



## 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](mailto:submissions@adaptation-fund.org)

## 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:** 5,000,000 (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.**

## 1. 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 37<sup>th</sup> 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 action<sup>1</sup>. 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 inhabitants<sup>2</sup>, 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 line<sup>3</sup>. 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 %<sup>4</sup>.

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

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

<sup>2</sup> ANSD (2023): RGPH 5.

<sup>3</sup> EHCVM 2018/2019.

<sup>4</sup> 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 marketing<sup>5</sup>, leading to reduced crop yields and quality. The UNCCD notes that soil degradation is a significant issue in the country, with an estimated 34%<sup>6</sup> 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 farmers<sup>7</sup>. 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 2022<sup>8</sup>. Women have far lower participation rates in the labor market (37.4% against 64.5% for men<sup>9</sup>). 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 respectively<sup>10</sup>: 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% nationally<sup>11</sup>. In the DSV, food crops largely dominate activities of women-headed households, while cash crops provide additional income to buy rice, which is one of the main staple food for most Senegalese. Market gardening, identified with high potential to support women-headed households food security, is hindered by the progressive salinization of the valley's lands. In this region, the most common way to access to land is inheritance from "father-to-son" and not often by social values from "father-to-daughter". The daughter generally inherits the land in the absence of a male option in the family. This is a dominant traits of land tenure status of agricultural of the DSV. This challenge is more prominent in getting access to individual land rights. In the case of collective access, municipalities are required to take a formal step of council's deliberation to secure access to land for women.

**Youth-** The Senegalese population is characterized by its large youth component: half of the population

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

<sup>6</sup> MEDD (2016). Land Degradation Neutrality Report.

<sup>7</sup> ARD (2021) : Étude Socioéconomique de la Vallée Morte du Sine.

<sup>8</sup> <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)

<sup>9</sup> World Economic Forum (2023): 2017 Global Gender Gap Report.

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

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

is under the age of 19<sup>12</sup>, 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 areas<sup>13</sup>), 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 migrated<sup>14</sup>. In this specific area, household heads are dominated by the 50 to 60 age group. The lower numbers in the 30-39 and 20-29 age groups, demonstrate that the less young, rarely heads of households<sup>15</sup>. Thus, the participation of young women and men in agriculture remains quite limited, resulting in migratory flows towards cities.

### **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 floods<sup>16</sup>.

#### **- 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 km<sup>2</sup>, 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 country<sup>17</sup>. The region displays a high ecological heterogeneity with two distinctive ecozones: the North has an average rainfall of 520 mm with a shorter rainy season and covers generally the department of Fatick, and the South has an average rainfall of 680 mm, particularly in the department of Foundiougne<sup>18</sup>. The project area covers nine (09) municipalities<sup>19</sup> 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 178,382<sup>20</sup>, for which 51% are women, and 77% are young (under 35 years old).

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<sup>12</sup> ANSD (2023): RGPH 5.

<sup>13</sup> ANSD (2013): RGPHAE.

<sup>14</sup> *Ibid.*

<sup>15</sup> CSE (2024): Project initial gender assessment.

<sup>16</sup> World Meteorological Organization (WMO), State of the Global Climate 2022. <https://wmo.int/publication-series/state-of-global-climate>

<sup>17</sup> 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.

<sup>18</sup> 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).

<sup>19</sup> The 9 communes are : Diakhao, Mbellacadio, Diaoulé, Ndiob, Thiarié Ndialgui, Niakhar, Patar Sine, Ngayokhème et Diarrère.

<sup>20</sup> ARD (2021) : Étude Socio-économique de la Vallée du Sine.

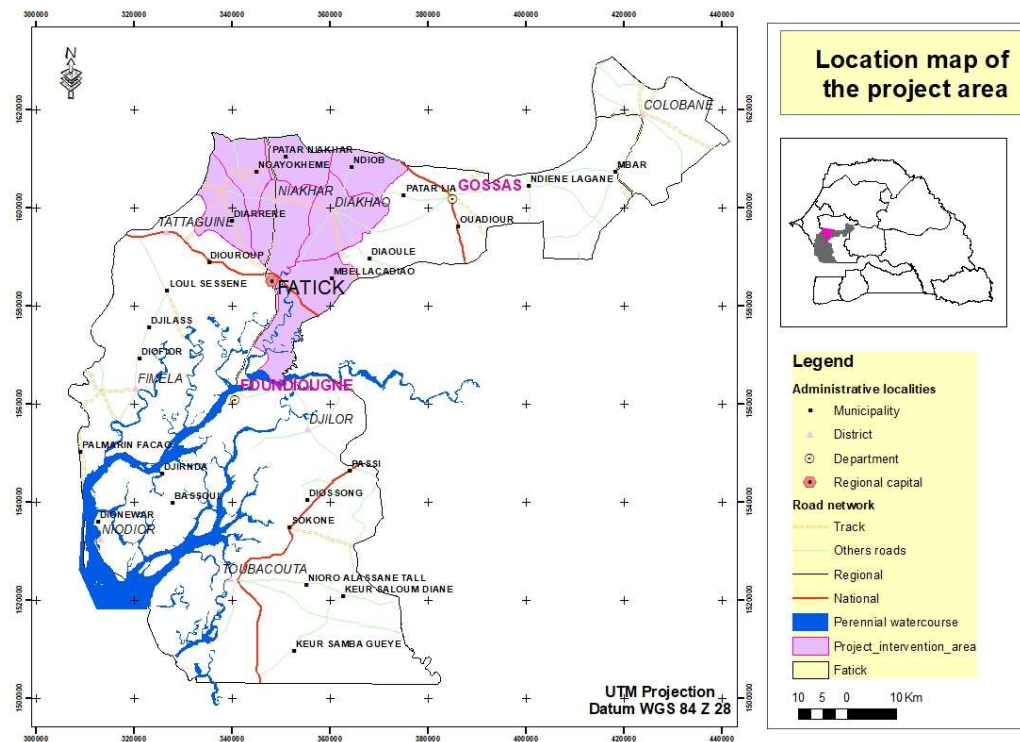


Figure 1: Map of project area-Dead Sine Valley (Source: CSE)

#### - Project area's vulnerability and impacts to climate change

Precipitation analytics 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). 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.

