Construction of warehouses - Construction of mini-dairies
Agricultural Sectors Support Project (Fi Agri)	- Trail development - Development of low-lying areas ; - Creation of Rural Land Plans (PFR)
Forest Resources Restoration Project in the Bassila region (PRRF)	- Limiting the degradation of ecosystems by targeting specific actions involving local communities, - Informing local people about the management of forests in the State's protected domain, - Clarify the land tenure situation in the forests to be managed, - Informing target groups about the technical requirements of sustainable management, - Management of the Pénessoulou classified forest,

Projects	Areas of intervention
	- Assisting local authorities or village communities in the process of recognising and obtaining ownership rights over the land and the forest it contains, - Maintaining biological diversity in village areas, - Vegetation fire management and economic development of forest products.
Support Programme for the Development of Agricultural Sectors (PROFI)	- Shop construction ; - Runway development ; - Lowland development
Rural Transport Sector Support Programme (PASTR)	Runway layout
Health Sector Support Programme (PASS/SOUROU)	- Support for community relays and Community Health Centre Management Committees; - Support for the implementation of the Results-Based Financing (RBF) mechanism; - Support for the creation of Health Service User Platforms (PUSS);
Rural Water and Sanitation Project (PADEAR)	- Improving sanitation coverage in schools, health centres and communities; - Change hygiene behaviour through awareness-raising and social marketing activities. - Creation of a network of qualified masons to meet the demand for low-cost sanitation facilities.
Multiannual Water and Sanitation Programme (PPEA)	Construction of boreholes equipped with human-powered pumps and village water supply systems
Micro-credit programme for the poorest (PMCPP)	Cash micro-credits for women
Multi-Sectoral Food, Health and Nutrition Project	Combating malnutrition
New projects 2018-2022 in the Municipality of Bassila Development Plan (PDC3)	
Sustainable management of community and communal forests	- Providing simplified participatory management plans for sacred, community and communal forests; - Support for the dissemination and application of the laws governing forests in the Republic of Benin; - Support for the management of forestry disputes; - Setting up rural timber markets (MRB) - Promotion of improved stoves made from local materials.
Adoption of sedentary agriculture and short-cycle crops	- Training producers in agroforestry techniques; - Developing the production and use of organic fertilisers.
Intensive reforestation	- Promoting the production of fast-growing tree species; - Institution of the materialisation of events through the planting of trees; - Organisation of statutory environmental days; - Installation of communal plantations; - Encouraging private and community reforestation.
Promoting alternative income-generating activities for forest resource users and climate change resilient construction	Development of beekeeping, poultry farming and rabbit farming activities - Processing of tropical products; - Development of tropical product processing

Projects	Areas of intervention
Development of promising sectors (rice, cashew nuts, honey, maize, yams, manioc and market gardening)	- Creation of innovation platforms for value-added chains in the rice, cashew nut, honey, maize, yam, cassava and market gardening sectors. - Improving producers' access to inputs, equipment and mastery of technical itineraries to improve the quality of their products - Improved access for processors to raw materials, equipment and technical know-how to improve the quality of their products - Improved access to markets for traders - Development of the fishing industry - Development of lowlands for rice and market garden production - Creation of water reservoirs for agricultural purposes
Improving food and nutritional security indicators in the Commune	- Support for the provision of inputs (seeds and compost) to promote home gardens - Training and awareness-raising for households on the proper management of food stocks and household income planning - Support for the creation of agricultural product processing units for women
Projects in the Government Action Programme 2021 - 2026 involving the Commune of Bassila (PAG2)	
Projects completed or in progress (PAG2)	
Development of farm mechanisation	- Development of agricultural mechanisation at various levels of the plant, animal and fishery production chains using appropriate agricultural machinery and equipment; - Adoption of new agricultural mechanisation technologies; - Setting up an institutional framework and incentives for the sustainable development of agricultural mechanisation in Benin.
Development of high value-added sectors (market gardening)	- Increased acreage, improved productivity and development of processing and export sectors and value chains; - Improving production, productivity and competitiveness (25% increase)
Strengthening of conventional sectors (rice, maize, manioc)	- Increase the competitiveness of the rice, maize and cassava sectors to cover national food needs, limit imports and develop local processing; - Achieving national food self-sufficiency in rice, maize and cassava, with quality raw and processed by-products to benefit the population, and better management of surpluses to conquer external markets.
Strengthening the drinking water supply systems in the towns of Bassila, Adjarra and surrounding areas	Densification and extension of the drinking water distribution network with a view to achieving the objective of universal access to drinking water in the 2 towns of Bassila and Adjarra.
New projects in the Government Action Programme 2021 - 2026 involving the Commune of Bassila (PAG2)	
National Programme for the Development of Plantations and Major Crops (cashew, rice, plantain banana, orange, oil palm, African apple, coconut, mango) throughout the country, particularly in the Commune of Bassila.	- Strengthening the system for producing quality seedlings for the crops selected; - Link dealers with processing units. - Optimising the development of arable land; - Encouraging national and/or international agro-industrial investors capable of adding significant value to the country's products;

Projects	Areas of intervention
Construction and reinforcement of SAEP multi-villages (SAEPmV) in poorly served or uncovered areas to increase access to drinking water in rural areas (to cover all rural localities in the Commune of Bassila).	- Increasing access to drinking water in rural areas through the construction of new water supply and sewerage systems (SAEPmV) - Improving access to water services in rural areas through the rehabilitation, upgrading and extension of existing facilities and networks.
Support project for the development of the cashew industry and agricultural entrepreneurship (PADEFA-ENA)	- Rehabilitation of old cashew plantations and establishment of new ones; - Contribute to reducing poverty and improving nutritional food security - Contribute to a sustainable increase in stakeholders' income
Project for the Sedentarisation of Ruminant Herds in Benin (ProSeR-Bénin) working in 40 communes in all the Departments except Littoral	- Improve the living conditions of farmers and livestock breeders and the productivity of the dairy and meat sectors, - Increase the income and entrepreneurial capacity of stakeholders, and provide services to pastoral camps.

Annex 6 : Synergy or complementarity links with some past and ongoing projects

Projects	Links/synergy/objectives	Lessons learned	Date/Status
Development Plan projects for the Commune of Bassila(2017-2025)			
Projects completed or in progress (Stakeholders and the Commune's PDC3)			
Communal forest management support project – phase II (PAFEMCOM-II)	Stabilize forest ecosystems based on the promotion of value chains of green economy products (smart agriculture, promotion of non-timber forest products, promotion of fish products, development of natural resources, promotion of ecotourism products, etc.); Improve food and nutritional security and the incomes of vulnerable small producers, Strengthen the resilience of populations, especially women and young people.	Experience in strengthening the resilience of women's groups and managing the incomes of vulnerable small-scale producers, small tools and shea value chains.	2016/closed
Project to support food security through the development of lowlands (PSAAB)	Hydro-agricultural development and installation of storage and conservation infrastructures	Experience in managing water resources and agricultural commodities	2010/ closed
Rural Development Support Project (PADER)	Various forms of support for farmers.	Experience in community management	2007/ closed
Multi-Sectoral Food, Health and Nutrition Project (PMASN)	- Strengthening food diversification through production, processing and consumption by households	Experience in community mobilization and strengthening food processing service provision	2014/closed

Projects	Links/synergy/objectives	Lessons learned	Date/Status
Support project for the rural world in the Atacora and Donga departments (PAMRAD)	Improving the living conditions of farmers and villagers in two of Benin's poorest departments in the north-west.	Experience of community management	2006/closed
Milk and Meat Sector Support Project (PAFILAV)	- Runway development - Construction of warehouses - Construction of mini-dairies	Experience of managing livestock systems	2009/closed
Agricultural Sectors Support Project (Fi Agri)	- Trail development - Development of low-lying areas ; - Creation of Rural Land Plans (PFR)	Experience of lowland development	
Agricultural Sectors Development Support Programme (PROFI)	- Shop construction ; - Runway development ; - Lowland development	Experience in developing lowlands and tracks	2014/ ongoing
Rural Transport Sector Support Programme (PASTR)	Development of runways	Experience in developing tracks	2014/closed
New projects 2018-2022 under the Bassila Commune Development Plan (PDC3)			
Adoption of sedentary agriculture and short-cycle crops	- Development of the production and use of organic fertilisers.	Experiments in organic fertilisation	2017/planned
Promotion of alternative income-generating activities for forestry resource users and climate change-resistant buildings	- Development of beekeeping, poultry farming and rabbit farming activities - Processing of tropical products - Development of tropical product processing	Experience of beekeeping development	2017/planned
Developing promising sectors (rice, cashew nuts, honey, maize, yams,	- Creation of innovation platforms for value-added chains in the rice, cashew nut, honey, maize, yam, cassava and market gardening sectors	Experience in developing water reservoirs and managing innovation platforms for cashew nut, honey,	2017/planned

Projects	Links/synergy/objectives	Lessons learned	Date/Status
cassava and market gardening)	- Improving producers' access to inputs, equipment and mastery of technical itineraries to improve the quality of their products	maize, yam, cassava and market gardening value-added chains (VADCs)	
Improving food and nutritional security indicators in the Commune	- Support for the provision of inputs (seeds and compost) to promote home gardens - Training and awareness-raising for households on the proper management of food stocks and household income planning - Support for the creation of agricultural product processing units for women	Experience in managing inputs and agri-food processing units	
Projects in the Government Action Programme 2021 - 2026 involving the Commune of Bassila (PAG2)			
Projects completed or in progress (PAG2)			
Development of farm mechanisation	- Development of agricultural mechanisation at various levels of the crop, livestock and fisheries production chains, using appropriate agricultural machinery and equipment; -- Establishment of an institutional framework and incentives for the sustainable development of agricultural mechanisation in Benin.	Experience in small-scale mechanisation	
Development of high value-added sectors (market gardening)	- Development of agricultural mechanization at various levels of the crop, livestock and fisheries production chains, using appropriate agricultural machinery and equipment; - Establishment of an institutional framework and incentives for the sustainable development of agricultural mechanization in Benin.	Experience in managing the market garden sector	
Strengthening conventional sectors (rice, maize, manioc)	- Increasing the competitiveness of the rice, maize and cassava sectors in order to meet national food needs, develop local processing and conquer foreign markets.	Experience in managing the maize and cassava sectors	

Projects	Links/synergy/objectives	Lessons learned	Date/Status
New projects in the Government Action Programme 2021 - 2026 involving the Commune of Bassila (PAG2)			
Support Project for the Development of the Cashew Sector and Agricultural Entrepreneurship (PADEFA-ENA)	Contribute to poverty reduction and improved nutritional food security Contribute to the sustainable increase in the income of actors	Experience in managing the cashew nut sector	2016/en cours
Project for the Sedentarization of Ruminant Herds in Benin (ProSeR- Benin) intervening in 40 municipalities distributed in all the Departments except the Littoral Department	- Improve the living conditions of farmers/breeders and the productivity of the milk and meat value chains - Ensure the increase in income and entrepreneurial capacities of actors, as well as the servicing of pastoral camps	Experience of managing sedentary livestock systems	2016/en cours
National Programme for the Development of Plantations and Major Crops (cashew, rice, plantain banana, orange, oil palm, African apple, coconut and mango) throughout the country, particularly in the Commune of Bassila.	- Strengthening the system for producing quality seedlings for selected crops - Optimising the development of arable land	Sharing experience in the production of resilient seedlings and the management of land and value chains	2016/ongoing
Project to Support the Competitiveness of Agricultural Sectors and Export Diversification (PACOFIDE)	- Increase the volume of formal exports in targeted value chains (cashew nuts, pineapples, fruit and vegetables) - Modernisation of the logistics chain (fruit quays, packaging, appropriate transport equipment, etc.);	Experiences in modernising value-added chains	2021/ongoing

Annex 7 : Outline of lessons learned or good practices that SONAB Project can build on the results of previous initiatives.

Expected results and products of the SONAB Project			Lessons learned or good practice from previous initiatives that can be exploited by the Project
COMPONENT	**EXPECTED RESULTS**	**EXPECTED PRODUCTS**	
1. Component 1: Capacity building for the most vulnerable small-scale farmers on good practices for adapting to CC	Outcome 1.1: Farm resilience is strengthened through the adoption of water and soil conservation and land restoration techniques	Output 1.1.1: Farmers are trained in water and soil conservation and land restoration techniques.	Most of the projects already implemented in the Commune of Bassila have dealt with water and soil conservation techniques and land restoration. Many of the new projects programmed target the same theme. Resilience to CC is not often addressed. This could be developed by the SONAB project on a relatively well-established technical basis.
		Output 1.1.2: Farmers adopt the technical itineraries and practices of the improved production system (SAP).	
		Output 1.1.3: Producers' material capacities are strengthened through support for various equipment (small tools, personal protective equipment, composting bags, sprayers, etc.).	
	Outcome 1.2: Water resources are managed in an integrated manner for the benefit of farmers	Output 1.2.1: Rainwater storage capacity is improved through the construction of a water tank for farmers in each arrondissement.	IWRM is the common thread running through all the hydro-agricultural development projects in the Bassila region, particularly in the market gardening sector. The experience gained in managing water use conflicts can serve as a basis for the activities of this project.
		Output 1.2.2: Market gardening facilities are built near the water reservoirs for areas used for market gardening.	
		Output 1.2.3: Farmers are trained in good integrated water resource management (IWRM) practices and in managing water use conflicts.	
	Outcome 1.3: Climate-resilient seeds and seedlings are available on time	Output 1.3.1: A mechanism is put in place to renew seeds and seedlings adapted to climate change (maize, cassava, soya and market gardening).	Experiments with seeds and plants that are resilient to climate change have often been inconclusive because of cultural or sociological constraints and local standards of organoleptic quality, which this project will have to incorporate into its approach.
		Output 1.3.2: The mechanism for supplying producers with seeds and seedlings is operational.	
2. Component 2: Development of value-added	Result 2.1: Local populations' sources of income are diversified	Output 2.1.1: Producer groups are better structured and more involved in the maize, soya, cassava and market gardening CVAs.	A large number of projects already completed or underway in the Commune of Bassila, or even planned by the municipal council, have set up or

Expected results and products of the SONAB Project			Lessons learned or good practice from previous initiatives that can be exploited by the Project
COMPONENT	**EXPECTED RESULTS**	**EXPECTED PRODUCTS**	
chains (VACs) in promising sectors to diversify sources of income for the most vulnerable communities	through the promotion of maize, soya, manioc and market gardening.	Output 2.1.2: The management system for innovation platforms in the maize, cassava, soya, cashew nut and market gardening sectors is in place and operational.	are planning Value Added Chains (VACs) in several agricultural or agro-forestry sectors. The SONAB project will be able to benefit from the achievements of these projects and incorporate the adaptive dimension.
	Outcome 2.2: Local people's sources of income are diversified through the promotion of the beekeeping sector	Output 2.2.1: Modern beekeeping techniques are mastered by beekeeping groups in the two districts.	Several beekeeping CVA platforms have already been set up under the aegis of the Bassila Local Council, particularly in the Manigri district. The SONAB project will be able to draw on the achievements of these CVAs.
		Output 2.2.2: Increased honey harvesting capacity for beekeepers through the acquisition of kits.	
	Outcome 2.3: Local women's groups diversify their sources of income by promoting the shea butter sector	Output 2.3.1: Groups of women producers are better structured and more involved in the shea CVAs	Shea butter is considered a non-timber forest product. In the current agricultural development project, women's groups should be oriented towards the agricultural economy of shea butter. This means going beyond the "picking" aspect of the crop. The fight against the fruit flies to which shea is addicted, and which are climate-sensitive, could serve as an entry point into the agricultural economy of shea.
		Output 2.3.2: The physical capacity of women's groups to collect and process shea butter is strengthened through the acquisition of tricycles and semi-industrial shea butter production units.	
3. Component 3: Strengthening the governance and local management framework for adaptation to climate change	Outcome 3.1: The framework for local governance and adaptation to CC is operational	Output 3.1.1: Communal stakeholders are trained in adapting the agricultural and forestry sectors to climate change.	The Bassila Town Hall Gender Focal Point will have a major role to play in achieving this result and obtaining these products.
		Output 3.1.2: The guide to coordinating local governance and adapting to climate change is validated and used by local players and communities living near the classified forests of Bassila and Pénessoulou.	
		Output 3.1.3: The gender approach is taken into account in adapting to climate change in the two districts.	
	Outcome 3.2:	Output 3.2.1: The community early warning system is functional, enabling appropriate measures to be	

Expected results and products of the SONAB Project			Lessons learned or good practice from previous initiatives that can be exploited by the Project
COMPONENT	**EXPECTED RESULTS**	**EXPECTED PRODUCTS**	
	Management of adaptation to CC is effective in both districts	taken in time, in anticipation of extreme weather events.	Very few projects explicitly address the issue of environmental and climate risk management and CC management. The project will have to draw on the experiences presented by the socio-professional groups during the consultations in order to develop functional warning systems with them.
		Output 3.2.2: Teachers, schoolchildren, opinion leaders and community radio presenters are aware of and have adopted good practice in adapting to climate change.	
	Outcome 3.3: Enrichment of communal, community and private forests with species resilient to climate change	Output 3.3.1: Local tree species that are resilient to climate change and adapted to the soil conditions in Bassila are identified and their seeds and seedlings are produced.	The managers of the forestry administration and the wise men and women of the community have a good knowledge of the ability of local plant species to tolerate the effects of the various climatic risks. This is an asset that the project team can exploit, even if the projects already carried out have produced few results on this issue in the Commune of Bassila.
		Output 3.3.2: Communal and community forests are enriched and private forests established using CC-resistant species.	

Annex 8 : Local tree species resilient to climate change and seedlings produced on the nursery site

Riparian area of the Bassila Classified Forest	*Riparian area of the Pénessoulou Forest*
Drought-resistant local species	
teak (Tectona grandis), shea (Vitellaria paradoxa), pterocarpus (Pterocarpus erinaceus), isoberlinia (Isoberlinia spp) and néré (Parkia biglobosa)	*shea (Vitellaria paradoxa), ebony (Diospyros crassiflora), cauliflower (Khaya senegalensis), pterocarpus (Pterocarpus erinaceus)* *kapok (Ceiba pentandra (L.) Gaertn), baobab (Adansonia digitata), tamarind (Tamarindus indica), prosopis (Prosopis africana) and teak (Tectona grandis).*
Flood-tolerant local species	
kapok (Ceiba pentandra (L.) Gaertn), roan (Borassus aethiopium), pentadesma (Pentadesma butyracea) and oil palm (Elaeis guineensis)	*the cauliflower Khaya grandifoliola and Pentadesma butyracea*
Local species resistant to strong winds	
néré (Parkia biglobosa), shea (Vitellaria paradoxa), teak (Tectona grandis), kapok (Ceiba pentandra (L.) Gaertn), daniellia (Daniellia oliveri (Rolfe) Hutch.	*shea (Vitellaria paradoxa), teak (Tectona grandis), kapok (Ceiba pentandra (L.) Gaertn), cedar (Khaya senegalensis) and ebony (Diospyros crassiflora)*
Local species resilient to wildfire	
teak (Tectona grandis), isoberlinia (Isoberlinia spp), shea (Vitellaria paradoxa), pterocarpus (Pterocarpus erinaceus), caïlcedrat (Khaya senegalensis), and afzelia (Afzelia africana) *néré (Parkia biglobosa), iroko (Milicia excelsa), daniellia (Daniellia oliveri (Rolfe) Hutch), baobab (Adansonia digitata), kapok tree (Ceiba pentandra (L.) Gaertn)*	*néré (Parkia biglobosa), shea (Vitellaria paradoxa), teak (Tectona grandis), kapok (Ceiba pentandra (L.) Gaertn), daniellia (Daniellia oliveri (Rolfe) Hutch.*
Plants produced on the nursery site	

teak (Tectona grandis), gmelina (Gmelina arborea), kapok (Ceiba pentadra), caïlcedrat (Khaya senegalensis), afzelia (Afzelia africana)	*teak (Tectona grandis), gmelina (Gmelina arborea) and cashew (Anacardium occidentale)*

Annex 9 : Letters of intent

a) Letters of intent Bassila 1

2

MINISTERE DU CADRE DE VIE
ET DU DEVELOPPEMENT DURABLE
REPUBLIQUE DU BENIN

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

Projet de renforcement de la résilience aux changements climatiques des populations riveraines des forêts classées de Bassila et de Pénessoulou au Centre du Bénin

LETTRE D'INTENTION

A la suite des réunions de concertations organisées pour l'élaboration du document complet du Projet « Renforcement de la résilience aux changements climatiques des populations riveraines des forêts classées de Bassila et de Pénessoulou au Centre du Bénin », La chef Village Bassila 1 Alissoudou

_____ exprime son adhésion aux objectifs dudit projet et son intention de s'impliquer dans l'exécution, le suivi et l'évaluation des activités, ainsi que dans les mécanismes de durabilité des acquis.

