



ADAPTATION FUND

REQUEST FOR PROJECT/PROGRAMME FUNDING FROM THE ADAPTATION FUND

The annexed form should be completed and transmitted to the Adaptation Fund Board Secretariat by email or fax.

Please type in the responses using the template provided. The instructions attached to the form provide guidance to filling out the template.

Please note that a project/programme must be fully prepared (i.e., fully appraised for feasibility) when the request is submitted. The final project/programme document resulting from the appraisal process should be attached to this request for funding.

Complete documentation should be sent to the email: submissions@adaptation-fund.org



ADAPTATION FUND

LOCALLY-LED ADAPTATION PROJECT/PROGRAMME PROPOSAL FOR SINGLE COUNTRY

PART I: PROJECT/PROGRAMME INFORMATION

Title of Project/Programme: Strengthening the resilience of communities in the Dead Sine Valley

Country: Senegal

Thematic Focal Area: Food security

Type of Implementing Entity: National Implementing Entity

Implementing Entity: Centre de Suivi Ecologique (CSE)

Executing Entities: Fatick Regional Development Agency (ARD)

Amount of Financing Requested: 4,999,680 (in U.S Dollars Equivalent)

Letter of Endorsement (LOE) signed: Yes No

NOTE: LOEs 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 concept has been submitted before
- This is the first submission ever of the concept proposal

In case of a resubmission, please indicate the last submission date: [Click or tap to enter a date.](#)

Please note that concept note documents should not exceed 50 pages, including annexes.

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.

Climate change problem– Senegal faces the threats of climate change impacts, jeopardizing its food security, nutrition, and economic growth. According to the ND-Gain index, Senegal is among the most vulnerable countries to climate change. The country recorded a high vulnerability score (0.520), ranking as the 37th most climate vulnerable country in the world, with a low readiness score (0.350) to climate change, making it one of the least ready for climate action¹. Senegal has significant needs for investment and innovation to improve its preparedness and urgent action. Among the identified adaptation priorities in the Nationally Determined Contribution (NDC), agriculture occupies a central place, because of its strong dependence to climate. To cope with such impacts at national and local levels, the Government developed several instruments and initiatives, aiming at reducing the impacts of climate change at national and local levels: the National Adaptation Programme of Action (2016), a Nationally Determined Contribution (2020), a National Adaptation and an Agricultural Adaptation plan (under development).

Because resilience to climatic change requires a bottom-up approach akin to the local integration of the aspirations of vulnerable communities in the framework of the decentralization process, the government initiated since 2013 a territorial approach to climate change in Fatick and the agro-sylvopastoral region. This locally-led policy resulted to an Integrated Territorial Climate Plans (PCTI), aiming at supporting local communities in their efforts to develop and implement responsive climate actions.

Local territories bear the greatest burden of climate change impacts and face their most severe externalities. In a context of decentralization, uncertainties are related to how to use climatic projections to anticipate and address negative impacts on local initiatives and livelihoods. Enhanced Direct Access (EDA) fund offers the opportunity to unleash more effective climate action and resilience, by advancing the implementation of the PCTI in local areas and by promoting the participation of the most vulnerable communities.

Senegal's socio-economic, and environmental context - Located in West Africa, Senegal borders Atlantic Ocean to the west, Mauritania to the north, Mali to the east and Guinea Bissau and Guinea Conakry to the south. Classified as a low-income country, it faces many challenges, including an economy that is heavily dependent on natural resources. Senegal's estimated population in 2023 is 18,032,473 inhabitants², of which 49.4% are women and 50.6% are men. The Senegalese population is characterized by its youngness: half of the population is under 19 years old (median age). About 37.8% of the population live below the poverty line³. Poverty is more accentuated in rural areas (53.6%) in comparison to urban areas (19.8%), and women are more likely to be poor than men (33.3% and 27.6%). The country's annual growth has been over 6% since 2015, while growth in agriculture, the sector employing most of the poor people is at 0.3 %⁴.

Senegal's most important economic sectors are agriculture, fishing, tourism, and livestock. The agriculture sector is, according to the NDC, the most vulnerable to climate change. It is characterized by its reliance to highly variable rainfall subjected to an unbalance between its contribution to GDP estimated at 15.3% in 2022 (WB, 2023) and the large share of its active population (60%). This asymmetry is an indicator of the low productivity of the sector, whose performance could be further compromised

¹ <https://gain.nd.edu/our-work/country-index>

² ANSD (2023): RGPH 5.

³ EHCVM 2018/2019.

⁴ World Bank (2023): Poverty & Equity Brief; Senegal.

by climate variability and change. The agriculture economy dominated by smallholder farmers face many challenges, including irregular rainfall and poor soil conditions, poor access to high-quality seeds, fertilizer, climate information, market access, rural infrastructure, processing and marketing⁵, leading to reduced crop yields and quality. The UNCCD notes that soil degradation is a significant issue in the country, with an estimated 34%⁶ of soils affected by erosion, salinization, and other forms of degradation. This degradation is driven by factors such as inappropriate land use practices, overgrazing, deforestation, and climate change.

These environmental pressures are serious impediments to a productive agricultural system and amplify the impacts of climate change on the sector. The adverse effects on Senegalese agriculture translate into reduced income for farmers as many crops are seasonal and increase farmers' dependency on single and short growing seasons for their entire yearly income. Therefore, a poor growing season marked by insufficient rain, dry-spells, flooding, or extreme temperatures can plunge many farmers into poverty for an extended period, in particular women and young people. In Fatick's region, particularly in the Dead Sine Valley, income generated by on-farm rain-fed activities is below the threshold of \$250 per year for more than 60% of farmers⁷. As a result, food insecurity remains high in many areas, leading to massive migration of young people: the prevalence of moderate or severe food insecurity went from 19.1% in 2019 to 23.1% in 2020, before declining to 17.4% in 2021.

Women- While Senegal gained international recognition for its efforts towards political participation of women through the adoption of the Gender Parity Law (2010), there is still important disparities between men and women. Senegal has a Gender Inequality Index (GII) value of 0.505, ranking it 129 out of 166 countries in 2022⁸. Women have far lower participation rates in the labor market (37.4% against 64.5% for men⁹). In the agriculture sector, they play an important role as producers, processors and marketers, contributing significantly to household food security and livelihoods. However, there are a few major hurdles preventing an equal economic empowerment of women: access to factors of production, financing mechanisms and markets. Thus, women control only 28 % of cowpea plots, 15 % of peanut plots and 7 % and 3 % of maize and millet plots respectively¹⁰: on average women's plots are significantly smaller than men's plots (0.4 ha compared to 1.3 ha for men). In growing horticultural, women are more active in the production of tomatoes and local vegetables, while in the livestock sub-sector, the two groups have gender-based responsibilities: women playing a role in managing small ruminants and poultry, and men responsible for cattle. The region of Fatick stands out with a lower proportion of farming households headed by women, at 8.6% compared to the national average (11.3%). The index of female entrepreneurship in the agricultural sector is estimated at 6.8% compared to 13.2% for the national average, while the proportion of women smallholder agricultural producers is 10.87% against 14.37% nationally¹¹.

Youth- The Senegalese population is characterized by its large youth component: half of the population is under the age of 19¹², and more than half of Senegalese youth live in rural areas (ANSD, 2014), but a significant proportion are unemployed (32 % compared to 24 % in urban areas¹³), thus creating an important migration to urban areas and outside of the country. The Dead Sine Valley witnesses 58.5% of households that experienced at least one family member who has migrated¹⁴.

⁵ CIAT; BFS/USAID (2016): Climate-Smart Agriculture in Senegal.

⁶ MEDD (2016). Land Degradation Neutrality Report.

⁷ ARD (2021) : Étude Socioéconomique de la Vallée Morte du Sine.

⁸ <https://hdr.undp.org/data-center/specific-country-data#/countries/SEN> (A low GII value indicates low inequality between women and men, and vice-versa)

⁹ World Economic Forum (2023): 2017 Global Gender Gap Report.

¹⁰ Winrock International (2023): A gender and social inclusion analysis of access to agricultural services in Senegal.

¹¹ ANSD (2023) : Situation Économique et Sociale de la région de Fatick 2020/2021, 146 pages.

¹² ANSD (2023): RGPH 5.

¹³ ANSD (2013): RGPHAE.

¹⁴ *Ibid.*

Country and project area's climate vulnerabilities and impacts -

Situated in the far west of the African continent, Senegal experiences a tropical, semi-arid climate with temperatures ranging from 25°C to 32°C throughout the year, commonly referred to as "Sahelian." The country faces high inter-annual rainfall variability with a dry season from October to May and a rainy season from June to September. According to the World Meteorological Organization (WMO), Senegal's average temperature has increased by 1.5°C since the pre-industrial era, surpassing the global average increase of 1.1°C. The country also reports an increased frequency and severity of extreme weather events, including more frequent, longer, and intense heatwaves, droughts, and floods¹⁵.

- Project area

The project will be implemented in the region of Fatick, one of the fourteen administrative regions of Senegal, covering a total area of 6,685 km², thus representing 3.7% of the national territory. This region, at the heart of which lies the Dead Sine Valley (DSV) which corresponds to the project area, is one of the climatic "hot spots" in the Sahel and in the country¹⁶. The region presents a strong heterogeneity which can be summarized in a North/South opposition: in the North, an average rainfall of 520 mm in the department of Fatick with a shorter rainy season and in the South an average rainfall of 680 mm, particularly in the department of Foundiougne¹⁷. The project area covers nine (09) municipalities¹⁸ of the department of Fatick in the region of the same name, corresponding to the coverage area of the Dead Sine Valley (the purple section of figure 1). In 2018, the population of the project area was estimated at 178,382¹⁹, for which 51% are women, and 77% are young (under 35 years old).

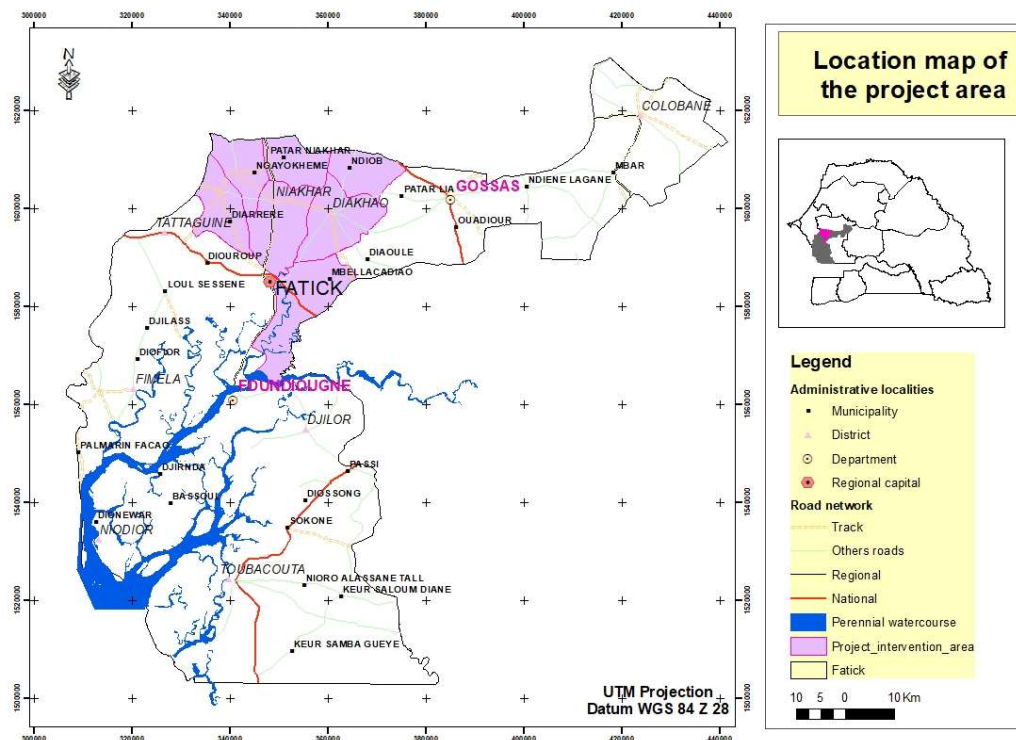


Figure 1: Map of project area-Dead Sine Valley (Source: CSE)

¹⁵ World Meteorological Organization (WMO), State of the Global Climate 2022. <https://wmo.int/publication-series/state-of-global-climate>

¹⁶ Climatic "hot spots" are those areas where the reduction in the number of wet days in August during the ten worst droughts of the 20th century has been the most recurrent and significant in the Sahel region.

¹⁷ Bodian, D. L. 2014. Variabilité climatique et dynamique des espaces pastoraux de la région de Fatick, Sénégal : une approche socio-écologique. (Thèse de doctorat, Université Cheikh Anta Diop de Dakar).

