

REPUBLIC OF SENEGAL
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MINISTRY OF AGRICULTURE AND SUSTAINABLE DEVELOPMENT (MAER)



SIXTH CALL FOR PROPOSALS

***POST-COVID FOOD AND NUTRITION SECURITY
ENHANCEMENT PROJECT (PRESAN/PC)***

Project Proposal

Submitted by:
Government of Senegal

September 2021

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LIST OF ACRONYMS

ANIDA	National Agency for Integration and Agricultural Development
ANCAR	National Farm Advisory Agency
ASPRODEB	Senegalese Association for the Promotion of Grassroots Development
ASUFOR	Borehole Users' Association
AfDB	African Development Bank
AsDB	Asian Development Bank
IDB	Islamic Development Bank
WB	World Bank
CES	Water and Soil Conservation
CNCR	National Rural Consultation and Cooperation Council
NDC	Nationally Determined Contribution
SC	Steering Committee
CRCS	Regional Consultation and Follow Up Committee
CDCS	District Coordination and Follow Up Committee
CSE	Ecological Monitoring Center
DAPSA	Department of Analysis, Forecast and Statistics
DBRLA	Department of Retention Ponds and Artificial Lakes
DIREL	Department of Livestock
DRDR	Regional Rural Development Directorate
DEEC	Department of Environment and Gazetted Sites
DRS	Soil Protection and Restoration
ADF	African Development Fund
FAO	United Nations Food and Agriculture Organization
FEM	Maintenance Fund
IFAD	International Fund for Agricultural Development
GAfsp	Global Agricultural and Food Security Program
ISRA	Senegalese Agricultural Research Institute
LPSEDD	Environment and Sustainable Development Policy Paper
FO	Farmers' Organization
PADERCA	Casamance Rural Development Program
MAER	Ministry of Agriculture and Rural Equipment
MEDD	Ministry of Environment and Sustainable Development
MEPA	Ministry of Livestock Breeding and Productions
MFB	Ministry of Finance and Budget
WFP	World Food Program
PAP	Priority Action Plan
PDZP/PNDL	Farming Areas Connectivity Project in support of the National Local Development Program
PADERCA	Casamance Rural Development Support Project
PAP2A	Fast-track and Adjusted Priority Action Plan
PAFA	Agricultural Value Chain Support Project
PAFA E	Agricultural Value Chain Support Project - Extension
PAPIL	Local Small-scale Irrigation Support Project
PASAD	Agricultural Program for Sustainable Agricultural Sovereignty
PMIA	Agricultural Modernization and Intensification Project
PNDIL	National Local Small-scale Irrigation Development Program
PNIASAN	National Agricultural Investment and Food and Nutrition Sovereignty Program
PASA LOU-MA-KAF	Food Security Support Program in the regions of Louga, Matam and Kaffrine

PASAD	Agricultural Program for Sustainable Food Sovereignty
PAN/LCD	National Action Plan to Combat Desertification
NAPA	National Adaptation Program of Action
PNAR	National Rice Self-sufficiency Program
PNDE	National Livestock Development Program
PSE	Senegal Emerging Plan
P2RS	Multinational Program to Build Resilience to Food and Nutrition Insecurity in the Sahel
PRACAS	Program to Fast-Track Agricultural Development in Senegal
PGES	Environment and Social Management Plan
PROVALE CV	Water Reclamation Project for Value Chain Development
PTBA	Work Program and Annual Budget
DFS	Decentralized Financial System
SNEEG	National Gender Equity and Equality Strategy
SNGDERST	National Strategy for Storm Water Management and Soil Salinization Control in Senegal
SNDD	National Sustainable Development Strategy
SNSAR	National Food Security and Resilience Strategy
UP	Pastoral Unit

PART 1: SENEGAL'S PROJECT PROPOSAL

I. SECTION 1: BASIC DATA

a. Project Title	Post-COVID Food and Nutrition Security Enhancement Project (PRESAN/PC).
b. Applicant Country (ies)	Senegal
c. Implementing Ministry (ies)	Ministry of Agriculture and Rural Equipment (MAER)
d. Main point(s) of contact in country (name, position, organization, email address) <i>(the names and details of project preparation team members should appear in Annex 5)</i>	<p>Senegal:</p> <ul style="list-style-type: none"> • Mr. Papa Malick NDAO, Secretary General of MAER malick.ndao@agriculture.gouv.sn • Dr Moustapha DIAW, National Coordinator of PASA Lou Ma Kaff moustapha.diaw@gmail.com
e. Total amount of financing requested from GAFSP <i>(see Annex 1 – project budget table)</i>	<p>Requested amount: USD 26,646,440</p> <p>Necessary minimum amount: USD 25,000,000</p>
f. Estimated start and end dates of the project (dd/mm/aaaa – dd/mm/aaaa) 01/01/2023 to 01/01/2027	
<p>g. Privileged oversight Body</p> <p>Oversight bodies for investment and technical assistance (select one)</p> <p><input checked="" type="checkbox"/> African Development Bank (AfDB)</p> <p><input type="checkbox"/> Asian Development Bank (AsDB)</p> <p><input type="checkbox"/> International Fund for Agricultural Development (IFAD)</p> <p><input type="checkbox"/> Islamic Development Bank (IDB)</p> <p><input type="checkbox"/> World Bank (WB)</p> <p>Oversight bodies for technical assistance only (optional 15F¹)</p> <p><input type="checkbox"/> United Nations Food and Agriculture Organization (FAO)</p> <p><input type="checkbox"/> World Food Program (WFP)</p> <p><i>If more than one body are selected</i>, specify the anticipated breakdown of costs between them.</p> <p>[xx] % of the financing will be implemented through [name of investment oversight body]</p> <p>[xx] % of the financing will be implemented through [name of the technical assistance oversight body]</p>	
<p>h. Did the country (ies) receive GAFSP financing before?</p> <p><input checked="" type="checkbox"/> Yes, see Annex 4 for further details.</p> <p><input type="checkbox"/> Non</p>	

¹ Each proposal must be supported by an investment oversight body (AfDB, AsDB, IFAD, IDB or WB). Besides, a country may decide call on another oversight body for technical assistance activities only (FAO or WFP).

II. SECTION 2: PROJECT DESCRIPTION

2.1. Project's development objective: The objective is to contribute to enhancing food security and increase small farmer income. Specifically, this means (i) improving the income and building the food and nutrition security of small farmers, through water management, increased productivity sustainable development of plant and animal productions, (ii) provide private sector development opportunities, in line with investment plans to support national efforts for medium and long term response to COVID-19 and resilience to climate change.

2.2. Project Description

2.2.1. Project Rationale and proposed approach

2.2.1.1. The major challenges in the project areas are irregular rainfall, making ecosystems vulnerable and compounding the food deficit due to lack of water in the previously arable shallows, but also the low mobilization of hydrogeological resources to foster farming and livestock production activities. Through its action, PASA Lou Ma Kaf contributed to further securing pastoral animal production systems (short-cycle species) and farming (rice and horticulture), through the fight against bush fires, facilitation of access to water, inputs, land, equipment, improved housing and better observance of farming techniques. In that regard, many facilities were built, capacity building activities held and various support provided, which induced positive impact on water access and the adoption of good farming practices. Despite these various achievements by PASA Lou Ma Kaf, efforts are still to be made to better consolidate them in the project area, replicate them in new sites with a high potential to mitigate the negative impacts of climate change and the COVID-19 pandemic on agricultural productivity.

2.2.1.2. This is the purpose of the project proposal by Senegal that perfectly fits into the objectives of the National Agricultural Investment and Food and Nutrition Security Program (PNIASAN). The Program notably aims a securing the productive base and fighting against soil degradation. It addresses the strategic guidelines contained in the country's various policies and sector development plans, notably the Fast-track and Adjusted Priority Action Plan (PAP2A) in its agriculture component that gives pride of place to the development of rice farming and horticulture. Thus, its implementation is a priority owing to its positive impact on economic growth, rural job creation, sustainable food and nutrition security for the poor, improved income for value chain stakeholders and rural entrepreneurship development. The project's intervention strategy will be mainly based on "faire-faire" (delegation of tasks).

2.2.2. Project components and activities

2.2.2.1. The project submitted by Senegal has 3 major components, namely i) build sustainable hydro-agricultural and pastoral infrastructure, ii) support development and capacity building and iii) project coordination.

- **Component A: building sustainable hydro-agricultural and pastoral infrastructure**

The activities proposed will enable the building of hydro-agricultural and pastoral infrastructure to support agro-pastoral value chains and enhance the mobilization of ground and surface water in the shallows, in order to make them more productive for communities seriously impacted by the health crisis. Emphasis will also be put on the rain-fed rice farming strategy integrating the area crossed by the "baobolong" in the Nioro district.

The major activities to be carried out in this component are:

Surface Water Component: rehabilitation of 4 retention ponds, development of three shallow sites, construction and rehabilitation of 35 km of rural connectivity roads, construction of 5 consolidation centers and 5 storage warehouses, construction of 500 ha of secondary facilities in the shallows, development of 30 ha for horticulture, launch of an infrastructure maintenance fund in rain-fed areas managed in public private partnership, etc.

Ground water component: construction of equipped farm boreholes in 5 old farms with excess flow in Kaffrine and Louga, switching from thermal to solar power for pumping stations in 10 existing farms, construction of 10 dairy barns and 10 modern henhouses in the old farms to diversify production and foster

Agriculture/Livestock integration, development of 10 village farms of 11 ha, 5 integrated village farms of 5 ha, 50 "nataange" family farms and construction of 13 km of small rural roads to connect to the main roads.

Livestock component: construction of 5 new pastoral boreholes, 50 km of water pipes around the boreholes, 20 mixed vaccination sites (bovines/small ruminants) to enhance support for animal health, development of fodder farms around the boreholes over 1 ha per borehole, two pastoral water points, construction of individual production units (50 sheep pens for vulnerable groups, 25 modern individual pens for women and youths, 10 modern henhouses for meat production and 10 modern henhouses for egg production), construction of fodder storage hangars and 5 cattle feed storage warehouses, construction of a district slaughterhouse and rehabilitation (2) and construction (10) of veterinary posts.

- **Component B: support to production and capacity building**

The activities proposed are part of measures to support production and capacity building. They are aimed at creating and boosting the conditions for optimum and sustainable development of the facilities built. The main activities to be carried out are:

Surface water component: set up and support farmers' cooperatives in the sites developed, support to turn management committees into cooperatives, under the OHADA Act, support in inputs for rice production and horticulture in the sites developed, support in equipment and farm implements, support to the private sector to facilitate farming and post-harvest operations, technical and organizational capacity buildings for farmers and their organizations, support in the implementation of fish farming and apiculture, support to the organization of value chains (rice and horticulture), construction of 04 processing units, scaling up the EPC system, etc.

Ground water component: selection, structuring and training of farmers, organization and implementation of 6 farmers' cooperatives, support to marketing for farmers, support in equipment in the farms developed (procurement of 6 tractors fitted with carts and harrows, etc.), support in various small farm implements for the farms developed, support in inputs for the start of farm activities, procurement of dairy cows to diversify production activities in the farms, support farmers in their dealings with financial partners (banks, DFS, savings and credit), etc.

Livestock component: Implementation of 05 pastoral units, setting up management committees for the 05 new boreholes and capacity building for committee members, support for the development of 20 vaccination parks, procurement of fodder seeds and small mowing implements, procurement of core groups of breeding cows and spawners for small rearers, procurement of 50 dairy heifers for small rearers, procurement of chicks, poultry feed, drugs and vaccines for AGR beneficiaries, insemination of 500 local cows in the barns, capacity building for umbrella farmers' organizations through a system of supervision, procurement of vaccines (especially SGP) and cold chain equipment, to support the Ministry of Livestock and Animal Productions in its overall strategy to eradicate SGP by 2025, etc.

- **Component C: project management and coordination**

This component covers all the project's planning, coordination and follow up activities, including those related to procurement, resource mobilization and administrative and financial management. It is aimed at ensuring effective and efficient implementation of the project, centered on result-and-impact-based monitoring and evaluation.

2.2.2.2. The activities proposed in this project are in line with national agricultural development strategies, namely productive water management in the context of climate change, post-COVID 19 economic recovery and the Fast-track and Adjusted Priority Action Plan (Agricultural PAP2A). Eventually, they will help build the resilience of vulnerable groups, food and nutrition security for households, through increased income and production, and the integration of diversified agricultural products (rice, milk, eggs, meat, fish and vegetables) in the food rations of vulnerable groups. Erratic rainfall caused by climate change will be mitigated through prolonged retention of storm water in the shallows, and the mobilization of generally shallow aquifers for farming and livestock activities. Such developments will enable the diversification of production, notably rice and horticulture in the shallows, to enhance the cereal and rice development program in Senegal. With regard to local climate change adaptation, the creation of water points (ponds, shallows), development of plantations (windbreaks, agroforestry), deferred grazing actions and climate

change adaptation plans under the project will have a beneficial impact on temperature and humidity in the developed areas. Overall, given the limited size of the facilities, the project's contribution to global warming will be negligible. However, for the local climate, its implementation will build a sort of barrier against desert encroachment in the project areas. The introduction of clean solar energy to pump the irrigation water will help generate more resources for the beneficiaries and will be a plus for the climate.

2.2.2.3. **Only the AfDB was selected as an oversight body** for the project proposed by Senegal.

2.2.3. Project area (geographic scope) and priority targets

2.2.3.1. The project covers the 5 administrative regions of Louga, Matam, Kaffrine, Kaolack and Tambacounda. From north to south, the 5 regions cover two agro ecological zones of Senegal: the sylvopastoral zone and the peanut basin. Furthermore, compared to the three regions covered by PASA Lou-Ma-Kaf, the districts of Nioro and Koumpentoum are the extension area of the project when it comes to the new regions. As for the initial regions, more specifically Matam, the new project proposed aims to actively intervene in the districts of Matam and Kanel, in addition to the district of Ranerou that benefited from virtually all PASA Lou Ma Kaf interventions in the region, apart from specific support to a dairy farm in the commune of Ourosogui (district of Matam).