Nous souhaitons la mise en œuvre effective du projet dans l'intérêt des communautés vulnérables et de la vie économique et sociale de la Commune de Bassila.

Bassila Centre, le 18 janvier 2023

La chef Village Bassila 1 Alissoudou
Inoussa
INOUSSA Sahoura
Tel 97 02 79 87

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

Projet de renforcement de la résilience aux changements climatiques des populations riveraines des forêts classées de Bassila et de Pénessoulou au Centre du Bénin

LETTRE D'INTENTION

A la suite des réunions de concertations organisées pour l'élaboration du document complet du Projet « Renforcement de la résilience aux changements climatiques des populations riveraines des forêts classées de Bassila et de Pénessoulou au Centre du Bénin », Chef village Bassila Allen

_____ exprime son adhésion aux objectifs dudit projet et son intention de s'impliquer dans l'exécution, le suivi et l'évaluation des activités, ainsi que dans les mécanismes de durabilité des acquis.

Nous souhaitons la mise en œuvre effective du projet dans l'intérêt des communautés vulnérables et de la vie économique et sociale de la Commune de Bassila.

Bassila Centre, le 18 janvier 2023

Chef village
Yaya
193A Kassiman
Tel 97476925

MINISTERE DU CADRE DE VIE
ET DU DEVELOPPEMENT DURABLE
REPUBLIQUE DU BENIN

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

Projet de renforcement de la résilience aux changements climatiques des populations riveraines des forêts classées de Bassila et de Pénessoulou au Centre du Bénin

LETTRE D'INTENTION

A la suite des réunions de concertations organisées pour l'élaboration du document complet du Projet « Renforcement de la résilience aux changements climatiques des populations riveraines des forêts classées de Bassila et de Pénessoulou au Centre du Bénin », Chef Village BAKABAKA (83)

_____ exprime son adhésion aux objectifs dudit projet et son intention de s'impliquer dans l'exécution, le suivi et l'évaluation des activités, ainsi que dans les mécanismes de durabilité des acquis.

Nous souhaitons la mise en œuvre effective du projet dans l'intérêt des communautés vulnérables et de la vie économique et sociale de la Commune de Bassila.

Bassila Centre, le 18 janvier 2023

Le chef Village
ALLEY Kougbe Alassane
Tel 96528878

b) Letters of intent Bassila 2

MINISTERE DU CADRE DE VIE
ET DU DEVELOPPEMENT DURABLE
REPUBLIQUE DU BENIN

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

Projet de renforcement de la résilience aux changements climatiques des populations riveraines des forêts classées de Bassila et de Pénessoulou au Centre du Bénin

LETTRE D'INTENTION

A la suite des réunions de concertations organisées pour l'élaboration du document complet du Projet « Renforcement de la résilience aux changements climatiques des populations riveraines des forêts classées de Bassila et de Pénessoulou au Centre du Bénin », le Président du Comité de Gestion Participative de la Forêt Classée (CoGePa'FAdjic)

exprime son adhésion aux objectifs dudit projet et son intention de s'impliquer dans l'exécution, le suivi et l'évaluation des activités, ainsi que dans les mécanismes de durabilité des acquis.

Nous souhaitons la mise en œuvre effective du projet dans l'intérêt des communautés vulnérables et de la vie économique et sociale de la Commune de Bassila.

Bassila Centre, le 18 janvier 2023

Le Président

YACOUBOU Awalé

Tel. 96141928

MINISTERE DU CADRE DE VIE
ET DU DEVELOPPEMENT DURABLE
REPUBLIQUE DU BENIN

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

Projet de renforcement de la résilience aux changements climatiques des populations riveraines des forêts classées de Bassila et de Pénessoulou au Centre du Bénin

LETTRE D'INTENTION

A la suite des réunions de concertations organisées pour l'élaboration du document complet du Projet « Renforcement de la résilience aux changements climatiques des populations riveraines des forêts classées de Bassila et de Pénessoulou au Centre du Bénin », la présidente des groupements de femmes de

exprime son adhésion aux objectifs dudit projet et son intention de s'impliquer dans l'exécution, le suivi et l'évaluation des activités, ainsi que dans les mécanismes de durabilité des acquis.

Nous souhaitons la mise en œuvre effective du projet dans l'intérêt des communautés vulnérables et de la vie économique et sociale de la Commune de Bassila.

Bassila Centre, le 19 janvier 2023

La présidente

ARDJNA Bakèsman

Tél. 67900350

MINISTERE DU CADRE DE VIE
ET DU DEVELOPPEMENT DURABLE
REPUBLIQUE DU BENIN

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

Projet de renforcement de la résilience aux changements climatiques des populations riveraines des forêts classées de Bassila et de Pénessoulou au Centre du Bénin

LETTRE D'INTENTION

A la suite des réunions de concertations organisées pour l'élaboration du document complet du Projet « Renforcement de la résilience aux changements climatiques des populations riveraines des forêts classées de Bassila et de Pénessoulou au Centre du Bénin », la présidente St Tchoukoulé des Jardinières

exprime son adhésion aux objectifs dudit projet et son intention de s'impliquer dans l'exécution, le suivi et l'évaluation des activités, ainsi que dans les mécanismes de durabilité des acquis.

Nous souhaitons la mise en œuvre effective du projet dans l'intérêt des communautés vulnérables et de la vie économique et sociale de la Commune de Bassila.

Bassila Centre, le 18 janvier 2023

La présidente

Aelam Dahanna

Tel. 97528135

c) Letters of intent Bassila 3

MINISTERE DU CADRE DE VIE
ET DU DEVELOPPEMENT DURABLE
REPUBLIQUE DU BENIN

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

Projet de renforcement de la résilience aux changements climatiques des populations riveraines des forêts classées de Bassila et de Pénessoulou au Centre du Bénin

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exprime son adhésion aux objectifs dudit projet et son intention de s'impliquer dans l'exécution, le suivi et l'évaluation des activités, ainsi que dans les mécanismes de durabilité des acquis.

Nous souhaitons la mise en œuvre effective du projet dans l'intérêt des communautés vulnérables et de la vie économique et sociale de la Commune de Bassila.

Bassila Centre, le 18 janvier 2023

Le Président

N'KOYAMA N'da

Tél. 97027848

d) Letters of intent Pénessoulou 1

MINISTÈRE DU CADRE DE VIE ET DU DÉVELOPPEMENT DURABLE
RÉPUBLIQUE DU BÉNIN

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

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exprime son adhésion aux objectifs dudit projet et son intention de s'impliquer dans l'exécution, le suivi et l'évaluation des activités, ainsi que dans les mécanismes de durabilité des acquis.

Nous souhaitons la mise en œuvre effective du projet dans l'intérêt des communautés vulnérables et de la vie économique et sociale de la Commune de Bassila.

Pénessoulou, le 19 janvier 2023

Le Chef Arrondissement

KASSOU FOUSSENI

Tél. 97027784

MINISTÈRE DU CADRE DE VIE ET DU DÉVELOPPEMENT DURABLE
RÉPUBLIQUE DU BÉNIN

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

Projet de renforcement de la résilience aux changements climatiques des populations riveraines des forêts classées de Bassila et de Pénessoulou au Centre du Bénin

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exprime son adhésion aux objectifs dudit projet et son intention de s'impliquer dans l'exécution, le suivi et l'évaluation des activités, ainsi que dans les mécanismes de durabilité des acquis.

Nous souhaitons la mise en œuvre effective du projet dans l'intérêt des communautés vulnérables et de la vie économique et sociale de la Commune de Bassila.

Pénessoulou, le 19 janvier 2023

Le Chef Village

ADAM Abondon

Tél. 96-90-74-10

MINISTÈRE DU CADRE DE VIE ET DU DÉVELOPPEMENT DURABLE
RÉPUBLIQUE DU BÉNIN

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

Projet de renforcement de la résilience aux changements climatiques des populations riveraines des forêts classées de Bassila et de Pénessoulou au Centre du Bénin

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exprime son adhésion aux objectifs dudit projet et son intention de s'impliquer dans l'exécution, le suivi et l'évaluation des activités, ainsi que dans les mécanismes de durabilité des acquis.

Nous souhaitons la mise en œuvre effective du projet dans l'intérêt des communautés vulnérables et de la vie économique et sociale de la Commune de Bassila.

Pénessoulou, le 19 janvier 2023

Le chef village

KASSIM Ganyou

Tél. 96109913

e) Letters of intent Pénessoulou 2

MINISTÈRE DU CADRE DE VIE ET DU DÉVELOPPEMENT DURABLE
RÉPUBLIQUE DU BÉNIN

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

Projet de renforcement de la résilience aux changements climatiques des populations riveraines des forêts classées de Bassila et de Pénessoulou au Centre du Bénin

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_____ exprime son adhésion aux objectifs dudit projet et son intention de s'impliquer dans l'exécution, le suivi et l'évaluation des activités, ainsi que dans les mécanismes de durabilité des acquis.

Nous souhaitons la mise en œuvre effective du projet dans l'intérêt des communautés vulnérables et de la vie économique et sociale de la Commune de Bassila.

Pénessoulou, le 19 janvier 2023

Le Chef village

ZAKARI Hadjon

Tél. 97372886

MINISTÈRE DU CADRE DE VIE ET DU DÉVELOPPEMENT DURABLE
RÉPUBLIQUE DU BÉNIN

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

Projet de renforcement de la résilience aux changements climatiques des populations riveraines des forêts classées de Bassila et de Pénessoulou au Centre du Bénin

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_____ exprime son adhésion aux objectifs dudit projet et son intention de s'impliquer dans l'exécution, le suivi et l'évaluation des activités, ainsi que dans les mécanismes de durabilité des acquis.

Nous souhaitons la mise en œuvre effective du projet dans l'intérêt des communautés vulnérables et de la vie économique et sociale de la Commune de Bassila.

Pénessoulou, le 19 janvier 2023

Le Chef Village

ISSIFOU Moussa

Tél. 96 01 00 44

MINISTÈRE DU CADRE DE VIE ET DU DÉVELOPPEMENT DURABLE
RÉPUBLIQUE DU BÉNIN

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

Projet de renforcement de la résilience aux changements climatiques des populations riveraines des forêts classées de Bassila et de Pénessoulou au Centre du Bénin

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_____ exprime son adhésion aux objectifs dudit projet et son intention de s'impliquer dans l'exécution, le suivi et l'évaluation des activités, ainsi que dans les mécanismes de durabilité des acquis.

Nous souhaitons la mise en œuvre effective du projet dans l'intérêt des communautés vulnérables et de la vie économique et sociale de la Commune de Bassila.

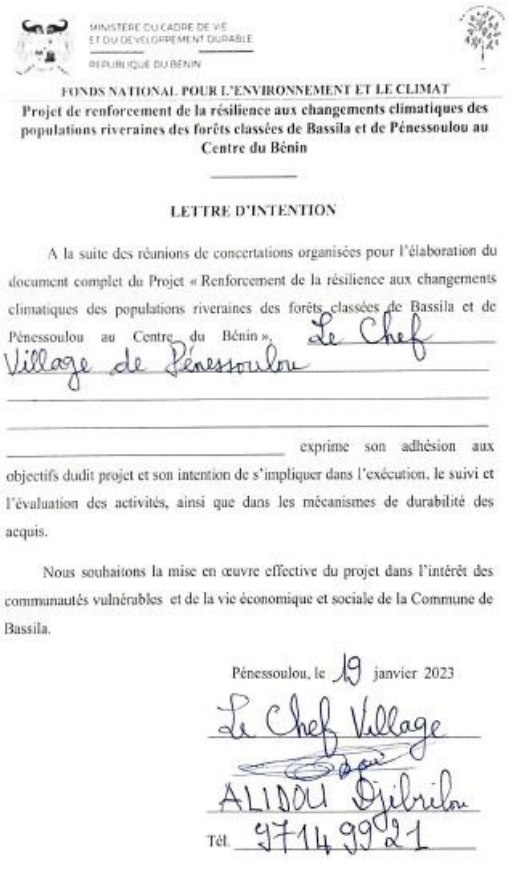
Pénessoulou, le 19 janvier 2023

Le Chef Village

MAGAZI Mamoudou

Tél. 66197107/94509090

f) Letters of intent Pénessoulou 3



MINISTERE DU CADRE DE VIE
ET DU DEVELOPPEMENT DURABLE
REPUBLIQUE DU BENIN

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

Projet de renforcement de la résilience aux changements climatiques des populations riveraines des forêts classées de Bassila et de Pénessoulou au Centre du Bénin

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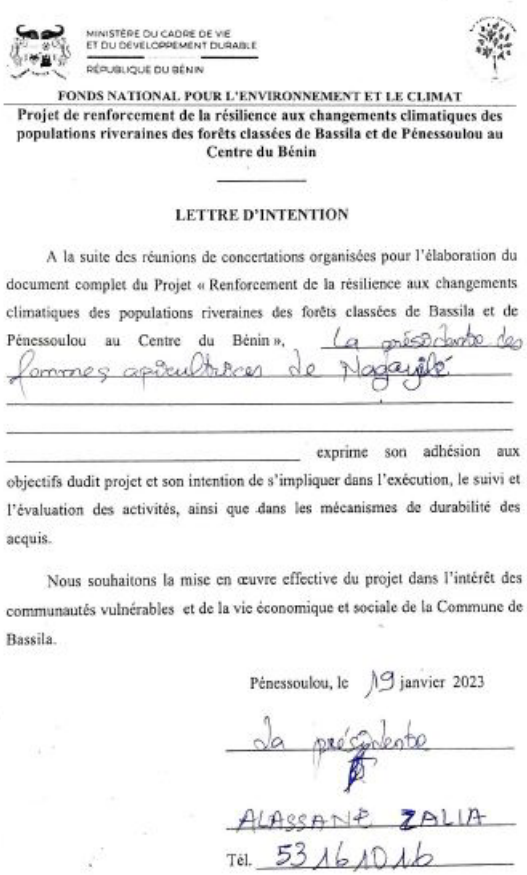
exprime son adhésion aux objectifs dudit projet et son intention de s'impliquer dans l'exécution, le suivi et l'évaluation des activités, ainsi que dans les mécanismes de durabilité des acquis.

Nous souhaitons la mise en œuvre effective du projet dans l'intérêt des communautés vulnérables et de la vie économique et sociale de la Commune de Bassila.

Pénessoulou, le 19 janvier 2023

Le Chef Village
ALIDOU Djibrilou
Tél. 97149921



MINISTERE DU CADRE DE VIE
ET DU DEVELOPPEMENT DURABLE
REPUBLIQUE DU BENIN

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

Projet de renforcement de la résilience aux changements climatiques des populations riveraines des forêts classées de Bassila et de Pénessoulou au Centre du Bénin

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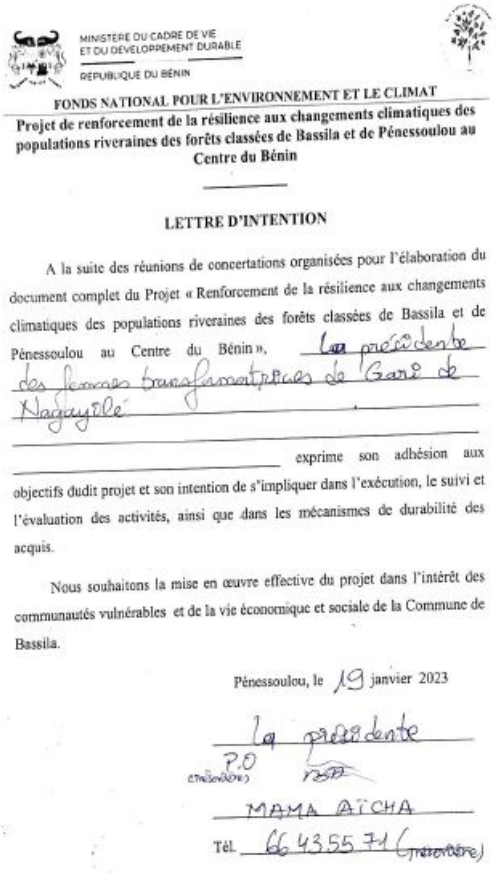
exprime son adhésion aux objectifs dudit projet et son intention de s'impliquer dans l'exécution, le suivi et l'évaluation des activités, ainsi que dans les mécanismes de durabilité des acquis.

Nous souhaitons la mise en œuvre effective du projet dans l'intérêt des communautés vulnérables et de la vie économique et sociale de la Commune de Bassila.

Pénessoulou, le 19 janvier 2023

la présidente
ALASSANE ZALIA
Tél. 53161016



MINISTERE DU CADRE DE VIE
ET DU DEVELOPPEMENT DURABLE
REPUBLIQUE DU BENIN

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

Projet de renforcement de la résilience aux changements climatiques des populations riveraines des forêts classées de Bassila et de Pénessoulou au Centre du Bénin

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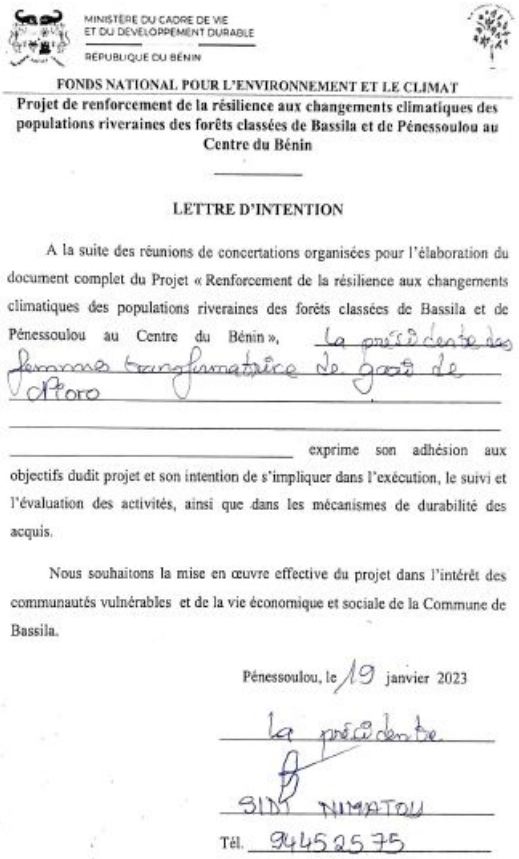
exprime son adhésion aux objectifs dudit projet et son intention de s'impliquer dans l'exécution, le suivi et l'évaluation des activités, ainsi que dans les mécanismes de durabilité des acquis.

Nous souhaitons la mise en œuvre effective du projet dans l'intérêt des communautés vulnérables et de la vie économique et sociale de la Commune de Bassila.

Pénessoulou, le 19 janvier 2023

la présidente
P.O
MAMA AÏCHA
Tél. 66435571 (trésorière)

g) Letters of intent Pénessoulou 4



MINISTÈRE DU CADRE DE VIE ET DU DÉVELOPPEMENT DURABLE
RÉPUBLIQUE DU BÉNIN

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

Projet de renforcement de la résilience aux changements climatiques des populations riveraines des forêts classées de Bassila et de Pénessoulou au Centre du Bénin

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exprime son adhésion aux objectifs dudit projet et son intention de s'impliquer dans l'exécution, le suivi et l'évaluation des activités, ainsi que dans les mécanismes de durabilité des acquis.

Nous souhaitons la mise en œuvre effective du projet dans l'intérêt des communautés vulnérables et de la vie économique et sociale de la Commune de Bassila.

Pénessoulou, le 19 janvier 2023

La présidente

SIDI NIMATOU

Tél. 94452575

MINISTÈRE DU CADRE DE VIE ET DU DÉVELOPPEMENT DURABLE
RÉPUBLIQUE DU BÉNIN

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

Projet de renforcement de la résilience aux changements climatiques des populations riveraines des forêts classées de Bassila et de Pénessoulou au Centre du Bénin

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exprime son adhésion aux objectifs dudit projet et son intention de s'impliquer dans l'exécution, le suivi et l'évaluation des activités, ainsi que dans les mécanismes de durabilité des acquis.