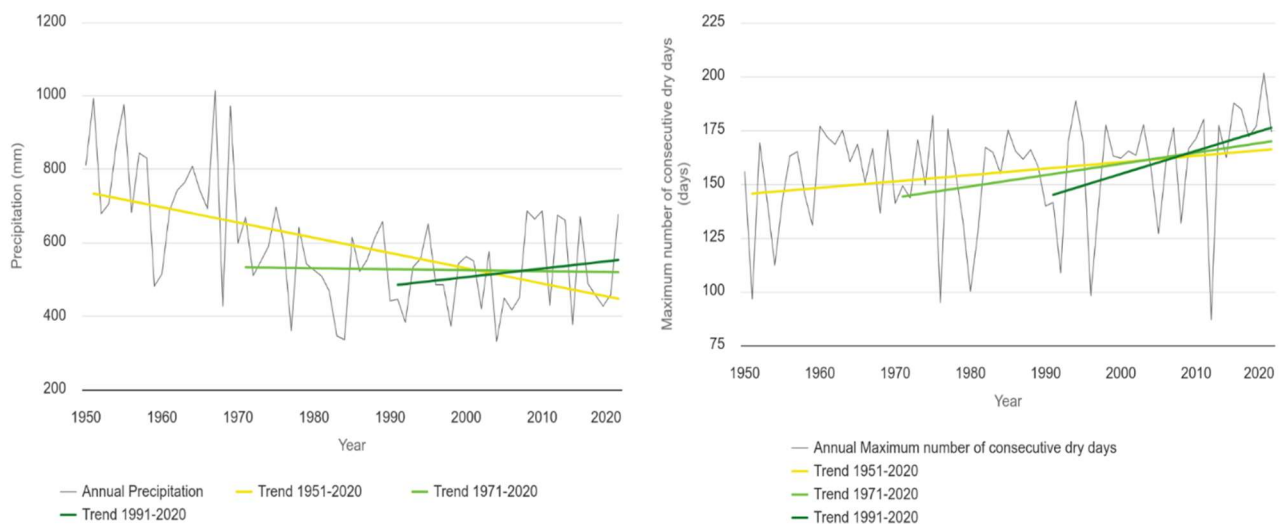


Figure 2: Precipitation annual trends with significance of trend per decade & Maximum number of consecutive dry days annual trends with significance of trends per decade, 1951-2020; Fatick (Source: Source: Climate Knowledge Portal, WB)

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.

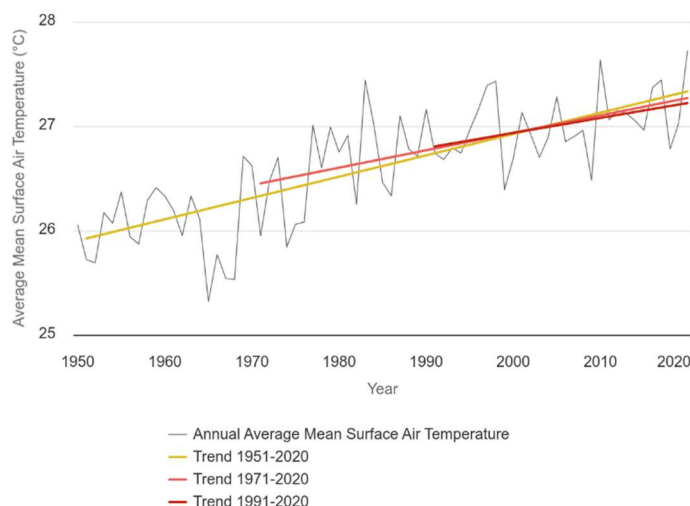


Figure 3: Average mean surface air temperature annual trends with significance of trends per decade 1951-2020; Fatick (Source: Climate Knowledge Portal, WB)

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 flows an increasing gradient from the plateau to the lowlands with a relatively high salinity levels in some areas. Moreover, the wells closest to the valley are highly saline reaching 15% in some cases. Many wells in this area have been abandoned because of the water salinity. In the southern part of the project area, salinity levels are above 40,000  $\mu\text{S}/\text{cm}$  (20 times higher than the "extremely saline" standard which is  $>2000 \mu\text{S}/\text{cm}$ ). Therefore, most farmers have lost their farms. Some seeds used in the project area are no longer adapted because of the disruption of the crop development cycle, leading to a serious drop in yields. According to Faye et al<sup>21</sup>, farmers pointed out higher temperatures, lower total 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. Dependence on rainfed agriculture as the primary source of household income, is a critical element for climate change adaptation for the young people and women. Failure to adapt leads to an emigration 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%)<sup>22</sup>.

#### - Projected climate change and impacts

The table below presents climate projections for Fatick, developed as part of the NAP process<sup>23</sup>, 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: total rainfall and length of the rainy season are expected to decrease; late onset of the rainy seasons persist in all scenarios; 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 coastline<sup>24</sup>, are particularly affecting the coastal zones, where approximately 67 % of the population and 90 % of industrial production are concentrated. This vulnerable low-lying area, characterized by high water tables and inadequate

<sup>21</sup> Faye, M., et al. (2019) : Analyse de la vulnérabilité des communautés à l'insécurité alimentaire et nutritionnelle dans la région de Fatick. Rapport final.

<sup>22</sup> ANSD (2021) : EHCVM.

<sup>23</sup> Climate Analytics (2019) : Évaluation de la variabilité climatique et des tendances climatiques futures dans la région de Fatick – Sénégal.

<sup>24</sup> USAID 2023. Senegal Climate Change Country Profile. <https://www.usaid.gov/sites/default/files/2023-11/2023-USAID-Senegal-Climate-Change-Profile.pdf>.

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
<b>Cumulative Rainfall (mm)</b>	RCP4.5	-9.40	-14.00
	RCP8.5	-21.86	-24.21
<b>Start of the rainy season</b>	RCP4.5	4.99±3.34	6.22±3.61
	RCP8.5	4.30±3.56	8.70±4.99
<b>Length of rainy season</b>	RCP4.5	-	-
	RCP8.5	8.33±4.46	11.56±7.11
		6.10±5.18	14.99±7.77
<b>Maximum temperatures</b>	RCP4.5	0.61±0.06	1.26±0.14
	RCP8.5	0.69±0.08	1.78±0.17
<b>Minimum temperatures</b>	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 proper 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 groundnuts<sup>25</sup>.

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. Expected impacts affect livelihoods and exacerbate existing social inequalities, because of the reliance of smallholder farmers on rain-fed agriculture.

<sup>25</sup> Ibid.



## 2. Project/Programme Objectives:

**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 cases where adaptation integration is effective<sup>26</sup>, its implementation faces serious capacity deficit, due partly, to the centralization of climate governance at the national level, which does not facilitate the availability of information and resources to local users. The dependance to central governments for resources and technical capacities, to deliver and scale up local adaptation initiatives should be unshackled to reinforced local climate action. This bottom-up adaptation strategy will be possible when solid collaboration networks (vertical and horizontal), are engaged in 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 country<sup>27</sup>, 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 decline<sup>28</sup>, compromising smallholder farmers' livelihood, and threatening the ecological integrity of agroecosystems. Against this background, local communities' resilience is strongly related 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 initiatives<sup>29</sup>, 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 initiatives in the intervention zone. The proposed project's outcomes and outputs identified as solutions, to overcome these barriers, include:

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<sup>26</sup> A guide for local planning that incorporates climate change considerations exist, and some municipalities have developed Climate-sensitive local plans.

<sup>27</sup> Dieng M, et al. (2023), Sustainable land management policy to address land degradation: linking old forest management practices in Senegal with new REDD+ requirements.

<sup>28</sup> 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.

<sup>29</sup> PAFA/PAFA-E and PADAER.

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.