2.2.3.2. The 3 regions of intervention of PASA Lou Ma Kaf were kept in the new project to enhance and capitalize actions already undertaken in those areas. The district of Nioro was added as a new intervention area in order to integrate, among others, the dimension of anti-salinization developments to reclaim land for rice farming, dominated by the "baobolong" that crosses the district of Nioro. Interventions in the district of Koumpentoum will make it possible to mobilize ground water for farming and livestock activities and address the problems of cattle transhumance in the sylvopastoral area towards the south of the country.

2.2.3.3. In these regions, the incidence of poverty is relatively high, between 45.2% and 63.8%, and food insecurity is recurrent. The overall acute malnutrition rate is between 11 and 14%².

2.2.3.4. **The project's priority targets** will be local small farmers and rearers (youths and women, people with disability) living in the project's 5 intervention regions. Emphasis will also be laid on the most vulnerable groups, including women, youths and the elderly.

2.3. Details on the project's target groups and targeting strategy

2.3.1. **Overall, nearly 40,000 farmers and rearers will be directly impacted by the project, including over 24,000 women (60% of project target) and about 12,000 youths (30% of the project target).** These youths and women will benefit from facilities in the valleys, farms, anti-salt sites and horticulture plots. They will also settle in modern farms with agricultural boreholes enabling diversified production activities all year long. About 15,000 cattle breeders in the sylvopastoral zone will be organized and supported in the pastoral units, with spawners and modern cattle farms, to be created or revamped. Boreholes will be used as a platform to push local development. Partnership will be developed with the Laiterie du Berger, who will support the professionalization of the management of dairy farms. The project beneficiaries will not only be farmers' families directly impacted by the activities promoted to boost production, but also communities in neighboring villages whose living conditions will improve thanks to better availability of food, the construction of connectivity roads and the multiplication of water points. An estimated total of 450,000 will benefit from the impacts of the project.

2.3.2. **Women and youths, representing 60% and 30% of the beneficiaries respectively,** were identified as the project's priority targets, owing to their vulnerability. Several studies show this category of beneficiaries is subjected to food insecurity on a recurrent basis. The project's priority targets live in areas severely hit by endemic poverty (project areas of intervention). This is why the activities to generate income, diversify agricultural and pastoral productions, will provide solutions to such challenges. The selected populations will be the most vulnerable living in areas with proven agrosylvopastoral potential.

2.3.3. In the process of selecting the project's direct beneficiaries, local monographs were consulted, with

² Senegal National Food Security Survey (ENSAS, 2016)

field visits, a literature review, notably local planning documents, and consultations were held. This made it possible first to identify priority areas to be developed, based on proven local challenges. The target populations are active farmers and rearers in these areas. At the project formulation stage, all stakeholders (local governments, decentralized national institutions, technical and financial partners, civil society, private sector, projects under implementation, beneficiary communities, including women and youths, etc.) were consulted. In each region, a brainstorming session was held with institutional partners, potential project beneficiaries, local elected officials and administrative authorities. Taking into account the experience of earlier projects and PASA Lou Ma Kaf, the choice of direct beneficiaries will be based on their level of vulnerability, access to land and pastoral resources, the commitment of potential beneficiaries and other considerations mentioned earlier.

2.3.4. The beneficiaries will be chosen based on their level of vulnerability, thanks to the Unified National Registry (RNU) adjusted to the context. The choice will be validated by targeting committees put in place since the start of activities by PASA Lou-Ma-Kaf, which will be updated. There will also be affirmative action in favor of the most vulnerable (youths, women, the elderly, the physically challenged, the visually impaired, etc.) but also people stigmatized for living with HIV/AIDS or COVID-19.

2.4. Deficiencies in the market targeted by the proposed project's activities

2.4.1. Activities proposed under this project are aimed at bridging gaps related to the decrease in farmers' and rearers' income, causing a fall in their demand for farm products (meat and milk). The activities will boost production in agriculture and animal farming (poultry, meat, dairy). The decrease in income and production (agricultural and pastoral) was mostly compounded by the COVID 19 pandemic.

2.4.2. The project's developments require real technical and financial capacities from local farmers. Given their vulnerability, the project plans for **increased private sector participation** notably through support in areas out of reach for small farmers and rearers. Thus, the private sector will intervene in heavy works, such as ploughing the shallows. It could also intervene in production contracts in partnership with the beneficiaries of farms in the valleys and shallows, and poultry farms to help market their products.

2.4.3. Other analyses of the private sector environment were taken into account. Such analyses are drawn from the Senegal Emerging Plan which is Senegal's the reference document on economic and social policy, with its operational components in PAP2A, PASAD (replacing PRACAS 2) and PNDE. These documents see Agriculture as the priority sector for Senegal's economic emergence. A select technical committee was put in place under the authority of the Secretary General of the Ministry of Agriculture and Rural Equipment. The committee has overseen the preparation process of Senegal's project proposal and made sure all analyses on the investment climate in Senegal were taken into account.

2.5. Private sector opportunities and private investment promotion

Le project proposed by Senegal will promote private investment. The private sector will be included in all the possible niches of activity, either as intermediaries or suppliers of goods and services, in various domains. Farmers' cooperatives will be set up or enhanced, in order to position them on certain links of the value chains. Other actions will be initiated or promoted, notably to foster and facilitate contracting between farmers' organizations and other private providers. The idea is to foster a win-win partnership among stakeholders that will sustain activities undertaken by the project. The operation of sheep pens and henhouses (for meat and eggs) could generate private sector development. Targeting for these facilities will be done in partnership with private investors, in particular for the marketing of the finished products (women traders or supermarkets). The Project will support farmers in the drafting of production contracts with private investors. Such horticultural production contracts will facilitate access to inputs and marketing of the products.

2.6. Description of results and how they will be measured in terms of output, outcome and impact

2.6.1. The main expected results of the project are increased agricultural and animal production, improved prices (remunerative prices) and availability of sufficient and quality food resources. These activities will impact the beneficiary households' food and nutrition security. They will help support beneficiaries in

agricultural diversification (cereals, horticulture, fruit arboriculture) and animal diversification (bovines, sheep, goats, poultry, etc.). This will improve and enrich the beneficiary households' food rations. The breeding of small ruminants and poultry by vulnerable households will help improve their livelihood and resilience. In addition to generating income, all these activities will enable beneficiaries and households in the project areas to improve their diet through the availability of horticulture products, cereals and animal protein from increased consumption of quality proteins (poultry, eggs and meat from small ruminants).

2.6.2. Monitoring and evaluation of the project's activities was given specific consideration, with emphasis on operation and decentralized management from 3 stations (Kaffrine, Louga and Linguere), periodic assessment of outcomes and results, mandatory accountability for all units involved. The outcome and impact monitoring framework to be filled by every stakeholder, will systematically feature disaggregated data by gender, so as to make visible the results for women, youths and the most vulnerable groups. The monitoring and evaluation manual already available will be updated as soon as the project starts. Operationalization will be done through a workshop grouping all stakeholders with support from a consultant. The system will include a component on capitalization and communication which, from the results achieved, will identify best practices and success stories to launch the process capitalization, sharing and dissemination of best practices. Table D in Annex 2 gives the list of GAFSP indicators for level 1 (impact) and level 2 (outputs and results). The relevant indicators for Senegal's proposal have been selected. These indicators are presented in results monitoring matrix (Table E of Annex 2) which will inform the project's results framework or logical framework if Senegal's proposal is approved.

2.7. Data on the relevance of the proposed approach and activities

2.7.1. The project plans to carry out activities whose relevance will help solve the problems raised. The project formulation team adopted a participatory and inclusive approach through consultations involving all stakeholders (local governments, decentralized national institutions, technical and financial partners, civil society, private sector, current projects, beneficiary communities including women and youth etc.). During the formulation phase, field missions were sent to discuss with all grassroots stakeholders. This made it possible to draw lessons from the challenges and best practices of previous projects and PASA Lou Ma Kaf, which were capitalized to draw up this project's activities. Such activities are consistent as the operational application of sector policies and plans for agriculture and livestock (notably PNIA, PAP2A, PARES and SNDE). Meetings with grassroots stakeholders helped confirm the relevance of the empowering grassroots communities and their needs for support in developing value chains such as rice, horticulture, short-cycle species and for improved employability and entrepreneurship development for youths and women, as well as putting in place management plans for the pastoral units created, integrating pastoral boreholes.

2.7.2. This participatory and inclusive approach will be continued and enhanced during the project's implementation, through the empowerment of beneficiaries in the decision making process, consultation frameworks for stakeholders in the development sites and pastoral units, participation in the submission of annual work plans, budgets and activities reports by those responsible for the components to regional dialogue and consultation for a such as regional and district coordination and follow up committees (CRCs and CDCs). Furthermore, local elected officials will be closely involved in selecting the sites and monitoring activities. These bodies will see to the involvement of all stakeholders. Prerequisites will be demanded from beneficiary communities, taking into account their contributory capacities. The implementation of the project's activities will be decentralized on purpose through the field stations (Kaffrine, Louga and Linguere) and through protocols involving regional technical departments. During the project's implementation, all these operational arrangements will help continue with the participatory and inclusive approach and put local stakeholders at the heart of the decision making process.

2.7.3. In the implementation approach, the involvement of Senegalese authorities, **the African Development Bank (AfDB) as a GAFSP oversight body** and implementing agencies will help generate more success in solving the problems identified. In the sector of agricultural production, the AfDB had funded projects now closed, which produced tangible results in the development of small irrigation, microfinance, notably the Agricultural Modernization and Intensification Project (PMIA) which fostered the emergence of modern farms irrigated with ground water, the Local Small Irrigation Support Project (PAPIL) and the Casamance Rural Development Support Project (PADERCA). The latter two projects developed activities based on better water

management, from small hydro-agricultural facilities, and the preservation of the productive capital in order to foster the emergence of production hubs and enhance food and nutrition security. The AfDB is currently active in rural infrastructure, hydro-agriculture and livestock, through operations in the Food Security Support Project in the regions of Louga, Matam and Kaffrine (PASA Lou Ma Kaf) through resources from GAFSP and ADF, the Production Zones Connectivity Project to support the National Local Development Program (PDZP/PNDL), the Water Reclamation Project for the development of value chains to support the National Local Small Irrigation Development Program (PROVALE-CV/PNDIL). These achievements by the AfDB in livestock and water management will be fully capitalized through the implementation of the project.

2.7.4. The project has links with other projects such as PASA Lou Ma Kaf P2RS, PAFA, PAFA-E in the same department (Ministry of Agriculture and Rural Equipment) as well as similarities in some activities implemented such as agricultural and pastoral facilities, hydro-agricultural facilities, livestock farms, targeting of beneficiaries, institutional steering etc. The close involvement of decentralized technical departments through memoranda of understanding will guarantee better ownership and sustainability at regional level and stronger presence in intervention sites.

2.7.5. The other lesson learned may be summarized as follows: (i) seeking synergies and complementarities with current projects for better capitalization of comparative advantages and pooling of actions, (ii) need to review the process of selecting companies, notably the notion of “lowest bidder” in the public procurement code, in order to minimize delays in the delivery of works and improve the quality of works and supplies, (iii) set up and build the capacities of management committees for each category of works and involve municipalities in monitoring the distribution of plots, building the facilities and implementing the management plans of pastoral unites, in order to guarantee their sustainability when the project is closed. Another lesson learnt is the priority given to the entrepreneurship and value chain approach, to generate more productivity gains, in the promoted value chains and solve the problem of youth and women’s unemployment. There is also an emphasis on capacity building for farmers’ organizations and their umbrella bodies, capable of playing an intermediation role between the grassroots beneficiaries and their support organizations.

2.7.8. To the certain extent, this project is a consolidation of achievements and a continuation of activities by PASA Lou Ma Kaf. It plans to enhance and scale up the activities already identified in the PASA Lou Ma Kaf areas of intervention, and develop some activities initiated by that project in new areas. This is an advantage in terms of efficacy in the implementation of the proposed project.

2.8. Rationale for the financing of the project by GAFSP

2.8.1. GAFSP should finance the project because all the activities proposed make it possible to capitalize and consolidate the achievements of PASA Lou Ma Kaf. The activities proposed are a financing priority as they improve the living conditions of the most vulnerable groups, through increased income and connectivity actions, potable water supply, natural environment protection, nutrition support, food security, health coverage and health security grants for the most vulnerable groups. Through the project’s activities, the National Universal Health Coverage Agency is called to enroll the project’s beneficiaries and offer them health insurance and health coverage services. These types of activities carry no cost for the project.

2.8.2. The proposed activities will also help communities better secure and diversify agricultural production. Enhanced food security induced by the developments will contribute to improving the nutritional status of the communities. The populations’ increased purchasing power from the use of the facilities and farms will enable households, especially women, to more easily access disease prevention and treatment means. Access to potable water will also be facilitated through the construction or rehabilitation of pastoral boreholes and water systems, which will contribute to decreasing the prevalence of waterborne diseases. The activities proposed will also contribute to reduced rural-urban migration and illegal emigration by keeping the populations, notably youths, in the production sites. The rehabilitation of rural roads, the processing of products, the construction of cereal banks and cattle feed stores will contribute to reducing post-harvest losses and thus increase agricultural production and household income. The new access roads to the production sites will facilitate the marketing of agro-pastoral products, generally improving trade in the areas concerned. For all these reasons, the proposed activities are indeed a financing priority for GAFSP.

III. SECTION 3: PROJECT BACKGROUND AND PUBLIC ACTION FRAMEWORK

3.1. Status of Senegal's agricultural and food system

3.1.1. In Senegal, Agriculture is a sector with a high potential for growth and job creation. In the second phase of the Senegal Emerging Plan (2019-2023), it is one of the most resilient sectors. Efforts to modernize agriculture are aimed at increased agricultural production. They mainly focus on water access management, improved selection of varieties, enhanced equipment, improved farming techniques, agricultural infrastructure, access to quality inputs, dissemination and adoption of technological innovations and improved access to adapted and sustainable financing. This led to increased production of fruits and vegetables. These performances were facilitated by the Five-Year Strategic Plan for the subsector. A significant component of this program is the creation of village and family farms, as well as facilities for surface water retention and mobilization. These modernization efforts are aimed at creating sustainable and decent jobs in rural areas.