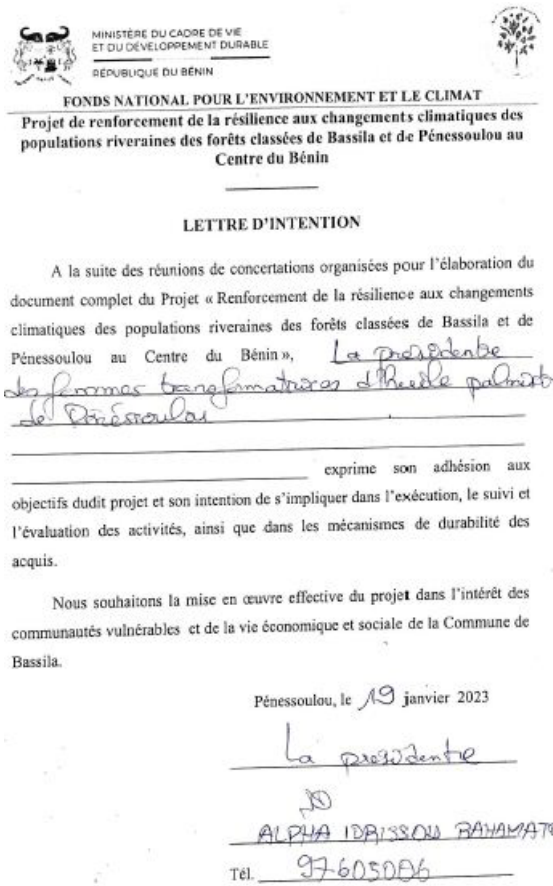
Nous souhaitons la mise en œuvre effective du projet dans l'intérêt des communautés vulnérables et de la vie économique et sociale de la Commune de Bassila.

Pénessoulou, le 19 janvier 2023

La présidente

MAGAZI RAFIA

Tél. 52313166



MINISTÈRE DU CADRE DE VIE ET DU DÉVELOPPEMENT DURABLE
RÉPUBLIQUE DU BÉNIN

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

Projet de renforcement de la résilience aux changements climatiques des populations riveraines des forêts classées de Bassila et de Pénessoulou au Centre du Bénin

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exprime son adhésion aux objectifs dudit projet et son intention de s'impliquer dans l'exécution, le suivi et l'évaluation des activités, ainsi que dans les mécanismes de durabilité des acquis.

Nous souhaitons la mise en œuvre effective du projet dans l'intérêt des communautés vulnérables et de la vie économique et sociale de la Commune de Bassila.

Pénessoulou, le 19 janvier 2023

La présidente

ALPHA IDRISSOU BAHAMATOU

Tél. 97605086

h) Letters of intent Pénessoulou 5

MINISTÈRE DU CADRE DE VIE
ET DU DÉVELOPPEMENT DURABLE
RÉPUBLIQUE DU BÉNIN

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

Projet de renforcement de la résilience aux changements climatiques des populations riveraines des forêts classées de Bassila et de Pénessoulou au Centre du Bénin

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_____ exprime son adhésion aux objectifs dudit projet et son intention de s'impliquer dans l'exécution, le suivi et l'évaluation des activités, ainsi que dans les mécanismes de durabilité des acquis.

Nous souhaitons la mise en œuvre effective du projet dans l'intérêt des communautés vulnérables et de la vie économique et sociale de la Commune de Bassila.

Pénessoulou, le 19 janvier 2023

La présidente

INOUSSA AFISSOU

Tél. _____

MINISTÈRE DU CADRE DE VIE
ET DU DÉVELOPPEMENT DURABLE
RÉPUBLIQUE DU BÉNIN

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

Projet de renforcement de la résilience aux changements climatiques des populations riveraines des forêts classées de Bassila et de Pénessoulou au Centre du Bénin

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_____ exprime son adhésion aux objectifs dudit projet et son intention de s'impliquer dans l'exécution, le suivi et l'évaluation des activités, ainsi que dans les mécanismes de durabilité des acquis.

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Pénessoulou, le 19 janvier 2023

le président

Adam Bassirou

Tél. 97916641

MINISTÈRE DU CADRE DE VIE
ET DU DÉVELOPPEMENT DURABLE
RÉPUBLIQUE DU BÉNIN

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

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_____ exprime son adhésion aux objectifs dudit projet et son intention de s'impliquer dans l'exécution, le suivi et l'évaluation des activités, ainsi que dans les mécanismes de durabilité des acquis.

Nous souhaitons la mise en œuvre effective du projet dans l'intérêt des communautés vulnérables et de la vie économique et sociale de la Commune de Bassila.

Pénessoulou, le 18 janvier 2023

le Président

ABDOULAYE M. Fataou

Tél. 96334652.

i) Letters of intent Pénessoulou 6

MINISTÈRE DU CADRE DE VIE
ET DU DÉVELOPPEMENT DURABLE
RÉPUBLIQUE DU BÉNIN

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

Projet de renforcement de la résilience aux changements climatiques des populations riveraines des forêts classées de Bassila et de Pénessoulou au Centre du Bénin

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exprime son adhésion aux objectifs dudit projet et son intention de s'impliquer dans l'exécution, le suivi et l'évaluation des activités, ainsi que dans les mécanismes de durabilité des acquis.

Nous souhaitons la mise en œuvre effective du projet dans l'intérêt des communautés vulnérables et de la vie économique et sociale de la Commune de Bassila.

Pénessoulou, le 19 janvier 2023

La présidente

INOUSSA AFIASSEDOU

Tél. /

MINISTÈRE DU CADRE DE VIE
ET DU DÉVELOPPEMENT DURABLE
RÉPUBLIQUE DU BÉNIN

FONDS NATIONAL POUR L'ENVIRONNEMENT ET LE CLIMAT

Projet de renforcement de la résilience aux changements climatiques des populations riveraines des forêts classées de Bassila et de Pénessoulou au Centre du Bénin

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exprime son adhésion aux objectifs dudit projet et son intention de s'impliquer dans l'exécution, le suivi et l'évaluation des activités, ainsi que dans les mécanismes de durabilité des acquis.

Nous souhaitons la mise en œuvre effective du projet dans l'intérêt des communautés vulnérables et de la vie économique et sociale de la Commune de Bassila.

Pénessoulou, le 19 janvier 2023

le président

Adam Bassirou

Tél. 97916641

MINISTÈRE DU CADRE DE VIE
ET DU DÉVELOPPEMENT DURABLE
RÉPUBLIQUE DU BÉNIN

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exprime son adhésion aux objectifs dudit projet et son intention de s'impliquer dans l'exécution, le suivi et l'évaluation des activités, ainsi que dans les mécanismes de durabilité des acquis.

Nous souhaitons la mise en œuvre effective du projet dans l'intérêt des communautés vulnérables et de la vie économique et sociale de la Commune de Bassila.

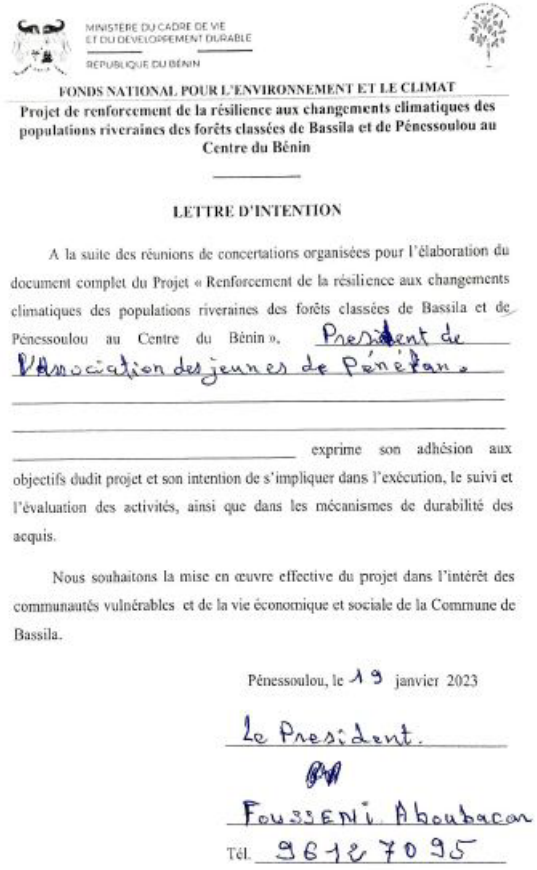
Pénessoulou, le 18 janvier 2023

le Président

ABDOULAYE M. Fataou

Tél. 96334652.

j) Letters of intent Pénessoulou 7



MINISTERE DU CADRE DE VIE
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REPUBLIQUE DU BENIN

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exprime son adhésion aux objectifs dudit projet et son intention de s'impliquer dans l'exécution, le suivi et l'évaluation des activités, ainsi que dans les mécanismes de durabilité des acquis.

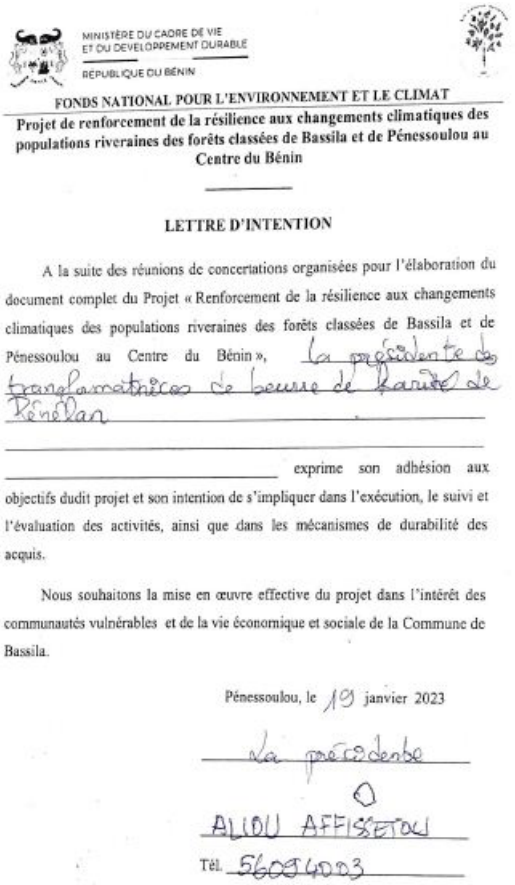
Nous souhaitons la mise en œuvre effective du projet dans l'intérêt des communautés vulnérables et de la vie économique et sociale de la Commune de Bassila.

Pénessoulou, le 19 janvier 2023

Le Président.

FOUSSENI Aboubacar

Tél. 96187095



MINISTÈRE DU CADRE DE VIE
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LETTRE D'INTENTION

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exprime son adhésion aux objectifs dudit projet et son intention de s'impliquer dans l'exécution, le suivi et l'évaluation des activités, ainsi que dans les mécanismes de durabilité des acquis.

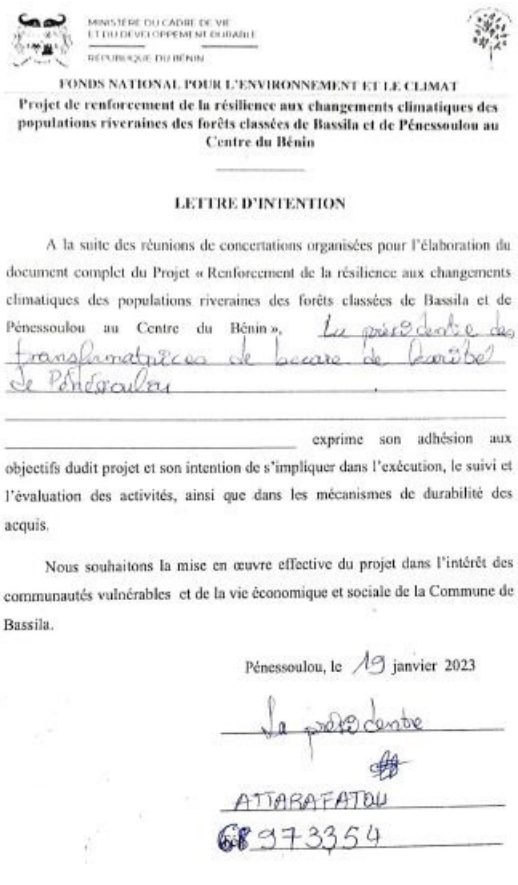
Nous souhaitons la mise en œuvre effective du projet dans l'intérêt des communautés vulnérables et de la vie économique et sociale de la Commune de Bassila.

Pénessoulou, le 19 janvier 2023

La présidente

ALIOU AFFISSETOU

Tél. 56084003



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La présidente

ATTARAFATOU

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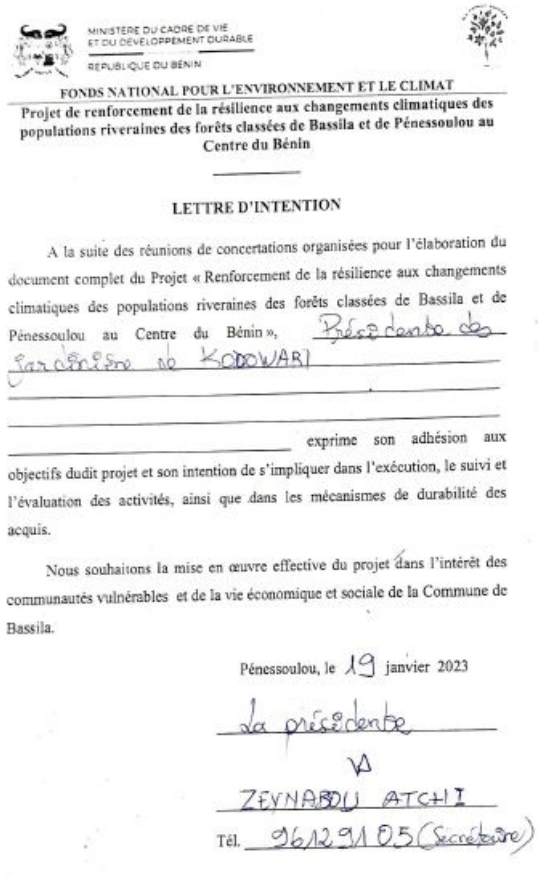
k) Letters of intent Pénessoulou 8



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exprime son adhésion aux objectifs dudit projet et son intention de s'impliquer dans l'exécution, le suivi et l'évaluation des activités, ainsi que dans les mécanismes de durabilité des acquis.

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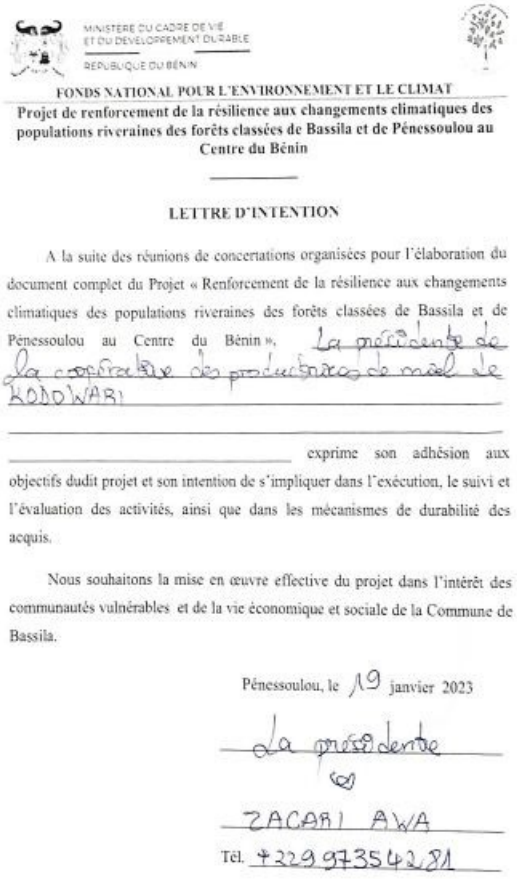
Pénessoulou, le 19 janvier 2023

La présidente

ZEYNABOU ATCHI

Tél. 96129105 (Secrétaire)



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exprime son adhésion aux objectifs dudit projet et son intention de s'impliquer dans l'exécution, le suivi et l'évaluation des activités, ainsi que dans les mécanismes de durabilité des acquis.

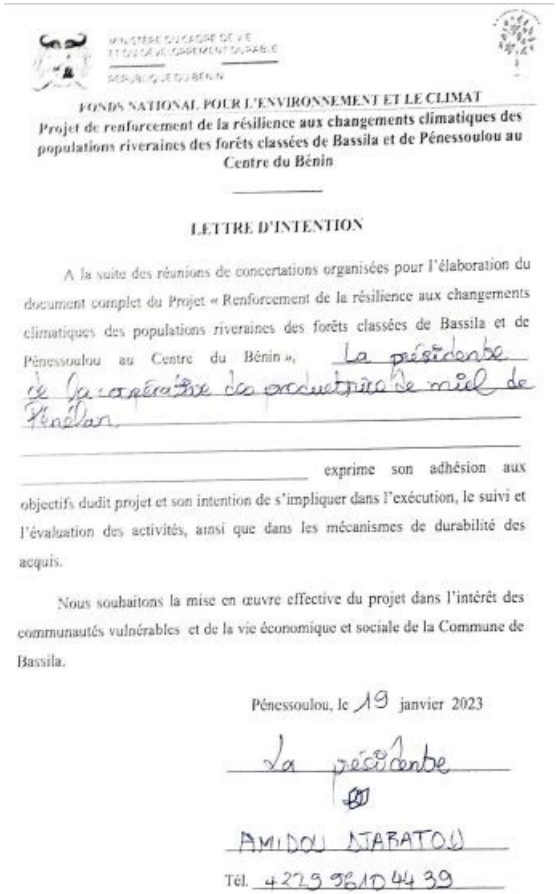
Nous souhaitons la mise en œuvre effective du projet dans l'intérêt des communautés vulnérables et de la vie économique et sociale de la Commune de Bassila.

Pénessoulou, le 19 janvier 2023

La présidente

ZACARI AWA

Tél. +229 97354281



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exprime son adhésion aux objectifs dudit projet et son intention de s'impliquer dans l'exécution, le suivi et l'évaluation des activités, ainsi que dans les mécanismes de durabilité des acquis.

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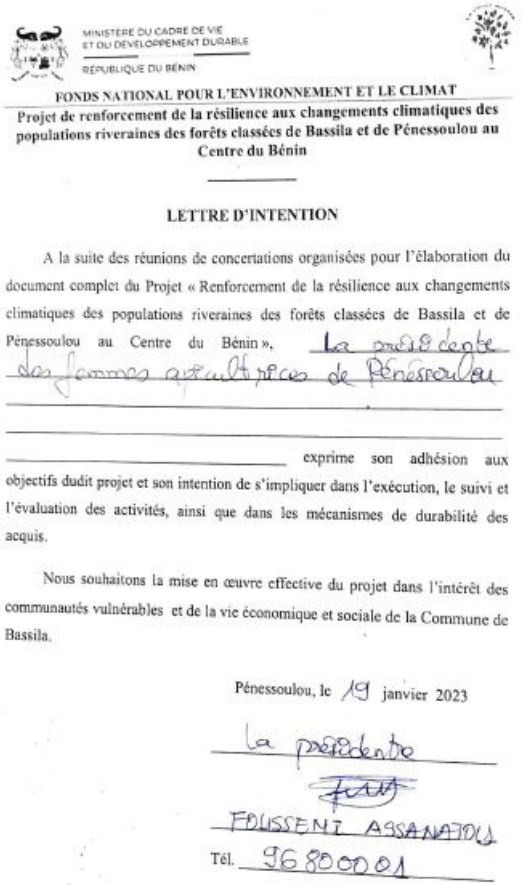
Pénessoulou, le 19 janvier 2023

La présidente

AMIDOU NIABATOU

Tél. 4229 96104439

l) Letters of intent Pénessoulou 9



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exprime son adhésion aux objectifs dudit projet et son intention de s'impliquer dans l'exécution, le suivi et l'évaluation des activités, ainsi que dans les mécanismes de durabilité des acquis.

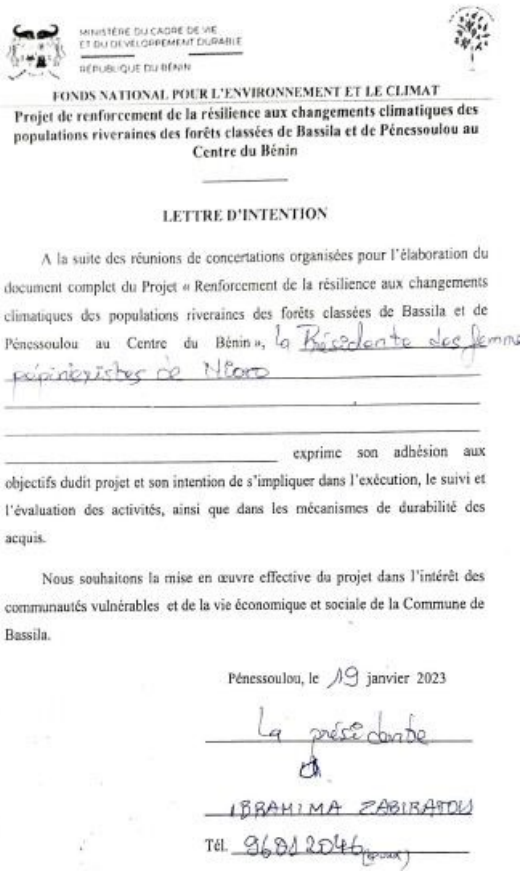
Nous souhaitons la mise en œuvre effective du projet dans l'intérêt des communautés vulnérables et de la vie économique et sociale de la Commune de Bassila.