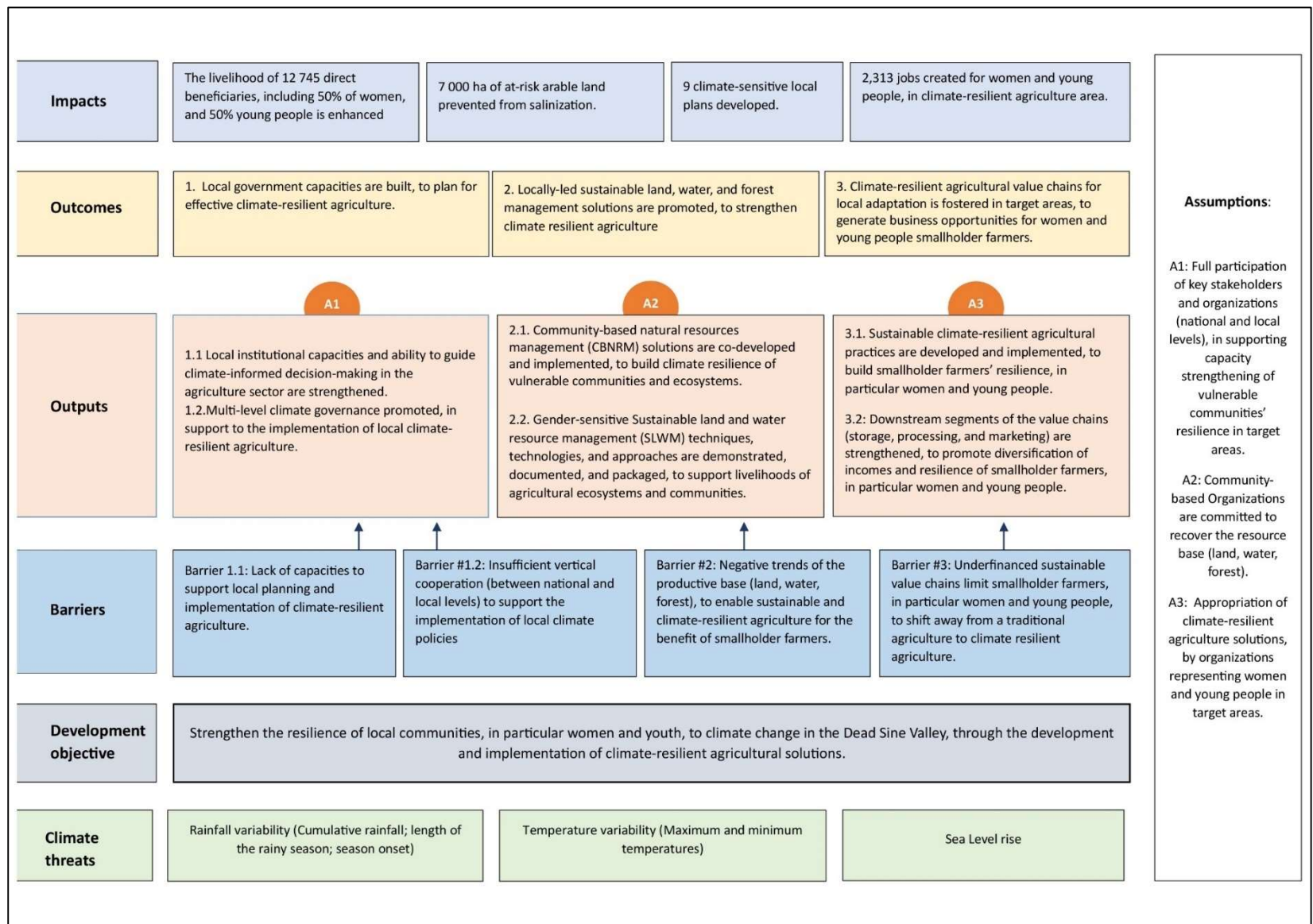


Figure 2: Project's theory of change

### 3. Project/Programme Components and Financing:

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.	<b>137,000</b>
	Output 1.2. Multi-level climate governance promoted, in support to the implementation of local climate-resilient agriculture.		<b>87,000</b>
2. Improved Sustainable Practices for Land, Water, and Forests Local Management.	Output 2.1. 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.	<b>2,075,000</b>
	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.		<b>87,295</b>
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	<b>936,000</b>

	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			4,172,295
5. Project Execution Cost			436,000
6. Total Project Cost			4,608,295
7. Project Cycle Management Fee charged by the Implementing Entity			391,705
Amount of financing requested			5,000,000

#### 4. Projected Calendar:

Milestones	Expected Dates
Start of Project/Programme Implementation	2025
Mid-term Review (if planned)	2028
Project/Programme Closing	2030
Terminal Evaluation	2031

## 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 participation<sup>30</sup>. 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 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 governance<sup>31</sup>, 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 the implementation of local climate policies, along the fields of information and knowledge, finance, and institutional capacities<sup>32</sup>. 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

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<sup>30</sup> 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.

<sup>31</sup> Cid, A. et al. (2024): Mobilizing institutional capacities to adapt to climate change: local government collaboration networks for risk management in Mexico City.

<sup>32</sup> GIZ (2018): Multi-Level Climate Governance Supporting Local Action.

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, and including land access and land tenure security. 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. To ensure that power for decision-making power will be equally shared among national and local stakeholders, power-sharing arrangements will be established among parties, including equal representation of national and local institutions under the shared governance framework. Local actors will play a pivotal role in guiding the design and implementation of climate-sensitive local plans, through prioritization of intervention areas, identification of capacity development and funding needs, etc. The technical assistance provided by the project will delineate the roles to avoid asymmetries of power and structural inequalities between the national and local actors.

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.*



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 community-based natural resources management (CBNRM), as well as locally led sustainable practices for land and water resource management (SLWM). It responds to the smallholder farmer's collective needs to produce enough and desired food while maintaining/increasing ecosystem productivity in the face of increased climate risks. 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 ecosystems<sup>33</sup>. 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 impact<sup>34</sup>. Moreover, Sustainable land and water management (SLWM) will more than offset the effect of climate change on yield under the current management practices<sup>35</sup>. By combining ecological resilience with water infrastructure, 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. The rationale for selecting specific SLWM measures (Small water retention dikes and Small Anti-Salt Dikes (SASD) is grounded in the fact that the technologies are well-known by national experts, ensuring ease of implementation, replicability, and potential for improvement. Previous projects, such as the PAPIL and PARIIS initiatives, have demonstrated the success of similar interventions (See Section F).

The component also prioritizes the establishment of local committees, ensuring that local stakeholders actively participate in decision-making and benefit from sustainable practices, as well as community engagement and knowledge sharing, through farmer field school (FFS), an approach based on people-centered learning<sup>36</sup>.

Output 2.1. *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

<sup>33</sup> Liniger, H.P. et al, (2011). Sustainable Land Management in Practice – Guidelines and Best Practices for Sub-Saharan Africa.

<sup>34</sup> 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>

<sup>35</sup> Ephraim Nkonya et al (2018): Climate Risk Management through Sustainable Land and Water Management in Sub-Saharan Africa.

<sup>36</sup> FAO (2016): Farmers field schools Guidance document.



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 the municipalities. An established inter-municipal committee 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 technical assistance and grants targeting women and young people groups, in diversifying their source of incomes from agriculture (see Output 2.2 & outcome 3).