¹⁸ The 9 communes are : Diakhao, Mbellacadio, Diaoulé, Ndiob, Thiaré Ndiagui, Niakhar, Patar Sine, Ngayokhème et Diarrère.

¹⁹ ARD (2021) : Étude Socio-économique de la Vallée du Sine.

- Project area's vulnerability and impacts to climate change

Analysis of precipitation in Fatick reveals a strong interannual to decadal variability over the period 1951-2021, a decrease in cumulative rainfall (from 1000 mm to 700 mm-Figure 2), a shortening of the rainy season (increase in number of consecutive dry days- Figure 2), longer and more frequent intraseasonal rainfall breaks (figure 3). In addition, the onset of the rainy season has shifted on average from the end of June to the first decade of July compared to the reference period, with a delay that can bring it in the second or third decade of July.

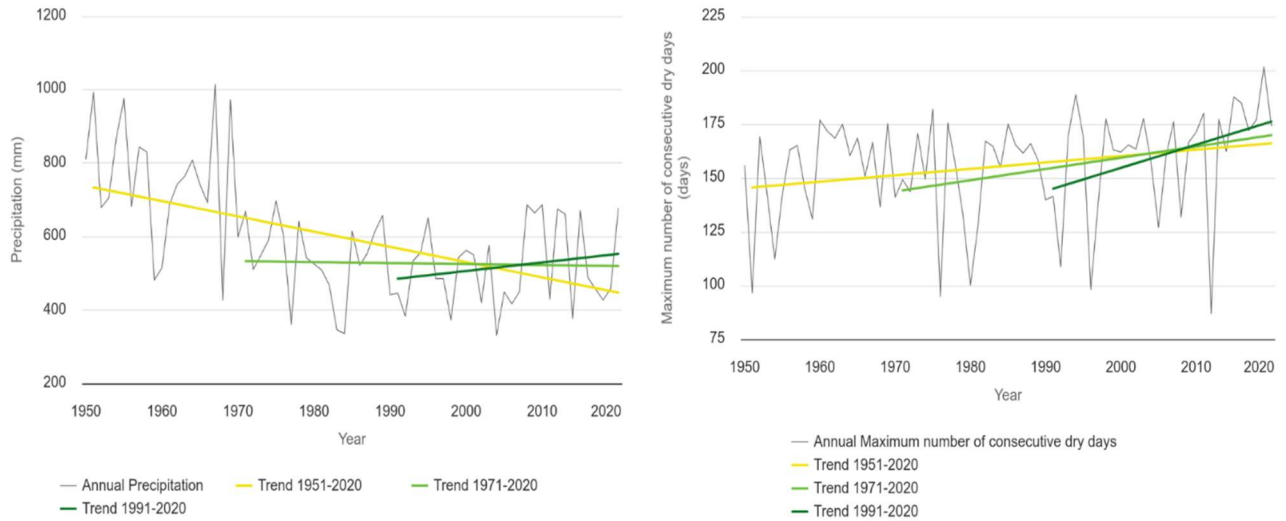


Figure 2: Precipitation annual trends with significance of trend per decade & Maximum number of consecutive dry days annual trends with significance of trends per decade, 1951-2020; Fatick (Source: Source: Climate Knowledge Portal, WB)

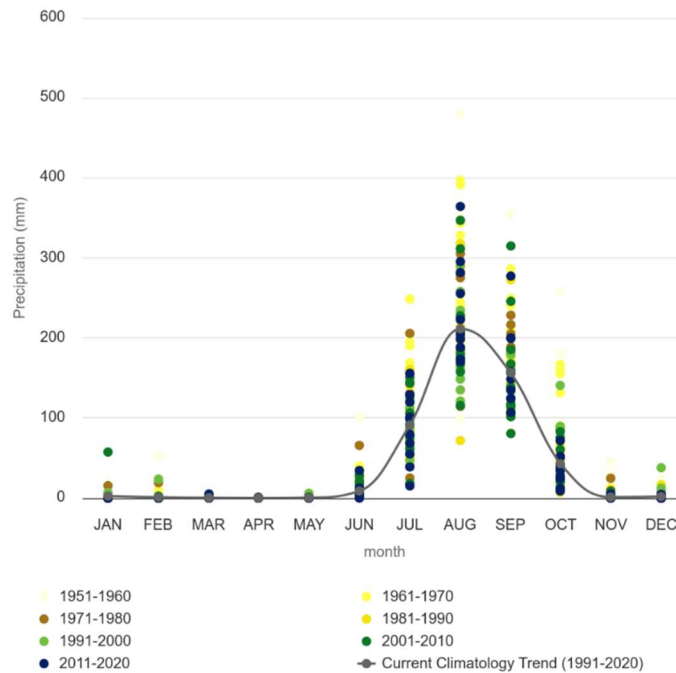


Figure 3: Variability and trends of precipitation across seasonal cycle 1951-2020, Fatick

Regarding temperature, analysis of historical data reveals an overall trend towards climate warming. An increase in the average annual temperature of 1.4°C between 1951 and 2020 is noted, and at an average rate of 0.2°C per decade.

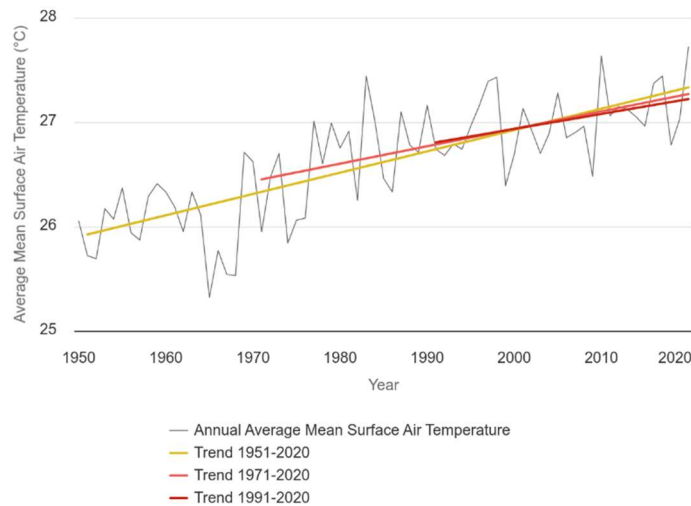


Figure 2: Average mean surface air temperature annual trends with significance of trends per decade 1951-2020; Fatick (Source: Climate Knowledge Portal, WB)

Because of rainfall variability and climate warming, the overall vulnerability of the Dead Sine Valley (DSV) is high, with repercussions on land degradation (loss of fertility and salinization of soils, weak vegetation cover). The groundwater salinity knows an increasing gradient from the plateau to the lowlands with relatively high salinity levels in some areas. Moreover, the wells closest to the valley are highly saline with rates sometimes reaching 15%. It should be noted that many wells in this area are unusable because of the water salinity. In the southern part of the project area, salinity levels are above 40,000 $\mu\text{S}/\text{cm}$ (higher than the "extremely saline" standard, i.e. $>2000 \mu\text{S}/\text{cm}$). Therefore, most farmers have lost their plots. Risks are such that, some seeds used in the project area are no longer adapted because of the disruption of the crop development cycle, leading to a drop in agricultural yields. According to Faye et al²⁰, farmers pointed to higher temperatures, lower cumulative rainfall, intra-seasonal rainfall breaks, false starts, early cessation of the rainy season, and salinity as the causes of lower production and therefore food insecurity, and reduced income for farmers. Thus, rainfed agriculture, which used to be the primary source of household income, is neglected by actors, in particular young people and women, leading to a migration to urban areas. As a result, there has been a drop-in community income, and ultimately, an increase in climate vulnerability and household poverty, whose rate is 49.2%, well above the national average (37.8%)²¹.

- Projected climate change and impacts

The table below presents climate projections for Fatick, developed as part of the NAP process²², based on the RCP 4.5 and RCP 8.5 scenarios. They demonstrate that, regardless of the horizons (2035 or 2050) and the considered scenarios, the variations will increase: cumulative rainfall and length of the rainy season are expected to decrease; for the rainy season onset, the scenarios foresee increasingly late onset; maximum and minimum temperatures will experience an increase compared to the values of the reference period (1976-2005). The rising sea levels, projected to reach one meter by 2100 along the country's coastline²³, are particularly affecting the coastal zones, where approximately 67 % of the

²⁰ Faye, M., et al. (2019) : Analyse de la vulnérabilité des communautés à l'insécurité alimentaire et nutritionnelle dans la région de Fatick. Rapport final.

²¹ ANSD (2021) : EHCVM.

²² Climate Analytics (2019) : Évaluation de la variabilité climatique et des tendances climatiques futures dans la région de Fatick – Sénégal.

²³ USAID 2023. Senegal Climate Change Country Profile. <https://www.usaid.gov/sites/default/files/2023-11/2023-USAID-Senegal-Climate-Change-Profile.pdf>.

population and 90 % of industrial production are concentrated. This vulnerable low-lying area, characterized by high water tables and inadequate drainage systems, is at risk of flooding, erosion, and compromised water quality.

Table 1: Table: change in climate parameters for the 2035 and 2050 horizons (RCP4.5 and RCP8.5)
(Source: Climate analytics, 2019)

Climate indicators	Scenarios	Horizon 2035	Horizon 2050
Cumulative Rainfall (mm)	RCP4.5	-9.40	-14.00
	RCP8.5	-21.86	-24.21
Start of the rainy season	RCP4.5	4.99±3.34	6.22±3.61
	RCP8.5	4.30±3.56	8.70±4.99
Length of rainy season	RCP4.5	-	-
	RCP8.5	8.33±4.46	11.56±7.11
		6.10±5.18	14.99±7.77
Maximum temperatures	RCP4.5	0.61±0.06	1.26±0.14
	RCP8.5	0.69±0.08	1.78±0.17
Minimum temperatures	RCP4.5	0.71±0.06	1.46±0.12
	RCP8.5	0.77±0.08	1.99±0.16

Climate risks described above will therefore become worse if appropriate adaptation measures are not urgently taken. Extreme temperature, changes in precipitation patterns, and increased soil salinization from evaporation, sea-level rise and saltwater intrusion are direct threats to crop yields and livelihoods of smallholder farmers. Severe negative impacts on crops are expected in the future for the project area, particularly on the development of cereals (millet and sorghum) and groundnuts, which experience rapid and deep decline in yields of 23.5% in 2035 and 38% in 2050 for cereals, and a loss of 5.8% in 2035 and 9.6% in 2050 for groundnuts²⁴.

The decline in yields will worsen the threat as it will occur in a context of demographic growth and increased food demand making food insecurity more serious. According to the National Agency for Statistics and Demography (ANSD) projections, the population of the project area will increase from 178,382 to 238,423 inhabitants in 2018 and 2035 accordingly, meaning an annual growth rate of 2.7%. If this trend continues, the population will double in 2051. The increase in population in a context of degradation of agricultural land and therefore of land pressure will lead to the reinforcement of the youth and women migration out of rural areas. Climate-induced expected impacts not only threaten livelihoods but also exacerbate existing social inequalities, due to the reliance of smallholder farmers to rain-fed agriculture.

²⁴ *Ibid.*

Project/Programme Objectives:

List the main objectives of the project/programme.

The main objective of this project is to Strengthen the resilience of local communities, in particular women and youth, to climate change in the Dead Sine Valley, through the development and implementation of climate-resilient agricultural solutions.

However, the barriers below have been identified during the field mission, as potentially hindering the achievement of such objective in the project area:

Barrier #1: The limited mainstreaming of climate change adaptation, in particular climate-resilient agriculture, into planning is a barrier hindering its deployment in the Dead Valley Sine, and consequently sustainability of actions initiated. Lack of integration results from insufficient capacity of local institutions to support planning and implementation of climate-resilient agriculture, for the benefit of vulnerable communities. In areas where adaptation integration is effective²⁵, implementation suffers from a capacity deficit, due partly, to the centralization of climate governance at the national level, which does not facilitate the availability of information and resources. Local governments often depend on national and subnational governments for their resources, capacities, to deliver and scale up local adaptation initiatives. Loose dependencies to national and subnational governments hinder climate action. Henceforth, in the absence of substantive deliberate collaboration networks (vertical and horizontal), implementation often remains deficient because of reduce engagement to all decision segments.

Barrier #2: Loss of productivity and declining soil fertility is considered, as the largest or most important form of land degradation in the country²⁶, while agriculture and forestry are the major sectors affected. In the Dead Sine Valley, multiple droughts and rising sea level rise have increased the salinization of land and water resources, leading to yields and farm incomes decline²⁷, compromising smallholder farmers' livelihood, and threatening the ecological integrity of agroecosystems. Against this background, local communities' resilience is strongly tied to sustainable land and water management solutions that equip them with tools to recover from land degradation and build resilient and productive ecosystems.