3.1.2. Despite several assets and opportunities, efforts to develop the agricultural sector are hampered by several factors, notably (i) little control over climate factors, (ii) insufficient management of access to productive water, (iii) decreased soil fertility and deterioration of agro-systems, and (iv) low valorization of agricultural products. To support agricultural development, Senegal, technical and financial partners, including GAFSP, injected on average 159 billion CFA a year, of which 51% of internal resources. Through these combined efforts by Senegal and its partners, the food security of rural households markedly improved thanks to increased family farm production and improved household income. However, these achievements may be compromised by the effects of the COVID-19 pandemic which is a real threat to productive and economic activity globally and in Senegal in particular, thus compounding the vulnerability of women, youths, the elderly and the disabled in rural areas.

3.1.3. Senegal still relies on imports for the supply of some food commodities such as rice, corn, onions, potatoes, wheat, etc. One incidence of COVID-19 is the very high probability of global agricultural under-production or major exporting countries prioritizing their own internal needs in food products, probably generating an unprecedented deficit for countries importing basic food commodities, as shown by FAO studies³. To contain the negative impacts of the coronavirus pandemic, boost socioeconomic activities and keep the country on track for emergence, the Government of Senegal opted to implement the Agricultural Program for Economic and Social Resilience (PARES) and adjust the Priority Action Plan (PAP) of phase 2 of PSE. PAP2A, the agricultural component, is aimed at fast-tracking Senegal's food sovereignty through enhanced autonomy in basic commodities.

3.1.4. Aware of the significant part to be played by PARES and PAP2A, the MAER initiated Sustainable Food Sovereignty Action Plan (PASAD) as the lever for the sector policy. The Plan, which is more ambitious, replaces PARES and PRACAS 2. However, despite its resilience to shocks, Senegal's agricultural system is struggling to provide food security to its people. Indeed, despite increased food supply (114% sufficiency in energy intake in 2018 from 112% in 2017⁴) as well as better economic accessibility (per capita GDP of 850,634 CFA in 2019 from 819,068 CFA in 2018⁵) and physical accessibility to food, food and nutrition security remains a concern. In 2018, the number of undernourished people was 1.8 million⁶. This situation may worsen with the pandemic that has disrupted food supply chains and could jeopardize the basic aspects of food and nutrition security, despite the boosting of primary commodity supply under PARES. Beyond the issue of food security, the agricultural sector is facing the disruption of value chains, a downturn from strategic partners and instability in domestic and global markets.

3.1.5. Livestock farming is one of the major income generating and job creating activities in Senegal. However, the pandemic has caused disruptions in the distribution of animal products, as well as challenges in access to feed and water.

³ FOASTAT 2020

⁴ FOASTAT, 2020

⁵ DGPPE

⁶ FOASTAT, 2020

3.1.6. Restriction measure introduced by Senegalese authorities following the COVID-19 outbreak led to decreased income for farmers and rearers, due to challenges in marketing their products because of binding and very strict decisions on transport. Huge quantities of unsold products and considerable loss of income for farmers were recorded in the project's intervention area. In the horticulture farms, the pandemic negatively impacted the maintenance of water regulation and irrigation systems, most of which were damaged. The livestock sector was not spared either by the COVID-19 pandemic. The negative incidences recorded in the animal value chains were harshly felt by farmers across all the value chains. The dairy, poultry cattle value chains were the most impacted. **In the dairy value chain**, there was a sharp decrease in the number of customers due to travel restrictions, leading to a slowdown in dairy marketing which, in normal circumstances, gave farmers a daily income to cover household expenditures and purchase agricultural inputs. Huge losses were also recorded in production, due to a lack of adequate storage facilities, causing considerable loss of income. **In the poultry value chain**, where demand mainly comes from restaurants, hotels and major religious events, there was a significant slump in sales, leading to turnover losses for poultry farms. **In the cattle-meat value chain**, following the closure of weekly markets and cancellation of religious festivals⁷, there was a sharp decrease in the slaughter of ruminants⁸. Significant losses of income and decreased food resources were recorded these value chains, which are the only savings for vulnerable groups (women and youths), due to challenges in marketing their products.

3.2. COVID-19 response management and agricultural and food sector recovery

3.2.1. To tackle the induced effects of the COVID-19 pandemic, an overall response plan was developed by the Senegalese government. The coordination of response actions was inclusive and autonomous, with the implementation of social support measures to boost the resilience of communities. In that regard, the Ministry of Agriculture and Rural Equipment also developed an Agricultural Program for Economic and Social Resistance (PARES) in response to COVID-19, the main objective being to provide urgent response to the negative impact of the pandemic on stakeholders in the agricultural value chains. With a response fund named "Force COVID-19" of 1,000 billion CFA, or 7% of GDP, to support the most affected households and businesses, the agricultural component of the program has evolved into the Agricultural Program for Sustainable Food Sovereignty (PASAD 2021-2023).

3.2.2. In that regard, rural areas received more significant subsidies in inputs and feed. A national coordination committee was set up to coordinate the implementation of response activities, under a military General. The AfDB and GAFSP were strongly involved in the national COVID-19 response mechanism, through the financing of development projects and programs. Thus, through PASA Lou Ma Kaf, a significant quantity of various inputs (fertilizers, seeds, phytosanitary products, cattle and poultry feed, food for the lean season and antiseptics, etc.) were received by Senegal's Ministry of Agriculture and Rural Equipment. This support, aimed for farmers in the project's intervention areas as well as to Plant Protection Departments, followed budget support directly paid to the Senegal Treasury by the AfDB under the COVID-19 response.

3.2.3. As part of this financing request, Senegal proposes a set of activities to mitigate the impacts of the COVID-19 pandemic. These activities boost the resilience of small farmers in the project's intervention area, to raise the living standards of households, through food and nutrition sovereignty targeting women and youths on the one hand and, on the other hand, improve food security and boost income. Specifically, the proposed activities will enable the valorization of horticulture farms, through better water management in the plots, diversification of agricultural activities in the intervention area, securing the productive base and improving the commodity marketing conditions. This will induce substantial increase in productivity, income from farms and, consequently, mitigate the negative impacts of COVI-19 on households and improve the nutrition of vulnerable groups, which has been heavily degraded by the pandemic. The installation of solar pumping systems will enable a large number of farmers to generate more income and increase their yield, with a significant decrease in operating costs. These activities will rapidly generate income (short-cycle species), boost the resilience of vulnerable groups (women and youths) faced with a downturn in economic activities in the project area and generate additional income for vulnerable households. The proposed

⁷ Magal, pilgrimages and Gamou

⁸ Bovines and small ruminants

activities will also improve the availability of food commodities (vegetables, dairy, eggs, meat and poultry) and sustainable income to meet basic expenses.

3.2.4. In a first instance, the project's planned activities will help respond to the weakening of agricultural production systems in the intervention area. These effects are mainly related to the observance of barrier measures (restrictions on travel and gatherings). COVID-19 has had a considerably negative impact on the livelihoods of households in the project area in terms of slump termination of activities initiated under PASA Lou Ma Kaf. Reduced remittances from the Diaspora decreased the households' capacities to tackle food insecurity. Agricultural recovery activities, with high value added commodities, will help mitigate these challenges. In the longer term, strengthened FOs and rehabilitated farms will help sustain the production base of households. The resources requested by Senegal will be used to support and boost agricultural production activities by impacted communities and revamp dormant activities as well as build the resilience capacities of households in general. The project's resources will also enable the rehabilitation of horticulture farms, sheep pens, goat pens and henhouses were production had stopped due to the COVID-19 pandemic. All these measures will have a short, medium and long term impact on household activities. In the short term, this will enable local economic recovery through capacity building for beneficiaries to restart their activities. The resources will also help⁹ boost the resilience of poor rural households, the availability quality food commodities and prevent food crises for beneficiary households and consumers in an environment where imports could slump. In the medium and long terms, resilience to the pandemic will be achieved through experimenting production systems compatible with the context of the pandemic (inputs, adapted supply, production, marketing), with full knowledge of the barrier measures necessary stay healthy and carry out production activities. The project could maintain this resilience through responses based on skills related to the project's expertise but also sustainable partnerships capable of supporting the project for the sustainability of its results.

3.2.5. The local response through agricultural recovery will combine the reopening of irrigation systems, provision of inputs and technical and organizational capacity building to boost farm production. Thus, the proposed activities complement those planned locally and will fill a resource gap, following COVID-19, to restart the dormant activities. Horticulture, given its motive role in the structural transformation of Senegal's economy, with a very significant contribution through import substitution (meeting the demand in the domestic market and creating shared wealth) and exports, should provide a more structural response to COVID-19, through the implementation of activities planned by the project.

3.3. Project background beyond COVID-19

3.3.1. By putting Agriculture at the heart of economic and social development, through the Senegal Emerging Plan (PSE), Senegal relied on this significant lever to fast-track growth and achieve its macroeconomic objectives and emergence by 2035. To rapidly operationalize the vision and political guidelines of the President of the Republic, MAER has developed and implemented, since 2014, the Senegalese Agriculture Fast-Track Program (PRACAS) and the Agriculture Sector Development Paper (LPSDA) 2019-2024. These strategic frameworks are implemented through projects and programs contained in the budget-program documents of the UEMOA's harmonized public finance management framework, which came into force in fiscal 2020.

3.3.2. To support the development of the agricultural sector, the Government and its technical and financial partners inject on average 159 billion CFA a year, of which 51% of internal resources. Through these combined efforts by the State and its partners, rural households' food security improved significantly, thanks to increased production from family farms and household income.

3.3.3. These achievements are now under threat from COVID-19, which is a serious menace for productive and economic activity globally and in Senegal in particular, thus compounding the vulnerability of rural women and youths.

3.3.4. Currently, Senegal is still dependent on imports, for certain commodities such as rice, corn, onions,

⁹ In line with the GAFSP objectives to increase investment in the agricultural sector

potatoes, wheat, etc. One incidence of COVID-19 is the high probability of agricultural underproduction. One incidence of COVID-19 is the very high probability of global agricultural under-production or major exporting countries prioritizing their own internal needs in food products, probably generating an unprecedented deficit for countries importing basic food commodities, as shown by FAO studies.

3.3.5. To contain the negative impacts of the coronavirus pandemic, boost socioeconomic activities and keep the country on track for emergence, the Government of Senegal opted to implement the Agricultural Program for Economic and Social Resilience (PARES) and adjust the Priority Action Plan (PAP) of phase 2 of PSE.

3.3.6. PAP2A, the agricultural component, is aimed at fast-tracking Senegal's food sovereignty through enhanced autonomy in basic commodities. Aware of the significant part to be played by PARES and PAP2A, the MAER initiated Sustainable Food Sovereignty Action Plan (PASAD) as the lever for the sector policy. This project proposed by Senegal fits in this framework and consolidates the achievements of PASA Lou Ma Kaf 1 and other projects with the same development objectives.

3.3.7. The adjustment initiated by Senegal under PAP2A, for the period 2021-2023, will be built on refocusing priorities to better revamp the market towards emergence. In that regard, the new projects under PAP2A will be tied to the strategic objectives of phase 2 of PSE, with specific emphasis on endogenous development underpinned by the quest for food sovereignty.

3.3.8. In the agricultural sector, which is pivotal in poverty reduction, food security enhancement and job creation, the following priority actions will be implemented: (i) valorization of farms and animal production units, hydro-agricultural development and facilities, (ii) horticulture recovery, (iii) rice self-sufficiency and (iv) boosting value chains through the promotion of resilient family farms (RFF). In the livestock sector, a major component of food sovereignty, development will be achieved by boosting current initiatives such as (i) fast-tracking sheep and milk self-sufficiency and (ii) developing fodder crops.

3.3.9. In recent years, Senegal did not suffer exogenous shocks such as hurricanes or locusts invasions, but there have been some instances of flooding.

3.4. Project's compliance with national agricultural and food security strategies and the national COVID-19 response plan

3.4.1. Through its objectives of improving farmers income and food and nutrition security through water management, sustainable increase and valorization of plant and animal productions, the project proposed by Senegal is in line with the Senegal Emerging Plan (PSE) adopted in 2014 as the reference framework for the implementation of all sector policies and programs in Senegal. The vision of PSE is "an emerging Senegal by 2035, with a solidarity society under the rule of law". In that regard, the project's implementation will contribute to operationalizing two pillars, namely those relating to: (i) "the structural transformation of the economy and Growth" and (ii) "significant improvement of the population's living conditions, a more sustained fight against social inequalities, while preserving the resource base by fostering the emergence of sustainable territories". The project is clearly in line with national agricultural development strategies, namely productive water access and management against the background of climate change, post-COVID-19 economic recovery¹⁰ and PAP2A in its agricultural component.

3.4.2. Indeed, the pandemic calls for a reorganization of public interventions and redefinition of the contours of a priority investment plan. These actions will focus on sectors with high potential for economic growth and social inclusion. In general, following a major shock of this magnitude, adjusting the development Plan becomes necessary to correct and bring in new measures likely to keep the country on track for emergence. In this context, Senegal adjusted the Priority Action Plan (PAP) of Phase II of the Senegal Emerging Plan (PSE) to mitigate the negative effects of the crisis, boost socioeconomic activities and stay on track for emergence. In that regard, a thorough analysis is necessary, notably at macroeconomic and socioeconomic levels, with a view to reviewing the medium term ambitions stated in Phase II of PSE.

¹⁰ Post-COVID Economic and Social Resilience Program (PRES, 2020)

3.4.3. Furthermore, the project fits perfectly into the objectives of the National Agricultural Investment and Food and Nutrition Sovereignty Program (PNIASAN), which notably aims at securing the productive base and fighting against soil degradation. PNIASAN also addresses the strategic orientations of the various sector development policies and plans, notably: (i) the Agricultural Program for Sustainable Food Sovereignty (PASAD) and the National Rice Self-Sufficiency Program (PNAR); the livestock development policy paper 2017-2021 and the national livestock development policy. It is also in synergy with the National Strategy for Sustainable Storm Water Management and Combating Soil Salinization in Senegal (SNGDERST) 2013-2027, which seeks to increase the volumes of surface water and reclaimed land, the Integrated Water Resource Management Action Plan of Senegal (PAGIRE) and the National Program for the Development of Local Small Irrigation (PNDIL) of July 2017 formalized by Decree Nr 14.12.2017/22 057/MAER. Besides, it is in line with Act III of the decentralization policy. It also integrates multi-sector strategies, gender equity and equality strategies (SNEEG), the food security and resilience strategy (SNSAR) and the agro-sylvopastoral Law (LOASP) developed in 2004 on food security, resilience to climate risks, access to infrastructure, water management, etc.