Output 2.2. 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 (5 technical guides tailored to the Dead Sine Valley context on SLWM covering Farmers Fields Schools approach, organic farming, crop rotation/ diversification of cropping system, water harvesting, Integrated Pest Management). The project will tap into successful local practices, as well as the Global SLM Database<sup>37</sup>, which holds a rich and ever-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 practices<sup>38</sup>. The pilot sites for Farmers Fields Schools and SLWM implementation will be established on volunteers' farmers' land. They will be selected in consultation with local authorities and producers. Community engagement and ownership will be key, prioritizing areas with active participation and interest in adopting SLWM practices. Sites representing diverse agroecological zones and social contexts will also be chosen to address a range of challenges and solutions. Scalability is another important factor, focusing on locations with potential for replicating successful practices regionally. Existing support infrastructure, such as local organizations, will also be considered to enhance implementation efficiency. Lastly, inclusivity will be emphasized, prioritizing sites with significant representation of women and youth to align with gender-sensitive approaches. These criteria will be further refined in the full proposal stage. 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, with an equal representation of women and men, including people with disabilities, displaced populations, and marginalized ethnic groups. It is

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<sup>37</sup> <https://qcat.wocat.net/en/wocat/>

<sup>38</sup> *Ibid.*

comprised of decentralized sectoral ministries, local governments, smallholder farmers' organizations, NGOs, private sector, etc. To ensure long-term sustainability of infrastructure and equipment, specific agreements will be signed with decentralized units of relevant sectoral ministries whose mandates are to provide technical support to farmers and ensure the maintenance of rural infrastructure, for inclusion in their annual programming. 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.

The timeline for capacity-building initiatives under Outputs 2.1 and 2.2 includes key phases to ensure timely implementation and impact. In Year 1, Land Use Planning and gender-sensitive SLWM capacity building will be conducted under the supervision of the established inter-municipal committee. Years 2–3 will focus on the implementation of Land use plans, hands-on training of SLWM practices in farmer field school (FFS) pilot sites, and construction of water retention and anti-salt dikes. Years 4–5 will emphasize management of climate-proofed investment, as well as monitoring of the inter-municipal agreement for natural resource management, packaging and sharing successful practices and lessons learned.

Outputs and activities planned under this component are presented below:

#### Output 2.1.

Activity 2.1.1. *Establish an inter-municipal committee, to guide and oversee the planning and management of natural resources*

Activity 2.1.2. *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 2.1.3. *Support the inter-municipal committee to monitor, evaluate, and document the implementation of the inter-municipal agreement for natural resource management.*

#### Output 2.2.

Activity 2.2.1. *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*

Activity 2.2.2. *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 2.2.3. *Support establishment of an inter-municipal committee, to manage and sustain the climate-proofed investment by local public authorities and farmer-based organizations.*

Activity 2.2.4. *Evaluate, document, and package SLWM solutions for potential replication and upscaling.*

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

Component 3 builds on SLWM outcomes (Improved capacity of smallholder farmers beneficiaries on gender-sensitive SLWM, and improved water retention of soils) to directly support the implementation of climate-resilient production and increasing of agricultural yield, thus providing reliable and sustainable inputs for processing and marketing.

Thus, the component 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 yield<sup>39</sup>, and ensure food security. Moreover, the additional integration of gender approaches provides the opportunity to promote gender equality while scaling it up<sup>40</sup>. The technical assistance and the project investments across the value chains crops will include support on land access and land tenure security, 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 private sector is expected to play roles in input supply, equipment provision, and market linkages for target crops. Partnerships with agribusinesses will facilitate access to high-quality inputs, processing technologies, and marketing opportunities. Additionally, collaboration with financial institutions and traders will enhance value chain financing and expand market access. Private sector actors may also contribute to co-investment in the multifunctional hubs and assist in scaling climate-resilient practices through shared infrastructure and expertise. Further details on specific roles and mechanisms for collaboration will be elaborated in the full proposal stage.

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 practices<sup>41</sup>. 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.

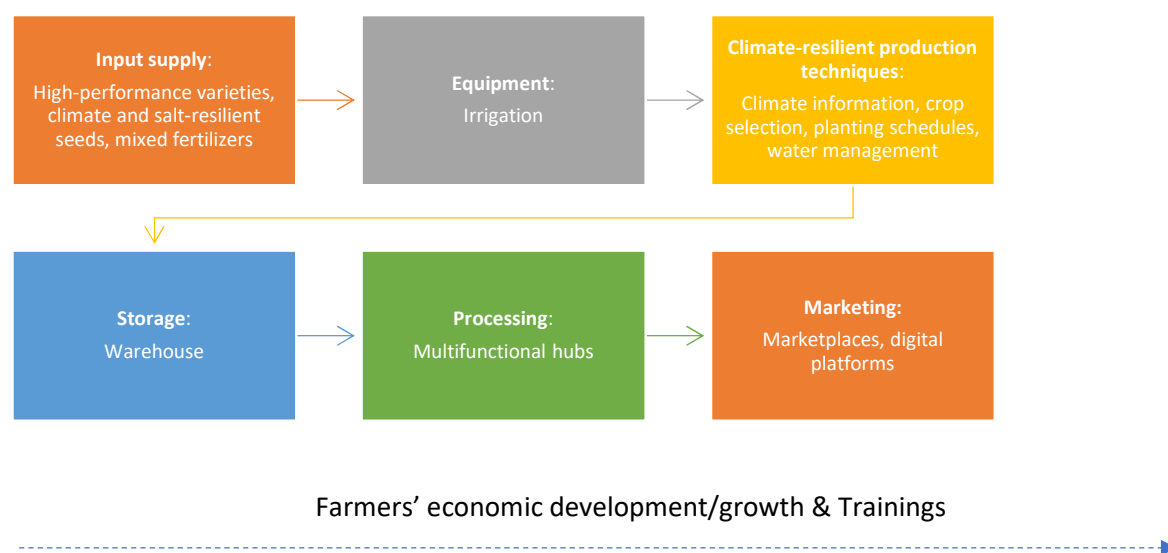


Figure 3: Project's climate-resilient value chain approach for provision of grants to smallholder farmers

**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

<sup>39</sup> 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>.

<sup>40</sup> 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

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

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 stakeholders to access to funding. Beneficiaries' women and young people groups will receive trainings on access to land and land tenure security, 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 group farming 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 to land of women and young people will be facilitated by their collective organization in the form of group farming or economic interest groups, while access 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 land access and land tenure security, as well as 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)<sup>42</sup>. 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), and establishing formal agreements between EIGs and financial services for further collaboration.

*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 access to land and land tenure security, value chain approach and climate-resilient agricultural practices.*

**Activity 3.1.3:** *Support implementation of climate-resilient production, through the provision to women*

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<sup>42</sup> EIG is the first level of business company in the current legal framework in Senegal.

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.

**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 production<sup>43</sup>. Similar kinds of productivity gains are reported for groundnut (from 680 kg/ha to 2,222 kg/ha), and millet (14-72%) in Senegal<sup>44</sup>. 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)<sup>45</sup>, 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. To manage occurrences of unexpected climate events, market access or price instability for target crops, adaptive management measures will be considered, as part of the project's Monitoring, Evaluation, and Learning Plan to be developed under the M&E framework (See section G). In this case, it may consist of a shift from target cropping (systems tomato, groundnut, millet) to the most promising ones based on reviews, consultations, and assessments made

<sup>43</sup> 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.

<sup>44</sup> 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).

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

during project implementation; provision of post-harvest management support (processing and packaging); improvement of storage and supply chains to allow farmers to sell crops when price improve; support access to real-time market-information systems; development and implementation of contingency plans for different levels of price instability, etc.