Barrier #3: The value chain approach implemented by some initiatives²⁸, produced significant results, demonstrating that it is possible to develop subsistence crop value chains to meet the demands of profitable markets. The essence of adaptation to climate change for poor smallholders' farmers is to balance the dual need for food and cash and not necessarily opposing them. However, we note a lack of a climate-resilient value-chain approach (production, processing, marketing), thereby reducing potential to generate business opportunities for vulnerable communities, with the aim to sustain in the long-term financing of the adaptation practices. These negative dynamics are, partly due, to the weak organization and professionalization of vulnerable groups in the project area. Addressing underfinanced climate-resilient value chains that limits smallholder farmers' resilience, in particular women and young people's, will help improve access to skills, inputs, infrastructure and markets needed to shift away from a traditional agriculture to climate resilient agriculture, diversifying cropping system to spread risk.

The project's theory of change is built to overcome these barriers while complementing ongoing

²⁵ A guide for local planning that incorporates climate change considerations exist, and some municipalities have developed Climate-sensitive local plans.

²⁶ Dieng M, et al. (2023), Sustainable land management policy to address land degradation: linking old forest management practices in Senegal with new REDD+ requirements.

²⁷ Bineta Faye, et al (2019) : « Évolution des terres salées dans le nord de l'estuaire du Saloum (Sénégal) », Géomorphologie : relief, processus, environnement [En ligne], vol.25 - n°2 | 2019.

²⁸ PAFA/PAFA-E and PADAER.

initiatives in the intervention zone. The proposed project's outcomes and outputs identified as solutions, to overcome these barriers, include:

Outcome 1: Local government capacities are built, to plan for effective climate-resilient agriculture.

Outcome 2: Locally led sustainable land, water, and forest management solutions are promoted, to strengthen climate resilient agriculture.

Outcome 3: Climate-resilient agricultural value chains for local adaptation is fostered in target areas, to generate business opportunities for the benefit of vulnerable communities.

The theory of change figure below illustrates the gaps and barriers to achieve the objective, and how each of the three outcomes of the proposed project contributes to the project objective and addresses barriers.

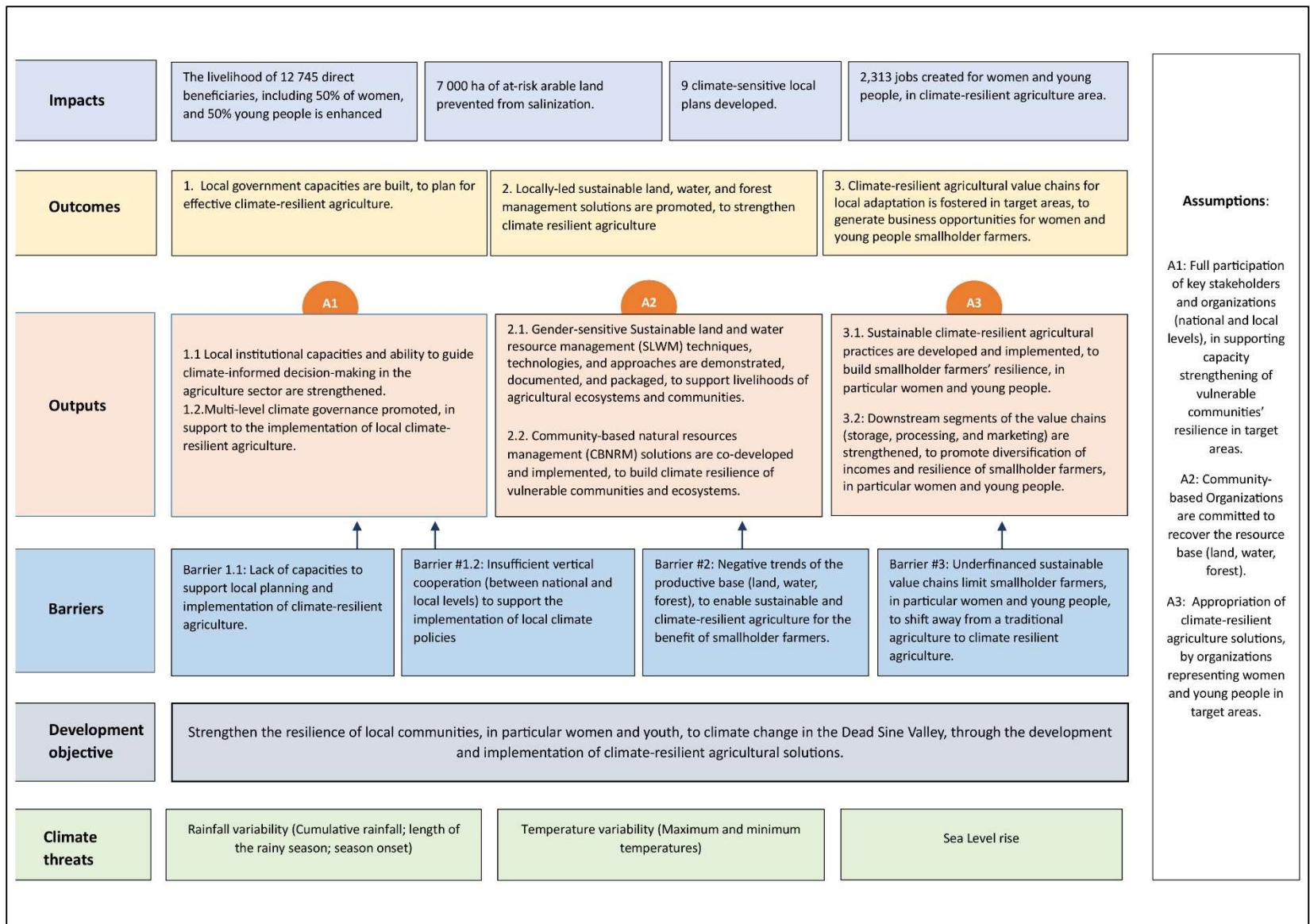


Figure 3: Project's theory of change

Project/Programme Components and Financing:

Fill in the table presenting the relationships among project components, activities, expected concrete outputs, and the corresponding budgets. If necessary, please refer to the attached instructions for a detailed description of each term.

For the case of a programme, individual components are likely to refer to specific sub-sets of stakeholders, regions and/or sectors that can be addressed through a set of well-defined interventions / projects.

Project/Programme Components	Expected Concrete Outputs	Expected Outcomes	Amount (US\$)
1. Enhanced Local Governance Framework for Climate-Resilient Agriculture	Output 1.1. Local institutional capacities and ability to guide climate-informed decision-making in the agriculture sector are strengthened.	Local government capacities are built, to plan for effective climate-resilient agriculture.	150,000
	Output 1.2. Multi-level climate governance promoted, in support to the implementation of local climate-resilient agriculture.		100,000
2. Improved Sustainable Practices for Land, Water, and Forests Local Management.	Output 2.1. Gender-sensitive Sustainable land and water resource management (SLWM) techniques, technologies, and approaches are demonstrated, documented and packaged, to support livelihoods of agricultural ecosystems and communities.	Locally led sustainable land, water, and forest management solutions are promoted, to strengthen climate resilient agriculture.	2,075,000
	Output 2.2. Community-based natural resources management solutions are co-developed and implemented, to build climate resilience of vulnerable people and ecosystems.		100,000
3. Diversified Resilient Agricultural systems for climate adaptation in target local value chains.	Output 3.1. Sustainable climate-resilient agricultural practices are developed and implemented, to build smallholder farmers' resilience, in particular women and young people.	Outcome 3: Climate-resilient agricultural value chains for local adaptation is fostered in target areas, to generate business opportunities for women and young people smallholder	936,000

	Output 3.2. Downstream segments of the value chains (storage, processing and marketing) are strengthened, to promote diversification of incomes and resilience of smallholder farmers, in particular women and young people.	farmers.	850,000
4.	Total Project Activities Cost		3,861,000
5.	Project Execution Cost		430,000
6.	Total Project Cost		4,608,000
7.	Project Cycle Management Fee charged by the Implementing Entity		391,680
Amount of financing requested			4,999,680

Projected Calendar:

Indicate the dates of the following milestones for the proposed project/programme

Milestones	Expected Dates
Start of Project/Programme Implementation	2025
Mid-term Review (if planned)	2027
Project/Programme Closing	2029
Terminal Evaluation	2029

PART II: PROJECT / PROGRAMME JUSTIFICATION

A. 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. Specify how the project/programme enables devolving decision making to the lowest appropriate level and gives local institutions and communities more direct access to finance and decision-making power over how adaptation actions are defined, prioritized, designed, implemented; how progress is monitored and how success is evaluated.

To facilitate effective implementation of climate-resilient agriculture at the local level for the benefit of vulnerable communities, the project's uses a multi-tier approach to create impactful changes within target areas and communities: the agricultural local governance framework; the ecosystems that host agro-sylvo-pastoral production systems; and the livelihood of vulnerable communities (women and young people). The expected improvement of their resilience is likely to advance the implementation of a territorial approach to climate change in Senegal, while addressing power imbalances between different groups. Project will offer catalytic grants to women and young people for the implementation of concrete climate change adaptation responses (under outcome 3), combined with technical assistance and training to support their sustainability, as well as investments (infrastructure) on the ground to lay the foundation for economic development in line with the priorities of local actors (under outcome 1 and outcome 2).

To be able to effectively implement concrete adaptation actions that will benefit to local communities of Dead Sine Valley and strengthen climate resilience, the project has been designed to be implemented under three key components:

- Component 1: Enhanced Local Governance Framework for Climate-Resilient Agriculture;
- Component 2: Improved Sustainable Practices for Land, Water, and Forests Local Management;
- Component 3: Diversified Resilient Agricultural systems for climate adaptation in target local value chains.

Under the three components, the project devolves decision-making to the lowest appropriate level by establishing inter-municipal committees to define grant application processes and by developing an operational manual for guidance and procedures, ensuring local relevance and ownership; it empowers local institutions and communities through training in value chain approaches and climate-resilient agricultural practices, and supports the creation and reinforcement of local economic interest groups (EIGs) for collective decision-making, resource-sharing, and access to funding opportunities; sub-grants targeting women and youth organizations facilitate the adoption of climate-resilient practices, while multifunctional hubs and digital platforms enhance market access and economic valorization, ensuring that local stakeholders have direct control over how adaptation actions are defined, prioritized, designed, implemented, and monitored, with systematic evaluation and dissemination of lessons learned to support continuous improvement.

Component 1: Enhanced Local Governance Framework for Climate-Resilient Agriculture.

This component will address barrier 1: it is grounded in the premise that local governance is a significant determinant of effective adaptation policy, and that local governance framework for climate-resilient pathways require access to science- and experience-based knowledge, community participation²⁹. Community engagement is a fundamental requirement to the process, to avoid existing inequalities or amplified adverse effects of climate change on adaptation actions. The subsequent effects induced by the engagement of actors will benefit both to communities and decision-makers. The component relies also on the growing and scientific evidence that, the institutional capacity of local governments to respond to climate risks can be strengthened by collaborative networks and supported by multilevel governance³⁰, due to the scope and speed of climate events which needs to be addressed effectively at different levels (national, sub-national, local).

Vertical cooperation, meaning cooperation between the national and sub-national levels, will be key for

²⁹ Moss, R. H., and Coauthors (2019): Evaluating Knowledge to Support Climate Action: A Framework for Sustained Assessment. Report of an Independent Advisory Committee on Applied Climate Assessment. *Wea. Climate Soc.*, 11, 465–487.

³⁰ Cid, A. et al. (2024): Mobilizing institutional capacities to adapt to climate change: local government collaboration networks for risk management in Mexico City.

the implementation of local climate policies, along the fields of information and knowledge, finance, and institutional capacities³¹. The underlying empirical justification of the multilevel governance in the Senegalese context, is that despite the existence of Integrated Territorial Climate Plans (PCTI) and local climate-sensitive plans in the country, local institutions are still facing with serious financial and capacity bottlenecks, and a continued dependency on financial transfers from the national government.

This component will be implemented, through the following outputs:

Output 1.1. Local institutional capacities and ability to guide climate-informed decision-making in the agriculture sector are strengthened: a participatory baseline assessment of targeted local institutional capacity on climate resilient agriculture planning, will be undertaken, to serve as a starting point, for assessing technical and functional capacities to mainstream and implement climate-resilient agriculture, and identify gaps where capacity enhancement is required. Technical and functional capacities targeted are climate information and risks assessment; planning and implementation; coordination and partnering; and monitoring and evaluation. The institutional capacity assessment serves, as well, as a participatory process to foster key stakeholders' ownership and commitment, in particular target groups, women and young people, at the starting phase of the project implementation. Based on the assessment, a gender-responsive capacity enhancement plan for adaptation in the agriculture sector will be co-developed with key stakeholders, with a view of supporting policy planning and implementation processes, taking into consideration specific needs of vulnerable communities, in particular women and young people. The implementation of the capacity enhancement plan will be facilitated, through the provision of a technical assistance tailored to the needs of the local communities. It includes provision of information toolkits and guidelines on climate change response plans, and encompasses awareness raising, training on the use of the guide for climate change mainstreaming into local planning, facilitating multi-stakeholder consultations and planning process. The expected outcome of such technical assistance is the co-development of nine robust climate-sensitive local development plans, integrating climate resilient agriculture.