IV. SECTION 4: CROSSCUTTING THEMES

4.1. Le projet proposé par le Sénégal se concentre sur les thèmes transversaux suivants, tous prioritaires pour le GAFSP. Ils sont :

- Genre et autonomisation des femmes et des filles;**
- Résilience climatique;**
- Mieux nutriments.**

4.2. Le Couverture du projet des zones thématiques identifiées d'intervention

4.2.1. Résilience climatique

One of the major phenomena affecting agricultural productivity and production and compounding production losses is climate variability and change. The project will be implemented in Senegal, a country of the Sahel, an eco-geographical zone seriously affected by climate change and cycles of drought. Such climate change materializes in extreme natural and meteorological phenomena such as high winds, recurrent drought, flooding, climate variations, erratic rainfall, rising temperature, etc. These events may hamper the project's success, all the more so as the following risks can be expected: (i) lower agro-sylvopastoral production, (ii) shrinking aquifers and drying up of water sources and streams, (iii) displacement of populations as a result of intense weather conditions, (iv) destruction of facilities, farms and assets as a result of flooding, (v) sanding up of water points by sandstorms, (vi) locust invasion, (vii) escalation of conflicts among users, etc. The adaptation measures and activities planned under the project are in line with the climate risk management analysis. The project contributes to the implementation of Senegal's Nationally Determined Contribution (NDC). Construction and/or rehabilitation of hydro-agricultural facilities in the valleys/shallows, anti-salinization works and feeder roads will not have a major incidence on climate change in terms of deforestation (carbon sink decrease). Besides, hydro-agricultural and anti-salinization works, with the resulting water management, will contribute to boosting the communities' resilience to the harmful effects of climate change, characterized by erratic rainfall, climate variability and climate change. With regard to local climate change adaptation, the creation of small water points (ponds, shallows), the development of plantations (windbreaks, agroforestry), water and soil conservation measures (WSC), as well as soil protection and restoration (SPR) under the project will have a beneficial impact on temperature and humidity around the farms developed. Overall, given the small size of the facilities, the project's contribution to global warming will be negligible. However, in view of the local climate, its implementation will be a form of barrier against desert encroachment in the intervention areas.

4.2.2. Genre et autonomisation des femmes et des filles

4.2.2.1. Gender mainstreaming is part of the project's intervention strategy. The project gives pride of place to gender mainstreaming in terms of improving access to productive resources and raising the level of participation of youths and women, including young men and women, in social mobilization and the management of the project's facilities. By fostering equitable access of women beneficiaries to capacity building activities, to decision making processes, to socioeconomic infrastructure, to investment operations and land tenure security on the one hand and, on the other hand, by building the organizational capacities of women farmers' organizations, employment and entrepreneurship opportunities in agricultural and livestock value chains, the project plays a strategic role in enabling inclusive growth in the regions covered. Women and young girls are often implicitly handicapped by discriminatory traditions and practices which make it more difficult for them to seize entrepreneurship opportunities. To remedy this situation, the proposal is to implement a gender sensitive communication strategy in all the intervention areas.

4.2.2.2. The project will benefit about 24,000 women and 12,000 youths in the rice, poultry, ovine, goat and other value chains. The project will include an integrated service package for women and young girls focusing on: (i) land tenure security for women and girls, notably through sensitization of municipal council officials and the delivery of land deeds, (ii) equitable access to socioeconomic facilities (feeder roads, storage warehouses, village nurseries, etc.), (iii) access to time-saving technologies and increased productivity and value addition (processing units), (iv) women's access to local, national and regional markets. The project will

also aim to promote women's inclusion and leadership (at least 30% women) in the decision making bodies of various entities set up under the project. The plan is to set up a gender sensitive monitoring and evaluation system. The capacities of all stakeholders will be built in the area of gender mainstreaming. Consultations and partnerships will be initiated with organizations working on gender mainstreaming.

4.2.3. Better nutrition outcomes

4.2.3.1. In the project's intervention areas, the nutrition situation remains insecure, notably among children under five. Indeed, the main forms of malnutrition – stunting, low weight, wasting and micronutrient deficiencies – are still highly prevalent. Food-related micronutrient deficiencies remain very high, especially anemia resulting from iron deficiency and vitamin A deficiency among children under five. Such deficiencies affect all the regions of Senegal and require priority interventions, in view of the many negative human and socioeconomic consequences.

4.2.3.2. The food-related causes of malnutrition remain significant in Senegal, with very little diversity in the diet. Cereals are the staple, especially rice, while consumption of commodities such as meat, fish, fruits and vegetables remains low. Several other factors may explain the lack of diet diversification, including problems of availability and accessibility, notably for some nutrient-rich foods, and unfavorable dietary and nutrition habits. The agricultural sector may strongly contribute to improving the nutrition situation, by improving availability, accessibility and the quality of foods, in order to positively influence diets. Horticultural production developed by the project will contribute to improving the nutrition of beneficiary households and have a positive effect on people's health, especially the most vulnerable – children and women of childbearing age. The project will develop initiatives to improve the nutrition quality of foods through vegetable gardens. Information, sensitization and education activities on nutrition, hygiene and waterborne disease prevention will also contribute to improving the communities' health and nutrition.

4.3. Consideration of crosscutting themes by national policies and strategies

4.3.1. All the activities proposed under crosscutting themes are informed and guided by consensually adopted national policies and strategies.

4.3.2. In the area of climate resilience, the activities proposed are mainly guided by the following papers and policies: (i) the Environment and Sustainable Development Sector Policy Paper (LPSEDD) 2016-2020 aimed at creating a national dynamics for improved management of the environment and natural resources, mainstreaming sustainable development principles in policies and boosting the resilience of communities to climate change, (ii) the National Sustainable Development Strategy (SNDD) aimed at reconciling current policies, strategies and programs on the one hand and, on the other hand, fostering better synergy among the various actions implemented by trying to identify and take on board interfaces of areas of competition, (iii) the National Desert Control Action Plan (PAN/LCD) which remains a major component of the National Environment Action Plan (PNAE) which focuses on restoration, reforestation, capacity building and sensitization on natural resource management, (iv) Senegal's forestry policy 2005-2025 which is an extension of the 1982 Forestry Development Master Plan which featured several actions, including the creation of a coordination framework for natural resource management, streamlining forestry exploitation and local community empowerment in local forestry resource management, (v) the National Adaptation Program of Action (NAPA) which is a set of priority actions aimed at responding to climate change, (vi) the Biodiversity Conservation Action Plan which is a strategy strongly highlighting the need to preserve biodiversity sites by reducing the risks of destruction of natural habitats and ecosystem disruptions, (vii) the national strategy for the implementation of the Convention on Climate Change which aims to mainstream the climate change dimension into Senegal's economic and social development policy.

4.3.3. In the area of gender promotion, the activities proposed are mainly based on the National Gender Equality and Equity Strategy (SNEEG) and a SNEEG implementation plan aimed at empowering women in economic and sociopolitical areas.

In the area of nutrition, the activities are mainly guided by the following documents: (i) the National Agricultural Investment and Food and Nutrition Sovereignty Program (PNIASAN) which notably aims at

securing the productive base and fighting soil degradation, (ii) the Agricultural Program for Sustainable Food Sovereignty (PASAD 2021-2023), (iii) the National Food Security and Resilience Strategy (SNSAR), (iv) the National Rice Self-sufficiency Program (PNAR), among others.

The following ministries will play a key role in the design and implementation of the project's activities: (i) Ministry of Agriculture and Rural Equipment (MAER), (ii) Ministry of Livestock and Animal Production (MEPA), (iii) Ministry of Finance and Budget (MFB), (iv) Ministry of Environment and Sustainable Development (MEDD).

4.4. Women and girls' roles and participation in the project

4.4.1. The project will give priority to rural activities usually popular among women, and for which their knowhow is recognized (horticulture, rice farming, small livestock, traditional poultry, processing, marketing, etc.) and from which they can generate income. It will also use affirmative action for women and vulnerable groups everywhere local traditions tend to exclude them from decision making or certain benefits. The project will notably make sure women have access to the developed land (women's farms, gardens, shallows), play a role in the organization and management of new facilities (boreholes, farms, henhouses, consolidation centers, etc.), as well as access to training and new production tools. Therefore, the project will contribute to boosting women's economic empowerment and decision making. Through water points and processing units, it will also contribute to reducing women's domestic chores. The project's priority targets will be small farmers (youths and women) living in the five intervention regions.

4.4.2. The project includes a gender sensitive communication strategy in all intervention areas. It will benefit around 24,000 women and 12,000 youths (girls and boys) active in value chains such as rice, poultry, horticulture, sheep, goat, etc. The project will feature an integrated service package for women and young girls focusing on: (i) land tenure security for women and girls, notably through the sensitization of municipal council officials and the issuance of land deeds, (ii) equitable access to socioeconomic facilities (feeder roads, storage warehouses, village nurseries, etc.), (iii) access to technologies reducing the work time increasing their productivity and the added value of commodities (processing units).

V. SECTION 5: PROJECT IMPLEMENTATION, SUSTAINABILITY AND MANAGEMENT

5.1. Risks threatening the achievement of the project's objectives

5.1.1. There are risks over the implementation of the project. Such risks are of various types: (i) climate alterations directly affecting agricultural and animal production and development, (ii) soil-related, lower fertility caused by continuous impoverishment and salinization, (iii) land-related, with risks of conflict between farmers and migrating pastoralists, (iv) time-related, delayed works caused by the low capacity of contractors and other service providers, (v) company performance, low efficiency of the monitoring and evaluation systems to reflect the impacts of the project, (vi) context-related, low level of training and organization of farmers, (vii) consumers' pessimistic behavior, (viii) challenges in commodity marketing, (ix) volatile prices of agricultural products, etc.

5.1.2. These risks are moderate low, since the proposed activities are quite similar to those implemented under PASA Lou Ma Kaf (under implementation) and lessons learnt were well capitalized in the design of the new project proposed by Senegal. Sensitization of farmers and herders, concerted organization of agro-pastoral areas, collective bargaining agreements and demarcation of cattle routes will reduce risks of conflict between migrating pastoralists and sedentary farmers. The risk of women's limited access to land was taken into account, as this concern will be part and parcel of the intervention criteria (affirmative action) and the land issue will be systematically clarified before any intervention (prior issuance of land deeds by municipalities).

5.1.3. Farm modernization and the development of a value chain and entrepreneurship approach could be a major challenge in light of the low capacities of the most vulnerable rural communities. The project will make sure these poorest groups are not excluded by integrating them in an inclusive dynamic where private entrepreneurship development will enable an overall boosting activity sectors, with induced effects on all groups, notably vulnerable groups in the project's intervention areas. Capacity building actions will also enable the various stakeholders, including women, to better manage the innovations and fulfill the responsibilities inherent in sub-sector development. The risks related to marketing horticulture products are limited, since their market access will be facilitated (connectivity, storage, marketing, partnerships, etc.) and the targeted achievements will be delivered by implementation partners for the choice of crops, farming calendar and search for outlets. A detailed assessment of risk levels and mitigation measures, as well as an assessment of negative externalities, are proposed in Annex 3, Tables F and G.

5.2. Sustainability

5.2.1. The sustainability of the actions implemented, notably maintenance and management of facilities built or rehabilitated, is a pivotal concern in the project design, as shown notably in two inseparable components and a maintenance fund focusing on "physical structures" and "organizational capacity building". The sustainability of the project's investment is mostly related to the beneficiary management committees' capacity to regularly and sustainably maintain and manage the facilities through the maintenance fund. The management committees of hydro-agricultural, pastoral and support facilities (surface water collection facilities, pastoral equipment, feeder roads, etc.) will be set up before starting construction of any structure and should facilitate community mobilization and participation. For each intervention, the project will give priority to tried and tested mechanisms for the recovery of maintenance and renewal costs: pastoral borehole management by ASUFOR and public service representatives (DSP), pastoral space organization through Ups and implementation of management plans, maintenance of retention facilities in the shallows by management committees set up and trained. Management committee members will receive organizational, technical and structure management support to enable them to supervise the contractors' work, together with the project team and inspection agencies.

5.2.2. The committees' involvement in closely monitoring the implementation and delivery of the works will enhance their ownership of the facilities, thus ensuring better sustainability. Besides, management committee members will be trained in accounting management of endogenous facility maintenance funds whose amount will be determined by joint agreement among beneficiaries based on the recurrent costs of each type of structure. Exchange visits to other facilities will be organized by the project so that committee members may learn from best practices in management. For the maintenance of rural roads and firebreaks,

the project will develop sustainability mechanisms empowering the municipalities concerned (involvement in project management) and fitting into the strategic options developed at national level (autonomous rural road maintenance fund) and regional level (firebreak maintenance brigades). The implementation of activities will be the responsibility of common interest groups, associations and organizations in place or set up with help from the project. Communities will be closely involved in participatory planning and provide, depending on the facility and their capacities, a physical and/or financial contribution. Priority will be given to an intervention process based on prior commitment and real participation of the communities concerned as well as local authorities and decentralized technical departments.

5.2.3. These various stakeholders will receive support from the project to build their technical and organizational capacities and skills. Umbrella organizations in the area (UP, ASUFOR, FO unions, federation of sub-project beneficiaries, etc.) will also be supported, which will strengthen the basis and coherence of the actions undertaken. This development approach based on responsibility, ownership, local governance, use of simple and tested techniques, capacity building, professionalization and empowerment of stakeholders, private sector involvement and close monitoring and supervision, is aimed at ensuring the sustainability of the project's activities and achievements. Besides, the project will build the capacities of young repairers selected based on criteria such as: availability, place of residence, level of education and motivation. These young artisans receive capacity building on regular facility maintenance operations (canal dredging, pump maintenance, cleaning of irrigation basins, etc.) and necessary equipment kits for these operations. The repairers will be able to work as maintenance service providers and will be easy to mobilize in case of a fault. For heavy maintenance requiring technical proficiency, the project will set up works maintenance fund (FEM).