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 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 2035<sup>46</sup>. 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 the FA's environmental and social policies, a stakeholder engagement plan with a grievance mechanism will be developed in the ESMP. It will identify in a very precise manner the

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<sup>46</sup> MEDD (2016). Land Degradation Neutrality Report.



communication, awareness-raising actions and the modalities for effective community participation as well as the channels for resolving concerns and complaints regarding alleged non-compliance with the FA's environmental and social policies through a grievance mechanism will be proposed by the project's ESMP.

**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.**

Knowing that Senegal is a least developed country and a highly indebted economy (76.6% of the GDP in 2022<sup>47</sup>), 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 sector<sup>48</sup>.

Without the support of the Adaptation Fund, the local community of the Dead Sine Valley will face 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.

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 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, 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.

Previous projects, such as the PAPIL<sup>49</sup> and PARIIS initiatives, have demonstrated the success of similar interventions. For example, anti-salt dykes reclaimed degraded lands, expanded rice-growing areas, and

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<sup>47</sup> 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/>

<sup>48</sup> 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>

<sup>49</sup> [https://evrd.afdb.org/documents/docs/PR10635\\_SR\\_FR.pdf](https://evrd.afdb.org/documents/docs/PR10635_SR_FR.pdf)

improved agricultural yields, revitalizing interest in rice production. These structures also regulate floods, with stored water used for agricultural, pastoral, and forestry purposes. Small-scale hydro-agricultural schemes, including reservoirs and ponds, enhance water management by controlling runoff and promoting balanced distribution within valleys. These measures not only address immediate climate challenges but also generate long-term positive impacts on soil quality and agricultural productivity in affected areas.

Farmer Field Schools (FFS) and Sustainable Land and Water Management (SLWM) are cost-effective and leverage local practices. FFS improves yields by 20–40% with lower costs compared to traditional extension services<sup>50</sup>, supporting scalability through community-driven learning<sup>51</sup>. SLWM techniques like agroforestry and water harvesting restore degraded lands and enhance productivity, offsetting up to 30% of climate change impacts and being 50–70% more cost-effective than large-scale infrastructure<sup>52</sup>. Multifunctional hubs for processing and marketing increase incomes and strengthen value chains<sup>53</sup>. Unlike costlier, less sustainable alternatives like mechanized agriculture, these scalable, community-focused solutions ensure a higher benefit-to-cost ratio<sup>54</sup>.

**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 project aligns strongly with Senegal's SDG strategies, contributing to SDG 1 (No Poverty) and SDG 2 (Zero Hunger) by improving livelihoods, food security, and income for vulnerable groups. It supports SDG 5 (Gender Equality) through women's empowerment and SDG 8 (Decent Work and Economic Growth) by supporting entrepreneurship and job creation. The project advances SDG 13 (Climate Action) through climate adaptation measures and SDG 15 (Life on Land) by restoring degraded lands and enhancing biodiversity. Beyond agriculture, the project supports water resource management and reforestation aligned with Senegal's Land Degradation Neutrality (LDN) and Water Code goals. It contributes to the Senegal National Development Plan 2025-2029 by promoting private sector engagement and local economic growth. Additionally, it aligns with decentralization and governance priorities under the General Code of Local Authorities, promoting multi-level collaboration for resilience building.

The current project is aligned with the objectives of the national policies, plans and strategies as shown in the following table:

<sup>50</sup> IDH, 2013, Cost-Benefit Analysis of Farmer Field Schools and Certification for Smallholder Tea Farmers in Kenya; An IDH learning study executed in close collaboration with KTDA, Unilever and Rainforest Alliance

<sup>51</sup> 3IE, 2021, Rapid Response Brief; What is the impact of Farmer Field School programs on farming practices and agricultural outcomes?

<sup>52</sup> M. Casanova and al, 2021, Combined Agroforestry and Rainwater Harvesting to Reduce Soil Degradation in Mediterranean Zones, Handbook of Water Harvesting and Conservation: Case Studies and Application Examples, Wiley.

<sup>53</sup> USDA 2013, The Role of Food Hubs in Local Food Marketing.

<sup>54</sup> M. Mcharo and M. Maghenda, 2021, Cost-benefit analysis of sustainable land and water management practices in selected highland water catchments of Kenya, Scientific African 12.



National Strategies / plans /Policies	Project alignment with the objectives of Senegal Framework documents
National Development Plan (PND 2025-2029)	<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 PND 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 PND, particularly in its strategic axis 1 "Competitive economy".</p> <p>The project contributes also to the achievement of the PND's objectives by contributing to Axis 3 " Sustainable Planning and Development".</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 PND (2025-2029).</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 indicators.</p>
the Integrated Territorial Climate Plan (PCTI) of Fatick	<p>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.</p>

**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	<p>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.</p> <p>Compliance with water resource management standards will be monitored by involving the Regional Hydraulic Service in project planning and implementation. Water-use permits, where required, will be obtained, and regular assessments of water infrastructure (e.g., retention dikes, irrigation systems) will ensure adherence to legal guidelines. Monitoring reports will track sustainable use and conservation practices.</p> <p>Relevant to component 3 relative to innovative CC resilient practices and water management</p>
Environment code (Law n° 2023-15 of 2 august 2023) 1981	<p>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.</p> <p>An Environmental and Social Management Plan (ESMP) will guide all project activities, including site-specific environmental impact assessments (ESIAs) for infrastructure projects. Regular audits, conducted in collaboration with the Regional Division for the Environment, will ensure environmental safeguards are maintained. A grievance redress mechanism will address any concerns raised about environmental non-compliance.</p> <p>Relevant to all the project components.</p>
Law No. 2004-16 on the agro-sylvo-pastoral orientation law	<p>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.</p> <p>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.</p> <p>Sustainable agricultural and forestry practices will be monitored through field inspections and progress reports, ensuring adherence to this law's principles of responsible land use. Training programs will include guidelines on compliance, and decentralized units of relevant ministries will provide oversight.</p> <p>Relevant to all project components</p>
Law No. 2019-12 amending and supplementing Law No. 2013-10 of December 28, 2013, concerning the General Code of Local Authorities.	<p>Scope: This law regulates the organizational and financial framework of local authorities and the transfer of competences to local authorities.</p> <p>Local governance structures, such as inter-municipal committees, will oversee compliance with decentralization laws. These committees will ensure that project activities align with local authority mandates and facilitate the integration of national standards into municipal planning and budgeting.</p> <p>Relevant to all the project because the project will be executed by local institutions.</p>

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.

**Monitoring and Evaluation (M&E):** The project's M&E framework will include specific indicators for compliance with national standards. Quarterly and annual reviews will assess progress, and results will be shared with regulatory agencies and stakeholders.

**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.**

Several initiatives have been developed in the Fatick region in f partnerships with technical support services, on 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, as it focuses on income generation and food security while maintaining/increasing ecosystem productivity in the face of increased climate risks. 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.). The project will build upon the identified initiatives and will actively seek to build synergies with agriculture-related initiatives, through the signature of agreements and their involvement in the steering committee. The table below presents earlier initiatives and ongoing projects' objectives/achievements/lessons learned, how they will inform the proposed project's design and implementation, and how synergies will be established.