Output 1.2. Multi-level climate governance promoted, in support to the implementation of local climate-resilient agriculture: Under this output, the project will support the establishment of a two-way communication of information and knowledge sharing mechanism (committee bringing together national and sub-national actors), to facilitate the implementation of climate-sensitive local plans, along the fields of capacity development and climate finance access. Key partners and networks operating at national and sub-national levels will be mobilized: local governments, national and regional climate change committees, research centers, non-governmental organizations, national designated authorities of UNFCCC's funding mechanisms, relevant ministries (agriculture & livestock, environment, decentralization), local communities' organizations, private organizations. The committee will develop a collaborative working plan to support implementation of climate-sensitive local plans, ensuring inclusive and meaningful participation of stakeholders, in particular women and young people. It will meet twice a year to monitor progress in implementation and provide specific recommendations.

Outputs and activities planned under this component are presented below:

Output 1.1.

Activity 1.1.1. Baseline assessment of targeted local institutions' capacity on climate resilient agriculture planning.

Activity 1.1.2. Development of a gender-responsive capacity enhancement plan for adaptation in the agriculture sector, including provision of information toolkits and guidelines on climate change response plans.

³¹ GIZ (2018): Multi-Level Climate Governance Supporting Local Action.

Activity 1.1.3. *Provision of technical assistance for improved policy framework to mainstream climate change adaptation, and in particular climate-resilient agriculture, into local planning and budgeting of the targeted areas (9 municipalities).*

Output 1.2.

Activity 1.2.1. Support the establishment of a two-way information and knowledge sharing committee (national and local), to facilitate the implementation of climate-sensitive local plans, along the fields of capacity development and climate finance access.

Activity 1.2.2. Develop, Implement and monitor a collaborative working plan, ensuring inclusive and meaningful participation of stakeholders, in particular women and young people.

Component 2: Improved Sustainable Practices for Land, Water, and Forests Local Management.

This component will address barrier 2, by supporting locally led sustainable practices for land and water resource management (SLWM), as well as community-based natural resources management (CBNRM). The smallholder farmer's collective needs for sustainable agricultural practices to address adaptation needs that are compatible to livelihoods, agriculture and land/soil management requirements to produce enough and desired food while maintaining/increasing ecosystem productivity in the face of increased climate risks. By assessing these needs the project will identify areas where emerging capacity building are needed and ensure knowledge sharing mechanism to feel information gaps for improved SLWM. The focus on SLWM and CBNRM is driven by opportunities they offer to provide triple-win solutions to communities, beneficial in adapting to climate change: increased land productivity, improved livelihoods, and ecosystems³². Indeed, there is growing scientific evidence that, SLWM– which includes a combination of organic soil fertility, inorganic fertilizer, and water managements- can provide effective climate change adaptation solutions, thereby enabling smallholders' farmers to cope with climate change impact³³. Moreover, Sustainable land and water management (SLWM) will more than offset the effect of climate change on yield under the current management practices³⁴. The component prioritizes community engagement and knowledge sharing, through farmer field school (FFS), an approach based on people-centered learning³⁵, as well as establishment of local committees, ensuring that local stakeholders actively participate in and benefit from sustainable practices. By harmonizing ecological resilience with socio-economic needs (infrastructure building), the project strives to create enduring structures that enhance the overall management of 7, 000 ha of land and water resource in the targeted areas.

Output 2.1. *Gender-sensitive Sustainable land and water resource management (SLWM) techniques, technologies, and approaches are demonstrated, documented and packaged, to support livelihoods of agricultural ecosystems and communities:* Under this output, the project will equip women and young people farmers with: (i) the necessary sustainable land management (SLM) techniques and approaches, to increasing productivity, enhancing adaptation and resilience of the farming systems, and (ii) water resource management techniques and infrastructure, to fortify the resilience of local ecosystems against the adverse effects of climate change, ensuring sustained access to water for agriculture while safeguarding soil quality.

Overall, trainings will be provided to smallholder farmers, in particular women and young people, on gender-sensitive SLM techniques and practices, based on specific guidelines/manuals. The project will tap into successful local practices, as well as the Global SLM Database³⁶, which holds a rich and ever-

³² Liniger, H.P. et al, (2011). Sustainable Land Management in Practice – Guidelines and Best Practices for Sub-Saharan Africa.

³³ Critchley, W. et al (2023): Sustainable Land Management and Climate Change Adaptation for Small-Scale Land Users in Sub-Saharan Africa. Land 2023, 12, 1206. <https://doi.org/10.3390/land12061206>

³⁴ Ephraim Nkonya et al (2018): Climate Risk Management through Sustainable Land and Water Management in Sub-Saharan Africa.

³⁵ FAO (2016): Farmers field schools Guidance document.

³⁶ <https://qcat.wocat.net/en/wocat/>

growing collection of SLM practices, taking into consideration the Dead Sine Valley specificity. Trainings focus, *inter alia*, on agroforestry, organic farming and crop rotation, conservation agriculture, regenerative agriculture practices, diversification of cropping system, water harvesting, Integrated Pest Management. The trainings will be provided by locals NGOs and research organizations. On-site implementation will follow in farmer field school (FFS) pilot sites covering the nine municipalities, offering to women and young people farmers, space for hands-on group learning, enhancing skills for critical analysis and improved decision making on co-developed sustainable land and water resource management practices³⁷. Small water retention dikes (SWRD) and Small Anti-Salt Dikes (SASD) will be built, for enhancing water retention, particularly during periods of increased precipitation, thereby reducing the risk of water scarcity, and for providing a protective barrier against saltwater intrusion into arable land. Positive impacts of water infrastructure will benefit to irrigated farming systems of project beneficiaries, in particular target women and young people farmers (Output 3.1). To support identification of beneficiaries, as well as managing and sustaining the climate-proofed investment, an inter-municipal committee will be established. It is comprised of local governments, smallholder farmers 'organizations, NGOs, private sector, etc. The committee will also play a key role in the process of evaluating, documenting, and packaging SLWM solutions for potential replication, upscaling, and integration into the project knowledge management system and the Global SLM Database.

Output 2.2. Community-based natural resources management (CBNRM) solutions are co-developed and implemented, to build climate resilience of vulnerable communities and ecosystems: the project will support participatory development of land use plans, enabling communities to allocate different activities to different zones, thereby facilitating appropriation and community-based management and use of natural resources (land, productive water and forests). The process includes: (i) a community mapping, (ii) a land-use planning, where communities are supported to plan, taking into consideration future variabilities. This phase entails collection of data to capture the main land uses that exist in the project area: economic, ecological and social value of each land use (forests, annual and perennial crops, livestock production models and other uses of the land). At this stage, high-resolution satellite and remote-sensing imagery will be provided by CSE, one of the main GIS-service provider in the country, (iii) Development of land use scenarios where communities will be supported to plan for development trajectories, based on various land use changes, (iii) Selection by communities of the land-use planning scenario, based on the expected economic, social and environmental effects of each scenario. To ensure that the land use plans are workable, they will be field-tested in at least three municipalities. The inter-municipal committee (output 2.1) will oversee the process, by supporting monitoring, documenting, and evaluation of the implementation phase, based on an inter-municipal agreement for natural resource management signed between the nine municipalities, that will define and formalize the rules of use, taking into consideration women and young people needs.

To promote uptake of CBNRM practices, the project will support the provision of incentives to communities, in the form of grants and technical assistance targeting women and young people groups, in diversifying their source of incomes from agriculture (see outcome 3).

Outputs and activities planned under this component are presented below:

Output 2.1.

Activity 2.1.1. Provide trainings to smallholder farmers, in particular women and young people groups, on gender-sensitive SLWM techniques and practices, and support on-site implementation in farmer field school (FFS): reforestation, agroforestry, assisted natural regeneration, fencing, living hedges and organic amendments (compost, animal waste), water harvesting

³⁷ *Ibid.*

Activity 2.1.2. *Support smallholder farmers, in particular women and young people, in the construction of infrastructure to withstand climate variability and salinization: small water retention dikes (SWRD) and small anti-salt dikes (SASD).*

Activity 2.1.3. *Support establishment of an inter-municipal committee, to manage and sustain the climate-proofed investment by local public authorities and farmer-based organizations.*

Activity 2.1.4. *Evaluate, document, and package SLWM solutions for potential replication and upscaling.*

Output 2.2.

Activity 2.2.1. *Support co-development of Land Use Plans and setting up of local inter-municipal agreement for natural resource management (land, productive water and forests), to define and formalize the rules of use, taking into consideration women and young people needs.*

Activity 2.2.2. *Support the inter-municipal committee to monitor, evaluate, and document the implementation of the inter-municipal agreement for natural resource management.*

Component 3: Diversified Resilient Agricultural systems for climate adaptation in target local value chains.

Component 3 will address barrier 3, by: (i) supporting climate resilient solutions at farm-scale to enhance the capacity of agricultural systems to face present and future uncertainties, and by: (ii) diversifying source of incomes, through the strengthening of downstream segments of the value chains: processing and marketing. Indeed, climate-resilient agriculture, including water management in irrigation, climate change-resistant crop development, inorganic fertilizers and pesticides, use of climate information, have a potential to increasing agricultural yield³⁸, and ensure food security. Moreover, the additional integration of gender approaches provides the opportunity to promote gender equality while scaling it up³⁹. By supporting diversification of farming activities in the processing and marketing segments of the value chains, and thereby spreading the risk among different crop and livestock types, and by increasing the range of agricultural products for subsistence or markets⁴⁰, this component provides to smallholder farmers opportunities to increase their ability to cope with upcoming climate variability and change. The project investments and technical assistance across the value chains crops will include input supply, equipment, provision of climate-resilient production techniques and information, support for storage, processing and marketing. Farmers' economic growth and training will be a cross-cutting activity, to better take advantage of investment made, enhance sustainability, and connect farmers with markets (see figure 5 below). The support provided under this component will be in the form of sub-grants, targeting women and youth organizations, based on a value chain approach (inputs, production, storage, processing and marketing), as provision of ex-ante funds to smallholders can be used to cover start-up transition costs that might otherwise prevent them from changing agricultural practices⁴¹. Targeted groups will be invited to apply for grants, and selected organizations will be accompanied to implement diversified resilient agricultural systems for climate adaptation, throughout all segments of value chains crops, based on the project's climate-resilient value chain approach, as illustrated below.

³⁸ Srivastav, A.L., Dhyani, R., Ranjan, M. et al. Climate-resilient strategies for sustainable management of water resources and agriculture. *Environ Sci Pollut Res* 28, 41576–41595 (2021). <https://doi.org/10.1007/s11356-021-14332-4>.

³⁹ Huyer S, et al. (2021): Expanding Opportunities: A Framework for Gender and Socially Inclusive Climate Resilient Agriculture. *Front. Clim.* 3: 718240. doi: 10.3389/fclim.2021.718240

⁴⁰ Paul F. McCord et al (2015): Crop diversification as a smallholder livelihood strategy within semi-arid agricultural systems near Mount Kenya, *Land Use Policy*, Volume 42, 2015, Pages 738-750, ISSN 0264-8377.

⁴¹ Streck C, et al (2012): Incentives and benefits for climate change mitigation for smallholder farmers CAFS Report no. 7.