5.2.4. With regard to the storage warehouses, agricultural equipment and multifunctional platforms to be managed by farmers' groups, the project will provide capacity building for local economic development with emphasis on agricultural value chains as a virtuous cycle to reduce poverty and develop entrepreneur private sector. The project's sustainability will also be ensured by the structuring of beneficiaries, notably cooperatives, farmers' groups, farmers' organizations, umbrella organizations and management committees in relation with mandated partners. These entities will receive managerial, accounting and logistic capacity building to enable them eventually grow into autonomous businesses capable of initiating, when the project is completed, income generating activities in sectors such as mechanics, transport, processing of agricultural products, maintenance etc. The development of local expertise induced by the project will foster the sustainability of technical capacities and, consequently, the sustainability of the facilities.

5.3. Consultation process for the design of the project

5.3.1. The project was designed in a participatory and inclusive approach involving all stakeholders: beneficiaries, technical departments, farmers' organizations, women/youth groups, civil society, private sector, technical and financial partners and projects, etc. Large consultations at all stages of formulation and assessment focused on activities, criteria for selecting intervention sites, beneficiaries, value chain development, opportunities to promote rural employment and youth entrepreneurship, financing mechanisms drawn from the implementation of prior similar projects, the role of various stakeholders under the new project and modus operandi to ensure successful implementation of the project, views and recommendations from major stakeholders.

5.3.2. In each area where sites were visited, work sessions were held with local elected officials, regional technical departments (agriculture, livestock, fisheries, forestry, etc.), farmers' representatives, civil society, private sector and some projects. The work sessions made it possible to: (i) brainstorm on the expected achievements and lessons learnt from previous projects and PASA Lou Ma Kaf. These lessons were capitalized to identify activities for this project, which are consistent with the agricultural development policies and plans featured at operational level in PNIA, PRACAS II, PASAD, PNDE and SNDE; (ii) set out the major orientations and intervention strategies of the project and (iii) discuss the role of various stakeholders in the new project, gather stakeholders' views and recommendations and measure the beneficiaries' interest and level of ownership and empowerment throughout the project's formulation and implementation process. The officials from the national coordination unit of PASA Lou Ma Kaf, from its parent Ministry of Agriculture and Rural Equipment (MAER), the Ministry of Livestock and Animal Production (MEPA), the Ministry of Economy and Finance, and officials from current projects in the sector were individually met to better discuss

the modus operandi of planned activities.

5.3.3. Consultations and work sessions with technical departments involved in the implementation of the project's activities, such as the National Agency for Integration and Agricultural Development (ANIDA), DBRLA, DRIREL and the National Farm Advisory Agency (ANCAR), etc. will enable good methodological ownership of the project by partners and build partnership agreements from the start of the project.

5.3.4. In the villages and communes, focus groups were organized to meet with the project's direct beneficiaries, elected officials, cooperative leaders, youths, women, traditional leaders. These meetings confirmed the relevance of the grassroots community empowerment approach and the needs for support to develop the rice, horticulture, small ruminant and poultry value chains, as well as capacity building for youth employability, youth and women entrepreneurship development and management plans for the pastoral units set up, integrating pastoral boreholes. The boreholes, which attract resources and provide a convergence point, will be used as development hubs to boost local development. The consultations will continue during the project assessment mission, when technical and financial partners will be engaged for endorsement, in compliance with GAFSP guidelines.

5.3.5. The selected activities cover already identified areas and communities, for whom several consultations have already been held and make it possible to define, in a participatory and decentralized manner, the priority interventions most recurrent in local development plans. The project preparation team visited the various regions to discuss with local stakeholders, technical departments and communities in order to more precisely specify the actions to be carried out and the modus operandi. A technical committee for the supervision of the project proposal development process was set up, under the authority of the Secretary General of the Ministry of Agriculture and Rural Equipment (MAER). The committee comprises MAER'S number 1 Technical Adviser, Technical Adviser number 2 of the Ministry of Livestock and Animal Production, the National Director of the Senegalese Grassroots Development Promotion Association (ASPRODEB), the Coordinator of the technical support unit of the National Rural Consultation and Cooperation Council (CNCR) on behalf of farmers's organizations and civil society, the Directors of DAPSA and DBRLA, the National Coordinator of PASA Lou Ma Kaf, experts from the national coordination of PASA as well as officials from decentralized stations, representatives from the AfDB and the oversight body team (observers). The Committee was supported by a recruited consultant facilitator. The committee consensually validated the activities to be implemented, their unit and total costs, as well as the modus operandi for their implementation.

5.3.6. This participatory approach will be continued and enhanced during the project implementation, through beneficiary empowerment in the decision making process for the activities, setting up stakeholder consultation frameworks in the development sites and pastoral units, participation and submission of work plans and development of annual budgets and activity reports by component officials to regional dialogue and consultation fora, namely regional and district coordination and monitoring committees (CRCS and CDCS). Besides, local administrative authorities will be closely involved in site selection activity monitoring. They will see to the involvement of all stakeholders and help prevent the risks of grabbing by local elites or unrecognized entities. Prerequisites will be set for beneficiary communities, taking into account their contributive capacities. The implementation of the project's activities will be purposely decentralized through field stations (Kaffrine, Louga and Linguere) and through memoranda of understanding involving regional technical departments. During the implementation of the project, all these operational arrangements will help continue with the participatory approach initiated and put local stakeholders at the heart of the decision making process.

5.4. Institutional arrangements for the project's implementation

5.4.1. The project is under responsibility of MAER. Coordination, monitoring and oversight of the implementation of its actions will be provided by a Steering Committee and a management unit. The steering and oversight activities will be provided by a steering committee set up by a MAER ministerial decree. The committee is an operational governance body. It will be chaired by the Secretary General of MAER or their representative, and the SG of MEPA or their representative will serve as vice-chair. Other line ministries as well as civil society or farmers' organization representatives are also members of the steering

committee. At the request of the chairperson, the steering committee will meet once a year in ordinary session and as the need may be, to consider annual reports, validate annual work plans budgets (AWPB) and any other issue relating to the project's implementation. In the project's intervention areas, oversight of actions will be provided by existing regional coordination and monitoring committees (CRCS) chaired by regional Governors. Each CRCS will see to the consistency of the actions to be implemented at regional level with existing communal development plans and current projects in the region. CRCS will pay particular attention to coherence between the 3 components of the project, in terms of site selection, intervention strategy and equity in the target regions.

5.4.2. The activities financed under the project will be implemented taking inspiration from the experience of PASA Lou-MA-Kaf: mobilization through the Donor (GAFSP) with the oversight body, the AfDB. The State of Senegal will be involved as the financial supervisor (Ministry of Finance and Budget). PASA Lou-Ma-Kaf has already proven its resource absorption capacity through the current program with disbursement rates of nearly 98% at 31/07/2021. It has an operational Project Management Unit (PMU) whose members are conversant with AfDB rules and procedures and can provide technical, administrative and financial management of the project. The project's management team will include a National Coordination Unit and three field stations. The National Project Coordination Unit (CNP) will monitor and coordinate activities in the 3 components. It will be responsible for programmatic, financial and procurement management, as well as monitoring and evaluation. It has substantive and equipped offices. It will be based in Dakar at the Diamniadio Ministerial compound.

5.4.3. The financed activities will be implemented by the current team of PASA Lou Ma Kaf, whether in terms of infrastructure to be valorized or production support and capacity building. The team will be boosted with new human resources, notably in the crosscutting themes (climate change expert, gender expert, nutrition expert, etc.). Recruitment of the additional staff will be through a competitive and transparent process, involving the relevant ministries. All applicants must have good professional experience and be conversant with the rules and procedures of technical and financial partners, notably the AfDB and GAFSP, in the areas of resource procurement and management.

5.5. Project coordination and implementation with other entities

5.5.1. In line with their sovereign mission of implementing programs and program budgets, in compliance with results based management, agreements/memoranda of partnership will be signed with: (i) DBRLA, for surface water mobilization and reclamation, setting up neighborhood maintenance system for storm water reclamation facilities, cooperation with DRDR and ANCAR for technical support to farmers in the shallows; (ii) DIREL, for livestock activities; (iii) ANIDA, for sustainable valorization of farms where ANIDA will provide project management as part of the missions assigned to it by MAER. In that regard, the 3 entities will put in place an adequate operating system, valorizing and pooling financial, logistic and human resources to carry out activities under their mandate.

5.5.2. The project's intervention strategy will mainly be based on subcontracting. In that respect, the project will sign memoranda of partnership with technical departments at central and regional levels and contracts with civil society organizations and service providers. The senior officer in each national department involved in the implementation of the project's activities will sign a memo appointing a focal point to serve as interface between the Project Coordination Unit and the Department concerned. The focal point will take part in monitoring and coordinating the activities. On the basis of contracts, private service providers (companies, suppliers, consultancy firms, individual consultants, NGOs, etc.) will provide goods and services and implement the projects works. They will be recruited on a competitive basis, in compliance with the relevant rules and procedures.

5.6. Overall project budget - Tables A and B of Annex 1

5.6.1. The overall budget of the project submitted by the Government of Senegal is estimated at **USD 30,662,844** of which **USD 4,016,403** representing the Government's contribution (**13% of the overall project budget**) and **USD 26,646,440** is the financing expected from GASFP. The rate used is **1 USD = 555 F.CFA**.

5.6.2. The project financing is presented in Table A of Annex 1 on the project's budget tables.

5.6.3 The detailed investment budget submitted by Senegal is presented in Table B of Annex 1 on budget tables.

5.6.4. The activities proposed by the new project will be implemented in record time since most prior studies necessary for their implementation are already available.

PARTIE 2 : DOCUMENTS ANNEXES

VI. APPENDICES

VI.1. APPENDIX 1 : PROJECT BUDGET TABLES

Table A: Summary of Overall Project Funding Submitted by Senegal

Source of funding	Amount (USD)	Is this funding secured? (Yes/No)?
Amount of funding requested from GAFSP		
Investment	26.646.440	NO
Technical Assistance	0 (Does not concern Senegal)	
Public Co-financing	4.016.403	Yes
Other sources of funding (supervisory bodies, APD, private sector, etc.)	0	
Total Project Funding	30.662.844 (rounded)	

Table b : Detailed investment project budget

Table B: Detailed investment project budget (6th GAFSP call for proposals)			
Conversion rate: 1 USD = 555 F.CFA		555	
Activities	Amount of funding requested from GAFSP (USD) G	Government Contribution (USD)	Overall Budget (USD)
Component A: Development of agricultural and livestock infrastructures			
Sub-component A1 : AGRICULTURAL INFRASTRUCTURE			
Activity 1 : Construction of equipped agricultural drillings in 5 old farms with excess flow in Kaffrine and Louga	360 360		360 360
Activity 2 : Solarization of pumping stations of 10 existing farms using thermal energy	216 216		216 216
Activity 3 : Construction of 10 dairy barns in old farms to diversify production and promote agriculture/livestock integration	115 315		115 315
Activity 4 : Construction of 10 modern poultry barns in old farms to diversify production and promote agriculture and livestock integration	100 901		100 901
Activity 5 : Construction of 10 village farms of 11 ha	1 297 297		1 297 297
Activity 6 : Construction of 5 integrated village farms of 5 Ha with chicken coop and barn in Koumpentoum, Nioro and Matam	504 505		504 505
Activity 7 : Construction of 3 Waarwi farms in Koumpentoum, Nioro and Matam	648 649		648 649
Activity 8 : Construction of 50 naatangue family farms in Koumpentoum, Nioro and Matam	864 865		864 865
Activity 9 : Construction of 13 Km of farm tracks	374 775		374 775

Activity 10: Supervision of works	90 090		90 090
Activity 11: Rehabilitation of four (04) retention structures in the Kaffrine region	423 423		423 423
Activity 12: Development of 3 lowland sites in the intervention zone	702 703		702 703
Activity 13: Construction of 4 product processing units with demonstration kiosks	216 216		216 216
Activity 14: Construction/rehabilitation of 35 km of rural roads	1 261 261		1 261 261
Activity 15: Construction of 5 consolidation centers and 5 storage warehouses	288 288		288 288
Activity 16: Completion of 500 ha of secondary development of the lands of the developed lowlands	720 721		720 721
Activity 17: Protection of 11 lowlands through CES/DRS activities	37 838		37 838
Activity 18: Development of 30 ha of market gardens	270 270		270 270
Activity 19: Supervision of works	90 090		90 090
Total Sub-component A1:	8 583 784	-	8 583 784
Sub-component A2 : LIVESTOCK INFRASTRUCTURE			
Activity 1: Construction of 05 new pastoral wells	1 351 351		1 351 351
Activity 2: Extension of 40 km of drinking water supply networks (AEP) around the pastoral boreholes already built. These will be underground pipes completed by standpipes, equipped with volumetric meters	360 360		360 360
Activity 3: Construction of 20 mixed vaccination parks (cattle/small ruminants) to strengthen the support provided for animal health	135 135		135 135
Activity 4: Development of fodder crops around the boreholes on an area of 1 ha/borehole	108 108		108 108
Activity 5: Construction of 50 sheepfolds for vulnerable groups and 25 modern individual sheepfolds (for women and youth)	382 883		382 883
Activity 6: Construction of 10 modern poultry houses for fodder	40 541		40 541
Activity 7: Construction of 10 modern poultry houses for layers	40 541		40 541
Activity 8: Construction of 15 dairy barns for the emergence of dairy basins	94 595		94 595
Activity 9: Construction of a solar dairy (technical standards)	118 919		118 919
Activity 10: Construction of 50 fodder storage sheds for agribusiness sheepfolds and dairy barns	180 180		180 180
Activity 11: Construction of 1 departmental slaughterhouse	113 514		113 514
Activity 12: Construction of 5 feed storage warehouses	99 099		99 099