Table 2: Synergies with other initiatives

Projects	Project's objectives/achievements /Lessons Learnt	Complementarities/synergies
<b>PROVALE-CV</b> (Water valorization project for value chain development) Donor: AfDB/IFAD Period: 2020- 2026 Budget: 160M\$	PROVALE-CV2 contributes to improving agricultural and livestock product production, storage, processing and marketing systems. As well as building the resilience of food systems, improve legal and regulatory framework to promote sustainable food sovereignty and economic growth-bearing agriculture that will create jobs.	The two projects will develop synergies in facilitating women and young people's EIGs access to market and financial services in the DSV, as well as building stronger links among actors in the targeted value chain (producers, consumers, distributors, and financial services).
<b>PAPIL</b> Donor: AfDB Period: 2004- 2009	During its implementation phase (2004-2009), Small Anti-Salt Dikes (SASD) built by the projects resulted	The current project will build on lessons learnt from the PAPIL initiative, in building Small Anti-Salt Dikes (SASD) and small

Projects	Project's objectives/achievements /Lessons Learnt	Complementarities/synergies
Budget:	in the recovery of 2000 ha of salty lands. 30 Small water retention dikes (SWRD) were built, and organizational support and assistance to 30 farmers' groups in 30 municipalities.	water retention dikes (SWRD). Further data will be collected during the baseline assessment.
<b>PUDC</b> <b>Period: Since 2015</b> <b>Donors: AfDB/ISdB</b>	The PUDC contributes to the improvement of storage and supply chains through the building of several warehouses in the Region. The social engineering strategy enables the uptake of selected options following their validation by local communities.	The project will benefit from the experience of PUDC in terms of infrastructure building and social engineering, with the aim to facilitate the uptake of climate-resilient options.
<b>PARIIS</b> (Regional Support Project to the Sahel Irrigation Initiative) 2018-2024	The development objective of the project is to strengthen stakeholders' capacities to develop and manage irrigation and increase irrigated areas. The project developed successful stories in developing land use plans, as well as building and managing water retention dikes (SWRD).	The current project will build on lessons learnt from the PARIIS, in developing land use plans and building small water retention dikes (SWRD). Further data will be collected during the baseline assessment.
<b>BARVAFOR</b> (Retention and Drilling Development Project) Donor: Belgium Period: 2010-2017 Budget: 11.9MEuros	The project objective was to strengthen agro-sylvo-pastoral production in rural areas through sustainable access to productive water. The project contribution and performance were estimated high in the provision of sub-grants to local communities.	The project will build on processes and procedures established in providing sub-grants to local communities. Lessons learnt will be used as a model for the development of the sub-grants. Further data will be collected during the baseline assessment.
<b>Senegal Natural Resources Management Project SENRM</b> Period: 2023-2028 Donor: World Bank Budget: 100M\$	The Project seeks to improve the management of forest resources in target areas and to promote related economic activities. It includes strengthening the institutional framework for forest management and monitoring, community-based forest management, as well as Valorization of natural forest capital.	The projects will collaborate to develop a common agenda in the participatory development of land use plans, ensuring that the plans developed benefit from the monitoring tools. Furthermore, the valorization of natural forest capital in the processing and marketing segments of the value chains will be considered as part of the partnership.

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.

A Monitoring, Evaluation, and Learning Plan will be developed to track and report on results, ensuring that the retroactions will feed into the implementation cycle for adaptive management purposes.

The periodic reports and surveys carried out, including the M&E reviews will use the findings to identify lessons learned and best practices. They will also serve to identify areas for improvement for adaptive management, drawing on difficulties encountered, and lessons learned. Measures to adjust activities based on lessons learned may entail: (i) Implementing alternatives solutions to meet the desired outcomes, (ii) building new partnerships, such as engaging specific stakeholders whose support is necessary to achieve planned outcomes and project's objectives, (iii) Adding more cascaded training sessions to improve knowledge uptake and application, etc.

To ensure transparency and accountability, the project' steering committee (SC) will serve as a supporting M&E mechanism overseeing the overall project technical and financial performance, and alignment with initial planning. As the main decision-making body, it enables various stakeholders (municipalities, CBOs, ministries, private sector, research, donors, ongoing projects and programs, etc.), through their representatives, to get access to information on outcomes, financial flows, and decision-making processes. Additionally, lessons learnt from the Monitoring, Evaluation, and Learning Plan are used to inform the steering committee decisions, under the leadership of municipalities operating as SC's chair. Communities' role in the decision-making and monitoring processes are reinforced by the positioning of the inter-municipal committee which guides the application process for grant provision (see component 3).

The knowledge management system (KMS) is fed by data collected from baseline surveys, periodic monitoring reports, interviews and follow-up missions, based on the Monitoring, Evaluation, and Learning Plan. To ensure that traditional and indigenous knowledge are fully considered into the KMS, its design will involve local organizations to reflect their specific knowledge documentation and collection needs (e.g. Use of audio, video, and images). They will be also equipped with training and tools to manage their own contributions. The website will feature user-friendly navigation that are intuitive and accessible. In addition, the project will facilitate exchanges between local communities and researchers for mutual learning, through farmer field school (FFS).

KM outputs planned under KM activities include In this regard, the project will produce 1 toolkit on climate-resilient agriculture mainstreaming into local planning and budgeting; 5 technical guides on Sustainable Land and Water Management (SLWM) integrating traditional knowledge, and covering Farmers Fields Schools approach, organic farming, crop rotation/ diversification of cropping system, water harvesting, Integrated Pest Management; 1 toolkit on management of processing and marketing of agricultural products; 1 manual outlining the framework, guidance, and grants application procedures. It will conduct 20 workshops for 1000 stakeholders, including women and youth groups, to strengthen local

institutional capacities and ability to guide and implement climate-resilient agriculture. A KM portal targeting at least 500 annual users will be established under the CSE website. Additionally, the project will document 9 case studies on successful SLWM and/or CBNRM solutions.

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, as well as build transparency and accountability. The website will feature user-friendly navigation and multilingual support to accommodate dominant local language. Outreach efforts will include training sessions to familiarize stakeholders with the platform, and mobile accessibility will be prioritized for users in rural areas. Regular feedback mechanisms will help improve the platform based on user experiences. These strategies aim to enhance engagement and ensure that knowledge-sharing resources effectively reach all relevant stakeholders in the region.

**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 assessment<sup>55</sup>, 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.

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

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<sup>55</sup> ARD (2021) : Analyse de la vulnérabilité au changement Climatique de la Vallée morte du Sine.



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 4: 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 5: 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 (See the initial gender assessment in appendix). The concerns raised centered on: (i) the progressive lack of interest among young people (women and men) in agricultural activities. They are increasingly leaving rural areas due to the low income generated by agricultural activities: in this context, it was decided to develop a full and specific outcome (Outcome 3) on climate-resilient agricultural value chains for local adaptation, to generate business opportunities for the benefit of young people and women. This outcome is complemented by outcomes 1&2; (ii) the declining yields and agricultural incomes in the project area due to the salinization: the project proposes, under Outcome 2, sustainable land and water management solutions that equip vulnerable communities, in particular women and young people, with tools to recover from land degradation, build resilient and productive ecosystems, including infrastructure (e.g. small water retention dikes) to store and harvest run off water for agriculture. Output 3.1 includes the provision to women and youth-owned farm, of climate-resilient inputs to enhance yield production, and secure it against climatic hazards; (iii) Ensuring the targeting of "real" beneficiaries and territorial equity into the selection of beneficiaries of the 9 communes: the project proposes the establishment of an inter-communal committee with an equal representation of women and men to ensure collective decision-making, resource-sharing, and access to funding opportunities. It defines sub-grants targeting and application processes; (iv) land access for women: the project promotes the collective organization of women and young people into economic interest groups-ElGs (Outcome 3) to facilitate access to resources, including land and tenure security.