Pénessoulou, le 19 janvier 2023

La présidente

FOUSSENI ASSANATOU

Tél. 96800001



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exprime son adhésion aux objectifs dudit projet et son intention de s'impliquer dans l'exécution, le suivi et l'évaluation des activités, ainsi que dans les mécanismes de durabilité des acquis.

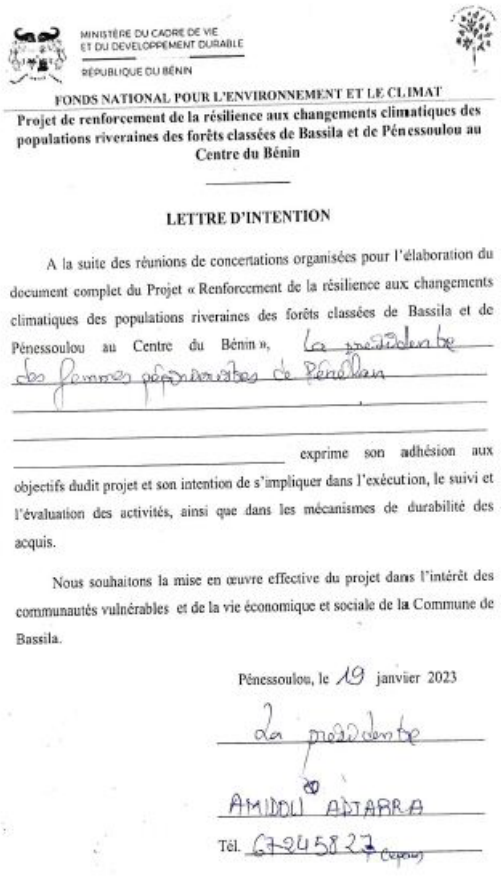
Nous souhaitons la mise en œuvre effective du projet dans l'intérêt des communautés vulnérables et de la vie économique et sociale de la Commune de Bassila.

Pénessoulou, le 19 janvier 2023

La présidente

IBRAHIMA ZABIRATOU

Tél. 96812046 (appel)



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exprime son adhésion aux objectifs dudit projet et son intention de s'impliquer dans l'exécution, le suivi et l'évaluation des activités, ainsi que dans les mécanismes de durabilité des acquis.

Nous souhaitons la mise en œuvre effective du projet dans l'intérêt des communautés vulnérables et de la vie économique et sociale de la Commune de Bassila.

Pénessoulou, le 19 janvier 2023

La présidente

AMIDOU AJIARRA

Tél. 67245827 (appel)

m) Letters of intent Pénessoulou 10

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Nous souhaitons la mise en œuvre effective du projet dans l'intérêt des communautés vulnérables et de la vie économique et sociale de la Commune de Bassila.

Pénessoulou, le 19 janvier 2023

La présidente

ALASSANA AMINA

Tél. 61341551

MINISTÈRE DU CADRE DE VIE
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Nous souhaitons la mise en œuvre effective du projet dans l'intérêt des communautés vulnérables et de la vie économique et sociale de la Commune de Bassila.

Pénessoulou, le 19 janvier 2023

La présidente

ABDOULMOUSSRA

Tél. 53161016

Annex 10 : Initial assessment of gender equality for food security and women's economic empowerment

The aim of this project is to improve the living conditions of the social groups most vulnerable to climate change in the communities bordering the Classified Forests of Bassila and Pénessoulou. The sustainability of the results will depend on the ability of the strategies and technologies implemented to ensure the preservation of environmental resources and the rehabilitation of marginalised groups. These include (1) the promotion of resilient tree species in communal, community or private plantations to meet communities' wood product needs and limit their pressure on classified forests, and (2) a series of household food and economic security measures, including the economic empowerment of women.

Despite the provisions of the Constitution of the Republic of Benin (1990), the Personal and Family Code promulgated in 2004, Law 2007-03 of 16 October 2007 on rural land tenure, and the National Gender Promotion Policy (PNPG, 2009), which enshrine equal rights for men and women and equity in socio-economic life, the Gender Inequality Index (GII) is still too high in Benin. It is estimated at 0.612 in 2019, placing the country 148th out of 162 countries (UNDP, 2021). Women still have too few technical and managerial skills, limited economic power and low representation in decision-making bodies.

The axes of analysis, food security and women's economic empowerment are the three key points covered by this initial assessment. They will be followed by the gender action plan.

Main areas of analysis

The main lines of analysis used are those defined in the *"Politique Nationale de Promotion du Genre du Bénin"* and which derive from the prisms of gender analysis:

(i) equal access for men and women and all marginalised people to resources and benefits;

(ii) the participation of men and women in policy and decision-making structures at family and community level;

(iii) men's and women's control over resources, work, benefits and decision-making spheres; and finally;

(iv) equal access for men and women to decision-making power.

In terms of gender analysis, three types of resources are considered:

(a) Socio-economic resources: land, labour, money, food and housing;

(b) socio-cultural and political resources: training, access to information and power

(c) time, availability and self-confidence.

In the context of climate change, gender takes on a particular dynamic. Climate change affects different communities, households and individuals in different ways. The ability of stakeholders to respond to the adverse effects of climate change implies having (CARE, 2016; MCVDD, 2019):

- - access to and use of information and services;
- - control over capital;
- - Access to institutions and rights to key resources;
- - the ability to innovate in response to changing challenges and opportunities;
- - flexibility and foresight in planning and decision-making.

Unequal distribution of resources and power imbalances are the underlying causes of poverty and impact on people's ability to adapt.

Poor women and men, young people, people with disabilities and the marginalised face multiple and complex challenges in their daily lives. Over the past forty years, the effects of climate change have accentuated these challenges and threaten to wipe out the efforts made by these social strata to survive and win the battle for development.

Different factors influence inequality across gender, ethnic, cultural and religious groups, and therefore determine the different ways in which climate change affects individuals, households and communities. These factors include differences in access to information, control over resources and capacity to innovate in response to climate challenges. In addition, the different roles of men, women and the marginalised in society give them different knowledge, different priorities and different concerns about climate change. In the name of living together and peace, all these differences will have to come together to meet the needs of all sections of society.

Gender analysis is considered in this project at the community level, which is traditionally characterised by a division of labour between stakeholders.

The issues addressed are those that emerged from consultations with stakeholders as being of greatest concern, i.e. food security and the economic empowerment of women.

Gender and food security in communities bordering the classified forests of Bassila and Pénessoulou

"**Food security** exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life" (FAO, 1996). The proportion of the world's population without such access is food insecure. Inequalities within countries increasingly outweigh inequalities between countries (FAO, 2021). Food security is not just a question of quantity; it also covers the quality of food.

While the **food system** encompasses all the factors that determine the way in which food is produced, processed, marketed, distributed and consumed, food security is "a situation in which all people at all times have physical and socio-economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life" (FAO). It depends on four essential factors that are highly sensitive to the gender dimension: (i) the physical availability of food, (ii) economic and physical access to food, (iii) the use of food and (iv) a favourable environment.

In the key areas of (i) the division of labour, roles and specific needs of women and men, (ii) access to resources and control of their use, and (iii) participation in decision-making, the functions and distribution of tasks according to gender are as follows in the communities bordering the classified forests of Bassila and Pénessoulou (Annexes 10-a and 10-b):

Annex 10-a : Gender dimension of the food security system in the small farmer community of Bassila and Pénessoulou

Function	Distribution of tasks in the household and community
Distribution of tasks in the household and community	
Production	The clearing and ploughing of the fields, the preparation of the seedbed and the supply of seeds and seedlings are carried out mainly by men and young people. But the choice of food seeds for the market gardening areas is left to the women's initiative. Fertilisers are negotiated by the men. Women and girls are responsible for sowing, fertilising, weeding and harvesting. Men are responsible for crop health protection. Men and women irrigate the market garden crops. If necessary, the men hire farm labourers. It is the women who feed the cattle and milk the cows. Fodder production and animal care are shared between men and women.
Post-harvest management	Women and girls are responsible for drying, threshing, winnowing, sorting, storing and preserving the crops. But the tasks that require a great deal of physical effort are carried out by men and young men.
Distribution and marketing	Foodstuffs are marketed by women and girls. Small volumes of foodstuffs are transported to the market by motorbike or tricycle, but large volumes of crops are negotiated by men with the large traders who come to buy in the fields, in the case of cereals, root tubers, pulses and animals. Relevant information on prices and sales opportunities is sought equally by men and women. Quality control of marketed products is carried out by buyers under the watchful eye of both men and women. Stalls, shops and other commercial areas are generally managed by women for food sales. But when the volume involved is large, men ask to take charge. It is generally the men who manage the money from the sale of food products, even though the entire production cycle is managed by the women and girls.
Preparation and consumption	Women are responsible for the availability of food in the household, the preparation of meals and distribution to family members, including children, the elderly and the disabled. It is still the women who ensure the nutritional balance of the diet because of their traditional knowledge of food quality. milking or slaughtering the animals? All members of the household eat the meal served by the mothers, with the exception of young children and the elderly or sick, for whom appropriate diets are served. The slaughtering of animals is reserved for men and young men, but the milking of ruminants is carried out by women.
	Access to resources and control of their use
Physical resources	Apart from the marginal situations of households that have acquired land through purchase or inheritance, the land generally belongs to the original community that founded the village. Its use is controlled by the community. It is allocated to family members by the head of the community, who may decide to sell it to third parties by decision of the community council. The choice of crops, timetable, methods and plots to be cultivated is generally left to the patriarchs because of their traditional knowledge of crop ecology and the suitability of the land for cultivation.

Function	Distribution of tasks in the household and community
Distribution of tasks in the household and community	
	Women generally do not have individual access to land. Arable land is allocated to women's groups for market gardening. It is the men who benefit from the fertile land for the needs of the members of their household. Women organised into groups and men have equal access to water for farming, or to land close to water resources: women for market gardening and men for all crops. Women are responsible for fetching water and ensuring that drinking water is available for the whole household. Men own the largest herds of animals; women own poultry and small livestock. Young people generally look after the household animals and take them out to pasture.
Financial resources	The general household budget is managed by the man, who also controls the seeds, manure, fertilisers, pesticides, fodder and medicines for the animals, as well as the working equipment. It is the man who hires the workers, owns the granaries and controls the products stored. The man is also responsible for the stock of cereals, pulses, roots and tubers. The woman is generally responsible for the products used to make the sauce. As far as meat products are concerned, the man is more responsible for livestock and game, and the woman for fish. If stocks are depleted, the man and woman work together to decide what action to take to ensure the household and children are fed, including the purchase of food products.
KnowledgeFinancial resources	Information on agricultural innovations, post-harvest management, marketing and food preparation is sought jointly by men and women for the food products for which they are directly responsible in the household. In the household, the products used for main courses (cereals, tubers, etc.) are of more interest to men than to women, who are more interested in vegetables, oil and other spices.
	Participation in decision-making
Strategic access to resources	The lengthening of the dry period due to climate change means that women have to travel further and further to fetch drinking water or vegetables for household needs. The additional time budget allocated to these activities is beyond the control of the household, forcing it to modify the roles and decision-making processes of women and men in the production system. To compensate for women's limited availability, some men contribute more to childcare, the search for firewood or the use of butane gas.
Policies, regulatory frameworks	The Benin Food and Nutrition Council (CAN-Benin) is chaired by the Head of State, with a Permanent Secretariat at national level. It comprises consultation bodies at departmental and communal level, chaired by Prefects and Mayors respectively, and food and nutrition monitoring committees chaired by village chiefs. The main national food policy instruments are Benin's Strategic Food and Nutrition Development Plan (PSDAN), the National Zero

Function	Distribution of tasks in the household and community
Distribution of tasks in the household and community	
	Hunger Strategy 2030, the National Strategy for Infant and Young Child Feeding 2015-2019, and the Health Sector Nutrition Policy 2016-2025. CAN-Benin has initiated the Multisectoral Food, Health and Nutrition Project (PMASN), which aims to "increase the coverage and use of community-based interventions relating to child nutrition and growth" in 40 communes across the country. The project has tackled the factors that determine malnutrition, and has incorporated the gender approach into its approach, which is also one of the key principles of Benin's PSDAN. With this in mind, it has carried out a pilot study on "Gender roles and norms in production, consumption and health in Benin" in the communes of Bonou, Zê, Lalo, Ouéssè and Boukoumbé.

Source : DDC (2017a) ; CAN-Bénin (2016).

Gender and economic empowerment of women living near classified forests in the development of inclusive market systems in Bassila and Pénessoulou

Women's empowerment is a process through which women's lives are transformed from a situation in which they have limited power due to gender inequality barriers to one in which they have the same power as men (Thorme *et al*., 2016). The economic, social, personal and political aspects of women's empowerment are linked: positive change in one aspect of women's lives cannot be sustained without progress in the other areas.

The economic aspect is an essential component of women's empowerment, as it relates to their ability to access and control productive resources and to be recognised as fully engaged actors in the economy. Nevertheless, women's empowerment encompasses more aspects than **economic empowerment** as such, as it includes the process of obtaining a broader set of political, economic and social rights. Indeed, Women's Economic Empowerment (WEE) is defined by (SDC, 2017):

- - economic progress, through higher incomes and better rewards for work ;
- - Access to opportunities and life chances, including skills development and employment;
- - access to the resources, services and support needed for economic progress;
- - the ability to make economic decisions and have a voice in different spheres, including household finances;
- - a manageable workload, taking into account unpaid family duties.

But for women's economic empowerment to be meaningful, women must also have the autonomy and self-confidence to make changes in their own lives. Ensuring the wider empowerment of women requires additional approaches that challenge the structural barriers that prevent women from being empowered in all aspects: economic, social, political and personal. This includes the opportunity and power to initiate and influence decision-making while enjoying the same rights as men and being free from violence.

Hence the importance of **Inclusive Market Systems Development (MSD)**, an approach which aims to induce large-scale sustainable benefits, such as income and employment, for poor men and women. MSD respects project cycle

management and is based on the premise that target groups do not exist in isolation, but are part of a larger system (Springfield Center, 2014).

i. Strategic framework for women's economic empowerment and the development of inclusive market systems

The strategic framework is the representation of the theory of change that underpins any Inclusive Market Systems (IMS) development project. Women's economic empowerment (WEE) objectives are inserted into it by analysing key gender issues at each stage and level, i.e. poverty reduction, growth and access objectives, selected inclusive market systems (sectors, value chains) with the potential to produce the expected benefits for women (DCED, 2014; Coffey, 2012).

ii. Selection of value chains under the inclusive market system.

The main aspects of the inclusive market system for communities living alongside the classified forests of Bassila and Pénessoulou are (i) essential operations, (ii) support functions and (iii) rules and standards.

In the light of the results of the consultation meetings with stakeholders, and based on the objectives of poverty reduction, growth and access, the value chains selected under the inclusive market system are those that have the potential to produce the expected benefits for vulnerable women.

Two groups of value chains and activities were selected: those that are already dominated by women, such as the production of shea butter, gari and palm kernel oil, and those in which women are already involved to some extent, and where women and men work together (vegetable production, forestry plant production).

The answers given by stakeholders to the key gender-related questions during the consultation workshop are set out in Table 15.

Annex 10-b : Analysis of inclusive market systems

Aspects of the inclusive market system	Reasons for women's behaviour and ways of changing it
Essential operations	• - In value chains dominated by women, it is women who take the initiative in terms of opportunities and activities. Men are involved in tasks that require considerable physical effort. In other situations, men may take the initiative. • - The difficulties that women face in trading within the basic inclusive market system as consumers/suppliers stem from the reluctance of some men to work to the order of women. • - The main factors that motivate women to get involved in the market are the domestic needs that the market makes it possible to satisfy, economic and financial independence, and the satisfaction of being useful to their community. • - Meeting these needs and incentives can be improved by building women's capacities and encouraging them. • - Women are currently integrated into the general market system because of the efficiency they have demonstrated. Improving the functioning of the market in their favour would require capacity building and the effective application of national policies and strategies on gender promotion.

Aspects of the inclusive market system	Reasons for women's behaviour and ways of changing it
Support functions	• - The difficulties faced by women in the area of support functions are the low level of access to financial institutions, the weakness of public services responsible for gender promotion and the limited availability of specific infrastructure and institutions favourable to women's activities in rural areas (childcare, domestic help). • - The explicit needs of women in relation to the other roles they play and which influence their involvement in the market are to strengthen their budgeting, negotiation and leadership skills. • - The "competitive advantage" (arguments) of women in relation to the support functions analysed lies in their natural sensitivity to social issues, their great capacity for economic management and their high level of listening skills.
Rules and standards	• - The difficulties faced by women as a result of the rules (formal and informal) in force in the socio-cultural context examined are difficulties in accessing land ownership and bank guarantees. • - Women's "competitive advantage" (arguments) in relation to the rules analysed is the strong advocacy they enjoy at international level (MDGs 1, 2, 4, 5, 8, 9 and 10). • - The resistance that women face within their family, their community and at a wider level if they become more involved in the market, is men's reticence about their real level of availability for the tasks of producing material goods and services and for decision-making tasks that may be socially painful. • - In particular, the resistance emanating from men's perception is the priority given to biological functions over social functions and the doubt about women's capacity for endurance in defending causes of community or national interest. • - Women (or men) risk being subjected to acts of violence because of their opinions contrary to those of extremist groups, even if these opinions are socially and economically just. • - The risk of women becoming victims of gender-based violence as a result of their greater participation in the market may come from philosophical or religious groups that traditionally see their role as being in the home and in housework.

Source: Adapted from Coffey (2012) and Helvetas Swiss Intercooperation (2013)

Overall, the initial gender analysis shows that existing gender-specific vulnerabilities are exacerbated by the adverse effects of climate change. Differences in livelihood strategies between men and women lead to differential exposure to these effects. For example, women's workload increases when the dry season is prolonged, as they have to fetch drinking water further from their homes. At the same time, men contribute to domestic chores by fetching firewood or choosing to use butane gas to replace firewood in the household.

In addition, poor and landless women, who rely on natural resources and paid work on farms for their livelihood, are doubly affected by the harmful effects of extreme weather: low availability of natural resources and reduced productivity of farm activities.