Activity 13: Construction of 02 pastoral ponds	144 144		144 144
Activity 14: Construction (02) and rehabilitation (10) of veterinary posts	270 270		270 270
Activity 15: Supervision of works	135 135		135 135
Total Sub-component A2	3 574 775	-	3 574 775
Total Budget COMPONENT A	12 158 559	-	12 158 559
Component B: Support to the enhancement and development of value chains			
Sub-component B1 : ACCESS OF SMALL PRODUCERS AND BREEDERS TO PRODUCTION FACTORS			
Activity 1: Selection, structuring and training of farm producers (in technical production itineraries, management, market access, processing, etc.)	90 090		90 090
Activity 2: Organization and establishment of 6 farm producers' cooperatives	54 054		54 054
Activity 3: Support to marketing (acquisition of 20 marketing tricycles and construction of 25 kiosks, acquisition of processing equipment)	75 676		75 676
Activity 4: Support in equipment for soil work (Acquisition of 6 tractors equipped with carts and harrows)	172 973		172 973
Activity 5: Support in various small agricultural equipment (rakes, wheelbarrows, crates, picks, shovels, hoes, spray	54 054		54 054
Activity 6: Support in inputs for start-up (production activities in the farms)	72 072		72 072
Activity 7: Acquisition of 50 dairy cows for the diversification of production activities in the farms	180 180		180 180
Activity 8: Visit of the inter-producer exchange (farm beneficiaries)	54 054		54 054
Activity 9: Establishment of 05 UP/UASP (characterization, mapping, development of management plans)	108 108		108 108
Activity 10: Establishment of management committees for the 05 boreholes and capacity building of management	27 027		27 027
Activité 11: Establishment of the management committees of the UP/UASP and capacity building of the management committées' members	27 027		27 027
Activity 12: Support for the development of vaccination parks (20 vaccination parks)	36 036		36 036
Activity 13: Acquisition of fodder seeds and small mowing equipment	18 018		18 018
Activity 14: Acquisition of nuclei of reproductive females and broodstock for the benefit of small breeders	144 144		144 144
Activity 15: Acquisition of 50 dairy heifers for small producers	90 090		90 090

Activity 16: Acquisition of small start-up materials (feeders and waterers)	27 027		27 027
Activity 17: Acquisition of broiler and layer chicks for small-scale poultry farmers	27 027		27 027
Activity 18: Purchase of poultry feed for small-scale poultry farmers	36 036		36 036
Activity 19: Procurement of medicines and vaccines for IGA beneficiaries	54 054		54 054
Activity 20: Inseminate 500 local cows in the barns (Acquisition of hormones and artificial insemination inputs)	90 090		90 090
Activity 21: Acquisition of revolving stock of animal feed for start-up stores (support to OSB)	117 117		117 117
Activity 22: Acquisition of 10 motorized mowers for barns and sheepfolds	45 045		45 045
Activité 23: Build the technical and organizational capacities of 3,000 producers (in animal health, good production conservation/storage techniques, bulk purchase techniques)	54 054		54 054
Activity 24: Capacity building of apex organizations and breeders through the supervision system (5 facilitators) and IGAs (500 fattening operations, 75 sheepfolds, 25 poultry houses, installation/use/servicing/maintenance of 10 motor mowers, 50 fodder sheds);	90 090		90 090
Activity 25: Support in small equipment to fight bush fires and opening of 1,500 km of firebreaks (maintenance and upkeep)	144 144		144 144
Activity 26: Capacity building, recycling and training in job adaptation for MEPA field agents (region, departments, v	54 054		54 054
Activity 27: Materialization of the boundaries and routes of the UP/UASP (signs, markers) in the UP/UASP	72 072		72 072
Activity 28: Acquisition of animal health and vaccination materials	61 261		61 261
Activity 29: Procurement of vaccines against goat plague MEPA's goat plague eradication strategy for 2025) and cold equipment.	180 180		180 180
Activity 30: Training of village livestock and vaccination relays (Agreement with DIREL)	54 054		54 054
Activity 31: Support for small conservation/vaccination equipment for village livestock relays	90 090		90 090
Activity 32: Inter-producer exchange visit of the UP beneficiary breeders	36 036		36 036
Activity 33: Setting up and supporting agricultural cooperatives around the developed sites	72 072		72 072
Activity 34: Support in inputs for rice and vegetable production in developed sites	360 360		360 360

Activity 35: Support in equipment and agricultural materials for lowland producers	180 180		180 180
Activity 36: Support to the private sector to facilitate plowing and post-harvest operations	288 288		288 288
Activity 37: Technical and organizational capacity building for producers and their organizations	144 144		144 144
Activity 38: Exchange visits and participation in fairs for lowland producers	72 072		72 072
Activity 39: Establishment and professionalization of EPC groups	108 108		108 108
Activity 40: Support for the implementation of fish farming and beekeeping activities	54 054		54 054
Activity 41: Improved nutrition	57 658		57 658
Activity 42: Study and support to the organization of the sectors (rice and market gardening)	27 027		27 027
Total sub-component B1	3 800 000	-	3 800 000
Sub-component B2 : CAPACITY BUILDING FOR FARMERS			
Activity 1: DRDR protocols for two components (Kaffrine, Kaolack, Tambacounda, Louga and Matam)	72 072		72 072
Activity 2: IREF protocols for two components (Kaffrine, Kaolack, Tambacounda, Louga and Matam)	72 072		72 072
	311 712		
Activity 3: AGEX ANIDA agreement (management fees)			311 712
	340 541		
Activity 4: Agricultural advisors (15 advisors to be recruited for the ANIDA convention)			340 541
Activity 5: AGEX - DIREL Agreement	496 605		496 605
Activity 6: AGEX DBRLA Agreement	270 270		270 270
Activity 7: Proximity operator (facilitation device)	216 216		216 216
Activity 8: DRDR protocols for two components (Kaffrine, Kaolack, Tambacounda, Louga and Matam)	72 072		72 072
Activity 9: IREF protocols for two components (Kaffrine, Kaolack and Tambacounda)	72 072		72 072
Activity 10: ANCAR protocols (North zone, BAS, East zone)	108 108		108 108
Activity 11: Tripartite agreement (project, Regional Fisheries Service and ANA)	27 027		27 027
Activity 12: Protocol with community radios	21 622		21 622
Total Sub component B2	2 080 389	-	2 080 389
TOTAL BUDGET COMPONENT B	5 880 389	-	5 880 389

Component C: Project Coordination and management

Sub component C1 : Vehicles, equipments and other materials			
Vehicle Prado National Coordinator	63 063		63 063
Vehicle Pick up (8)	259 459		259 459
Computer equipment (computer, printers, UPS, etc.)	50 450		50 450
Office equipment and supplies	57 658		57 658
Office furniture	14 414		14 414
Various electronic and technical equipment (video-projector, camera, GPS, etc.)	21 622		21 622
Laptops and printers	20 901		20 901
Purchase of servers	4 505		4 505
Total Sub component C1	492 072	-	492 072
Sub component C2 : Staff			
Government Salaries			
Component Coordinators (3)		259 459	259 459
Regional Supervisors (2)		172 973	172 973
Component Accountants(3)		129 730	129 730
Material Accountant		30 270	30 270
National Coordination Assistant		30 270	30 270
Component Assistants (3)		51 892	51 892
National Coordinator Driver		21 622	21 622
Component drivers (11)		190 270	190 270
Component gatekeepers (6)		70 054	70 054
GR Experts (2)		172 973	172 973
Pastoralist and Capacity Building Expert		86 486	86 486
Production and Capacity Building Expert		86 486	86 486
Social charges (CSS, IPRES, FNR, IR, TRIMF and CFCE) (GVT)		764 871	764 871
Total government salary	-	2 067 357	2 067 357

C2.2. Fees and Allowances National Coordination (GAFSP)			
National Coordinator	259 459		259 459
Administrative and Financial Manager	181 622		181 622
Monitoring and Evaluation Manager	181 622		181 622
Acquisitions Manager	181 622		181 622
Environmental Manager	129 730		129 730
Communication Manager	129 730		129 730
Management Controller	99 459		99 459
UGP Chief Accountant	99 459		99 459
Component Coordinators Allowance (3)	259 459		259 459
Regional Supervisors Allowance (2)	86 486		86 486
Component Accountant Allowance (3)	25 946		25 946
Component Assistants Allowance (3)	12 973		12 973
Component Drivers Allowance (11)	47 568		47 568
Component gatekeepers' Allowance (6)	28 541		28 541
GR Experts Allowance (2)	86 486		86 486
Pastoralist and Capacity Building Expert Allowance	43 243		43 243
Production and Capacity Building Expert Allowance	43 243		43 243
Material Accountant Allowance	4 324		4 324
Drivers allowance (3) UGP	35 027		35 027
Annual performance bonus	172 973		172 973
Staff severance payments borne by the State		91 174	91 174
Staff severance payments borne by GAFSP	135 520		135 520
Total compensation	2 244 493	91 174	2 335 667
Total Sub-component C2	2 244 493	2 158 532	4 403 025
Sub-component C3 : Operation			
Field mission allowance for monitoring purposes	207 568		207 568
Fuel and lubricant for vehicles	432 432		432 432
Vehicle maintenance	115 315		115 315
Office and computer consumables	18 018		18 018
Maintenance of various equipment (computers, etc.)	32 432		32 432

Communication costs (PTT, Internet, DHL, etc.)	57 658		57 658
Building maintenance	43 243		43 243
Water and electricity (GVT)		28 829	28 829
Health insurance	216 216		216 216
Rental of the web application hosting site	15 135		15 135
Rehabilitation of the Kaffrine branch and maintenance of the Louga branch	41 441		41 441
Provision for training and employment of young graduates over 6 months	30 270		30 270
Publication of notices/operation of the contracting committee	72 072		72 072
External monitoring of the project	36 036		36 036
Various management costs	21 622		21 622
VAT on activities		1 531 532	1 531 532
Total Sub-component C3	1 339 459	1 560 360	2 899 820
Sub-component C4 : Services			
C4.1. Meetings, Trainings			
Launching workshop	21 622		21 622
Organization and holding of the Steering Committee	45 045		45 045
Consultation meetings (PMU/Partners, Regional Committees, etc.)	36 036		36 036
Support to events (fairs,...)			
Appui aux manifestations (foires,...)	252 252		252 252
Organization of self-evaluation workshops between project stakeholders	43 243		43 243
On-site trainings	37 838		37 838
Trainings, seminars abroad	72 072		72 072
Regional Workshop (CRC and autres)	36 036		36 036
Formations du dispositif du volet	86 486		86 486
Holding of 8 regional consultation meetings (CRC.)	21 622		21 622
Total C4.1	652 252	-	652 252
C4.2. Contractual services			
Updating of the administrative and financial procedures manual	18 018		18 018
Purchase of TOM2PRO multiservice web and payroll software including training	23 423		23 423
Purchase of the market software including training	12 613		12 613
Baseline study	54 054		54 054

Development of the monitoring-evaluation manual and implementation of the system	27 027		27 027
Surveys for monitoring and evaluation	86 486		86 486
Capacity building of actors in ICT for the application of PASA MOB	14 414		14 414
External audit of accounts	108 108		108 108
Mid-term review	63 063		63 063
Study on the capitalization of the project's good practices	54 054		54 054
Film on project impact	36 036		36 036
Impact assessment	63 063		63 063
Final Evaluation	72 072		72 072
Completion Report	54 054		54 054
Individual consultant support missions	121 622		121 622
Communication/Project visibility actions	135 135		135 135
Georeferencing of sites to feed the database (CSE Protocol)	28 829		28 829
Updating of the database (production of fire maps, real time alert systems): Protocol with CSE	36 577		36 577
<i>Total C4.2</i>	1 008 649	-	1 008 649
<i>Total Sub-component C4</i>	1 660 901	-	1 660 901
<i>Subcomponent C5: Scaling up of ICT integration in the project strategy (PASA MOB application)</i>			
<i>C5.1. ICT application to strengthen the SIM (Protocol C.S.A)</i>			
Recruitment of three collectors for the 12 test markets/3 regions (within the OP umbrella organizations): Protocol	16 216		16 216
Training of collectors and other stakeholders	21 622		21 622
Fuel/motorcycle maintenance/internet connection	36 036		36 036
Purchase of equipment and cell phone	4 324		4 324
Follow-up of the implementation of the system	10 811		10 811
<i>Total C5.1</i>	89 009	-	89 009

C5.2. ICT application to strengthen the SAP (breakdown of boreholes, bush fires, monitoring of structures and epizootics) / CSE Protocol			
Purchase of cell phones (drivers, mayors, farms operators, livestock, surface water and other stakeholders)	12 613		12 613
Internet connection	72 072		72 072
Stakeholder training	72 072		72 072
Monitoring/capitalization of the implementation of the system	18 018		18 018
<u>Total C5.2</u>	174 775	-	174 775
<u>Total Sub-components C5</u>	263 784	-	263 784
<u>Sub-component C6 : Implementation of PGES</u>			
Elaboration of PGES (consultant contract)	36 036		36 036
Development of an environmental management guide (CSE Protocol)	21 622		21 622
Environmental monitoring (CSE Protocol)	43 243		43 243
Environmental monitoring (DEEC Protocol)	36 577		36 577
Awareness raising on STI/HIV/AIDS, waterborne diseases, etc. (Health Department Protocol)	27 027		27 027
<u>Total Sub-component C6</u>	164 505	-	164 505
<u>Sub-component C7 : Other expenses</u>			
Environmental monitoring and surveillance with CSE and DREEC	36 036		36 036
Awareness raising for the fight against waterborne diseases, HIV and Covid_19 (Medical Regions)	108 108		108 108
Protocols with community radio stations	57 658		57 658
Institutional support and other capacity building for MAER	266 667		266 667
<u>Total Sub-component C7</u>	468 468	-	468 468
<u>TOTAL BUDGET COMPONENT C</u>	6 633 682	3 718 892	10 352 574
<u>TOTAL COMPONENTS A+B+C</u>	24 672 630	3 718 892	28 391 522
<u>ADB administrative costs (8% of total budget)</u>	1 973 810	297 511	2 271 322
<u>SUB TOTAL ADB ADMINISTRATIVE COSTS</u>	1 973 810	297 511	2 271 322
<u>TOTAL BUDGET (USD)</u>	26 646 440	4 016 403	30 662 844

B.1: The impact of a partial allocation of the requested amount on the design of the proposed project: The amount of funding requested from GAFSP is US\$26,646,440. However, an allocation of less than this amount will not result in a reduction in the proposed activities, areas of intervention and target population of beneficiaries. If necessary, a reduction in the project's operating budget and certain first-level results (outputs) will be proposed that will not affect the project's impact on the beneficiaries, but a minimum amount of USD 25,000,000 is necessary for the activities carried out to have an impact on development.