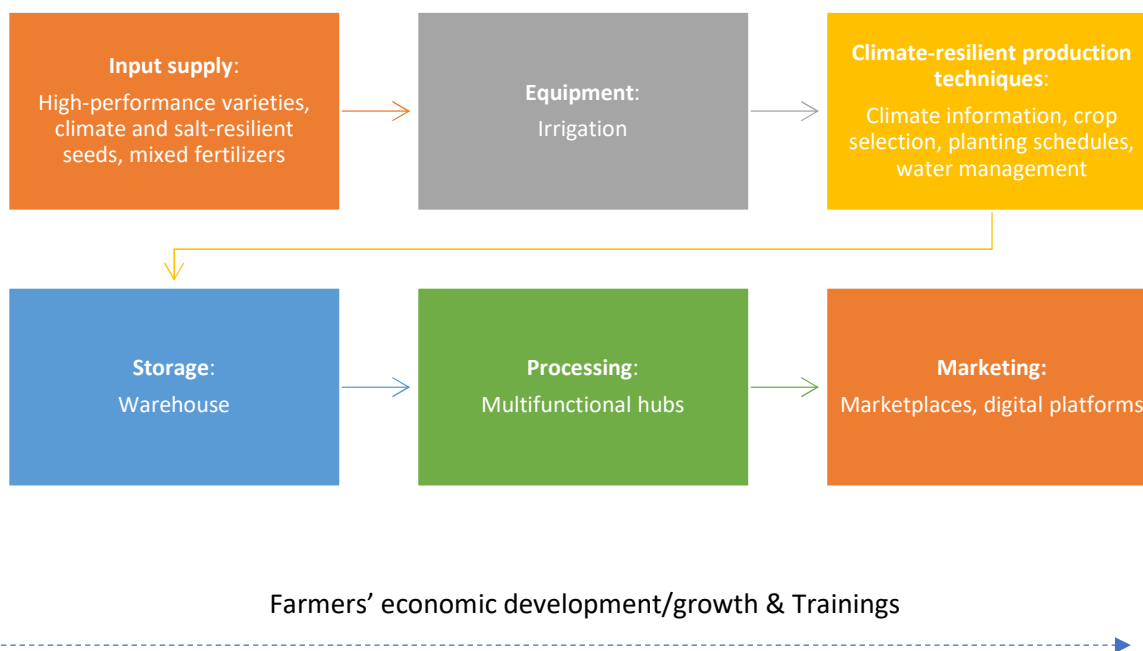


Figure 4: Project's climate-resilient value chain approach for provision of grants to smallholder farmers

Output 3.1: *Sustainable climate-resilient agricultural practices are developed and implemented, to build smallholder farmers' resilience, in particular women and young people:* this output will be the starting point of the grants provision to smallholders' farmers, with the view of enhancing their incomes, and thereby their resilience to climate variability and change. The application process for grants provision will be defined by the inter-municipal committee, established under output 2.1, through an operational guideline outlining the framework, guidance, application, selection procedures, and implementation, as well as environmental and social safeguards and M&E procedures. The document will further improve the processes and will provide templates for stakeholder to access to funding. Beneficiaries' women and young people groups will receive trainings on value chain approach and climate-resilient agricultural practices in farmer field school (FFS) pilot sites, including crop rotation, selection and use of high-performance varieties, climate and salt-resilient seeds, integrated soil fertility management, use of climate information, planting schedules, and water management. To support implementation, nine women and youth-owned agricultural farms will be equipped with climate resilient inputs, solar irrigation system, and warehouses, to boost productivity of target crops (millet, groundnut and tomato), while promoting sustainable practices aligned with the specific climatic conditions of the project area. Access of women and young people to inputs and equipment will be covered, partly, by the sub-grant.

Output 3.2. *Downstream segments of the value chains (storage, processing and marketing) are strengthened, to promote diversification of incomes and resilience of smallholder farmers, in particular women and young people:* under this output, selected beneficiaries will benefit from technical assistance and training for economic valorization of their agricultural products.

First, support will be provided to smallholder farmers and their organizations for enhancing their professional capacity to deliver high quality services, and to be reliable business partners for other climate resilient value chain stakeholders, such as input providers, traders, processors, and lenders. This will be done, through the establishment and/or reinforcement of their organizations as local economic

interest groups (EIGs)⁴². EIGs offer the opportunity to negotiate better deals, access funding opportunities and markets in the target value chains crops (millet, groundnut and tomato), and promote shared responsibility for maintenance, management, and business viability, as well as fostering collective decision-making, resource-sharing, and knowledge exchange. Technical and management trainings, in support to the corporate groups, will cover processing and marketing, financial management, market access.

Second, as pooling services can offer opportunities to streamline the agricultural value chain and create more jobs for youth and women, two multifunctional hubs equipped with solar system processing, and packaging equipment will be set up.

Third, the project will facilitate, in close collaboration with existing initiatives (see section F), access to market and funding of women and young people's EIGs, through setting up of marketplaces and digital platforms to build stronger links among actors in the value chain (producers, consumers, distributors, and financial services).

Fourth, lessons learnt from the whole process of climate-resilient agricultural value chains implementation (from production to marketing) will be documented and disseminated, through appropriate communication channels to support country's programming in the same area.

Outputs and activities planned under this component are presented below:

Output 3.1.

Activity 3.1.1: *Develop an operational manual outlining the framework, guidance, and grants application procedures, and select beneficiaries, following a call for proposals.*

Activity 3.1.2: *Training smallholder farmers beneficiaries, in particular women and young people, on value chain approach and climate-resilient agricultural practices.*

Activity 3.1.3: *Support implementation of climate-resilient production, through the provision to women and youth-owned farm, of climate-resilient inputs, solar irrigation equipment and warehouses, to cope with rainfall variability and secure production against climatic hazards.*

Output 3.2.

Activity 3.2.1: *Support economic professionalization of smallholder farmers, in particular women and young people, through the creation /reinforcement of local economic interest groups (EIGs) and provide trainings on technics and management of processing and marketing, to facilitate access to business opportunities in the target value chains crops (millet, groundnut and tomato).*

Activity 3.2.2: *Set up two multifunctional hubs for facilitating access of women and young people's EIGs, to processing and packaging.*

Activity 3.2.3: *Facilitate, in close collaboration with existing initiatives, access to market and financial services of women and young people's EIGs, through setting up of marketplaces and digital platforms.*

Activity 3.2.4. *Evaluate, document, and disseminate lessons learnt from the implementation of the climate-resilient agricultural value chains for local adaptation.*

⁴² EIG is the first level of business company in the current legal framework in Senegal.

B. 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. In particular, specify how the project/programme is addressing structural inequalities faced by women, youth, children, people with disabilities, people who are displaced, Indigenous Peoples and marginalized ethnic groups.

Economic and social benefits

Increased yield production and incomes - Evaluation of economic returns of climate resilient livelihood strategies demonstrated that adopters benefit by switching from the traditional practices, with increased income, in the context of climate change and environmental degradation. The economic benefit varies, depending on the type of climate resilient practice and the cropping system. The methods of crop intensification for climate-resilient and sustainable agriculture to improve the growing of tomatoes revealed an average increase in yield of 20%, and a net income/hectare of 47% given the lower costs of production⁴³. Similar kinds of productivity gains are reported for groundnut (from 680 kg/ha to 2,222 kg/ha), and millet (14-72%) in Senegal⁴⁴. The resulting increase in farmer's net income will alleviate pressures that lead to forced outmigration of young people and women in search of employment in urban areas. In the context of the proposed project, improved irrigation systems, use of high-performance varieties, climate and salt-resilient seeds, integrated soil fertility management, sustainable land and water management strategies, and use of climate information are expected to boost agricultural yields of target cropping systems (tomato, groundnut, millet), securing a more stable and diversified source of income for women and young people groups. In the context of the project area, where the average yield per hectare for female-headed households is estimated for groundnut and millet respectively at 549.9 kg/ha (821.9 kg/ha for men) and 619.7 kg/ha (1249.8 kg/ha)⁴⁵, actions initiated to develop and implement sustainable climate-resilient agriculture in target local value chains (outcome 3) will increase the average yield per hectare, and therefore enhance incomes.

Food security: The project's interventions will lead to improving the food security of the target households in the context of climate variability and change, through one of its critical components: food availability. By improving yield production, resilience and adaptability of agricultural systems to the effects of climate change and by enabling women and young people' groups to buffer fluctuations in market prices for target cropping systems (storage capacity), the project contributes to enhance the capacity of the country's food supply system to respond to various climate related climate-related shock or stress.

Gender equity-The project is expected to enhance the livelihood of 12 745 direct beneficiaries, of which 50% (6372) are women and 50% are young people. Women represent 51% of the estimated indirect beneficiaries, 178,382 people, i.e. 90 974 people. The project prioritized the inclusion of women and youth groups to ensure their active involvement and consideration throughout the project's lifecycle. Women and young people will benefit from an improved governance framework enabling equal participation of men and women, as well as technical assistance, equipment, training, grants, access to markets facilities, with the aim of enhancing their economic empowerment, improving their resilience to cope with and adapt to climate change, and unlock bottlenecks for participation in rural value chains. All stakeholders, encompassing both men and women in their diverse roles, will actively participate in

⁴³ Prabhakar A. et al (2018): System of crop intensification for more productive, resource-conserving, climate-resilient, and sustainable agriculture: experience with diverse crops in varying agroecologies.

⁴⁴ Folorunso M. Akinseye et al. AICCRA Fact Sheet: Farm-level productivity of Millet, Groundnut, and Cowpea under climate-smart practices using participatory Accelerating Impacts of CGIAR Climate Research for Africa (AICCRA).

⁴⁵ CSE (2021) : Etude sur la consultation des parties prenantes et évaluation des problématiques liées au genre.

planning, implementing, monitoring, and evaluating project activities. This inclusive approach aims to address the unique needs of various stakeholders and streamline the targeting of development sub-projects. During the full funding proposal phase, the in-depth gender analysis will provide a foundational understanding of the gender nuances within the project areas, facilitating more informed and equitable interventions.

Job creation: With increased entrepreneurial capacities of many farmers, the project will create 2,313 jobs, including 1,275 permanent sustainable jobs, for which 50% are expected to benefit from women, and 50% to young people.

Environmental benefits

Improved soil quality- Among the indicators selected to achieve Senegal's land degradation neutrality (LDN) is the areas under sustainable management. It is estimated that a sustained annual effort of 480,263 ha per year is required from 2020 to compensate losses, and thereby move towards neutrality by 2035⁴⁶. The project will contribute to meet country LDN's objectives, by maintaining existing healthy land in the project area, adopting sustainable land management practices that can slow degradation while increasing food production, and by promoting responsible and inclusive land governance. Corresponding actions will cover 7000 ha of land at-risk of salinity.

Avoiding or mitigating negative impacts -The following measures will ensure that project activities are designed and implemented in a way that does not cause negative social or environmental impacts. During the full proposal development: (i) the project Gender Action Plan will be designed to ensure that risks related to gender are managed and enable project decisions to be gender-inclusive; (ii) the Environmental and Social Management Plan (ESMP) will ensure impacts of the project are mitigated or minimized and there will be no negative environmental or social impact from the project activities. Under the ESMP, site-specific environmental or social impact assessments (ESIAs) will be also planned, to comply with national and Adaptation fund standards for specific activities (infrastructure) and take appropriate mitigation measures. To facilitate the resolution of concerns and complaints regarding alleged non-compliance with environmental and social policies of the AF, a grievance redress mechanism will be proposed by the project's ESMP.

⁴⁶ MEDD (2016). Land Degradation Neutrality Report.

C. Describe or provide an analysis of the cost-effectiveness of the proposed project / programme., focusing on the implementation and execution arrangements, in particular the mechanism which will provide more direct access to finance.

This project is based on best practices from other interventions conducted by the main actors in this project. The Regional Development Agency (ARD), the Regional Division for the Environment and Classified Establishments (DREEC), the Regional Water and Forest Inspection (IREF) and the Regional Department of Rural Development (DRDR) as well as the Producer Organisations have significant experience as they have been involved in other past projects.

The proposed project will build on the lessons learned from previous projects. For example, the ARD has built on its extensive experience in project management for water retention dams and ant salt dams, which will be very useful during the implementation of the project. This is also the case for the Water and Forestry Department, which has a solid knowledge of sustainable soil and forest management practices. The endogenous practices in terms of fighting land degradation through defensive measures, desalination techniques with the use of groundnut shells and cow dung will be also used in this project.

Knowing that Senegal is a least developed country and a highly indebted economy (76.6% of the GDP in 2022⁴⁷), the grant requested is essential to reduce climate hazards and reduce vulnerability in the Fatick area. This grant will help reduce the additional costs of adaptation which are estimated at the national level at around 683 million USD for the agriculture sector⁴⁸.

Without the support of the Adaptation Fund for combating soil salinization and implementing climate-resilient agriculture practices in the Dead Sine Valley in Senegal, the local community faces a cascade of challenges with potentially severe and lasting consequences. The persistent issue of soil salinization, exacerbated by climate change, could intensify, rendering vast tracts of land unsuitable for cultivation. The absence of funding would impede the adoption of climate-resilient agriculture practices, such as drought-resistant crops and efficient irrigation systems, leaving farmers without the tools and techniques necessary to adapt to changing environmental conditions.

As a result, agricultural yields may plummet, leading to decreased income for local farmers and threatening food security in the community. The vulnerability of the region to the impacts of climate change, including water scarcity and unpredictable weather patterns, would be exacerbated, amplifying the risks faced by already vulnerable communities. The livelihoods of the local population, which are intricately tied to agriculture, could be severely impacted, potentially leading to increased poverty and economic hardship.

Moreover, the lack of funding for adaptation measures could contribute to environmental degradation in the Dead Sine Valley. Soil erosion, loss of biodiversity, and other ecological consequences may unfold, affecting not only the agricultural landscape but also the overall health of the local ecosystem. The long-term sustainability of agriculture in the area would be compromised, and the community might find itself in a precarious position, grappling with both immediate and future challenges without the necessary resources for resilience-building. In essence, the absence of Adaptation Fund funding could set off a chain reaction of adverse effects, posing a threat to the well-being, livelihoods, and sustainability of the local community in the Dead Sine Valley.