Annex 11 : Gender Action Plan

Global Objective: *Building resilience to climate change of the neighbouring populations of the classified forests of Bassila and Penessoulou in the Central region of Benin*						
Specific Objectives 1. Building the capacity of the most vulnerable small farmers on good practices for adaptation to climate change **2.** Developing of value-added chains (VACs) in promising sectors in order to diversify the sources of income of the most vulnerable communities **3.** Reinforcing of local governance and management frameworks for adaptation to climate change						
Outcomes	**Activities/PAG**	**Indicators**	**Objectives**	**Chronogramme**	**Responsability**	**Budget USD)**
Output 1.1.1: Farmers are trained on water and soil conservation and land restoration techniques						
Outcome 1.1: On-Farm Resilience is built through the adoption of water and soil conservation and land restoration techniques	1.1.1.1 Identify, among the small farms along the Bassila and Pénessoulou classified forests, those run by women whose state of degradation of water, soil and land justifies training farmers in techniques for conserving, improving and restoring these resources.	1. Number of farms run by young women, disabled people and vulnerable people identified 2. Number of young women, disabled people and vulnerable people who took part in the workshop to validate the study report	Promote equity and gender equality in the identification of small farmers to be trained and the evaluation of the identification report	When the project starts	ATDA4	**2,509**
	1.1.1.2. Provide tailor-made training modules on water, soil and land conservation and restoration techniques and other relevant techniques taking into account gender specificities.	Number of young women, people with disabilities taking part in training	Promote local knowledge of land restoration			**29,297**

Global Objective: *Building resilience to climate change of the neighbouring populations of the classified forests of Bassila and Penessoulou in the Central region of Benin*

Specific Objectives

1. Building the capacity of the most vulnerable small farmers on good practices for adaptation to climate change
2. Developing of value-added chains (VACs) in promising sectors in order to diversify the sources of income of the most vulnerable communities
3. Reinforcing of local governance and management frameworks for adaptation to climate change

Outcomes	Activities/PAG	Indicators	Objectives	Chronogramme	Responsability	Budget USD)
	1.1.1.3. Ensure that community trainers, identified on the basis of gender equity, monitor the application of good practice by beneficiaries after training, for the duration of the project.	Number of women among community trainers	Promote the integration of minority sensitivities in the application of good practices			**101,000**
1.1.2 The technical itineraries and practices of the improved production system (SAP) are adopted by the farmers						
	1.1.2.1 Identify with the local farmers of the classified forests of Bassila and Pénessoulou the technical itineraries and practices of the improved production system (SAP) that are technically feasible, economically profitable and socially acceptable on their farms. In addition, identify farms that can be used as training fields for specific technical itineraries integrating gender.	Number of endogenous technical itineraries identified Number of farms run by women and ethnic minorities identified as training areas	Involving all vulnerable sections of communities in adopting resilient techniques		ATDA4	1,672
	1.1.2.2: Provide tailor-made training modules on technical itineraries and improved production system practices, including proven endogenous	Number of women, young people and disabled people	Promote local know-how and cultural diversity			**25,634**

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Outcomes	**Activities/PAG**	**Indicators**	**Objectives**	**Chronogramme**	**Responsability**	**Budget USD)**
	practices. Training will take place on fields chosen by consensus in the two districts.	taking part in training				
	1.1.2.3: Ensure that community trainers identified on the basis of gender equity monitor the application of good EWS practices by beneficiaries during the project's implementation period.	-Number of women among community trainers	Promote the integration of minority sensitivities in the application of good EWS practices			**79,000**
1.1.3 The material capacities of producers are built through support for various equipment (small tools, personal protective equipment, composting bags, sprayers, etc.)						
	1.1.3.1 Identify with stakeholders (chosen from the two districts) the specific material needs of organised groups, broken down by gender.	Number of women's groups and other vulnerable groups whose specific needs have been identified Number of women, young people and people with disabilities who took part in the workshop to	Involve all vulnerable sections of the community in identifying material needs.		**ATDA4**	**1,672**

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Specific Objectives 1. Building the capacity of the most vulnerable small farmers on good practices for adaptation to climate change **2.** Developing of value-added chains (VACs) in promising sectors in order to diversify the sources of income of the most vulnerable communities **3.** Reinforcing of local governance and management frameworks for adaptation to climate change						
Outcomes	**Activities/PAG**	**Indicators**	**Objectives**	**Chronogramme**	**Responsability**	**Budget USD)**
		validate the study report				
	1.1.3.2: Supply the equipment to the farmers' groups and train them in its use where necessary.	Number of groups of women, young people and other vulnerable groups benefiting from equipment	Promote the principle of gender equity, particularly in the area of technical and material procurement.		**UGP** **EMO**	**128,620**
Output 1.2.1 Improved stormwater storage capacity through the construction of a water reservoir for the benefit of farmers in each arrondissement						
Outcome 1.2 : **Water resources are managed in an integrated manner for the benefit of farmers**	1.2.1.1: Organise consultations with water users (market gardeners, livestock breeders, fish farmers, households, etc.) to specify how the reservoirs can be used jointly to meet different needs, including those of women and vulnerable minorities.	Number of women's groups and vulnerable minorities whose interests are taken into account Number of women, young people and marginalised people taking part in the workshop to validate the study report	Facilitating access to water resources for women, young people and minorities		SONAB	1,672

Global Objective: *Building resilience to climate change of the neighbouring populations of the classified forests of Bassila and Penessoulou in the Central region of Benin*

Specific Objectives

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Outcomes	Activities/PAG	Indicators	Objectives	Chronogramme	Responsability	Budget USD)
	1.2.1.2: Build water reservoirs on a consensual basis, taking into account the interests of women and all minorities.	Percentage of women's, youth and disabled groups expressing satisfaction	Ensure unhindered access to water reservoirs for women, young people and the disabled		UGP EMO Banking or microfinance institution	2,509
1.2.2 Market gardening developments are carried out in the vicinity of the water reservoirs for the areas allocated to market gardening						
	1.2.2.1: Organise consultations with market gardeners to identify suitable locations for their specific activities on sites shared with other users, particularly women.	Percentage of market garden area allocated to women	Ensuring that women and young people have free access to market garden areas		ATDA4	1,672
	1.2.2:2: Develop the areas allocated to market gardening for the benefit of women market gardeners and young people.	Number of women's and youth groups granted plots of land on the site of the water reservoirs	Promotion of market gardening activities		UGP EMO Consultant	26,672
1.2.3 Farmers are trained on good integrated water resources management (IWRM) practices and on how to manage water use conflicts						
	1.2.3.1: Organise consultations (focus groups, interviews) with stakeholders (selected from the two districts) on local water resource management	Percentage of endogenous water management practices that	Promoting the rights of vulnerable populations and minorities to water resources		ATDA4	1,672

Global Objective: *Building resilience to climate change of the neighbouring populations of the classified forests of Bassila and Penessoulou in the Central region of Benin*						
Specific Objectives 1. Building the capacity of the most vulnerable small farmers on good practices for adaptation to climate change **2.** Developing of value-added chains (VACs) in promising sectors in order to diversify the sources of income of the most vulnerable communities **3.** Reinforcing of local governance and management frameworks for adaptation to climate change						
Outcomes	**Activities/PAG**	**Indicators**	**Objectives**	**Chronogramme**	**Responsability**	**Budget USD)**
	practices, water use conflicts and ways of improving practices or reducing conflicts based on the gender approach.	respect minority rights identified				
	1.2.3.2: Provide tailor-made training modules on good practice in integrated water resource management (IWRM) and on conflicts over water use.	Participation rate of women, young people and disabled people in these training courses	Promoting water conservation in households and agricultural processing plants		UGP EMO Consultant	22,134
	1.2.3.3: Monitor farmers' adoption of good integrated water resource management (IWRM) practices.	Number of women in the field monitoring team	Empowering women in water governance			4,000
1.3.1: Setting up a mechanism for the revolving of seeds and plants adapted to climate change (maize, cassava, soya and market gardening). .						
Outcome 1.3: Climate-resilient seeds and plants are available on time	1.3.1.1: Organise nursery growers into seed and seedling chains that meet the needs of local forestry operations.	Number of seed and seedling chains available	Promoting seed and seedling production in the Commune of Bassila		ATDA4	**1,672**
	1.3.1.2: Organise the production of seeds and seedlings adapted to climate change in line with the campaign plans of local	Number of women, young people and disabled people who took part in	Development of climate change-resistant seed and seedling chains in the Commune of Bassila			**1,672**

Global Objective: *Building resilience to climate change of the neighbouring populations of the classified forests of Bassila and Penessoulou in the Central region of Benin*

Specific Objectives

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2. Developing of value-added chains (VACs) in promising sectors in order to diversify the sources of income of the most vulnerable communities
3. Reinforcing of local governance and management frameworks for adaptation to climate change

Outcomes	Activities/PAG	Indicators	Objectives	Chronogramme	Responsability	Budget USD)
	communities (maize, cassava, soya and market gardening).	the workshop to validate the report on the production of seeds and seedlings adapted to climate change				
1.3.2 The mechanism for supplying seeds and plants to producers is operational.						
	1.3.2.1: Define with the stakeholders (Town Hall, ATDA and farmers) the mechanisms for making seeds available to farmers, involving women's nursery groups.	Number of women's groups involved	Rehabilitating women's nursery groups in Bassila		ATDA4	1,672
	1.3.2.2: Organise the timely supply of seeds and seedlings to farmers.	Delivery planning documents available	Revitalising women's nursery groups in Bassila		UGP EMO Consultant	1,672
2.1.1 Producer groups are better structured and are committed to the maize, soybean, cassava and market gardening VACs						
Outcome 2.1: **Sources of income of the local populations are diversified through the promotion of corn, soya, cassava and market gardening**	2.1.1.1: Organise consultations (focus groups, interviews) with producers in the maize, soya, cassava, cashew nut and market garden sectors to identify the groups and their operating methods.	Number of women, young people and disabled people who took part in the work and in the workshop to	Involve women's groups and the vulnerable in project activities		ATDA4	1,672

Global Objective: *Building resilience to climate change of the neighbouring populations of the classified forests of Bassila and Penessoulou in the Central region of Benin*

Specific Objectives

1. Building the capacity of the most vulnerable small farmers on good practices for adaptation to climate change
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3. Reinforcing of local governance and management frameworks for adaptation to climate change

Outcomes	Activities/PAG	Indicators	Objectives	Chronogramme	Responsability	Budget USD)
		validate the study report.				
	2.1.1.2: Support the setting up of a platform bringing together the various groups and equipped with an operating plan for the groups proposed by them, which will promote better management of the CVAs for the maize, soya, cassava, cashew nut and market garden crops sectors.	Percentage of women and young people involved in the work and validation of the results	Promote gender in the development of CVAs			21,672
2.1.2 The management mechanism of the innovation platforms of the maize, cassava, soybean, cashew nut and market gardening sectors are in place and operational.						
	2.1.2.1: Have the stakeholders define and validate the management mechanism for the innovation platforms of the maize, cassava, soya, market garden produce and cashew nut value chains, and ensure that they are run.	Percentage of women and young people involved in the work and validation of results	Promoting gender in the development of CVAs		ATDA4	12,547
	2.1.2.2: Monitor the operation of the maize, cassava, soya, market gardening and cashew nut CVA innovation platforms.					PM

Global Objective: *Building resilience to climate change of the neighbouring populations of the classified forests of Bassila and Penessoulou in the Central region of Benin*						
Specific Objectives 1. Building the capacity of the most vulnerable small farmers on good practices for adaptation to climate change **2.** Developing of value-added chains (VACs) in promising sectors in order to diversify the sources of income of the most vulnerable communities **3.** Reinforcing of local governance and management frameworks for adaptation to climate change						
Outcomes	**Activities/PAG**	**Indicators**	**Objectives**	**Chronogramme**	**Responsability**	**Budget USD)**
2.2.1 Modern beekeeping techniques are mastered by beekeeping groups in both arrondissements						
Outcome 2.2 : Sources of income of the local populations are diversified through the promotion of the beekeeping sector	2.2.1.1: Organise consultations (focus groups, interviews) with beekeepers (chosen from the two districts) on local beekeeping techniques used by beekeepers living alongside the Bassila and Pénessoulou classified forests.	Number of women, young people and disabled people who took part in the work and in the workshop to validate the study report	Promoting gender in the development of CVAs		SONAB	1,672
	2.2.1.2: Provide tailor-made training modules on modern beekeeping techniques that respect the environment. Relay beekeepers will be trained to replicate the training with other beekeepers.	Number of women and young people involved in training	Involve women and marginalised groups in all activities			22,134
	2.2.1.3: Monitor the adoption by beekeepers of the modern beekeeping techniques taught.	Number of women, young people and marginalised people involved in monitoring operations				PM
2.2.2 Increase honey harvesting capacity for beekeepers through the acquisition of kits						

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Specific Objectives 1. Building the capacity of the most vulnerable small farmers on good practices for adaptation to climate change **2.** Developing of value-added chains (VACs) in promising sectors in order to diversify the sources of income of the most vulnerable communities **3.** Reinforcing of local governance and management frameworks for adaptation to climate change						
Outcomes	**Activities/PAG**	**Indicators**	**Objectives**	**Chronogramme**	**Responsability**	**Budget USD)**
	2.2.2 1: Organise consultations (focus groups, interviews) with beekeepers (chosen from the two districts) to define the groups' needs for beekeeping kits (Kenyan hive, protective suit and other equipment).	Number of women and young people involved in consultations and evaluation of mission reports	Involvement of women and marginalised groups in all activities		SONAB Bassila Town Hall	1,672
	2.2.2.2: Make beekeeping kits available to beekeeping groups and independent beekeepers.	Number of women's and young people's groups benefiting				25,000
	2.2.2.3: Set up honey houses to refine honey					17,672
2.3.1 Women producers' groups are better structured and are committed to the shea butter VACs						
Outcome 2.3 : Sources of income of local women's groups are diversified through the promotion of the shea butter industry	2.3.1.1: Organise consultations (focus groups, interviews) with women shea butter producers to identify the groups and their operating methods.	Number of women and young people involved in consultations and evaluation of mission reports	Involving women and marginalised groups in all project activities		SONAB Bassila Town Hall	1,672
	2.3.1.2: Set up a platform bringing together the various groups and propose a modus operandi for the groups to better manage the shea butter CVA.	Percentage of women and young people involved in the work and validation of results	Promoting gender in the development of CVAs			20,172

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3. Reinforcing of local governance and management frameworks for adaptation to climate change

Outcomes	Activities/PAG	Indicators	Objectives	Chronogramme	Responsability	Budget USD)
2.3.2 The material capacities of women's groups are built for the collection and processing of shea butter through the acquisition of tricycles and semi-industrial shea butter production units.						
	2.3.2.1: Organise consultations with women shea butter producers to define the groups' needs in terms of materials and equipment for collecting and processing shea butter.	Number of women's groups and other vulnerable groups whose specific needs have been identified Number of women, young people and disabled people who took part in the workshop to validate the study report	Involving all vulnerable sections of the community in identifying material needs		SONAB Bassila Town Hall	1,672
	2.3.2.2: Make tricycles and semi-processing units available to groups of women producers to increase shea butter collection and processing capacity	Number of groups of women producers benefiting	Promotion of shea butter production by women in Bassila			35,000
3.1.1 Communal actors are trained on the adaptation of the agriculture and forestry sectors to CC						

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Specific Objectives 1. Building the capacity of the most vulnerable small farmers on good practices for adaptation to climate change **2.** Developing of value-added chains (VACs) in promising sectors in order to diversify the sources of income of the most vulnerable communities **3.** Reinforcing of local governance and management frameworks for adaptation to climate change						
Outcomes	**Activities/PAG**	**Indicators**	**Objectives**	**Chronogramme**	**Responsability**	**Budget USD)**
Outcome 3.1 : **The local governance and CC adaptation framework is operational**	3.1.1.1: Identify the training needs of municipal staff in adapting the agriculture and forestry sectors to climate change. The training could be extended to partner NGOs of the Mayor of Bassila working in the fields of natural resource protection and climate change.	Number of women, young people and people with disabilities who contributed to the identification of training needs and took part in training courses	The Bassila Town Hall Gender Focal Point will be able to play a key role in ACC considerations		Bassila Town Hall FNEC	1,672
	3.1.1.2: Provide tailor-made training modules on adapting the agriculture and forestry sectors to climate change.					4,181
3.1.2 The guide for the coordination of the local governance and adaptation to CC framework is validated and used by communal actors and communities bordering the classified forests of Bassila and Pénessoulou						
	3.1.2.1: Organise consultations to capitalise on good practice and lessons learned from this project.	Number of women, young people and disabled people who took part in the work and in the workshop to validate the study report	Involving women and young people in leading the local governance and climate change adaptation framework		Bassila Town Hall FNEC	69,620
	3.1.2.2: Draw up the guide for facilitating the local governance and climate change adaptation framework and have it validated by the stakeholders.					1,672

Global Objective: *Building resilience to climate change of the neighbouring populations of the classified forests of Bassila and Penessoulou in the Central region of Benin*

Specific Objectives

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Outcomes	Activities/PAG	Indicators	Objectives	Chronogramme	Responsability	Budget USD)
	3.1.2.3: Disseminate the guide. The guide could be posted on the website of the Association Nationale des Communes du Bénin (ANCB).	Number of women's and young people's groups that contributed to the dissemination of the guide				PM
3.1.3 The gender approach is taken into account in the adaptation to CC at the level of the two arrondissements						
	3.1.3.1: Organise consultations with communal actors and local communities on the distribution of roles according to gender in the project's results framework, its strengths and weaknesses.	Number of women and young people who contributed to the consultation and validation of the results			FNEC Bassila Town Hall	PM
	3.1.3.2: Have the gender consultation report validated by the stakeholders and take the necessary steps to support the strengths and correct the weaknesses during the implementation of the project.					1,672
3.2.1 The community early warning system is functional, allowing appropriate measures to be taken in time, in anticipation of extreme weather events						
Outcome 3.2 :	3.2.1.1: Organise consultations with stakeholders to select environmental and climatic risk	Number of women and young people				1,672

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Specific Objectives

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Outcomes	Activities/PAG	Indicators	Objectives	Chronogramme	Responsability	Budget USD)
CC adaptation management is effective in both arrondissements	management methods and strategies adapted to local conditions.	contributing to consultations				
	3.2.1.2: Update/implement the community early warning system.	Proportion of women and young people active in the early warning system	Activate the dormant early warning mechanism			3,000
	3.2.1.3: Organize training modules on the dissemination of climate information for local council departments, community radio stations and farmers.	Number of women, young people and people with disabilities taking part in training courses				4,180
3.2.2 Teachers, schoolchildren, opinion leaders and community radio hosts have become aware of and have taken ownership of good CC adaptation practices						
	3.2.2.1: Raise awareness among the general public in the two districts about good practice in adapting to climate change (radio broadcasts, posters, sketches, competitions in schools and colleges, etc.).	Number of women's, youth and disabled groups contributing to events				7,840

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Outcomes	**Activities/PAG**	**Indicators**	**Objectives**	**Chronogramme**	**Responsability**	**Budget USD)**
	3.2.2.2: Produce communication tools accessible to speakers of national languages (awareness-raising songs in the local language Anii on good practice in adapting to climate change, translation of posters and sketches into local languages, etc).					8,625
3.3.1 Indigenous tree species resilient to climate change and adapted to the edaphic conditions of Bassila are identified and their seeds and seedlings are produced						
Outcome 3.3. : Enrichment of communal, community and private forests with climate change resilient species.	3.3.1.1: Organize a consultation of stakeholders for the final choice of tree species that are resistant to drought or flooding and adapted to the edaphic conditions of the chosen sites.	Number of experienced men and women of 3rd age taking part in the consultation	Promoting local knowledge of climate-sensitive flora			1,672
	3.3.1.2: Have nurserymen produce seeds and seedlings to meet the needs of communal, community and private forests.	Number of young people supporting nursery growers				15,000
	3.3.1.3: Have women's groups produce seedlings to be	Number of women's groups involved				20,000

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Specific Objectives 1. Building the capacity of the most vulnerable small farmers on good practices for adaptation to climate change **2.** Developing of value-added chains (VACs) in promising sectors in order to diversify the sources of income of the most vulnerable communities **3.** Reinforcing of local governance and management frameworks for adaptation to climate change						
Outcomes	**Activities/PAG**	**Indicators**	**Objectives**	**Chronogramme**	**Responsability**	**Budget USD)**
	delivered to forest plantation sites.	Number of plants produced				
3.3.2 Communal and community forests are enriched and private forests established using CC resilient species						
	3.3.2.1: Organise planting operations in communal, community and private forest plots.	Number of youth groups supporting planting operations and monitoring seedlings	Encouraging youth groups in these activities			6,000
	3.3.2.2: Ensure the maintenance and monitoring of young seedlings.					6,000

Annex 12 : Detailed budget of activities

Expected Results / Activities	Budget notes	Unit	Unit cost	Quantity	Amount
Component 1 : Capacity building of the most vulnerable small farmers on good CC adaptation practices					
Output 1.1.1: Farmers are trained on water and soil conservation and land restoration techniques					
Activity 1.1.1.1: Identify among the small farms along the Bassila and Pénessoulou classified forests those whose state of degradation of water, soil and land justifies the training of farmers on techniques for the conservation, improvement and restoration of these resources. Some farms could be used as training fields					
Assessment of the state of water, soil and land degradation and identification of 5 farms per Arrondissement to be used as training or school fields.	A 35-man-day consultancy to survey vulnerable smallholdings bordering the Bassila and Pénessoulou classified forests, assess the state of water, soil and land degradation and propose 5 holdings per Arrondissement to be used as training or school fields.	Cost of consultation (man-day)	250	35	8,750
	A 3-day workshop attended by 40 people, including 20 women, young people and/or disabled people, to validate the evaluation reports and approve the training field proposals.	Workshop organization costs	5,017	1	5,017
Activity 1.1.1.2: Provide tailored training modules on water, soil and land conservation and restoration techniques and other relevant techniques. These trainings will be mostly practical and will be conducted on selected training fields in the two arrondissements.					
Development of training modules on water and soil conservation and land restoration techniques	Recruitment of a team of consultants to draw up training modules on water and soil conservation and land restoration techniques (35 man-day) and to propose the required facilities and equipment.	Cost of consultation (man-day)	250	35	8,750
	A 2-day workshop attended by 40 people, including 20 women, young people and/or disabled people, to validate the training modules and the proposed layout and equipment requirements in the field schools.	Cost of workshop	3,344	1	3,344

Training of trainers in water and soil conservation and land restoration techniques.	Installation of the facilities and equipment needed to train trainers in water and soil conservation and land restoration techniques in the 5 field schools identified by district.	Set-up and equipment costs/training area	2,000	10	20,000
	A 5-day training workshop in water and soil conservation and land restoration techniques for 10 community trainers from each of the Bassila and Pénessoulou Arrondissements (including 5 women and young people).	Workshop organization costs	5,250	1	5,250
Training of local smallholders by community trainers	A 3-day training workshop for 40 local farmers in each of the 5 school fields of the two Arrondissements.	Workshop fee	3,100	10	31,000
Activity 1.1.1.3: Follow up on the application of good practices by the beneficiaries during the implementation of the project					
Water conservation, soil conservation and land restoration support for 100 small farms with the most degraded soils.	Support for water conservation, soil conservation and land restoration equipment and facilities for 50 small farms with the most degraded soils, per Arrondissement, at least 25 of which are run by women or young people and people with disabilities.	Amount of support/per vulnerable smallholder	1,940	100	194,000
Annual monitoring and maintenance of installed facilities for 4 years	Support for 20 community trainers for annual monitoring/maintenance of the facilities installed on farms	Amount of support/community trainer	100	80	8,000
Output 1.1.2 : The technical itineraries and practices of the improved production system (SAP) are adopted by the farmers.					
Activity 1.1.2.1 Identify with the neighbouring farmers of the classified forests of Bassila and Pénessoulou the technical itineraries and practices of the improved production system (SAP) that are technically feasible, economically profitable and socially acceptable on their farms. Identify the farms that can serve as training fields for specific technical itineraries.					
Identification of farming techniques used in villages bordering the Bassila and Pénessoulou classified forests	Consultancy of 35 man-day to list the technical itineraries and practices applied to the main crop, livestock and fish productions, identify their performance with the assistance of the farmers and propose the best practices and 5 farms per Arrondissement to be used as school fields.	Cost of consultation (man-day)	250	35	8,750
	A 2-day workshop with 40 participants, including at least 20 women, young people and/or people with disabilities, to validate the consultation report.	Workshop organization costs	3,344	1	3,344

Activity 1.1.2.2: Provide tailored training modules on technical itineraries and improved production system practices. The training will take place on selected fields in the two arrondissements					
Development of training modules on technical itineraries and improved production system practices	Recruitment of a team of consultants to develop training modules on technical itineraries and improved production system practices adapted to the local context (40 man-day)	Cost of consultation (man-day)	250	35	8,750
	A 3-day workshop to validate the consultancy report (40 people, including 20 women, young people and/or people with disabilities).	Workshop organization costs	5,017	1	5,017
Training of trainers on technical itineraries and improved production system practices	Setting up the operating systems needed to train trainers in improved production system techniques and practices in the 5 school fields identified by Arrondissement.	Cost of setting up operating systems/training field	1,000	10	10,000
	A 5-day training workshop in water and soil conservation and land restoration techniques for 10 community trainers from each of the Bassila and Pénessoulou Arrondissements (including 5 women and young people).	Workshop organization costs	5,250	1	5,250
Training of local smallholders by community trainers	A 3-day training workshops for 40 local farmers in each of the 5 school fields of the two Arrondissements.	Workshop fee	3,100	10	31,000
Activity 1.1.2.3: Monitor the application of good SAP practices by the most vulnerable farmers.					
Support for the implementation of resilient technical itinerary systems on 100 small, vulnerable farms.	Support, per Arrondissement, for 50 small, vulnerable farms (at least 25 of which are run by women or young people) to set up resilient technical itinerary systems (first year).	Amount of support/per vulnerable smallholder	1,500	100	150,000
Annual monitoring of the application of SAP best practices for 4 years	Support to community trainers for annual monitoring of the application of good SAP practices by the most vulnerable farmers.	Amount of support/community trainer	100	80	8,000
Output 1.1.3 : The material capacities of producers are built through support for various equipment (small tools, personal protective equipment, composting bags, sprayers, etc.)					
Activity 1.1.3.1: Identify with stakeholders (selected from the two arrondissements) the specific material needs of the organized groups.					