B.2: Assumptions underlying the proposed budget: This budget is presented on the basis of realistic assumptions. The proposed unit costs are market costs, based on existing practices within the Lou Ma Kaf ASAP, which has carried out activities similar to those proposed by the new project.

VI.2. APPENDIX 2: PERFORMANCE MONITORING MATRIX AT THE PROPOSAL STAGE

Table D: Core GAFSP Level 1 and Level 2 indicators selected by Senegal

#	Tier 1 impact indicators for all GAFSP projects	Check if Yes
1	Food and nutrition security ▶ Mandatory Food Insecurity Experience Scale (FIES) indicator and optional indicators are Food Consumption Score (FCS), Minimum Dietary Diversity-Woman (MDD-W) and Minimum Dietary Diversity -Children (MDD-C)	<input checked="" type="checkbox"/>
2	Household income	<input type="checkbox"/>
3	Crop yield (apply only to those projects with explicit productivity gain goals)	<input checked="" type="checkbox"/>
#	Tier 2 indicators for all GAFSP projects, <i>Mandatory Breakdowns</i> † (unit) ▶ Indicator notes	
1	Number of beneficiaries reached, gender disaggregated, percentage who have been helped to cope with impact of climate change†† ▶ People receiving benefits from the project. ▶ Disaggregation for gender and those receiving Climate-Smart Agriculture (CSA)-specific support.	<input checked="" type="checkbox"/>
2	Land area receiving improved production support, <i>percentage of these that are climate smart</i> (ha) ▶ Area that adopted new inputs/practices, new/rehabilitated irrigation services, land registration, etc. ▶ Disaggregation for climate-smart interventions.	<input checked="" type="checkbox"/>
3	Number of smallholders receiving productivity enhancement support, gender disaggregated, climate-smart agriculture support ▶ Number of end-users who directly participated in project activities. ▶ Includes technology/technique adoptees, water users with improved services, those who had land rights clarified, people offered new financing/risk management services. ▶ Using CSA approaches.	<input checked="" type="checkbox"/>
4	Number of producer-based organizations supported (number) ▶ Relevant associations established or strengthened by project.	<input checked="" type="checkbox"/>
5	Volume of agriculture loans that are outstanding. ▶ Volume of outstanding loans for agriculture and agribusiness in a financial institution	<input type="checkbox"/>
6	Percentage of beneficiaries with secure rights to land, property, and natural resources (percent of total beneficiaries) †† ▶ Measured as those with legal documentation or recognized evidence of tenure and those who perceive their rights are recognized and protected.	<input type="checkbox"/>
7	Roads constructed or rehabilitated, percentage resilient to climate risks (km) ▶ All-weather roads built, reopened, rehabilitated, or upgraded by project. ▶ Percentage that are designed to withstand changes in climate.	<input checked="" type="checkbox"/>
8	Number of post-harvest facilities constructed and/or rehabilitated (number) ▶ Includes markets, agro-processing/storage/quality control facilities.	<input checked="" type="checkbox"/>

9	<p>Volume of agricultural production processed by post-harvest facilities established with GAFSP support, <i>by food group</i> (tons)</p> <p>▶ Tons of total produce processed sorted by 10 major FAO food groups.</p>	<input checked="" type="checkbox"/>
10	<p>People benefiting from cash or food-based transfers, <i>gender disaggregated</i> (number of people)</p> <p>▶ Number of people who benefited from cash or food transfer interventions.</p>	<input type="checkbox"/>
11	<p>People receiving improved nutrition services and products, <i>gender disaggregated, age disaggregated</i> (number of people)</p> <p>▶ Number of people who received nutrition counseling/education, recipients of Ready-to-use-Therapeutic Foods, bio-fortified foods, and Vitamin A and micronutrient supplements.</p> <p>▶ Number of people receiving extension support for nutrition-relevant techniques (e.g., homestead gardens, Farmer Field School support, etc.).</p>	<input checked="" type="checkbox"/>
12	<p><i>Direct employment provided; gender disaggregated</i> (full-time equivalent)</p> <p>▶ Number of direct employees in a client company.</p> <p>▶ Part time jobs aggregated to full-time equivalent.</p>	<input checked="" type="checkbox"/>
13	<p>Persons receiving capacity development, <i>gender disaggregated, organization type</i> (number of people)</p> <p>▶ Agricultural and non-agricultural rural training and capacity building support provided.</p> <p>▶ Distinguishes between individual producers/household members, civil society organization staff, and government officials.</p>	<input checked="" type="checkbox"/>
14	<p>Number of substantive deliverables on food security processes completed (number)</p> <p>▶ Measures “soft support” for institutional development provided through discrete deliverables.</p> <p>▶ Deliverables include policy studies, strategies and plans, best practices, and lessons learned, among others.</p>	<input checked="" type="checkbox"/>

Table E: Performance monitoring matrix at the proposal stage

B		PERFORMANCE MONITORING MATRIX				
Indicators		Indicators	Unit of measurement	Baseline value	End of project target	Data Sources
STATEMENT OF PRODUCT 1: Number of market garden perimeters completed						
PRODUCT INDICATOR: 1.1		Complete 10 perimeters	Ha	20 ha	70 ha	Acceptance report Processing of monthly, quarterly, semi-annual and annual reports
STATEMENT OF PRODUCT 2: Surface area of developed lowlands						
PRODUCT INDICATOR: 2.1		Develop three lowlands (300 ha of developed areas)	Ha	2.500 ha	2.800 ha	Site reports and acceptance report, periodic reports
STATEMENT OF PRODUCT 3: Secondary improvements areas completed						
PRODUCT INDICATOR: 3.1		Develop 500 ha of secondary improvements	Ha	380 ha	880 ha	Acceptance reports and periodic reports
STATEMENT OF PRODUCT 4: Lineage of rural access roads completed						
PRODUCT INDICATOR: 4.1		Build 35 km of rural access roads	Km	127	162	Acceptance reports, periodic reports
STATEMENT OF PRODUCT 5: Number of km of water conveyance around the boreholes						
PRODUCT INDICATOR: 5.1		To build, around the constructed boreholes, water conveyances on xxx km for a better management of the water needs for the populations and for the pasture and a watering place in the Labardi site.	Km	127 km	167 km	Acceptance report Use of site reports
STATEMENT OF PRODUCT 6: Number of sheepfolds built						
PRODUCT INDICATOR: 6.1		Build 75 sheepfolds	Nbre	129	204	Acceptance report Operating report Activity reports
STATEMENT OF PRODUCT 7: Number of dairy barns built						
PRODUCT INDICATOR: 7.1		Build 15 dairy barns	Nbre	20	35	Acceptance report Operating report Activity reports
STATEMENT OF PRODUCT 8: Number of storage facilities built						
PRODUCT INDICATOR: 8.1		Construction of five storage warehouses and toilet blocks.	Nbre	34	39	Acceptance report Operating report Activity reports
STATEMENT OF PRODUCT 9: 10 solar pumps performed						
PRODUCT INDICATOR: 9.1		Install solar pumping systems in 10 other farms	Nbre	34	44	Acceptance report

					Operating report Activity reports
■ STATEMENT OF PRODUCT 10: Farms completed					
PRODUCT INDICATOR: 10.1	Construction of 10 farms of 11 ha	Nbre	18	28	Acceptance report Operating report Activity reports
■ STATEMENT OF PRODUCT 11: Farms completed					
PRODUCT INDICATOR: 11.1	Construction of 50 family farms	Nbre	10	60	Acceptance report Operating report Activity reports
■ STATEMENT OF PRODUCT 12: Farms completed					
PRODUCT INDICATOR: 12.1	Construction of 3 Waarwi farms	Nbre	4	7	Acceptance report Operating report Activity reports
■ STATEMENT OF PRODUCT 13: Farms completed					
PRODUCT INDICATOR: 13.1	Construction of 5 village farms of 5 ha	Nbre	18	23	Acceptance report Operating report Activity reports
■ STATEMENT OF PRODUCT 14: Quantity of vegetable seeds distributed					
PRODUCT INDICATOR: 14.1	Provide small producers with market garden seeds subsidized at 80%, at least 150 kg for the Surface Water component	Kg	2.602	2.75 2	Acceptance report Activity reports DHORT report
STATEMENT OF PRODUCT 15: Quantity of fertilizers distributed					
PRODUCT INDICATOR: 15.1	Provide producers with chemical and organic fertilizers subsidized up to 80% (400 tons for the surface water component)	Tons	1.050	1.45 0	Acceptance report Activity reports DHORT report
■ STATEMENT OF PRODUCT 16: Quantity of insecticides, fungicides distributed					
PRODUCT INDICATOR: 16.1	Provide producers with 80% subsidized insecticides and fungicides (150 liters for the surface water component)	Litres	4.040	4.19 0	Acceptance report Activity reports
■ STATEMENT OF PRODUCT 17: Quantity of rice seed distributed					
PRODUCT INDICATOR: 17.1	Provide producers with 80% subsidized seed.	Tons	130	310	Acceptance report Activity reports
■ STATEMENT OF PRODUCT 18: quantity of inputs distributed to poultry farmers					
PRODUCT INDICATOR: 18.1	Provide small-scale poultry farmers with the necessary inputs to resume their activities (broiler chicks, poultry feed, medicines, vaccines)	Tons	14	24	Acceptance report Activity reports
■ STATEMENT OF PRODUCT 19: Number of heifers and broodstock distributed					
PRODUCT INDICATOR: 19.1	50 crossbred dairy heifers, hormones and other insemination inputs, 60 sheep/goat breeding stock to improve the quality of marketable products	Nbre	179 broodstock 35 heifers	239 brodst ock 85	Acceptance report Sheepfold activity reports

				heifers	
STATEMENT OF PRODUCT 20: Number of local cows under artificial insemination					
PRODUCT INDICATOR:	20.1	Set up artificial insemination operations for 500 local cows in the barns (train and support private veterinarians and provide them with insemination kits).	Nbre	750	1.250 Acceptance report Activity reports
STATEMENT OF PRODUCT 21: Number of forage perimeters established					
PRODUCT INDICATOR:	21.1	Develop two fodder perimeters in Moguére and Kamb, set up by the project. Set up a drip system (in Kamb) and fodder seeds	Nbre	02	04 Acceptance report Activity reports
STATEMENT OF PRODUCT 22: Number of IEC performed on the Covid 19					
PRODUCT INDICATOR:	22.1	Implement IEC activities (awareness raising, education and communication activities around the lowlands to fight against waterborne diseases common in water storage areas, awareness raising at sheepfolds, poultry houses, slaughterhouses and dairies on barrier measures against COVID 19). 25,885 for the Surface Water component	Nbre	20.000	45.885 Activity reports Attendance sheet
STATEMENT OF PRODUCTS 23: Number of supported packages					
PRODUCT INDICATOR:	23.1	To support women processors in improving the marketing conditions of their products in xxx processing units (provision of quality packaging, product labeling, marketing, etc.). 4 units	Nbre	500 women trained by the Surface Water component 2 processing units carried out by the Surface Water component 3000 (1000 bags of ½ l; 1000 bags of ¼; 1000 bags 1/8 l)	08 Labeling Use of business plans
STATEMENT OF PRODUCTS 24: Number of consolidation centers supported					
PRODUCT INDICATOR:	24.1	Support 5 consolidation centers to be functional (provide these centers with tricycles for the transport of products, electrification with solar energy-solar kits; provide water supply in these centers	Nbre	07	12 Acceptance report Activity reports
STATEMENT OF PRODUCT 25: Number of solar systems installed in dairies					
PRODUCT INDICATOR:	25.1	To generalize the use of renewable energies, in particular solar energy within the processing units	Nbre	04	08 Acceptance report Activity reports
STATEMENT OF PRODUCTS 26: Number of producers trained					
PRODUCT INDICATOR:	26.1	Build the technical and organizational capacities of 1,500 producers (in animal health, good production, conservation/storage techniques, etc.) 6,500 for the Surface Water component	Nbre	21.200	27.700 Attendance sheet Training reports
STATEMENT OF PRODUCTS 27: Number of warning systems put in place					
PRODUCT INDICATOR:	27.1	Support 02 existing warning systems and 8 community radios	Nbre	2 warning systems 8 community radios	2 warning systems 8 Protocols Number of programs completed

				community radios	
■ STATEMENT OF PRODUCTS 28: Setting up and professionalization of EPC groups					
PRODUIT 28.1INDICATOR:	Setting up and professionalization of EPC groups	Nbre	112	247	Activity reports
■ STATEMENT OF PRODUCTS 29: Establishing agricultural cooperatives					
PRODUIT INDICATOR: 29.1	Establishment of agricultural cooperatives	Nbre	0	07	Activity reports

VI.3. APPENDIX 3: RISKS AND NEGATIVE EXTERNALITIES

Table F: Project Risk Assessment

Risks	Likelihood (L, M, H)	Risk Rating (L, M, H)	Risk description	Proposed Mitigation Measures
Climate vagaries with direct effects on agricultural and livestock production and development.	M	H	Stagnation or even significant reduction in productivity and production and loss of assets, flooding and destruction of structures	Improvement of water management, dissemination of certified seeds, itineraries and resilient technologies, establishment of a fund for the upkeep and maintenance of structures and AHA
Reduction of land fertility through continuous soil impoverishment and salinization of the land	M	M	Stagnation or even significant reduction in productivity and agricultural production	Anti-salt and retention structures, CES/DRS developments, organic matter inputs (phospho-gypse) and programs on good sustainable soil management practices are planned by the project
Land problem and risk of conflicts between farmers and transhumant herders	H	M	Hinders the securing of investments and the sustainable management of farms. Tendency to circumvent the law if it cannot be applied. Land speculation that mainly affects urban areas, but also certain agricultural areas with high agricultural potential.	Allocation of land by the communes through deliberation and retrocession in consultation and collaboration with the grassroots organizations (without excluding women). Involvement of the communes in the management of transit corridors and the development of reception areas and protection of the facilities.
Delay in works due to low capacity of works companies as well as other providers.	M	L	Delays in the delivery of agricultural and pastoral infrastructure development work.	Careful selection of companies. Local control of the works by the design office, the AGEX, the beneficiaries' management committee and the PMU. Capacity building and support for the stakeholders.