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, through Economic interest groups (EIGs), to invest in adaptive measures and maintain climate-smart practices independently. EIGs sustainability relies on the diversification of funding sources facilitated by revenue-generating activities; enhanced capabilities of EIGs to attract business opportunities in the target value chains crops (millet, groundnut and tomato); strengthened governance and capacities by training on financial management and strategic planning; established network of partners, including financial services for further collaboration (Output 3.2). This support will be provided in the form of a technical assistance, to facilitate co-development and co-implementation of customized training packages and on-the-job mentoring.

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. Long-term maintenance of equipment is the responsibility of the inter-municipal committee established, *inter alia*, for managing and sustaining the climate-proofed investment. Specific agreements will be signed with decentralized units of relevant sectoral ministries whose mandates are to provide technical support to farmers and ensure the maintenance of rural infrastructure, for inclusion in their annual programming.

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 legal and regulatory framework (national and international) will be analyzed and the project interventions will be developed so as to comply with all regulatory provisions in force. 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 process of defining the criteria will be done on a participatory basis (consultations) in order to guarantee criteria that allow reaching the most relevant beneficiaries and avoid possible conflicts related to the choice of the latter. 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. However, in the environmental and social assessment during the development of the full proposal, further investigations will be carried out to ensure that there are no minority or marginalized ethnic groups in the project area and, where appropriate, specific consultation will be carried out for these groups and, if necessary, ensure their free and informed consent.
<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>		Based on the project activities, the impacts that can be expected include, among others: noise, vibrations, tree cutting to free up the rights-of-way of dikes and other infrastructure (during the construction phase); water and soil pollution linked to the development activities of the developed sites, the production of agricultural waste, etc. The environmental impact studies will exhaustively identify all negative impacts and propose mitigation measures..
<i>Public Health</i>	x	The project will be designed and implemented in a way that avoids any negative impact on public health. Measures to prevent risks related to waterborne diseases may nevertheless be necessary in the developed sites. Environmental and social impact studies will assess the risks of proliferation of vectors of waterborne diseases and their development. if necessary, an information and communication plan will be put in place and executed by the project.
<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. Cases of accidental discoveries are possible during the construction of the dikes. The environmental and social impact studies will define the procedure to be implemented to deal with these cases.
<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.

The project's environmental and social risk category can be classified as B (moderate risk) due to the

nature of the risks associated with the hydro-agricultural infrastructures.

In addition to the identified activities, the proposal acknowledges the inclusion of Unidentified Subprojects (USPs) and will develop a comprehensive management and monitoring plan at the full project development phase. Criteria for USP identification and approval will prioritize alignment with project objectives, with a participatory process for selection and endorsement. Each USP will undergo environmental and social risk screening to ensure compliance with the Environmental and Social Policy (ESP) and Gender Policy (GP). Local governments and community organizations will oversee implementation, supported by the project's M&E team. Grievance redress mechanisms will address concerns promptly, ensuring transparency and stakeholder engagement throughout USP planning and execution.

## PART III: IMPLEMENTATION ARRANGEMENTS

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

Project Objective(s) <sup>1</sup>	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	224,000
Outcome 2: Locally led sustainable land, water, and forest management solutions are promoted, to	Number of Sustainable land and water resource management (SLWM) and Community-based natural resources	Output 5: Vulnerable ecosystem services and natural resource assets strengthened in response to climate change impacts,	5.1. No. of natural resource assets created, maintained or improved to withstand conditions resulting from	2,162,295

strengthen climate resilient agriculture.	management (CBNRM) solutions promoted and adopted by communities	including variability	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

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<sup>1</sup> 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 government<sup>2</sup>

*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: 2024</p> 
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### B. Implementing Entity certification

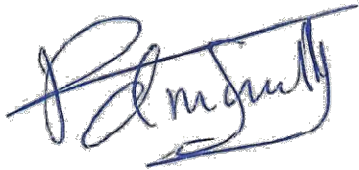
*Provide the name and signature of the Implementing Entity Coordinator and the date of signature. Provide also the project/programme contact person's name, telephone number and email address*

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.

<sup>6</sup> 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.



<sup>6</sup> 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 <a href="mailto:mbow@cse.sn">mbow@cse.sn</a>	
Project Contact Person: Aissata Sall		
Tel. And Email: +221 338258066; +221 338258067 +221 77 685 1590 <a href="mailto:aissata.sall@cse.sn">aissata.sall@cse.sn</a>		

REPUBLIQUE DU SENEGAL



*Un Peuple - Un But, Une Foi*

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**MINISTERE DE L'ENVIRONNEMENT ET DE LA TRANSITION ECOLOGIQUE**  
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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](mailto: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)*



## Appendix: INITIAL GENDER ASSESSMENT

### 1. PROJECT INFORMATION

Project Title	Strengthening the resilience of communities in the Dead Sine Valley-Senegal
Project grant amount (USD)	5,000,000
Location (Regions/Countries)	Fatick/Senegal
Implementing entity	CSE

### 2. PROJECT OBJECTIVE

The project aims to strengthening the resilience of local communities, in particular women and youth, to climate change in the Dead Sine Valley (DSV), through the development and implementation of climate-resilient agricultural solutions.

### 3. OBJECTIVE OF THE INITIAL GENDER ASSESSEMENT

The objective of the initial gender assessment is to demonstrate how gender considerations have been incorporated into the project design. The analysis builds on primary data collected during field missions (June 2021<sup>56</sup> and August 2024) and secondary data from existing reports. This initial gender assessment will be deepened during the full proposal phase by a detailed gender analysis and a Gender Action Plan (GAP). The current analysis follows two steps: a first step where data were collected on gender disaggregated requirements of the project through an intensive consultation process (June 2021), and a second consultation (August 2024) to ensure that women and youth aspirations (raised during initial consultations) were incorporated into project design.

### 4. OVERALL SITUATION OF GENDER EQUALITY IN THE COUNTRY

**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 2022<sup>57</sup>. Women have far lower participation rates in the labor market (37.4% against 64.5% for men<sup>58</sup>). 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 respectively<sup>59</sup>: 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% nationally<sup>60</sup>.

<sup>56</sup> Mbaye A. (2021). Etude sur la consultation des parties prenantes et évaluation des problématiques liées au genre dans la Vallée Morte du Sine, Centre de Suivi Écologique, 63 pages.

<sup>57</sup> <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)

<sup>58</sup> World Economic Forum (2023): 2017 Global Gender Gap Report.

<sup>59</sup> Winrock International (2023): A gender and social inclusion analysis of access to agricultural services in Senegal.

<sup>60</sup> ANSD (2023) : Situation Économique et Sociale de la région de Fatick 2020/2021, 146 pages.

**Youth-** The Senegalese population is characterized by its large youth component: half of the population is under the age of 19<sup>61</sup>, 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 areas<sup>62</sup>), 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 migrated.