Identifying the specific material needs of organized producer groups	A 30-man-day consultancy to identify the specific priority material needs of organised producer groups (cassava, shea butter, etc. processors; market gardeners; nursery gardeners; livestock farmers, fishermen/fish farmers; beekeepers, hunters, charcoal burners, women's groups, youth groups, groups of people with disabilities, etc.).	Cost of consultation (man-day)	250	30	7,500
	A 2-day workshop attended by 40 people, including at least 20 women, young people and/or people with disabilities, to validate the consultation report	Workshop organisation costs	3,344	1	3,344
Activity 1.1.3.2: Provide equipment to groups of farmers and train them in its use when necessary.					
Setting up an arbitration and monitoring committee for the use of equipment by beneficiaries (CASUE) in each district.	An arbitration and monitoring committee for the use of equipment by beneficiaries will be responsible for organising the process of allocating resources to farmers' groups (CASUE). Composition: the District Chief, 01 representative of ATDA, 01 representative of the communal producers' organisations, the Town Hall's Gender Focal Point and 01 representative of the Town Hall's Environment Department.	0			0
Supply of equipment to organised producer groups	The specific equipment prioritised by the groups will be subject to the criteria and resource allocation key defined by the Arbitration and Monitoring Committee for the use of the equipment.	Cost of equipment/per Borough	128,620	2	257,240
Output 1.2.1: Improved stormwater storage capacity through the construction of a water reservoir for the benefit of farmers in each arrondissement.					
Activity 1.2.1.1: Organize consultations with water users (market gardeners, livestock breeders, fish farmers, households, etc.) to specify the modalities for joint use of the water reservoirs.					
Identification of methods for the joint operation of water reservoirs by users	Consultancy of 25 man-day to determine the surface water requirements for each district, identify 01 villages that could host a water reservoir and the methods for joint use of the reservoir by users.	Cost of consultation (man-day)	250	25	6,250
	A 2-day workshop bringing together 40 people, including at least 20 women, young people and/or people with disabilities, to validate the consultation reports, the villages that can host the	Workshop organisation costs	3,344	1	3,344

	water reservoirs and the arrangements for joint use of the water by the users.				
Activity 1.2.1.2: Construct water reservoirs					
Design and creation of conditions to ensure the safety and social acceptability of reservoirs	Consultancy for 45 man-day to size the 2 reservoirs according to social and economic needs and environmental and geological constraints, and to specify the security and social acceptability measures to be taken around the sites and in the villages where the structures are to be built.	Cost of consultation (man-day)	250	45	11,250
	A 3-day workshop bringing together 40 people, including at least 20 women, young people and/or people with disabilities, to validate the consultation reports and the preliminary measures to be taken around the sites and in the villages where the structures are to be built.	Workshop organisation costs	5,017	1	5,017
Construction of water reservoirs	Recruitment of rural engineering companies to build the water reservoirs in the two villages and to develop the sites.	Construction/retain costs	309,425	2	618,850
Output 1.2.2: Market gardening developments are carried out in the vicinity of the water reservoirs for the areas allocated to market gardening					
Activity 1.2.2.1: Organize a consultation with market gardeners to specify the locations suitable for their specific activities on sites shared with other users					
Drawing up plans for occupation of the water retention sites by groups of water users and market gardeners from the surrounding villages	Consultancy of 35 man-day to identify groups of market gardeners, fish farmers, livestock farmers and other potential water users, to specify, per site, the potential space requirements of each group, to draw up the general plan for occupying the site according to the specific characteristics of the activities, and to draw up the plot plan for the market garden perimeter.	Cost of consultation (man-day)	250	35	8,750
	A 2-day workshop attended by 40 people, including at least 20 women, young people and disabled people, to validate the consultation report	Workshop organisation costs	3,344	1	3,344
Activity 1.2.1.2: Develop the areas allocated to market gardening for market gardeners					
Development of market garden areas	A 35 man-day consultancy to (1) identify the stakeholders already involved in market gardening in the villages near the water retention sites, (2) specify their availability to use the sites	Cost of consultation (man-day)	250	35	8,750

	in the short term, (3) their space requirements, (4) the potential stakeholders, and (5) to propose the areas that could be allocated to market gardening from the second year of the Project, as well as the arrangements for their development.				
	A 2-day workshop attended by 40 people, including at least 20 women, young people and disabled people, to validate the consultation report.	Workshop organisation costs	3,344	1	3,344
Allocation of plots to market gardeners and development of allocated areas	Market garden plots to be laid out by specialised companies according to the configuration of the land and the technical standards in force	Cost of parceling work/Site	8,500	2	17,000
	Allocation of plots to women, young people, the disabled and other vulnerable households under the supervision of the committee responsible for arbitrating and monitoring the use of equipment.	0			0
	Support for vulnerable smallholders in developing the plots allocated to them, including the availability of photovoltaic solar water intakes	Amount of support/Site	25,000	2	50,000
Output 1.2.3: Farmers are trained on good integrated water resources management (IWRM) practices and on how to manage water use conflicts					
Activity 1.2.3.1: Organize consultations (focus groups, interviews) with stakeholders (selected at the level of the two arrondissements) on local water resource management practices, water use conflicts and ways to improve practices or reduce conflicts.					
Identification of local water resource management practices, water use conflicts and ways of improving them in riverside villages	A 30-man-day consultancy to draw up a report on local agricultural water management practices and ways of managing conflicts over water use, and to propose ways of improving local practices and reducing water-related conflicts.	Cost of consultation (man-day)	250	30	7,500
	A 2-day workshop attended by 40 people, including 20 women, young people and/or people with disabilities, to validate the consultation report	Workshop organisation costs	3,344	1	3,344
Activity 1.2.3.2: Provide tailored training modules on integrated water resources management (IWRM) best practices and water use conflicts.					
Development of training modules on	A 30-man-day consultancy to develop training modules on improving local water management practices, good IWRM practices and reducing water-related conflicts.	Cost of consultation (man-day)	250	30	7,500

water resource management	A 3-day workshop to validate the training modules (40 people, including 20 women, young people and disabled people)	Workshop organisation costs	5,017	1	5,017
Training community trainers in water resource management	A 5-day workshop to train 10 community trainers (including 5 women and young people) from each Arrondissement on good IWRM practices in rain-fed and irrigated agriculture and on conflicts over water use.	Workshop organisation costs	8,250	1	8,250
Training small-scale rainfed and irrigated farmers in good IWRM practices	A 3-day training workshops on good IWRM practices for 40 small-scale farmers (including 20 women, young people and disabled people), in 5 groups of vulnerable villages per Arrondissement	Workshop fees	3,100	10	31,000
Activity 1.2.3.3: Monitor farmers' adoption of integrated water resources management (IWRM) best practices and water use conflict management.					
Annual monitoring of good practice in water resource management and methods of managing water use conflicts	Support for 10 community trainers per district to run events and provide annual monitoring and advice on the application of good IWRM practices and the management of conflicts over water use in 5 groups of small farms bordering classified forests over a period of 4 years.	Amount of support/community trainer	100	80	8,000
Output 1.3.1: Setting up a mechanism for the revolving of seeds and plants adapted to climate change (maize, cassava, soya and market gardening).					
Activity 1.3.1.1: Organize nurseries into seed and seedling chains corresponding to the needs of the farms bordering the forest areas.					
Organisation of nurserymen into seed and seedling chains	A 25-man-day consultancy to propose a way of organising nursery growers into chains that meet the seed and planting stock needs of local farmers in the classified forests of Bassila and Pénessoulou.	Cost of consultation (man-day)	250	25	6,250
	A 2-day workshop attended by 40 people, including at least 20 women, young people and people with disabilities, to validate the consultation reports.	Workshop organisation costs	3,344	1	3,344
Activity 1.3.1.2: Organize the production of seeds and plants adapted to climate change according to the campaign plans of the neighbouring communities (corn, cassava, soybeans and market gardening).					
Organisation of the production of seeds	A 25-man-day consultancy to draw up a report on the production of seeds and seedlings adapted to climate change	Cost of consultation (man-day)	250	25	6,250

and seedlings adapted to climate change	and to propose ways of organising production in line with the local communities' crop plans (maize, manioc, soya and market gardening).				
	A 2-day workshop bringing together 40 people, including at least 20 women, young people and/or people with disabilities, to validate the consultation reports and the way in which production is organised.	Workshop organisation costs	3,344	1	3,344
Output 1.3.2: The mechanism for supplying seeds and plants to producers is operational.					
Activity 1.3.2.1: Define with stakeholders (Town Hall, ATDA, and farmers) the mechanisms for making seeds available to farmers.					
Definition with the town council, ATDA and farmers' groups of mechanisms for making seeds available to farmers.	A 20-man-day consultancy to work with the Town Hall, ATDA and farmers' groups to draw up procedures for making seeds and seedlings available to farmers in communities bordering the two classified forests.	Cost of the consultation (man-day)	250	20	5,000
	A 2-day workshop attended by 40 people, including at least 20 women, young people and/or people with disabilities, to validate the consultation report.	Cost of organising the validation workshop	3,344	1	3,344
Activity 1.3.2.2: Organize the supply of seeds and plants to farmers on time.					
Organising the timely supply of seeds and seedlings to farmers	A 20-man-day consultancy to draw up a report on how to organise the timely supply of seeds and seedlings to riparian farmers in the Bassila and Pénessoulou classified forests in the context of climate change.	Cost of the consultation (man-day)	250	20	5,000
	A 2-day workshop attended by 40 people, including at least 20 women, young people and/or people with disabilities, to validate the consultation report.	Cost of organising the validation workshop	3,344	1	3,344
Component 2 : Development of value- added chains (VACs) in promising sectors in order to diversify the sources of income of the most vulnerable communities					
Output 2.1.1: Producer groups are better structured and are committed to the maize, soybean, cassava and market gardening VACs					
Activity 2.1.1.1 : Organize consultations (focus groups, interviews) with producers in the corn, soybean, cassava, cashew and market gardening sectors to identify groups and their operating methods					
Analysis of the operating methods of producer groups in	A 25-man-day consultancy to analyse the operating methods of producer groups in the maize, soya, cassava, cashew nut and market garden crops sectors, in conjunction with other direct	Cost of consultation (man-day)	250	25	6,250

the maize, soya, cassava, cashew nut and market garden crops sectors in relation to their interests and those of other CVA stakeholders.	and indirect CVA stakeholders (processors, traders, consumers, input suppliers, transporters, equipment manufacturers, researchers, farm advisory services, local decision-makers, etc.).				
	A 2-day workshop bringing together 40 people, including at least 20 women, young people and/or people with disabilities, to validate the consultation reports.	Workshop organisation costs	3,344	1	3,344
Activity 2.1.1.2: Support the creation of a platform bringing together the various groups and equipped with an operating plan for the groups proposed by them, which will promote better management of the VACs of maize, soybean, cassava, cashew and market garden crops sectors.					
Setting up an innovation platform for climate-smart agricultural value chains in communities bordering the classified forests of Bassila and Pénessoulou for the maize, soya, cassava, cashew nut and market garden crops sectors.	A 30-man-day consultancy to propose an innovation platform for CVAs in the maize, soya, cassava, cashew nut and market garden crops sectors, bringing together all the direct and indirect stakeholders in the sectors and based on the operating model of producer groups.	Cost of consultation (man-day)	250	30	7,500
	A 2-day workshop bringing together 40 people, including at least 20 women, young people and/or people with disabilities, to validate the consultation reports and approve the proposed platforms.	Workshop organisation costs	3,344	1	3,344
	Support for setting up innovation platforms for CVAs in the maize, soya, cassava, cashew nut and market garden crops sectors in communities bordering the Bassila and Pénessoulou classified forests (formalisation, material support, etc.).	Support amount/District	20,000	2	40,000
Output 2.1.2: The management mechanism of the innovation platforms of the maize, cassava, soybean, cashew nut and market gardening sectors are in place and operational.					
Activity 2.1.2.1: Define and validate by the stakeholders the management mechanism of the innovation platforms of the VACs of maize, cassava, soybean, market garden and cashew nuts, and ensure their coordination.					
Definition of the mechanism for managing and leading the	A 30-man-day consultancy to define and propose a management and leadership mechanism for the innovation platforms of the maize, cassava, soya, market gardening and cashew nut CVAs in the context of climate change.	Cost of consultation (man-day)	250	30	7,500

innovation platforms of the commodity chain CVAs	A 2-day workshop bringing together 40 people, including at least 20 women, young people and/or people with disabilities, to validate the consultation report	Workshop organisation costs	3,344	1	3,344
Running the innovation platforms of the maize, cassava, soya, market gardening and cashew nut commodity chain CVAs	Consultancy for the design in French (31 man-day) and translation into 3 local languages (36 man-day) of leaflets and posters to raise awareness among stakeholder groups about climate change and the management of VADs in the maize, cassava, soya, market gardening and cashew nut sectors.	Consultancy team fees/man-day	167	67	11,189
	A 5-day workshop to validate the drafts of the leaflets and posters in French (2 days) and local languages (3 days) for 40 people	Workshop organisation costs	8,250	1	8,250
	Publication of 1,250 leaflets and 500 posters in French, Anii, Nago and Kotokoli	Cost of poster	3	1,750	5,250
	Support for the organisation of 2 monthly awareness-raising sessions in the districts for the 5 CVA platforms over the 12 months following the publication of the leaflets and posters.	Cost of fortnightly meetings with producer groups / CVA platform	2,700	5	13,500
Activity 2.1.2.2: Monitor the running of the innovation platforms of the VAC of maize, cassava, soya, market garden and cashew nuts sectors					
Annual monitoring of the operation of the CVA innovation platforms for the maize, cassava, soya, market garden produce and cashew nut sectors	Support for annual advisory missions and monitoring of the operation of CVA innovation platforms in the maize, cassava, soya, market garden crops and cashew nut sectors by the Arbitration and Monitoring Committees for the Use of Equipment (CASUE), for 4 years.	Support amount/District	1,500	2	3,000
Output 2.2.1 Modern beekeeping techniques are mastered by beekeeping groups in both arrondissements					
Activity 2.2.1.1: Organize consultations (focus groups, interviews) with beekeepers (selected at the level of the two arrondissements) on local beekeeping techniques used by beekeepers living in the classified forests of Bassila and Penessoulou					
Identification of beekeeping operations and local	A 20-man-day consultancy to take stock of bee-keeping operations in villages bordering the Bassila and Pénessoulou classified forests, draw up a report on local bee-keeping	Cost of consultation (man-day)	250	20	5,000

honey production techniques in villages bordering the classified forests of Bassila and Pénessoulou	techniques, propose ways of improving honey production in the context of climate change, and identify 5 bee-keeping farms that could be used as training centers.				
	A 2-day workshop attended by 40 people, including at least 20 women, young people and/or people with disabilities, to validate the consultation report.	Workshop organisation costs	3,344	1	3,344
Activity 2.2.1.2: Provide training modules tailored to modern beekeeping techniques that respect the environment. Relay beekeepers will be trained for a duplication of the training to other beekeepers					
Development of training modules	Recruitment of a team of consultants to develop training modules on improved local beekeeping techniques and modern, environmentally-friendly beekeeping techniques applicable to the 5 training bee farms identified per district (30 man-day)	Cost of consultation (man-day)	250	30	7,500
	A 3-day workshop to validate the training modules (40 people, including 20 women and young people)	Workshop organisation costs	5,017	1	5,017
Supply of training equipment to beekeeping schools	Support for setting up the equipment and facilities needed to train community instructors in beekeeping techniques, in the 5 beekeeping training farms identified by district	Cost of beekeeping equipment/training farm	1,500	10	15,000
Training of community trainers	A 5-day training workshop in beekeeping techniques for 10 community trainers from each of the arrondissements of Bassila and Pénessoulou (including 5 women and young people)	Workshop organisation costs	8,250	1	8,250
Training of beekeepers by community trainers	A 3-day training workshop for 40 local beekeepers in the 5 beekeeping schools in each arrondissement	Workshop fee	3,100	10	31,000
Activity 2.2.1.3 : Follow up on the beekeepers' adoption of the taught modern beekeeping techniques					
Annual monitoring of the application of good beekeeping techniques for 4 years	Support for community trainers to run events and provide annual monitoring and advice on the application of good modern beekeeping techniques for 4 years	Support amount /community trainer	100	80	8,000
Output 2.2.2 : Increase honey harvesting capacity for beekeepers through the acquisition of kit					
Activity 2.2.2 1: Organize consultations (focus groups, interviews) with beekeepers (selected at the level of the two arrondissements) to define the needs of the groups in beekeeping kits (Kenyan hive, protective suit, and other equipment).)					