⁴⁷ Statista. 2023. Senegal: National debt from 2018 to 2028 in relation to gross domestic product. <https://www.statista.com/statistics/452330/national-debt-of-senegal-in-relation-to-gross-domestic-product-gdp/>

⁴⁸ Government of the Republic of Senegal. 2020. Nationally Determined Contribution of Senegal. <https://unfccc.int/sites/default/files/NDC/2022-06/CDNSenegal%20approuv%C3%A9e-pdf-.pdf>

With the support of Adaptation Fund funding to combat soil salinization and implement climate-resilient agriculture practices in the Dead Sine Valley in Senegal, the local community stands to experience transformative positive impacts. Adequate funding could enable the implementation of advanced technologies and sustainable practices to mitigate soil salinization, preserving arable land and ensuring its productivity. The adoption of climate-resilient agriculture practices, facilitated by the financial support, would enhance the resilience of local farmers to the adverse impacts of climate change, including droughts and erratic weather patterns. Improved irrigation systems, drought-resistant crop varieties, and efficient water management strategies could boost agricultural yields, securing a more stable and diversified source of income for the community. This funding would not only fortify the community's capacity to adapt to climate change but also elevate the overall quality of life, contributing to food security, poverty reduction, and sustainable development. Moreover, the environmental health of the Dead Sine Valley could be safeguarded, promoting biodiversity and ecosystem resilience. In essence, the Adaptation Fund funding has the potential to catalyze a positive cycle of sustainable development, empowering the local community to thrive amidst the challenges posed by climate change.

D. Describe how the project / programme is consistent with national, sub-national and local sustainable development strategies, including, where appropriate, national adaptation plan (NAP), national, sub- national or local development plans, poverty reduction strategies, national communications, or national adaptation programs of action, or other relevant instruments, where they exist.

Senegal formally ratified the United Nations Framework Convention on Climate Change (UNFCCC) in June 1994, showcasing its early commitment to international efforts aimed at mitigating the impacts of climate change. Subsequently, the country also ratified the Kyoto Protocol in July 2001, reinforcing its support for initiatives seeking to reduce global greenhouse gas emissions. These ratifications underscore Senegal's willingness to contribute significantly to the international community's goals in combating climate change and adopting policies for a more sustainable future. The current project is aligned with the objectives of the national policies, plans and strategies as shown in the following table:

National Strategies / plans /Policies	Project alignment with the objectives of Senegal Framework documents
Senegal Emerging Plan, PSE Phase II 2019-2023	<p>The alignment of the project with national policies and strategies is an element that promotes national ownership of the project.</p> <p>The project is aligned with the PSE which is the most important development document of the country. The Senegalese government has put in place a policy that places agriculture at the heart of the development strategy, as shown by the Plan Sénégal Emergent (Senegal Emerging Plan, PSE), particularly in its strategic axis 1 "Structural transformation of the economy and growth".</p> <p>The project contributes also to the achievement of the PSE's objectives by contributing to Axis 2 "Structural transformation of the economy" through agricultural production activities and 3 "Human capital, social protection and sustainable development" with in particular the environment and sustainable development component.</p>
Programme to revive and accelerate the cadence of Senegalese agriculture, PRACAS 2014	<p>Senegal's high ambitions for the agricultural sector are reflected in the "Programme de relance et d'accélération de la Cadence de l'agriculture sénégalaise"</p> <p>(Programme to revive and accelerate the cadence of Senegalese agriculture, PRACAS), which provides the cornerstones for the creation of mass employment in the agricultural sector and the development of a highly competitive agri-food sector, anchored in horticultural value chains.</p> <p>The activities of components 2 and 3 contribute to the objectives of the PRACAS through the development of the vegetable value chain</p>
Nationally Determined Contribution 2021	<p>In the Nationally Determined Contribution of the agricultural sector (NDC-Agriculture), strong measures have been adopted for agriculture. These include the promotion of sustainable land management technologies, the improvement and adaptation of crop and forest production, soil fertilization, diversification and use of short-cycle varieties, improving the resilience to food and nutrition insecurity, water management/promotion of local irrigation, promotion of climate-related risk and disaster management and agricultural insurance, promotion of climate information, and scaling up collaborative natural resource management, food security.</p> <p>The proposed project is in line with the national priorities. It seeks to improve agricultural performance and food security through the improvement and diversification of production through water management, soil quality improvement and the restoration of the vegetation cover.</p>
National Adaptation Plan 2015	<p>The project is also in line with the priorities of the NAPA, which aims to facilitate people's adaptation to climate change. Senegal embarked on the process of drawing up its NAP (National Adaptation Plan) in 2015, adopting a sector-based and participatory approach, coordinated by the Ministry of the Environment and Sustainable Development (MEDD).</p> <p>An institutional framework coordination and monitoring framework has been put in place, and a roadmap was drawn up in 2018, to be updated every three years.</p> <p>Priority sectors have been identified on the basis of the NAPA analysis (2006), the Intended Nationally Determined Contributions (2015) and the Plan Sénégal Émergent (2014-2035).</p> <p>Nine sectoral NAPs will be formulated: agriculture, livestock, fisheries, water resources, coastal zone, biodiversity/tourism, health, flood-focused disaster risk management, and infrastructure. Currently, the fisheries sectoral NAP has been developed with the support of the United States Agency for International Development (USAID). The process of drawing up the other sectoral NAPs is in progress.</p>
Investment Framework on Sustainable Land Management.	<p>The project's expected results are also in line with the objectives of the country's Land Degradation Neutrality Plan (LDN), which aims to reach the neutrality by 2035. The LDN considers "areas under sustainable management" as one of its three</p>

	indicators.
the Integrated Territorial Climate Plan (PCTI) of Fatick	The project supports the implementation of the Integrated Territorial Climate Plan (PCTI) of Fatick, which considers as one its six priority areas, the development of a productive agriculture and livestock adapted to climate change.

E. 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. Also describe, as needed, how the project/programme will provide support to local actors and build their capacities to comply with the standards.

Relevant national technical standards	Scope and relevance to the project
Water code (Law n° 81-13 of 4 march 1981) 1981	Scope: This delineates the legal framework governing continental surface and subsurface waters. It specifically addresses regulations pertaining to the management, utilization, and conservation of water resources, as well as those governing the structure and functioning of public water services. Relevant to component 3 relative to innovative CC resilient practices and water management
Environment code (Law n° 2023-15 of 2 august 2023) 1981	Scope: This law establishes the fundamental rules and principles for environmentally sound management of the environment. The provisions of this law apply to natural environments, sites, and landscapes; to air, soil, and water; to animal and plant species; to classified installations; to biodiversity and biological balances; and to the living environment. Relevant to all the project components.
Law No. 2004-16 on the agro-sylvo-pastoral orientation law	Scope: The policy pursued by the State in the field of agro-sylvo-pastoral development is characterized by the gradual withdrawal of the State and adheres to the principles of refocusing its functions on sovereign duties, continuing the decentralization policy, improving the framework and living conditions in rural areas, and creating an environment conducive to private investments in rural areas. This law takes into account all economic activities in rural areas (farming, livestock, inland fishing, forestry, gathering, processing, trade, and services), as well as their social and environmental functions. The policies developed in these various sub-sectors contribute to the agro-sylvo-pastoral development policy of which they are an integral part. The present law also considers the regional specificities and agro-ecological diversities of the country. Relevant to all project components
Law No. 2019-12 amending and supplementing Law No. 2013-10 of December 28, 2013, concerning the General Code of Local Authorities.	Scope: This law regulates the organizational and financial framework of local authorities and the transfer of competences to local authorities. Relevant to all the project because the project will be executed by local institutions.

All subprojects funded by the project will also comply with relevant national and AF's standards, by identifying and evaluating negative environmental and social impacts and mitigation actions, based on the project's operational manual outlining the guidance and application procedures for subprojects (Output 3.1). Under these sub-projects, the project will support local actors by implementing targeted

capacity-building initiatives that comply with national and international standards. This will involve conducting specialized training sessions and workshops, providing technical assistance to ensure effective implementation and compliance. Moreover, the project will establish robust monitoring and evaluation frameworks to track progress and ensure sustained adherence to standards. These efforts will not only enhance local capacity but also promote an environment conducive to long-term sustainability and resilience in line with global development goals.

F. Describe if there is duplication of project / programme with other funding sources, if any. Describe how the project/programme will ensure coordination of different initiatives, sub-projects and small grants towards a common goal, enhances collaboration across sectors and outlines how activities avoid duplication and enhance efficiencies and good practice.

The project complements other projects such as

- “the Sahel Resilience Building Project, the Support Project for Agricultural Sectors”,
- “the Support Project for Small-Scale Local Irrigation”,
- “BARVAFOR”,
- “the Renewable Energy Development Project”, and
- “the Integrated Development Programme for Fatick”, which addressed environmental issues and the resilience of populations to climate change.
- Sen-RM. Natural Resource Management Project.

These projects have achieved results in the Fatick region in terms of partnerships with technical support services, the fight against land salinization, and land preservation, which can be capitalized on thanks to the mobilization of technical support services. However, they did not cover the entire current intervention zone (only two municipalities) and their action was limited. Furthermore, the proposed project differs from the previous ones in that it focuses on both income generation and food security (support for agricultural production and diversification). The aim is to help farmers find alternatives to the drop in their income caused by climate change by developing adaptation activities (control of productive water, promotion of market gardening, support for the processing of agricultural products, introduction of adapted varieties, etc.).

Despite climate change and agriculture-related projects in Senegal, there is still need for the project to increase the adaptive capacity of the people living in the Dead Sine Valley:

- The techniques selected have been tried and tested in farming communities affected by the problem of land salinisation in Foundiougne (in the communes of Keur Samba and Keur Saloum Diané), Kaffrine, Kolda, Ziguinchor and Kédougou.
- The need for these practices to restore degraded land in the communities of the five communes is crucial. The soils are becoming increasingly salty, and yields have dropped significantly. This places these communities in a situation of real need, so that any practice aimed at redressing the trend of resource degradation is awaited with great interest.
- The practices/techniques from previous projects use local materials and skills and therefore are available and accessible. This ensures their sustainability. They are practices that do not generate additional costs for producers. They use materials and equipment that already exist in the project area.

The project will ensure coordination by establishing a centralized project management unit (PMU) that oversees all initiatives, sub-projects, and grants. This PMU will facilitate regular meetings and communication channels to align goals and activities across sectors, promoting collaboration. Clear project guidelines and standardized procedures will be implemented to prevent duplication and ensure efficient resource allocation.

G. If applicable, describe the learning and knowledge management component to capture and disseminate lessons learned and how this contributes to building and institutionalizing local capabilities. Provide details on managing traditional and/or indigenous knowledge, where relevant.

The project knowledge management actions will consist of capturing, documenting, and disseminating at different levels (local, national, regional, global), lessons learned, best practices, and evidence gathered from the activities, for supporting and improving a climate resilient agriculture approach benefiting to most vulnerable communities at local level. Particular attention will be given to the lessons learned on improving the adaptive capacity of women and young people groups. Different tools such as in farmer field school (FFS), demonstration sessions, workshop proceedings, technical guides, manuals and others, will serve to share information and knowledge on technological solutions, resilient infrastructure, structuring funding requests, managing climate information and implementing appropriate responses. Climate-resilient agricultural practices, upstream and downstream of the value chains (production, storage, processing and marketing), will be documented and packaged, to serve upcoming programming. The project will also conduct regular M&E reviews, under the project coordination component, and will use the findings to identify lessons learned, best practices, and areas for improvement.

To ensure easy access of information for the right audiences, all content will be made available on the CSE website. This system allows beneficiaries to showcase accomplishments and provides a common space to make connections and engage with broader audiences.

H. 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. Provide details on how the consultative process considered and addressed gender-based, economic and other inequalities and encouraged vulnerable and marginalized individuals to meaningfully participate in and lead adaptation decisions.

The development of the concept note followed a participatory approach, engaging all key local stakeholders in a collaborative process. Initiated by a vulnerability assessment⁴⁹, a workshop was organized to identify the project idea, with active participation from the beneficiaries, including local authorities and farmers' organizations. This inclusive approach ensured that the perspectives and insights of the primary stakeholders were considered from the outset, encouraging a sense of ownership and relevance in the conceptualization of the project. The participatory nature of the proposed activities not only facilitated a more comprehensive understanding of the specific vulnerabilities but also laid the groundwork for a project aligned with the needs and priorities of the local communities and organizations involved.