## **5. OVERALL SITUATION OF GENDER EQUALITY IN THE DSV**

### **5.1. METHODOLOGY**

*Regarding the first series of consultation*, we balanced the sample size based on a stratified approach of gender ratio to meet the representativeness considerations of the Dead Sine Valley (DSV) gender requirements. The sample considers the nine (09) municipalities as strata. The size of the strata is 236 people, representing 10% of the overall population (236,743 people), for which 55% are women (130) and 45% are men (106). The ratio for each municipality is proportional to its demographic weight. The figure below details the sampling.

The *second consultation* was a workshop bringing representatives of 9 communes including organizations of women and youth. Based on the project's presentation and final recommendations made by participants, adjustments were made to follow orientations and expectations.

### **5.2. Distribution of households by age**

The average age of heads of households of the sample is 52 years for men and 48 years for women, while the median age is 50 years. Household heads are dominated by the 50 to 60 age group. They are followed by the 40-49 and 60 and over age groups, who record the same score of 53 household heads. The lower numbers in the 30-39 and 20-29 age groups, which total absolute values of 42 and 08 respectively, demonstrate that the less young, rarely heads of households. Thus, the participation of young women and men in agriculture remains quite limited, resulting in migratory flows towards cities.

### **5.3. Distribution of households by source of income**

The main source of income for households is agriculture: 58% for Men-headed households compared to 42% for Women-headed households. This is an indicator of the reliance of the target population to agricultural activities, and as well their vulnerability to potential climate variability and climate change impacts.

### **5.4. Participation and role of gender sub-groups in the agriculture sector**

#### **5.4.1. Distribution of households by type of farm**

Family-type farming and individual farming total the same scores with 52% for women and 48% for men, while group-farming is dominated by women. This occurs in the collective fields whose income is used to finance activities of high social significance. Successful experiences have been recorded in the area. E.g. *ASC mixte Jum Bugum de Niakhar* is a social innovation with outlets in the national and international markets. Individual farming has a relatively important place. On the margins of family farms owned by men, women often farm small plots. This further shows an important gender gap in access to productive lands (see section 5.4)

#### **5.4.2. Distribution of households by crop types**

Food crops largely dominate activities of the households surveyed (48% for men against 52% for women). In this specific environment of the DSV, having a reserve of *millet* all year round is a sign of respectability and one of the criteria of social hierarchy. Cash crops (*groundnut*) provide additional income to buy rice, which is one of the main staple food for most Senegalese. While market gardening is identified with high potential to support women-headed households food security, the progressive salinization of the valley's lands is hindering its development.

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<sup>61</sup> ANSD (2023) : RGPH 5.

<sup>62</sup> ANSD (2013) : RGPHAE.

### **5.5. Controlling access to resources**

*Access to land* is by inheritance. The most common way is inheritance from "father-to-son" and not often by social values from "father-to-daughter". The daughter generally inherits the land in the absence of a male option in the family. This is a dominant traits of land tenure status of agricultural lands of consulted population, where only 47% of women are owners compared to 53% of men. To address this challenge, women use the (i) sharecropping approach which is a women communal, for co-farming and co-harvesting, based on a system defined at the onset of the season; or (ii) land renting, or (iii) lending for free. This land access challenge is more prominent in getting access to individual land rights. In the case of collective access, municipalities are required to take a formal step of council's deliberation to secure access to land for women.

With regards to *agricultural seeds*, seed-saving is the main source for women and men with values of 52% and 48% respectively. This traditional practice guarantees the seed autonomy of farmers but does not guarantee the quality of the production. Subsidized seeds by the government are mainly captured by men with 57% compared to 43% for women generally absent from distribution committees. As a result, women produced less with 549.9 kg of groundnuts compared to 821.9 kg for men. This imbalance in production is further exacerbated in the millet sector, where male-headed households produced twice as much (1249.8 tons) as the average for female-headed households (619.7 tons) because of a combination of land access and quality seed available by gender groups.

### **6. CONCERNS VOICED BY VULNERABLE PEOPLE, RECOMMENDATIONS AND INTEGRATION INTO THE PROJECT DESIGN**

Based on concerns raised by communities, in particular vulnerable people during the consultation process, specific recommendations have been made and therefore fully considered and integrated into the concept note design (see table below).

Table 2: Recommendations of vulnerable communities and integration into project design

Concerns	Specific recommendations	Integration into the project design
<b>A progressive lack of interest among young people (women and men) in agricultural activities is noted. They are increasingly leaving rural areas due to the low income generated by agricultural activities.</b>	<ul style="list-style-type: none"> <li>Promoting and creating jobs in the agriculture sector, through the development of productive value chains.</li> </ul>	<ul style="list-style-type: none"> <li>The project has developed a full and specific outcome (Outcome 3) on climate-resilient agricultural value chains for local adaptation, to generate business opportunities for the benefit of young people and women. This outcome is complemented by outcomes 1&amp;2.</li> </ul>
<b>Declining yields and agricultural incomes in the project area due to the salinization.</b>	<ul style="list-style-type: none"> <li>Integrate organic solutions into restoration actions and strategies.</li> <li>Harvest rainwater runoff to optimize water resources use for agricultural activities.</li> <li>Supplying seeds adapted to salty soils.</li> </ul>	<ul style="list-style-type: none"> <li>The project proposes, under Outcome 2, sustainable land and water management solutions that equip vulnerable communities, in particular women and young people, with tools to recover from land degradation, build resilient and productive ecosystems, including infrastructure (e.g. small water retention dikes) to store and harvest run off water for agriculture. Output 3.1 includes the provision to women and youth-owned farm, of climate-resilient inputs to enhance yield production, and secure it against climatic hazards.</li> </ul>
<b>Ensure the targeting of “real” beneficiaries</b>	<ul style="list-style-type: none"> <li>Establish an inter-communal committee between the target municipalities of the project. This body could serve to manage and support investments in a transparent and sustainable manner.</li> </ul>	<ul style="list-style-type: none"> <li>The project proposes the establishment of an inter-communal committee with an equal representation of women and men (Output 2.1 and outcome 3) to ensure collective decision-making, resource-sharing, and access to funding opportunities. It defines sub-grants targeting and application processes. The committee includes representatives of people with disabilities, displaced populations, and marginalized ethnic groups.</li> </ul>
<b>Territorial inequity into the selection of beneficiaries of the 9 communes.</b>		
<b>land access for women</b>	<ul style="list-style-type: none"> <li>Promote collective access to facilitate deliberation.</li> </ul>	<ul style="list-style-type: none"> <li>The project promotes the collective organization of women and young people into economic interest groups-ElGs (Outcome 3) to facilitate access to resources, including land and tenure security.</li> </ul>



## 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	April 2025
Completion date of PFG	September

### 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	5,400	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	20,000	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	38,800	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	7500	Desk work with experts to refine the project's components and activities
Development of project log frame	Detailed Project Logframe and	4,500	Expert's work for the definition of

and results framework	Results Framework developed		the project logfram, results framework
Detailed project budget development	Detailed and concrete project budget	3000	Financial expert work to define the project's detailed budget
Gender assessment	Gender analysis report	16,200	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	26,850	ESS expert for ground activities and survey for the final EIA report
Full project proposal development	Full Project Proposal developed	15,000	Diverse expertise linked to the project sector workshops to finalize the project development
Implementing Entity's Management Fee		12,750	Follow and supervision of NIE for the activities for the full proposal development
Total Project Formulation Grant		150,000	

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
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