Identifying the needs of beekeepers for beekeeping kits	A 20-man-day consultancy to draw up a report on the priority needs of beekeeping groups for beekeeping kits (Kenyan hive, protective suit and other equipment) in the Bassila and Pénessoulou districts.	Consultation cost (man-day)	250	20	5,000
	A 2-day workshop bringing together 40 people, including at least 20 women and young people, to validate the consultation report	Organization costs for the validation workshop	3,344	1	3,344
Activity 2.2.2.2 : Make beekeeping kits available to beekeeping groups and independent beekeepers					
Supply of beekeeping kits to vulnerable groups of beekeepers and independent beekeepers	Meeting of the Committee for Arbitration and Monitoring of the Use of Equipment (CASUE) to define the criteria and the key for allocating the kits to beekeeping groups and independent beekeepers in the districts.	0			0
	Provision of beekeeping kits under the supervision of the Arbitration and Monitoring Committees for the use of equipment	Equipment cost /by arrondissement	25,000	2	50,000
Activity 2.2.2.3 : Install honey factories for honey refinement					
Definition of procedures for setting up honey houses	A 20-man-day consultancy to draw up a report on the need for honey houses and the conditions for installing them in beekeeping groups in the Bassila and Pénessoulou districts.	Consultation cost (man-day)	250	20	5,000
	A 2-day workshop attended by 40 people, including at least 20 women and young people, to validate the consultation report.	Organization costs for the validation workshop	3,344	1	3,344
Setting up honey houses in groups of vulnerable beekeepers	Support for the setting up of 8 modern honey houses in vulnerable groups of beekeepers in the Bassila and Pénessoulou districts.	Installation/millwork costs	2,000	16	32,000
Output 2.3.1 : Women producers' groups are better structured and are committed to the shea butter VACs					
Activity 2.3.1.1: Organize consultations (focus groups, interviews) with women shea butter producers to identify groups and their operating methods					
Analysis of the operating methods of groups of women shea butter	A 25-man-day consultancy to analyse the operating methods of groups of women shea butter producers in conjunction with the other direct and indirect players in the shea butter sector (traders, consumers, input suppliers, transporters, equipment	Consultation cost (man-day)	250	25	6,250

producers in the light of market constraints and the need to diversify sources of income	manufacturers, researchers, agricultural advisory services, local decision-makers, etc.).				
	A 2-day workshop bringing together 40 people, including at least 20 women, young people and/or people with disabilities, to validate the consultation reports.	Workshop organisation costs	3,344	1	3,344
Activity 2.3.1.2 : Create a platform that brings together the various groups and propose a mode of operation for the groups to better manage the shea butter VACs					
Setting up an innovation platform for climate-smart shea butter value chains in communities bordering the classified forests of Bassila and Pénessoulou	A 20-man-day consultancy to propose an innovation platform for the shea CVA, bringing together all the direct and indirect players in the sector and based on the way groups operate.	Consultation cost (man-day)	250	20	5,000
	A 2-day workshop bringing together 40 people, including at least 20 women, young people and/or people with disabilities, to validate the consultation report.	Workshop organisation costs	3,344	1	3,344
	Support for the setting up of innovation platforms for shea butter CVAs in communities bordering the classified forests of Bassila and Pénessoulou (formalisation, material support, etc.).	Support amount /District	18,500	2	37,000
Output 2.3.2 : The material capacities of women's groups are built for the collection and processing of shea butter through the acquisition of tricycles and semi-industrial shea butter production units.					
Activity 2.3.2.1: Organize consultations with women shea butter producers to define the needs of the groups for materials and equipment for collecting and processing shea butter.					
Identifying the specific material needs of women's groups	A 20-man-day consultancy to identify the needs of shea butter-producing women's groups for materials and equipment for collecting and processing shea butter.	Consultation cost (man-day)	250	20	5,000
	A 2-day workshop bringing together 40 people, including at least 20 women, young people and/or people with disabilities, to validate the consultation reports.	Workshop organisation costs	3,344	1	3,344
Activity 2.3.2.2 : Make tricycles and semi-processing units available to groups of women producers to increase their capacity to collect and process shea					
Supply of tricycles and semi-processing units to groups of	Meeting of the Arbitration and Monitoring Committee for the use of equipment to define the criteria and keys for allocating processing tricycles and semi	0			0

women shea butter producers	Provision of tricycles and semi-units under the supervision of the Arbitration and Monitoring Committees for the use of equipment	Equipment cost/by arrondissement	35,000	2	70,000
Component 3 : Reinforcing the local governance and management framework for CC adaptation					
Output 3.1.1 : Communal actors are trained on the adaptation of the agriculture and forestry sectors to CC					
Activity 3.1.1.1: Identify the training needs of communal agents on the adaptation of the agriculture and forestry sectors to CC. The training could be extended to the NGO partners of Bassila town Hall working in the fields of natural resource protection and CC.					
Identification of training needs for local authority staff on adapting the agriculture and forestry sectors to CCs	A 20-man-day consultancy to draw up a report on the training needs of municipal staff and those of the Mayor's NGO partners in the fields of natural resource protection and the ACC.	Consultation cost (man-day)	250	20	5,000
	A 2-day workshop bringing together 40 people, including at least 20 women and young people, to validate the consultation report	Organization costs for the validation workshop	3,344	1	3,344
Activity 3.1.1.2 : Provide tailored training modules on adapting the agriculture and forestry sectors to CC					
Development of training modules for local authority staff	A 30-man-day consultancy to develop training modules on adapting the agriculture and forestry sectors to climate change	Consultation cost (man-day)	250	30	7,500
	A 2-day workshop to validate the training modules (40 people, including 20 women, young people and disabled people)	Workshop organisation costs	3,344	1	3,344
	A 3-day training workshop for 40 local authority staff and staff from the Mayor's partner NGOs on the protection of natural resources and the ACC.	Workshop organisation costs	5,017	1	5,017
Output 3.1.2 : The guide for the coordination of the local governance and adaptation to CC framework is validated and used by communal actors and communities bordering the classified forests of Bassila and Pénessoulou					
Activity 3.1.2.1: Organize consultations for the capitalization of good practices and lessons learned from this project.					
Organisation of annual workshops to capitalise on good practice in the Boroughs	Support for 40 stakeholder representatives at annual 3-day capitalisation workshops in the Boroughs over 4 years	Participation fee/player	84	960	80,640
	Consultancy and organisation of annual 3-day capitalisation workshops in the districts	Consultancy and workshop organisation costs/District	22,100	2	44,200

Organisation of national workshops to capitalise on good practice	Support for 40 stakeholder representatives at 3-day national workshops to capitalise on good practice in years 3 and 4	Participation fee/player	103	300	30,900
	Consultancy fees and organisation of 3-day national capitalisation workshops in years 3 and 4	Consultancy and organisation costs/workshop	5,367	2	10,734
Annual communal accountability workshops	Support for the organisation of 1-day annual communal accountability workshops for 50 stakeholders	Workshop preparation and organisation costs/year	2,000	4	8,000
Community events to capitalise on good practice and lessons learned	Organisation of 2-day facilitation sessions per district for 40 people to capitalise on good practice and lessons learned	Cost of organising events/district	3,200	2	6,400
	Media coverage of the events/borough	Media support costs	1,000	2	2,000
Knowledge sharing	A 3-day national workshop for the appropriation of project results by 50 stakeholders from universities, research centres and development institutions	Consultancy and workshop organisation costs	15,000	1	15,000
	Dissemination of the project's results on physical media in French, English and local languages, and on the SONAB, FNEC and Bassila Town Hall platforms.	Production and dissemination of information materials	4,500	1	4,500
Activity 3.1.2.2 : Develop a guide for the coordination of the local governance and CC adaptation framework and have it validated by the stakeholders					
Drawing up a guide to facilitating the local governance framework and adapting it to CCs	A 20-man-day consultancy to characterise the framework for governance and adaptation to climate change in administrative units and community groups and to propose a facilitation guide adapted to the local context.	Consultation cost (man-day)	250	20	5,000
	A 2-day workshop to validate the leadership guide (40 people, including 20 women, young people and people with disabilities)	Workshop organisation costs	3,344	1	3,344
Activity 3.1.2.3: Ensure the dissemination of the guide. The guide can be published on the website of the National Association of Benin Communes (ANCB).					
Distribution of the animation guide	2000 copies of the guide published	Publishing costs/copy	7	2,000	14,000

	Campaign to disseminate the guide in the media and on the websites of SONAB, Bassila Town Hall, FNEB, ANCB and the ministries responsible for the environment and decentralisation.	Distribution costs	6,000	1	6,000
Output 3.1.3 : The gender approach is taken into account in the adaptation to CC at the level of the two arrondissements					
Activity 3.1.3.1 Organize consultations with communal actors and neighbouring communities on the distribution of gender roles in the project outcomes framework, its strengths and weaknesses					
Organisation of consultations on gender roles	A 20-man-day consultancy to reach a consensus with local players and communities on the strengths and weaknesses of the gender approach and the measures to be taken to ensure a proper distribution of roles according to gender.	Consultation cost (man-day)	250	20	5,000
Activity 3.1.3.2: Have the gender consultation report validated by stakeholders and take steps to support strengths and address weaknesses during project implementation.					
Validation of the gender consultation report	A 2-day workshop bringing together 40 people, including 20 women, young people and people with disabilities, to validate the consultation report and set up a Gender Promotion Committee (GPC).	Workshop organisation costs	3,344	1	3,344
Implementation of validated proposals	Support for the implementation of the recommendations of the validation workshop during years 2, 3 and 4	Cost of implementing recommendations/year	6,000	3	18,000
Output 3.2.1 : The community early warning system is functional, allowing appropriate measures to be taken in time, in anticipation of extreme weather events					
Activity 3.2.1.1 Organize consultations with stakeholders to choose environmental and climatic risk management methods and strategies adapted to local conditions					
Organising consultations on environmental and climate risk management	A 20-man-day consultancy to take stock of the situation and draw up a report on environmental and climate risk management methods and strategies adapted to local conditions.	Consultation cost (man-day)	250	20	5,000
	A 2-day workshop to validate the consultation report and activate the structures involved in environmental and climate risk management (40 people, including 20 women, young people and people with disabilities)	Workshop organisation costs	3,344	1	3,344
Activity 3.2.1.2: Update/develop the community early warning system					

Community early warning system up and running	Support for the operationalisation of the community early warning system based on the PNRRC-ACC National Platform and the MON implementation mechanism during years 2, 3 and 4.	Support amount /year	2,000	3	6,000
Activity 3.2.1.3: Organize training modules on the dissemination of climate information for Town Hall services, community radio stations, and farmers					
Development of training modules	A 25-man-day consultancy to develop training modules on the dissemination of climate information for town council departments, community radio stations and farmers.	Consultation cost (man-day)	250	25	6,250
	A 2-day workshop to validate the training modules (40 people, including 20 women and young people)	Workshop organisation costs	3,344	1	3,344
	A 3-day training workshop for 40 municipal and community radio staff and farmers, including at least 20 women, young people and disabled people,	Workshop organisation costs	5,016	1	5,016
Output 3.2.2 : Teachers, schoolchildren, opinion leaders and community radio hosts have become aware of and have taken ownership of good CC adaptation practices					
Activity 3.2.3.1 : Raise awareness among the general public in the two boroughs about good practices for adapting to CC (radio programmes, posters, sketches, contests in schools and high schools, etc.)					
Raising public awareness of good VAC practices	Support for the participation of 80 key players per arrondissement in the 2-day community outreach sessions to raise awareness of ACC among the general public	Support amount /actor	9	320	2,880
	Material organisation of the community outreach sessions/borough	Events organisation cost	6,400	2	12,800
	Media coverage of the events/borough	Media support costs	2,000	2	4,000
Activity 3.2.3.2 : Produce communication tools that are accessible to speakers of national languages (awareness-raising songs in the local language Anii on good CC adaptation practices, translation of posters and sketches into local languages, etc.)					
Production of communication tools accessible to all	Consultancy for the design in French (31 man-days) and translation into 3 local languages (36 man-day) of leaflets and posters to raise awareness among stakeholder groups about good ACC practice.	Consultation cost (man-day)	167	67	11,189
	A 5-day workshop to validate the leaflets and posters in French (2 days) and in local languages (3 days) (40 people, including at least 20 women, young people and people with disabilities)	Workshop organisation costs	8,250	1	8,250

	Production of 1,250 leaflets and 500 posters in French, Anii, Nago and Kotokoli	Cost / poster	3	1,750	5,250
	Support for the production and translation of songs and sketches in local languages	Support amount	9,000	1	9,000
Output 3.3.1 : Indigenous tree species resilient to climate change and adapted to the edaphic conditions of Bassila are identified and their seeds and seedlings are produced					
Activity 3.3.1.1 : organize stakeholder consultation for the final selection of tree species that are drought or flood resistant and adapted to the soil conditions of the selected sites					
Final choice of tree species resistant to drought or flooding and adapted to the soil conditions of the chosen sites	A 20-man-day consultancy to make the final choice of resilient tree species, and to determine the specific planting needs of communal, community and private forests.	Consultation cost (man-day)	250	20	5,000
	A 2-day workshop attended by 40 people, including at least 20 women, young people and/or people with disabilities, to validate the consultation report	Workshop organisation costs	3,344	1	3,344
Activity 3.3.1.2 : Have nurseries produce seeds and seedlings to meet the needs of communal, community and private forests					
Seed and seedling production	Support for 5 nursery groups per district to organise the production of seeds and seedlings for communal, community and private forests	Support amount/ group of nurserymen	1,500	10	15,000
Activity 3.3.1.3 : Have women's groups produce seedlings to be delivered to agroforestry planting sites					
Seedling production by women's groups	Support for 10 women's groups per Arrondissement to organise the production of seedlings to be delivered to forest plantation sites	Support amount / women's groups	1,000	20	20,000
Output 3.3.2 : Communal and community forests are enriched and private forests established using CC resilient species.					
Activity 3.3.2.1: Organize planting operations in communal, community and private forest plots					
Organisation of planting operations	Support for the organisation of communal, community and private planting operations	Support amount / District	3,000	2	6,000
Activity 3.3.2.2: Have the young plants maintained and monitored					
Organisation of follow-up care for seedlings	Support for the maintenance of young plants for two (2) years	Monitoring support amount/District and year	1,500	4	6,000
Operating component costs (A)					2,470,000

Project Execution Cost (B)=(A)×9,5 %					234,650
Staff allowances	Salaries for the Project Management Team and allowances for technicians mobilised in the field to provide support and guidance to beneficiaries	Cost of staff / year	21,600	4	86,400
Office equipment	Computers and equipment	Cost of equipment	11,250	1	11,250
	Office supplies	Annual cost	3,000	4	12,000
Seminars and workshops	Organisation of seminars and workshops	Number	1,950	2	3,900
communications	Web page, social media and written press	Cost of communications	3,800	4	15,200
Travel	Travel expenses for the project team to monitor activities	Mission costs/year	12,975	4	51,900
Assessment	Project launch	Launch workshop	6,000	1	6,000
	Mid-term evaluation	Evaluation mission	16,000	1	16,000
	Final evaluation	Evaluation mission	16,000	1	16,000
Audit	Project audit	Audit mission	16,000	1	16,000
TOTAL PROJECT COST (C) = (A)+ (B)					2,704,650
FNEC project cycle management costs (D)= (C) x 8,5%					229,895
Project performance management and budget monitoring by the FNEC	General supervision, quality control and management, field visits, seminars, workshops and travels	FNEC management fees/year	11,240	4	44,960
Policy support, Portfolio management	Management	FNEC management fees/year	11,185	4	44,740
Reporting, Outreach,	Reports, awareness documents	FNEC management fees/year	9,830	4	39,320
Project preparation, oversight, financial management	Preparation activities, control and audit	FNEC management fees/year	9,728	4	38,912
Quality assurance, supervision	Procedures manuals, supervision reports, control of quality assurance	FNEC management fees/year	8,595	4	34,380

reporting, and completion and evaluation oversight					
Communications and information	Maintenance of information management systems and specific databases to monitor and control project implementation Knowledge sharing	Cost of communications & information/year	5,516	4	22,064
	Web page, social media and print media	Cost of setting up the information system	5,519	1	5,519
TOTAL (E) = (D) + (C)					2,934,545

Annex 13 : ToRs of key personnel

1) National Project Coordinator (NPC)

- The main responsibilities of the NOC are
- - day-to-day supervision and coordination of the implementation of project activities;
- - the mobilization of inputs in accordance with the project management procedures;
- - Supervising and coordinating the production of project outputs, in accordance with the terms of the project document;
- - supervising and coordinating the work of all members of the Project Management Unit, consultants and sub-contractors;
- - preparing and reviewing the project's work plans and financial plans;
- - liaising with the FNEC, SONAB, the relevant Government and Episcopal structures, and all project partners, including civil society organizations and NGOs, to ensure effective coordination of project activities;
- - technical support for consultants, sub-contractors and training activities supported by the Project;
- - supervising the preparation and timely submission of progress reports, quarterly financial reports and other reports and documents required by the partners;
- - publicizing and disseminating Project reports;
- - submitting project progress reports to the Technical Committee and the Project Steering Committee, and implementing the directives and recommendations of these Committees;
- - overseeing the exchange and sharing of experiences and lessons learned with other community-based initiatives in order to capitalize on the results and integrate them into national development plans and disseminate them internationally;
- - timely implementation of all project components;
- - building the capacity of community groups, municipalities, NGOs, students, women's groups and other vulnerable communities by organizing site visits, internships and training workshops based on the project's results;
- - sharing results with scientific institutions by initiating and implementing field studies in all project components;
- - opening up project activities and field studies to the teams responsible for producing documentaries, television commercials, guide books and awareness campaigns;
- - the regular organization of scheduled or unannounced inspection visits to all the sites and to all the activities of the project's site management units.

The NOC must have a BAC+5, an agronomist or agro-economist or a specialist in the planning and management of natural resources with a sound knowledge of adaptation to climate change (ACC).

1) Monitoring & Evaluation Manager (CSR)

The CSR is responsible for :

- implementing the overall results-based M&E strategy in accordance with the M&E plans described in the project document;
- guiding and coordinating the review of the project results framework;
- providing technical advice on the revision of performance indicators;
- evaluation of the achievement of objectives;
- preparing reporting formats and supporting the NPC in preparing the required reports;
- participatory planning and monitoring of activities;
- supporting the NOC in archiving technical reports and other project documents.

The CSR must have at least a BAC+3, socio-economist or agro-economist with at least 5 years' proven experience in the field of project monitoring and evaluation and experience in at least three relevant projects.

2) Administrative and Financial Manager (RAF)

The RAF is responsible for :

- updating and applying administrative and financial management procedures ;
- keeping accounting records on a regular basis;
- producing financial statements and monitoring the budget in accordance with forecasts;
- drawing up and monitoring the various contracts at project level;
- contributing to the preparation and organisation of calls for tender;
- drawing up purchase orders and preparing payments to suppliers and service providers;
- keeping the staff register (leave, missions, absences);
- carrying out activities inherent in the preparation and keeping of the project account;
- carrying out transactions with banks;
- providing and managing the office's equipment and property, and keeping the relevant records;
- organizing meetings of the various project bodies and drawing up reports;
- participating in the organization of missions, workshops/seminars, etc. ;
- taking part in drawing up and implementing the budget for the project's annual programme of activities;
- assisting the NPC in drawing up annual, quarterly and monthly forecasts;
- assisting in the preparation of project budget reviews;
- carrying out and monitoring the maintenance and repair of vehicles and keeping records of repairs (where applicable);
- carrying out any other tasks in line with his/her profile and requested by the National Project Coordinator.

The RAF must have at least 3 years' higher education and at least 5 years' experience in project administrative and financial management, with proven experience of at least two projects financed by international institutions (ADB, World Bank, GIZ, UNEP, UNDP, Adaptation Fund, GEF, Green Climate Fund, etc).

3) Head of Gender and Communication (RGC)

The RGC is responsible for :

- developing and implementing the project's communication plan ;
- organizing activities at national and local level, and communication activities to ensure the visibility of the project;
- providing input into the development of the terms of reference for consultations;
- mobilizing stakeholders;
- disseminating the project's achievements and good practice;
- carrying out any other tasks in line with his/her profile and requested by the National Project Coordinator.

He/she will also :

- contribute to training activities where necessary;
- work to ensure that gender is taken into account in accordance with the gender policy of the Adaptation Fund and Benin.

The RGC must have at least 3 years' higher education in the field of communication, with a good knowledge of the Adaptation Fund's gender policy and good experience of mobilising stakeholders.

4) Community Focal Points or Facilitators (FP or CF)

The FPs are responsible for implementing and monitoring activities in the field and for collecting and reporting information to the Coordinator.

Facilitators must have at least 10 years' experience in supporting groups in agricultural production and nutrition, with a good knowledge of measures to adapt to climate change. They must have at least 5 years' practical experience in one or more climate change adaptation projects.

Annex 14 : Justification of the agricultural land area and the number of people on family farms

In Republic of Benin, the National Agricultural Census carried out in 2018-2019 identified households in the Commune of Bassila whose livelihoods are derived primarily from the agricultural or agri-food sector (annexes 14-a and 14-b).

Annex 14-a : Households and agricultural activities in the Commune of Bassila

	Number of farming households	Crop production (tons)	Livestock production (tons)	Aquaculture (tons)	Fishing (tons)	Forestry (tons)	Agricultural product processing (tons)	Agricultural product marketing (tons)
BENIN	926,539	886,368	606,112	3,464	49,990	57,235	231,904	210,966
DONGA	56,722	55,994	41,388	8	193	3,807	7,876	9,219
BASSILA	13,983	13,851	8,737	4	54	1,537	1,580	2,190

Source : MAEP, 2021.