The outcomes of the workshop were reinforced by insights gathered from interviews conducted in the field, engaging local elected representatives and producers on the issues of agriculture and climate change. The collaborative effort extended to the active involvement of various stakeholders, including local authorities, technical services (ARD, DREEC, DRDR, IREF, SRADL (Regional Support Service for Local Development), ANCAR (National Agency of Agricultural and Rural Council), NDA (DEEC (Direction of the Environment and Classified Establishments)), and CSE, in the development of the concept note. These technical stakeholders played a pivotal role in finalizing the concept note particularly through the provision of technical data on elements such as types of dikes, suitable sites, potential environmental impact, and information relevant to the climate change challenges. Their continued involvement underscores the holistic and informed approach taken to address the complex issues at the intersection of agriculture and climate change.

⁴⁹ ARD (2021) : Analyse de la vulnérabilité au changement Climatique de la Vallée morte du Sine.

Additionally, the collaboration with stakeholders played a crucial role in refining the project's focus by helping in the identification and determination of the number of direct beneficiaries. Local authorities proved instrumental by providing essential, region-specific information pivotal in shaping the activities and guiding the types of investments and developments to be undertaken. The active participation of local authorities ensured that the project design was intricately tailored to the unique characteristics and needs of their respective territories. This inclusive approach not only enhanced the precision of targeting but also fostered a sense of local ownership, making the project more responsive to the nuanced requirements of the communities involved.

The concept note underwent a thorough validation process, receiving approval at the local level from local authorities and various stakeholders. During the process of identifying and formulating the project, several actors and stakeholders were consulted. On 15 June 2021, a local consultation meeting was held at the Fatick Regional Development Agency to present the project idea to stakeholders and gather their opinions and contributions. The organization of this meeting was facilitated by the financial support of the PAS-PNA project (Scientific Support Project for the National Adaptation Plan Process).



Figure 5: Local consultation at the ARD meeting room

Public consultations were also organised as part of the process of involving and ensuring ownership of the project by the various stakeholders. They took place from 17 to 26 June 2021 in the commune of Fatick and in the local authorities and communities concerned by the project. They had the following objectives: (i) to inform and discuss the project with the main actors and stakeholders; (ii) to gather information on the characteristics of the sites and the potential impacts, in relation to the planned activities; (iii) to gather opinions, perceptions, expectations and concerns, suggestions and recommendations on the project.

The methodology used was a direct interview survey based on a semi-directive guide, which enabled fruitful exchanges to be established with the various interlocutors. This made it possible to create a framework for discussion with the stakeholders so that they could express themselves in the best possible conditions.

The public consultation involved a number of stakeholders through the following socio-professional structures: (i) the territorial communes (Municipal Council, Departmental Council); (ii) the regional technical departments (the Regional Division for the Environment and Classified Establishments, Regional Direction for Rural Development, Regional Livestock Service, Regional Fisheries Service, the Regional Water and Forest Inspection, Regional Hydraulic Service, etc.); (iii) projects, programmes and agencies (Regional Development Agency, National Agency for Statistics and Demography, National Aquaculture Agency, PROVAL-CV, etc.); (iv) producers' organisations; and (v) the populations of the villages polarised by the sites where the works planned by the project are located.



Figure 6: Completing the screening form with local people and members of the regional technical committee

At the final phase of the concept note development, a public consultation was organized in August 2024 to validate project components and ensure that stakeholders' considerations are fully taken into account, in particular women and young people groups.



Figure 7: validation workshop (August 2024)

As part of the funding proposal preparation, an extensive stakeholder consultation process will take place. This inclusive approach will involve workshops engaging key stakeholders at both national and local levels to solicit their opinions, with a particular emphasis on activities and their active involvement. By fostering open dialogue and incorporating diverse perspectives, the consultation process aims to ensure that the funding proposal is not only technically sound but also reflects the priorities and aspirations of the broader stakeholder community, in particular women and young people groups. This includes various consultations with farmers on trends in land use, farming practices, climate risks, market challenges and perception of food security. This information will be combined with emerging needs for food and income and how actors perceive a combination of the two objectives in the same landscape.

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

The project cannot be funded through the Senegalese government and local authorities due to stranded budgetary resources. Senegal is among the least developed countries (LDCs) with relatively high debts (72.5 % of the overall GDP in April 2024, according to IMF). Central and local governments are thus characterized by a structural budget deficit that prevents them from covering their needs to finance adaptation actions. Therefore, they cannot bear the additional cost of addressing climate change adaptation. The sector could not be a source of financing for this project because it has not yet fully grasped the business opportunities and risks in climate action. As a result, private sector actors are cautious and sometimes even insensitive to the topic of climate action. This is why the financing from the Adaptation Fund is the only option to implement this project.

Senegal's financial needs, which are estimated in the NDC at 4.3 billion dollars, exceed the country's capacities. Therefore, to achieve the objectives set out in the NDC, Senegal expects a lot from its external partners. This is why the unconditional share of the NDC covered by its own resources is very low, particularly the part reserved for management in the area. In this context, the resources of the Adaptation Fund are crucial to overcome the obstacles that hinder the Government of Senegal's ability to increase resilience to the impacts of climate change in the Dead Sine Valley holistically.

The recipients of the project are primarily local authorities and local communities, through the national government representing the State of Senegal, a signatory both to the Convention on Climate Change and to the Paris Agreement. These stakeholders are in a situation of serious need of adaptation to climate change due to the more frequent and severe droughts and the salinization of land and water resources associated with the advance of the salt bevel. However, budget allocations as the only internal source of funding are largely insufficient. Each of these stakeholders faces a budget deficit that hinders them from covering the additional financial needs associated with climate risks. Concerning international sources of financing, although the Senegalese Government approached various climate and environment funds. However, the financial resources mobilized remain insufficient to support climate action in the project area. In addition to the insufficient financial resources mobilized by the country, local authorities and local communities do not have the necessary capacities to formulate bankable projects for the various climate funds. To meet the financial needs and overcome the obstacles identified above, this funding request is made in the form of a grant.

J. Describe how the sustainability of the project/programme outcomes has been taken into account when designing the project / programme. In particular, describe how the project/programme supports long-term development of local governance processes, and improves the capacity of local institutions (including through simpler access modalities), and how it can ensure that communities can effectively implement adaptation actions, facilitate and manage adaptation initiatives over the long term without being dependent on project-based donor funding.

The project goes beyond one-time interventions by integrating climate resilience into local governance structures. It strengthens local capacities for risk assessment, climate-informed decision-making, and the mainstreaming of adaptation strategies into local planning. This will ensure long-term ownership and institutionalization of climate adaptation beyond the project's lifespan, fostering a culture of proactive resilience within local government entities.

The project also focuses on building the organizational capacities of farming communities, in particular women and young people groups, to independently address climate change challenges. It empowers farmers with knowledge, skills, and resources for adaptive strategies, soil and water conservation, climate-resilient seed selection, and salt-resistant crop diversification. This fosters self-reliance, enabling communities to sustain climate-resilient agricultural practices without ongoing external support, ensuring adaptation continuity.

The project also strengthens value chains, fortifying entire agricultural ecosystems for greater resilience. It supports market access for processed agricultural products, ensuring income generation and economic sustainability for farmers. This in turn will promote the formation of economic interest groups for collective ownership and management of shops and platforms, fostering community-driven sustainability initiatives. This approach strengthens overall economic resilience, enabling communities to invest in adaptive measures and maintain climate-smart practices independently.

The project establishes community-based natural resource management mechanisms, fostering collective responsibility and ownership. It encourages inter-communal agreements for shared resource management, promoting collaboration and conflict resolution. The project includes the formation of committees for integrated water management and salinity control, instilling a sense of shared responsibility for sustainability among community members, particularly considering the most vulnerable, including women and young people. This collaborative approach ensures long-term commitment to adaptive practices and resource stewardship, contributing to sustainable outcomes beyond the project's funding period.

The project embraces innovative and sustainable technologies, promoting self-sufficiency and reducing future external inputs. It introduces renewable energy-powered irrigation systems, reducing reliance on fossil fuels and mitigating climate impact. It establishes multifunctional hubs for agricultural processing and storage, powered by solar energy, further integrating sustainable practices and cost-saving measures. These innovations contribute to long-term resilience by decreasing external dependencies and promoting environmentally conscious solutions that can be sustained by communities themselves.

Several activities, like establishing community management frameworks and developing local plans, ensure the sustainability and replicability of the project's achievements. The project's investments generate income for communities, allowing them to continue their activities even after the funding ends. The establishment of community frameworks for the management of local organizations guarantees the sustainability of the project. Local communities in charge of their management are capitalizing their experience to ensure the sustainability of investments. Local plans developed and implemented in a participatory manner serve as a reference framework for land use and sustainable management of natural

resources. This achievement is becoming part of local culture. Strengthening governance with the empowerment of territorial actors and local communities and integrating the climate change adaptation, in particular climate-resilient agriculture, into local development planning makes it possible to integrate climate risk management into practices in a more sustainable approach. The degree of producers' commitments through awareness-raising, organization and capacity building is a guarantee for the project's sustainability. The dissemination and use of good practices, such as those related to Natural Resources Management, agroforestry and agro-food of the project, could be considered as sustainability factors. The investments made (climate-resilient inputs, irrigation equipment, warehouse and processing equipment) generate income that allows the benefiting producer organizations to set up working capital to continue their activities when the project is completed. The project, which targets the areas that are most vulnerable to climate change, will provide, through the capitalization and dissemination of its results, information on the conditions required, so that they can be widely used by national and even international decision-makers.

The project's impact goes beyond Senegal. By capitalizing on its experiences and disseminating best practices, the project provides valuable information to decision-makers worldwide, inspiring climate action across borders. In addition, the approach used for the development and implementation of the project, which has enabled a strong involvement of local technical services, is an excellent guarantee of the sustainability of the project's results. These are permanent structures that can contribute to the consolidation and sustainability of the assets acquired. Finally, CSE regularly receives doctoral students and interns on local economic development issues due to the university's relationship with Cheikh Anta Diop in Dakar, Paul Valéry in Montpellier and SupAgro in Montpellier. Students could contribute, as part of the capitalization of experience, to produce knowledge on this theme to facilitate its dissemination, particularly to national and international decision-makers.

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

Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
<i>Compliance with the Law</i>		Further consultations and detailed assessments will be done during the development of Environmental and social impact framework (ESMF) for the Project at full proposal stage. The final project design will be compliant with all relevant national laws after extensive consultations with national and local stakeholders as well as development of the detailed EMSF for the project at local level.
<i>Access and Equity</i>		The project will take a number of transparent steps that will help ensure that the benefits of the project are being distributed fairly with no discrimination nor favoritism, under the supervision of the by the inter-municipal committee (Output 3.1). Project targeting will comprise targeting criteria based on gender and age quotas. The subprojects' application will advertise broadly through the local mass media (radio, social media, town hall and village meetings, workshops etc.) for the selection of women and young people beneficiaries.
<i>Marginalized and Vulnerable Groups</i>		Marginalized and vulnerable groups including women and youth will be consulted during the proposal development process to ensure that their identified threats, priorities and mitigation measures are reflected. The project

		will empower vulnerable groups to make decisions on concrete adaptation actions, valuing their traditional and local knowledge. This project will encourage women and youth to choose adaptation activities in a transparent and participatory manner.
<i>Human Rights</i>	x	This project does not risk violating any pillar of human rights.
<i>Gender Equality and Women's Empowerment</i>		Further detailed gender analysis will be done at full proposal level to ensure that all gender aspects are fully incorporated into the proposal. The project targeting strategy will have gender quotas (50% at least) and will promote women leadership in public spaces and decision-making power for climate change adaptation. During project formulation women will be consulted at national and local levels and a full Initial Gender Assessment will be conducted that will enable the appropriate risk screening of the ESP on Gender Equality and Women's Empowerment.
<i>Core Labour Rights</i>		The project will not affect working conditions and health and safety of workers. All the requirements of Senegalese international laws on working conditions will be respected and integrated in the environmental and social evaluation during the formulation of the funding proposal. No child will be associated or employed in the activities of the project. Women can be employed on some activities, but specific care will be taken regarding working conditions. The project will not have impacts on working conditions, but it will be further detailed in the environmental and social evaluation that will be carried out during the formulation phase of the full funding proposal.
<i>Indigenous Peoples</i>	x	There are no indigenous peoples in the project area.
<i>Involuntary Resettlement</i>	x	No resettlement will be undertaken by the project.
<i>Protection of Natural Habitats</i>	x	Protected areas or critical habitats are not part of the area of intervention of the project.
<i>Conservation of Biological Diversity</i>		Only indigenous species or established agricultural species will be used in project activities.
<i>Climate Change</i>		No further assessment required Project activities proposed are aimed to enhance the resilience of ecosystems and communities to climate change.
<i>Pollution Prevention and Resource Efficiency</i>		Works may cause noise and vibration, but measures will be elaborated in the environmental and social evaluation that will be carried out during the formulation phase of the funding proposal to mitigate the impact. The same applies for the wastes induced by activities.
<i>Public Health</i>	x	The project will be designed and implemented in a way that avoids any negative impact on public health.
<i>Physical and Cultural Heritage</i>	x	Archaeological, religious, or other areas of physical or cultural heritage will not be part of the project area of intervention.
<i>Lands and Soil Conservation</i>		The proposed project is not expected to have negative impact on lands and soils. Project and subprojects' interventions promote sustainable land and water resource management (SLWM) techniques, technologies, and approaches.