Annex 14-b : Distribution of heads of agricultural households by sex and average age in the Commune of Bassila

	ENSEMBLE			GENDER OF HEAD OF HOUSEHOLD			Average age of household head
	Headcount	Commune's weight in relation to the country	Commune's weight in relation to the département	MALE	FEMALE	Proportion of farm households headed by women (%)	
BENIN	926,539	100,0		781,307	145,232	15,7	43,5
DONGA	56,722	6,1	100,0	53,244	3,478	6,1	45,1
BASSILA	13,983	1,5	24,7	13,131	852	6,1	45,1

***Source** : MAEP, 2021.*

It would appear that 99% of the rural population's income comes from the crop production sub-sector. The strategy of diversifying sources of income has led them to open up in parallel to the animal production sub-sector (62.5%), the marketing of agricultural products (15.7%), the processing of agricultural products (11.3%), forestry (11%), fishing (0.4%) and aquaculture (0.03%),

The area of arable land in the Commune is estimated at 196,253.484 ha (Commune de Bassila, 2017). The distribution of farming households in the Commune has made it possible to determine the area of land that can be farmed by households in the villages (Annex 14-c).

Annex 14-c: Distribution of households and farmland in the arrondissements of Bassila and Pénessoulou

Boroughs and villages/neighbourhoods	Number of households	Household size	Arable land (ha)
ARR0ND. PENESSOULOU			
BAYAKOU	381	8.8	5,345
BODI	683	8.4	9,588
KODOWARI	416	7.9	5,832
NAGAYILE	404	9.4	5,669
NIORO	121	10.0	1,693
PENELAN	309	9.1	4,336
PENESSOULOU	511	7.9	7,165
SALMANGA	488	7.8	6,852
ARROND: BASSILA			
AORO-LOKPA	*121*	7.8	*1,704*
AORO-NAGO	*304*	7.3	*4,255*
BAKABAKA	*316*	7.7	*4,429*
BASSILA 1	*927*	7.6	*13,009*
BASSILA 2	*662*	5.7	*9,287*
BIGUINA	*802*	7.0	*11,258*
DIEPANI	*129*	5.7	*1,809*
DOGUE	*518*	7.2	*7,269*
IGBO-MACRO	*333*	6.4	*4,672*
FIRIHOUN	*254*	7.0	*3,559*
KIKELE	*527*	7.9	*7,397*
KPREKETE	*648*	5.9	*9,090*

Given the size of the areas of land concerned, this is a classic situation of large numbers, where sampling is based on the Cachran [14] formula. The estimate of 30% of land affected by the adverse effects of climate change or degraded in small farms leads to the size of 3,300 ha for the sample of land in a set of 10 groups of farms bordering the classified forests of Bassila and Pénessoulou. This is with 95% confidence and an accepted margin of error of 5%. The consultation work that will precede any intervention in the field will enable the sites to be defined.

[14] :
https://www.google.com/search?q=formule+de+Cochran+%3A&oq=formule+de+Cochran+%3A&aqs=chrome..69i57j0i512j0i22i30.7698j0j7&sourceid=chrome&ie=UTF-8

The first animators of these farms could number 1,000, with an average of 500 per Arrondissement. Given the average household size in the villages, which is 7.7 (Annex 14-c), the total number of people closely impacted by component 1 interventions could be increased to 7,700.

In component 2, sites where products such as shea butter are harvested and processed into butter by women's groups could be counted, even if these sites are not formally occupied by women for shea butter-making activities. The size of the minimum land sample could therefore be increased to 4,000 ha to take into account both agri-food processing and beekeeping activities, even though the calculation of economic profitability would only concern the minimum of 3,300 ha. Similarly, the creation of value-added chain platforms will necessarily involve new players (traders and merchants, input suppliers, transporters, etc.) in addition to those involved in component 1. New jobs will also be created for young people, women and people with disabilities. This is why it seems appropriate to increase the number of direct beneficiaries of this component to 2,000.

As for component 3, whose activities are limited to the sphere of intervention of the actors of the communal administration, its direct beneficiaries are of the order of a hundred. However, the activities will impact almost the entire population of the Commune. In terms of areas to be exploited, these are essentially those of communal forests and community and private reforestation, which the communal authorities have planned to encourage to the tune of 5,200 ha/year in the 2018-2022 Communal Development Plan (Commune de Bassila, 2017). Support for 2,000 ha of planting would be a good contribution from this Project to the communal authorities' ambition.

Annex 15 : Consideration of the Adaptation Fund Board's outstanding recommendations on the Concept Note.

Final review 11 February 2022	Proposed changes to the full project document
Question 2. Does the length of the proposal amount to no more than Fifty pages for the project/programme concept, including its annexes?	
CAR2: Finally, please add a table of contents and lists of acronyms and figures Examples of errors to be fixed are: …. *many figures in part I are a mix of French and English;* …	The table of contents and lists of acronyms, tables and figures have been added. The indications on the climate projections figures (figures 8, 9 and 10) have been translated into English. The source data for the other figures in Part 1 are not available, but information is provided in the figure legends to make them easier to understand.
Question 3. Does the project / programme support concrete adaptation actions to assist the country in addressing adaptive capacity to the adverse effects of climate change and build in climate resilience?	
CR1: Please clarify how the activities will contribute to climate change adaptation (the proposal should elaborate on how the activities would contribute to climate change adaptation).	The conceptual basis of the activities is presented in a sub-section entitled "Climate justification of the activities" created just before the sub-section on the Project's objectives. In addition, in the Project's detailed budget (table 22 and Annex 11), the content of each activity is formulated in relation to its relationship to adaptation.
Question 4. Does the project / programme provide economic, social and environmental benefits, particularly to vulnerable communities, including gender considerations, while avoiding or mitigating negative impacts, in compliance with the Environmental and Social Policy and Gender Policy of the Fund?	
CAR3: Please provide more information on the gender context and include an initial gender assessment. A full gender assessment and action plan would be required at the full project stage.	An evaluation and a gender action plan are proposed.
Question 5. Is the project / programme cost effective?	
CR4: Provide more information on the area to be rehabilitated (number of hectares). A more detailed cost-effectiveness analysis would be needed at the full project proposal stage	The cost-effectiveness analysis is more detailed
Question 6. Is the project / programme consistent with national or sub-national sustainable development strategies, national or sub-national development plans, poverty reduction strategies, national communications and adaptation programs of action and other relevant instruments?	

CR5: Elaborate more on the consistency of the project with recent plans (NDC, NAP, National CC Management Policy, PC2D and the Low Carbon and CC Resilient Development Strategy) and describe how would the project align with and/or contribute to the implementation of these plans	The recommendation is taken into account in section D of Part II.
Question 8. Is there duplication of the project/programme with other sources of funding?	
CAR4: Provide more information in a table format that highlights linkages, lessons learned complementarities and synergies with past/ current identified projects	The list of projects already closed, in progress, or new, with which the SONAB Project has complementary or synergistic links, is updated and enriched thanks to the information provided by the stakeholders or available on the projects and programs concerned. The connections and lessons learned are presented in Table 10
Question 10. Has a consultative process taken place, and has it involved all key stakeholders, and vulnerable groups, including gender considerations in compliance with the Environmental and Social Policy and Gender Policy of the Fund?	
CR6: Provide details more details on gender and vulnerable groups in the project area, as well as on the number and type of participants in the consultations with due consideration of gender (women, men) and marginalized/ vulnerable groups. **CR7:** Provide a summary of the consultation outcomes in a tabulated form and explain how these outcomes were considered in the project design.	The categorization of participants by gender in the consultations is carried out The summary of the consultation and its use in the design of the project are provided
Question 12. Is the project / program aligned with AF's results framework?	
CAR5: Please demonstrate alignment with AF's results framework. *(*Note: As outlined in the OPG Annex 4 "Instructions for Preparing a Request for Project or Programme Funding from the Adaptation Fund", any project or programme must align with the Fund's results framework and directly contribute to the Fund's overall objective and outcomes outlined. Not every project/programme outcome will align directly with the Fund's framework but at least one outcome and output indicator from the Adaptation Fund's Strategic Results Framework must be included at the project design stage). Alignment of the projects with AF's results framework is given in Table 12 of the revised project concept note. However, more details	Recommendation taken into account.

should be provided at fully developed proposal stage	

Annex 16 : Summary of the results of the technical, social and environmental feasibility study for two water reservoirs with the full participation of the final beneficiaries

The study successively identified (1) the two villages bordering the classified forests of Bassila and Penessoulou that could accommodate the water reservoir infrastructure, (2) the water needs in the villages during the dry period, (3) the characteristics of the water reservoirs that could meet these needs, (4) the estimated cost of the works, and (5) the environmental and social risks and their impacts. It then proposed (6) the environmental and social management plan (ESMP) and (7) the implementation monitoring plan.

1) IDENTIFIED VILLAGES:

In the arrondissement of Bassila (46,569 inhabitants): Baka Baka (2,960 inhabitants)

In the arrondissement of Penessoulou (33,875 inhabitants) : Pénélan (3,396 inhabitants)

2) WATER REQUIREMENTS DURING THE DRY SEASON (NOVEMBER TO MARCH)

- *WATER REQUIREMENTS FOR IRRIGATION (annual basis)*

The basis of calculation for each village is a market gardening area of five (05) hectares. Water requirements are estimated at 4613 m3 for each site (922.6 m3/ha).

- *PASTORAL WATER REQUIREMENTS (annual basis)*

The basis of calculation for each village is a herd of 5,000 head of cattle and 5,000 head of sheep/goats needing to drink from each of the water reservoirs per day at a rate of 50 litres of water and 20 litres of water per day, per cattle and per sheep/goat respectively, during the 5 months of drought. Water requirements are estimated at 42,500 m3 for each site.

- *WATER REQUIREMENTS FOR FISH FARMING*

Water requirements for fish farming could not be estimated as they were not significant.

- *DOMESTIC WATER NEEDS FROM 2026 TO 2050 (laundry, washing-up, other)*

The basis of calculation for each village is 10% of the population at a rate of 20 litres of water per inhabitant per day until 2050.

The water needs are :

Baka Baka 2345 m^3

Pénélan 2690 m^3

- *OTHER WATER REQUIREMENTS*

These are water requirements for beekeeping, shea butter processing and construction work. In the absence of data on these uses, these requirements are taken into account by adding 10% to the sum of the above requirements.

- *TOTAL WATER REQUIREMENTS*

Total water requirements are represented by the sum of the above water requirements.

Village	Irrigation water requirements (m3)	Pastoral water requirements (m3)	Domestic water requirements (m3)	Other water requirements (m3)	Total water requirements (m3)
Baka Baka	4,613	42,500	2,345	4,946	54,404
Pénélan	4,613	42,500	2,690	4,981	54 784

3) CHARACTERISTICS OF WATER RESERVOIRS

The design and dimensioning of the structures were based on the use of topographic data, with the aid of AutoCaD software, which enabled us to record the surface areas and volumes upstream of the dike position at various altitudes.
The height-volume and height-surface graphs for the Baka-Baka and Pénélan sites were used to calculate the theoretical volume of the basin and the theoretical surface area of the water body.
Sizing the reservoir dike involves determining its length, height, crest width and freeboard, as well as setting the permissible head of water.

At Bakababa The theoretical capacity of the basin is 82,053 m^3 for a water surface area of 3.02 hectares and a dike height of 5.35 metres.

At Pénélan The theoretical capacity of the basin is 91,208 m^3 for a water surface area of 4.71 hectares and a dike height of 4.15 metres.

4) ESTIMATED COST OF WATER RETENTION WORKS

Baka Baka : USD 436,364

Pénélan : USD 418,898

5) ENVIRONMENTAL AND SOCIAL RISKS AND THEIR IMPACT

(Legend: N = Negative, P = Positive, N/P = Positive and Negative, O = negligible)

1) ENVIRONMENTAL AND SOCIAL RISKS AND THEIR IMPACT

(Legend: N = Negative, P = Positive, N/P = Positive and Negative, O = negligible)

		Biophysical environment							Human environment					
		Air	Soil	Surface water	Groundwater	Flora	Fauna	Landscape	Health and safety	Employment	Traffic	Economic activities	Cultural heritage	Quality of life
Start-up phase	Site installation and living quarters	N	N	O	O	N	O	N	N	P	N	P	O	O
	Transport of materials and movement of people and machinery	N	N	O	O	N	N	N	N	P	N	P	O	N
	Excavation and disposal of raw materials	N	N	O	O	N	N	N	N	P	O	P	O	N
	Mining of borrow pits and quarries	N	N	O	O	N	N	N	N	P	N	P	O	N
	Backfilling dikes	N	N	N	O	N	N	N	N	P	N	P	O	O
Construction phase	Stump removal in the right-of-way of water reservoirs and perimeters to be developed	N	N	O	O	N	N	N	O	P	N	P	O	O
	Masonry work on structures	N	N	N	O	N	O	N	N	P	N	P	O	O
	Construction of ancillary works (drains, miscellaneous protection)	N	N	N/P	O	N	N	N	N	P	N	P	O	O
	Presence of workforce	N	O	N	N	N	N	O	N	P	O	P	N/P	N/P

	Site withdrawal	N	N	N	O	N	N	N	O	N	O	O	O	O
	Tree planting	N	N	O	O	P	P	P	O	P	O	P	O	P
	Relocation and resettlement of populations	O	N	O	N	N	O	N	N	P	O	N/P	O	N/P
Operating phase	Routine or periodic maintenance of structures	N	O	N	O	N	O	O	N	P	N	O	O	N/P
	Presence of water reservoirs, developed perimeters and supporting infrastructure	N/P	O	N	N	N	N	N	N/P	P	N/P	P	P	N/P

2) ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

In a coherent table, the study has set out the Potential Negative Impacts, the Mitigation Measures, the Planning and Implementation Responsibilities and the Project Phase where impacts may be observed.

3) PLAN FOR MONITORING IMPLEMENTATION OF MITIGATION MEASURES AND ASSOCIATED COSTS

The monitoring plan successively sets out the Component, the Activities to be carried out, the Location, the Monitoring Indicators, the Period, the Responsibilities and the Total Cost.

Component	*Activities to carry out*	*Location*	*Monitoring indicators*	*Period*	*Responsibilities*	*Total cost (USD)*
Guarantee of total support of the populations for the project	*Awareness/information sessions for the population*	*Municipality of Bassila (Districts of Bassila and Penessoulou)*	*Number of awareness sessions*	*Before the start of work*	*Bassila Town Hall, SONAB, FNEC*	*1300*
Guarantee of land security for project sites	*Acquisition of domains and relocation of usual operators of areas falling within the project area*	*Area covered by the water reservoir construction project*	*List of people and property listed* *Compensation report*	*Preparation of work*	*Bassila Town Hall, SONAB, FNEC*	*8,300*
Public health and safety guarantee	*Awareness campaign on respiratory diseases, STI/HIVAIDS, unwanted pregnancies,* *Awareness raising on hygiene and sanitation;*	*Construction site,* *Access tracks to borrow areas and quarries,*	*Prevalence of respiratory diseases, STIs/HIVAIDS, and unwanted pregnancies* *Watering the site;*	*Before and during the work*	*Control Mission,* *Bassila Town Hall,* *SONAB,*	*6,700*

	Establishment of a health unit for rapid treatment of construction site accidents; *Installation of markers, signage and construction site signs; Prohibitions on night work, consumption of alcohol and stimulants by staff:* *Imposition of the obligation to wear Personal Protective Equipment (PPE);* *Information and awareness of the populations on the risks linked to the presence of the construction site;* *Raising awareness about respecting places of worship*	*Deviations,* *Area covered by the water reservoir construction project*	*Number of awareness sessions Existence of health unit on construction sites* *Existence of markers and signs* *Number of accidents* *Number of reports of actual wearing of PPE*		*FNEC,* *Company*	
	Awareness campaign against malaria and water-borne diseases *Awareness campaign against the risks of drowning* *Installation of signs prohibiting swimming in water reservoirs*	*Riparian areas of water reservoirs*	*Prevalence of malaria and water-borne diseases* *Number of drowning victims* *Real presence of signs prohibiting swimming in water reservoirs*	*During the use of water reservoirs*	*Bassila Town Hall,* *SONAB* *FNEC*	*3,300*

	Establishment of a team to monitor activities around the reservoir		*Effective presence of teams responsible for monitoring water reservoirs*			
Traffic fluidity	*Awareness campaign on respecting the highway code in the context of public works;* *Carrying out deviations according to the rules of the art –* *Traffic regulations;* *Imposition of speed limits in particular on drivers of heavy machinery and trucks* *Permanently maintaining the fluidity of traffic and access for local residents to their homes* *Installation of adequate signage*	*Borrowing areas and quarries* *Areas of right-of-way for the construction of water reservoirs*	*Number of awareness campaigns carried out* *Existence of deviations made according to the rules of the art* *Effective presence of traffic signs and officers regulating traffic* *Number of accidents recorded*	*During the works*	*Control mission,* *Company,* *Bassila Town Hall*	*Cost not estimated*
Traffic fluidity	*Awareness campaign on respecting the highway code in the context of public works;* *Carrying out deviations according to the rules of the art –*	*Construction site* *Lifebase* *Borrowing areas and quarries*	*Number of awareness campaigns carried out* *Existence of deviations made according to the rules of the art*	*During the works*	*Control mission, Bassila Town Hall, Company*	*Cost not estimated*

	Traffic regulations; *Imposition of speed limits in particular on drivers of heavy machinery and trucks* *Permanently maintaining the flow of traffic and access for local residents to their homes* *Installation of adequate signage*	*Areas covered by the construction of water reservoirs*	*Effective presence of traffic signs and officers regulating traffic* *Number of accidents recorded*			
Guarantee of protection of flora and fauna	*Staff awareness campaign on respect for the environment* *Periodic unannounced checks of compliance with environmental standards* *Ban on the slaughter of wild animals by personnel*	*Areas covered by the construction of water reservoirs*	*Number of awareness campaigns and unannounced checks on compliance with environmental standards* *Number of complaints from local populations about non-compliance with environmental standards and the killing of wild animals*	*During the works*	*Control Mission,* *Company,* *Bassila Town Hall*	*13,300*
	Compensatory planting of trees in the areas bordering each site; *Development of the banks of water reservoirs to provide more protection;*	*Areas covered by the construction of water reservoirs. The municipality's nurserymen will be involved in the implementation of these measures.*	*Number of awareness campaigns and unannounced checks on compliance with environmental standards* *Number of complaints from local populations about non-compliance with environmental*	*During the works*	*Control Mission,* *Business,* *Bassila Town Hall*	*13,300*

	Restoration of quarries with the participation of local populations and using adapted local species		*standards and the slaughter of wild animals*			
	Compensatory planting of trees in the areas bordering each site; *Development of the banks of water reservoirs to provide more protection;* *Restoration of quarries with the participation of local populations and using adapted local species*	*Areas covered by the construction of water reservoirs. Nurseries in the Municipality will be involved in the implementation of these measures.*	*Number of hectares reforested and plants planted around water reservoirs* *Observation of the effective development of the surroundings of water reservoirs* *Existence of the management or restoration plan for borrow pits* *Number of quarries restored*	*At the end of the work*	*Control Mission;* *Business ;* *Bassila Town Hall;* *ATDA*	
Employment promotion	*Recruitment of local labor*	*Municipality of Bassila*	*Number of direct and indirect jobs created*	*During the works*	*Company; Bassila Town Hall; FNEC and SONAB*	*Cost not estimated*
	Establishment with water users of a mode of efficient operation of water reservoirs; *Training groups of producers, breeders and water users on good production and management*	*Around water reservoirs and market gardening areas*	*Number of direct and indirect jobs created;* *Yield of market gardening;* *Number of tonnes of fish per season;*	*At the end of the work and at the time of exploitation of the water reservoirs*	*Bassila Town Hall, ATDA, and SONAB*	*65,000*

	techniques adapted to their contexts; *Construction of an access track to the Baka Baka reservoir (not necessary in Pénélan);* *Market gardening;* *Support for fish farming (fish ponds and stocking of water reservoirs);* *Support for pastoral activities (access corridors to water reservoirs and watering troughs)*		*Number of kilometers of access tracks and number of water troughs built;* *Number of head of cattle watered per season*			
Protection of cultural heritage	*Raising awareness among workers about respecting sacred places; Imposition of reporting of any discovery of cultural or archaeological remains*	*Water reservoir construction work areas*	*Number of complaints linked to the desecration of sacred places and objects;* *Number of reports of the discovery of cultural or archaeological remains*	*During the works*	*Bassila Town Hall, Control Mission, Company, Customary Authorities*	*667*
Guarantee of a good social climate between users of	*Development and dissemination of regulations relating to the operation of water reservoirs (principles of IWRM);* *Establishment of water reservoir management committees*	*Areas covered by water reservoirs;* *Municipality of Bassila*	*Number of regulations for the operation of water reservoirs available;* *Number of truly functional management committees in activity;*	*While using water reservoirs*	*Bassila Town Hall, ATDA; SONAB*	*Cost not estimated*

water reservoirs			*Number of conflicts recorded*			