PART III: IMPLEMENTATION ARRANGEMENTS

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

Project Objective(s) ¹	Project Objective Indicator(s)	Fund Outcome	Fund Outcome Indicator	Grant Amount (USD)
Objective: To Strengthen the resilience of local communities, in particular women and youth, to climate change in the Dead Sine Valley, through the development and implementation of climate-resilient agricultural solutions	Improved ecosystem services	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	
	% of the population in targeted communities reporting benefits from an enhanced livelihood asset	Outcome 6: Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas	6.1 %age of households and communities having more secure access to livelihood assets	
	Number of climate-resilient practices / technologies adopted	Outcome 7: Improved policies and regulations that promote and enforce resilience measure	7. Climate change priorities are integrated into national development strategy	
Project Outcome(s)	Project Outcome Indicator(s)	Fund Output	Fund Output Indicator	Grant Amount (USD)
Outcome 1: Local government capacities are built, to plan for effective climate-resilient agriculture	Number of local plans integrating gender sensitive climate-resilient agriculture	Output 7: Improved integration of climate-resilience strategies into country development plans	7.2. No. of targeted development strategies with incorporated climate change priorities enforced	250,000
Outcome 2: Locally led sustainable land, water, and forest	Number of Sustainable land and water resource management	Output 5: Vulnerable ecosystem services and natural resource assets	5.1. No. of natural resource assets created, maintained	2,175,000

management solutions are promoted, to strengthen climate resilient agriculture.	(SLWM) and Community-based natural resources management (CBNRM) solutions promoted and adopted by communities	strengthened in response to climate change impacts, including variability	or improved to withstand conditions resulting from climate variability and change (by type and scale)	
Outcome 3: Climate-resilient agricultural value chains for local adaptation is fostered in target areas, to generate business opportunities for women and young people smallholder farmers.	Number of new incomes sources generated for women and young people households, to cope with climate variabilities and uncertainties.	Output 6: Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability.	6.2.1. Type of income sources for households generated under climate change scenario	1,786,000

¹ The AF utilized OECD/DAC terminology for its results framework. Project proponents may use different terminology but the overall princ

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

A. Record of endorsement on behalf of the government²

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:

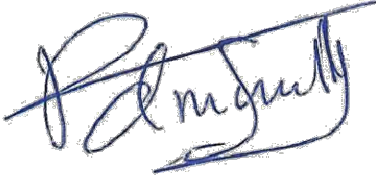
<p>Mrs. Mame Faty Niang SEYDI Head of the Coastal Management Division at the Direction of Climate Change, Ecological Transition and Green Finance (DCCTEFV)/MEED Ministry of Environment and Ecological Transition (METE).</p>	<p>Date: 02/02/2024</p> <div style="text-align: center;">  <p>Le Chef de Division</p> </div>
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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*

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 (Senegal Emerging Plan, Programme to revive and accelerate the cadence of Senegalese agriculture, Nationally Determined Contribution, National Adaptation Plan, , Investment Framework on Sustainable Land Management....) 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.

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.

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>Prof Cheikh Mbow</i> Implementing Entity Coordinator		
Date: November 4 , 2024	Tel. and email: +221 338258066; +221 338258067, +221 77 573 05 55 mbow@cse.sn	
Project Contact Person: Aissata Sall		
Tel. And Email: +221 338258066; +221 338258067 +221 77 685 1590 aissata.sall@cse.sn		

REPUBLIQUE DU SENEGAL



Un Peuple - Un But, Une Foi

MINISTERE DE L'ENVIRONNEMENT ET DE LA TRANSITION ECOLOGIQUE

**Direction du Changement climatique, de la Transition écologique et des
Financements verts**

October, 20, 2024

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

Subject: Endorsement for Locally Led Adaptation concept note

In my capacity as designated authority for the Adaptation Fund in Senegal, I confirm that the above 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 Senegal.

Accordingly, I am pleased to endorse the above LLA Concept note with support from the Adaptation Fund. If approved, the project will be implemented by the Centre de Suivi Ecologique (CSE) and executing by the Regional Development Agency (ARD) of Fatick.

Sincerely,

Mrs. Mame Faty Niang SEYDI

*Head of the Coastal Management Division at the Direction of Climate Change, Ecological
Transition and Green Finance /MEED Ministry of Environment and Ecological Transition (METE)*





Project Formulation Grant (PFG)

Submission Date: November 4 2024

Adaptation Fund Project ID:
 Country/ies: Senegal
 Title of Project/Programme: Strengthening the resilience of communities in the Dead Sine Valley
 Type of IE (NIE/RIE/MIE): National Implementing Entity (NIE)
 Implementing Entity : Centre de Suivi Ecologique
 Executing Entity/ies: Fatick Regional Development Agency (ARD)

A. Project Preparation Timeframe

Start date of PFG	December 2024
Completion date of PFG	April 2025

B. Proposed Project Preparation Activities (\$)

Describe the PFG activities and justifications:

List of Proposed Project Preparation Activities	Output of the PFG Activities	USD Amount	Budget note
Literature review	Detailed literature review, a list of reviewed literatures	3,600	Desk review and onsite literature gathering
Stakeholders’ workshops for validating the project design and inputs for full proposal development	Workshop reports, validated project design, improved design, inputs to the design process	16,600	Projects design workshops with stakeholders from the 9 municipalities
Field visits in the project area for validating project design and obtaining inputs for full project proposal development	Validated project design	21,600	Visit of the project sites in the 9 municipalities and potential beneficiaries of the projects

Detailed analysis of project components, outputs and activities	Well described and detailed Project components, output and activities	5000	Desk work with experts to refine the project's components and activities
Development of project log frame and results framework	Detailed Project Logframe and Results Framework developed	3000	Expert's work for the definition of the project logfram, results framework
Detailed project budget development	Detailed and concrete project budget	2000	Financial expert work to define the project's detailed budget
Gender assessment	Gender analysis report	10800	Gender expert for ground activities and survey to produce the gender analysis for the project
Environmental Impact Assessment (EIA) of the proposed project	EIA report, EIA review report and Environmental Clearance Certificate	17900	ESS expert for ground activities and survey for the final EIA report
Full project proposal development	Full Project Proposal developed	10000	Diverse expertise linked to the project sector workshops to finalize the project development
Implementing Entity's Management Fee		8500	Follow and supervision of NIE for the activities for the full proposal development
Total Project Formulation Grant		100,000	

Please describe below each of the PFG activities and provide justifications for their need and for the amount of funding required:

➤ **Literature review**

The literature review will involve systematically gathering, evaluating, and synthesizing existing research, policy, strategy and all other relevant document; to identify best practices, highlight knowledge gaps, provide contextual understanding, inform project design and methodology, avoid redundancy, and establish theoretical frameworks, encompassing steps such as defining objectives, searching for and evaluating literature, synthesizing information, and reporting findings.

➤ **Stakeholders' workshops for validating the project design and inputs for full proposal development**

The stakeholders' workshops for validating the project design and gathering inputs for full proposal development are critical for ensuring that the project aligns with local needs and conditions. These workshops will involve a diverse group of stakeholders, including community members, local government officials, NGOs, experts, and other relevant parties. The activities in these workshops include presenting the initial project design, discussing its goals, methods, and expected outcomes, and soliciting feedback and suggestions. This participatory approach ensures that the project benefits from local knowledge, addresses actual vulnerabilities, and enhances community buy-in and ownership. The feedback collected is then used to refine the project proposal, making it more robust, context-specific, and likely to succeed in achieving its adaptation goals.

➤ **Field visits in the project area for validating project design and obtaining inputs for full project proposal development**

Field visits in the project area are essential for validating the project design and gathering inputs for the full project proposal. These visits will involve on-site evaluations and interactions with local communities, stakeholders, and environmental conditions. The activities will include assessing the physical and social landscape, identifying climate vulnerabilities, and understanding local adaptation needs. Meetings and discussions with community members, local leaders, and experts will help gather firsthand information and feedback on the proposed project design. These interactions ensure that the project is context-specific, addresses actual and future climate risks, and incorporates local knowledge and practices. The insights gained from these field visits will be crucial for refining the project proposal, making it more effective and sustainable in enhancing climate resilience.

➤ **Detailed analysis of project components, outputs and activities**

A detailed analysis of project components, outputs, and activities will involve several important steps. First, project components are detailed, encompassing inputs such as resources (funding, expert knowledge), activities (events, research, capacity building), and intended outcomes. This analysis uses a logical framework (logframe) to summarize core elements, ensuring clarity and coherence in the project's design. Outputs refer to the direct results of project activities, such as the development of climate-resilient infrastructure. Activities will include the specific actions taken to achieve these outputs, such as training smallholder farmers beneficiaries on value chain approach and climate-resilient agricultural practices and organizing stakeholder workshops. Regular monitoring and evaluation (M&E) are integral to track progress, assess effectiveness, and inform necessary adjustments. This systematic approach ensures that the project is well-structured, targeted, and adaptable to changing climate conditions

➤ **Development of project log frame and results framework**

The project log frame and results framework will involve defining the project's goal and objectives, developing a logical framework matrix capturing the hierarchy of results (impact, outcomes, outputs, activities, inputs), establishing indicators and means of verification, identifying assumptions and risks, visually representing the logical linkages between project components, engaging stakeholders for validation, and implementing a monitoring and evaluation plan to track progress and make necessary adjustments, ensuring the project is well-designed, effectively managed, and capable of delivering sustainable benefits to vulnerable communities.

➤ **Detailed project budget development**

Developing a detailed project budget will involve several key steps to ensure comprehensive financial planning and resource allocation. First, this activity will detail and categorize all necessary components of the project,

such as baseline data collection, capacity building, community engagement, infrastructure development, monitoring, and evaluation. Each category will be broken down into specific activities, with estimated costs for personnel, materials, equipment, travel, and administrative expenses. Incorporate contingency funds to address unforeseen expenses.

➤ **Gender assessment**

The gender assessment will involve evaluating the different impacts of climate change on men and women and ensuring gender-responsive strategies. This activity will start with collecting gender-disaggregated data to understand the specific vulnerabilities and needs of women and men in the project areas. The assessment will identify gender-specific barriers to adaptation and proposes measures to overcome them, such as enhancing youth and women's access to resources, information, and decision-making processes. It will also examine how the proposed adaptation strategies might affect gender dynamics, aiming to avoid reinforcing existing inequalities. Furthermore, the assessment will develop indicators to monitor and evaluate gender outcomes throughout the project. Engaging both women and men in the planning and implementation stages ensures that the adaptation efforts are inclusive and equitable.

➤ **Environmental Impact Assessment (EIA) of the proposed project**


The Environmental Impact Assessment (EIA) will involve evaluating the potential environmental impacts of the project to ensure it does not adversely affect the environment or hinder its resilience. This process will include screening to determine the necessity of an EIA, scoping to identify key environmental concerns, assessing potential impacts on natural resources and ecosystems, proposing mitigation strategies to address negative effects, consulting stakeholders to gather feedback, and documenting the findings in a comprehensive report. Moreover, it will involve monitoring the project's environmental effects to ensure compliance with mitigation measures and to adapt strategies as needed for unforeseen impacts.

➤ **Full project proposal development**

Developing the comprehensive project proposal will involve several key components. Initially, the proposal will define the specific climate change impacts and vulnerabilities the project aims to address, using data and assessments to justify the need for adaptation. The objectives will be clearly articulated, with detailed activities designed to achieve these goals. Engaging stakeholders, including local communities, ensures that the project is designed taking into account the actual needs and constraints of the target population. The proposal will outline a detailed budget, specifying how funds will be allocated to various activities, and include a timeline for implementation. Furthermore, a robust monitoring and evaluation plan will be included because it is essential to track progress, assess outcomes, and make necessary adjustments. Risk management strategies will also be detailed to address potential challenges that might arise during the project lifecycle. Finally, the proposal will align with the requirements of the Adaptation Fund to enhance its chances of approval

C. Implementing Entity

This request has been prepared in accordance with the Adaptation Fund Board's procedures and meets the Adaptation Fund criteria for project identification and formulation

Implementing Entity Coordinator, IE Name	Signature	Date (Month, day, year)	Project Contact Person	Telephone	Email Address
Pr Cheikh Mbow		September, 20, 2024	Aissata Boubou SALL	+221 33 825 8066 +221 77 685 1590	aissata.sall@cs e.sn