Risks	Likelihood (L, M, H)	Risk Rating (L, M, H)	Risk description	Proposed Mitigation Measures
<p>Low efficiency of the monitoring and evaluation system to reflect project impacts.</p>	L	L	<p>Difficulties in properly carrying out monitoring and evaluation operations on the basis of a coherent established framework</p>	<p>M&E must be a results-oriented system and include indicators on changes brought about by project implementation. Also, the baseline situation must be well established, a PTPA and PTBA well designed and monitored by the PMU. Capacity building for the PMU and system stakeholders is planned by the project.</p> <p>A web-based monitoring and evaluation software is planned</p>
<p>Low level of training and organization of farmers and livestock producers</p>	M	M	<p>Small-scale rainfed farmers are generally of advanced age and have a low level of education, which limits their ability to innovate and modernize their production systems</p>	<p>Continue the process of setting up chambers of agriculture. Establish dynamic and functional cooperative societies. Encourage the private sector to invest in the distribution chains of agricultural and livestock products. Capacity building for farmers on good agricultural and livestock practices. Carry out a national awareness raising campaign and train producers on soil improvement techniques.</p>
<p>Pessimistic consumer behavior</p>	L	M	<p>Presence of imported products in direct competition or substitution to local productions.</p> <p>National investment efforts wiped out.</p>	<p>Establish an investment fund for private initiatives. Improve processing, packaging and marketing conditions for local products. Improve the quality of packaging. Promote local consumption. Implement awareness campaigns on the nutritional value and health benefits of local products. Implement incentives for consumers (subsidy for consumption of local products).</p>

Risks	Likelihood (L, M, H)	Risk Rating (L, M, H)	Risk description	Proposed Mitigation Measures
Difficulties in selling agricultural and livestock products	M	M	Difficulties in selling vegetable/egg/broiler production, causing a drop in profitability and huge losses in income.	Activities to improve market access (access roads, storage, organization, packaging, marketing), processing and marketing.
Cash crop price volatility	L	L	Influence on household resource management. Reduced accessibility of food products	Facilitate access to credit during marketing. Capacity building for market participants. Develop relationship between Producer Operators and Market Operators

For Likelihood: L (low probability), M (moderate probability), or H (high probability).
For Risk rating: L (low risk or impact), M (moderate risk or impact), or H (high risk or impact).

Table G: Assessment of negative externalities

Potential negative externalities	Likelihood (L, M, H)	Risk Rating (L, M, H)	Description of negative externalities	Proposed Mitigation Measures
Environnemental 23F ¹¹	H	M	Salinization of water from agricultural wells and subsidence of the water table	Select aquifers that are not affected by salt and reduce the flow rates of the boreholes to levels that are not very high (30 to 60 m ³ /h) maximum.
Social 24F ¹²	H	H	Land dispute	Ensure that the deliberation of the territorial authorities assigning the land to the developments planned by the project is obtained before any intervention.
Gender	L	L	Non-involvement of women, youth and people living with disabilities	Self-targeting by the very recipients Scoring system favorable to these categories of people 50% of activities for women and youth
Political	H	L	Political unrest	Proposed activities not related to politics Political actors are not involved in the implementation of activities

For Likelihood: L (low probability), M (moderate probability), or H (high probability).
For Risk rating: L (low risk or impact), M (moderate risk or impact), or H (high risk or impact).

¹¹ Examples include: potential effects on natural resources such as water resources, forests, and protected areas; possible effects on biodiversity; and, where applicable, possible climate impacts from uncontrolled anthropogenic emissions of greenhouse gases and short-lived climate pollutants (SLCPs).

¹² Examples include: potential effects on human health and safety; nature, magnitude, and duration of social effects such as the need for land acquisition or voluntary resettlement; potential impacts on equity and indigenous peoples; and potential impacts on physical cultural resources.

VI.4. APPENDIX 4: PREVIOUS GAFSP FUNDING

Project title	Food Security Support Project in the regions of Louga, Matam and Kaffrine (PASA/Lou Ma Kaf)
Country	Senegal
GAFSP funding amount and amount disbursed	<ul style="list-style-type: none"> • Initial funding amount (GAFSP grant): USD 40,000,000 • Amount disbursed: USD 39,101,391, or 97.75% as of July 31, 2021 • Additional grant (GAFSP grant): USD 4,422,000
Program approval date	June 24, 2013
Progress of the project	<p>A lowland and 12 hectares of secondary development were finalized to complete the 2,000 hectares of rice-growing land planned. In addition, 2 farms have been equipped with boreholes in Louga and Kaffrine. Twenty-five (25) UPs with management plans and governing bodies continue to operate. In addition, 1.5 km of bush roads and 3 feed stores have been built. Six (6) pastoral wells have been constructed. To fight against bushfires, radio outreach programmes have been broadcasted through community radios and village meetings. Bushfire control committees have been trained and equipped.</p> <p>PASA Lou Ma Kaf has developed its 2021 PPM, which totals 8 PPMs since the project's inception and has been published and validated by the DCMP. Eight (67%) of the 12 planned acquisitions have been launched.</p> <p>The disbursement rates for GAFSP 1, AfDB and State resources are 98%, 82% and 130% respectively. The BCI funds received since the beginning of the project are 4,740,128,088 of which 154,000,000 FCFA for 2021.</p> <p>In the post-COVID19 period, GAFSP provided additional funding to consolidate the gains of PASA/LouMaKaf and strengthen community resilience to COVID. Thus, the project was extended for 18 months to allow for the mitigation of the effects of COVID19, the completion of activities delayed by COVID19, and the acceleration of capacity building activities. However, the signing of the grant agreement is not yet effective because the project has completed the environmental and social audit in addition to an environmental and social management plan validated and submitted to the AfDB, prior to the signing of the grant agreement.</p> <p>The project received its eighth supervision mission from the AfDB-State of Senegal from June 14 to June 19 2021. It provided an opportunity to review the activities included in the PTBA, the constraints related to the signing of the grant agreement and the project's prospects.</p>
Project closing date	March 31 2022
Project Implementation Update <i>(progress, results, difficulties, etc.)</i>	<p>National cereal production (SAI): +5,800 tons/year</p> <p>National vegetable production (ISC) : +13,000 tons/year</p> <p>National meat production: +5,300 tons</p> <p>Milk production collected: +1.04 million liters of milk</p>

Income of lowland producers: 250,000 to 1,000,000 FCFA/year

Income of women in gardens: 80,000 to 240,000 FCFA/year

Income of women/youth on PPI: 172,000 to 808,000 FCFA/year

Value added for beef production: 715 million FCFA

Value added for sheep/goat meat: 225 million FCFA

Value added by the valorization of milk: 470 million FCFA

Twenty-two (22) lowlands and retention basins have been developed or rehabilitated to provide nearly 2,000 hectares of rice-growing land with an estimated production potential of nearly 7 to 8,000 tons of rice. Lowland onion cultivation has also been developed. In addition, 46 farms have been built in Louga and Kaffrine. Nearly 40,000 producers have been strengthened through training and exchange visits. Twenty-five (25) Pastoral Units with management plans and governing bodies have been set up since 2016. In addition, 117 km of roads, 1,338 km of firewalls, 60 vaccination parks, 121 sheepfolds, 100 poultry houses, 13 livestock feed stores and a slaughterhouse have been built or rehabilitated. 18 pastoral boreholes have been completed. Among the achievements are 2 dairies, 15 dairy barns, 25 storage sheds and 7 pastoral ponds. For local poultry, 1,500 vaccinators have been trained and equipped. In order to improve the prevention and fight against bush fires, in addition to awareness raising through radio broadcasts, more than 200 Bush Fire Control Committees have been trained and equipped.

In addition, 24 partnerships contribute to the implementation of the project in various areas including natural resource management, agricultural and livestock advisory support, resilience building, communication, land management, food security and nutrition, soil management, renewable energy and resilience building of natural ecosystems. With the National Agency of the CMU and the DGPSN, the social impact of the project has been strengthened. With 3 projects financed by the ADB, PASA Lou-Ma-Kaf supported the fight against the Ebola virus and the land reform process. With other partner projects, the project has implemented a capitalization and consultation process on the UP approach to sustainable natural resource management, which has led to the development of a harmonized guide for the implementation of the UP approach that is currently being disseminated. With the FAO and the NGO AVSF, PASA Lou Ma Kaf contributed to co-funding two projects dedicated to the improvement of agricultural production techniques through the dissemination of the Field to school approach and the strengthening of the resilience of pastoral ecosystems. It co-organized, with the CLM and the Executive Secretariat of the CNSA, a workshop (Penc) on the governance of food security and nutrition. The project also plans to participate in the co-organization with AVSF of a workshop on the sustainability of UPs.

Seven Procurement Plans were implemented for 168 acquisitions and the signing of 249 contracts for a cumulative amount of 20 105 625 640 FCFA.

The respective overall disbursement rates for GAFSP, ADF and State resources are 98%, 82% and 130% respectively, compared to an overall commitment rate of 90%.

The project has been extended for 18 months due to the mitigation of the effects of COVID19, the completion of activities delayed by COVID19 and the acceleration of capacity building activities but the signing of the grant agreement is not yet effective which is delaying the implementation of activities.

A draft completion report has been prepared. It incorporates the results of the

	project's impact studies and the project's cost-effectiveness evaluation ¹³ carried out in 2020
The supervisory body's most recent performance rating for (i) achievement of project objectives and (ii) implementation progress.	The last supervision mission, which took place in June 2021, gave a rating of 4 to the project, which was found to be satisfactorily implemented.
Will the project in this proposal build on or be linked to previous GAFSP funding? If so, how?	<p>The project presented builds on the results of PASA to focus on:</p> <ul style="list-style-type: none"> - capitalizing and disseminating the results obtained - scaling up; - capacity building for producers' and breeders' organizations <p>The project will expand some activities in the new zones to scale up the results obtained during PASA, emphasizing capacity building activities, documentary films, image boxes, and communication materials as part of the capitalization.</p>

¹³The rate is estimated at 16%.

VI.5. APPENDIX 5: TEAM IN CHARGE OF PREPARING SENEGAL'S PROPOSAL

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VI.6. APPENDIX 6: DETAILED DESCRIPTION OF SENEGAL'S PROPOSED PROJECT ACTIVITIES

ACTIVITIES	DETAILED DESCRIPTION
Component A: Development of agricultural and livestock infrastructures	
AGRICULTURAL INFRASTRUCTURE	
Activity 1: Rehabilitation of four retention structures in the Kaffrine region	Rehabilitations concern the runoff mobilization structures of Weynane, Mbaye Mbaye, and Koh Socé, which were built in the first phase and which have been damaged, thus preventing their operation. The fourth structure is that of Gouye Madi Bouri, which must be consolidated, as it is located in a lowland developed as a waterfall during the first phase.
Activity 2: Development of 03 lowland sites in the intervention area	This activity consists in building retention dykes in identified sites in order to improve the spreading of water for the development of agricultural activities. These are sites where rice and market gardening are practiced, but where there are water constraints to complete the crop cycles. These sites, for which studies are available, are distributed as follows: 01 in the department of Koumpentoum, 01 in the region of Kaffrine and 01 in the department of Nioro.
Activity 3: Implementation of four processing units with demonstration kiosks	During its first phase, PASA-Lou-Ma-Kaf, set up 22 water retention structures in the Kaffrine region to promote significant market garden production in the lowlands. Lowland market gardening has increased from 20 ha at the start to 365 ha during the 2021 season. Thus, there is a risk that large quantities of produce will go unsold, especially tomatoes and peppers. It has therefore become necessary to set up processing units in areas of high production in order to facilitate marketing, limit post-harvest losses and strengthen nutrition and income. This activity will be accompanied by the establishment of kiosks along the road axis, as well as training and marketing.
Activity 4: Rehabilitation of 35 km of rural roads	The aim of this activity is to open up the production areas, to connect them to the national network in order to facilitate the marketing of agricultural products. The targeted

	sections aim at connecting the structures which are the structuring developments to the road network. The new structures will concern the zones to be developed for a linear distance of 15 km while the rehabilitation will concern degraded roads for a linear distance of 10 km in the intervention zone.
<u>Activity 5:</u> Construction of 05 grouping centers and 05 storage warehouses	The idea is to complete the network of warehouses and grouping centers to ensure proper conservation of agricultural products and minimize post-harvest losses in the developed sites. They will also serve as headquarters for the agricultural cooperatives set up. With a capacity of 100 tons per unit, the stores will be equipped with weighing equipment. In addition to the sorting and conservation compartments, the grouping centers will be equipped with an administrative block and sanitary facilities to ensure the usual amenities. These infrastructures concern the departments of Koumpentoum, Nioro, Matam and Kanel.
<u>Activity 6:</u> Realization of 500 ha of secondary development of the lands of the developed lowlands	This activity consists in setting up small sills downstream of the structures built during the first phase, creating a casing for the lowlands allowing a better control of the water level. The sills will be used to trap water in the diversion bays in order to allow the crops to complete their maturity cycles. The riffles will also allow the members of the agricultural cooperatives to have equitable access to the developed land.
<u>Activity 7:</u> Protection of 11 lowlands through CES/DRS activities	The CES/DRS activities for the protection of the lowlands consist in setting up structures to fight against wind and water erosion and against silting. These activities will be carried out in HIMO, with the technical support of the water and forestry service. It will consist in setting up lines of stone barriers, fascines and bunds. Reforestation will be introduced to reinforce vegetation cover and soil fixation. The RNA will also be developed to strengthen the harvesting activities in order to improve the income of the beneficiaries.
<u>Activity 8:</u> Development of 30 ha of market gardening areas	The market gardening areas are considered as secondary developments that complement the surface water mobilization structures. Their main objective is to capture the water table recharged by the structures for the purpose of market gardening for women and youth. They

	<p>will be equipped with mini solar drilling, with a functional irrigation system. These perimeters will be located around new sites to be developed in the departments of Koumpentoum, Nioro, Linguère, Matam and Kanel.</p>
<p>Activity 9: Construction of equipped agricultural wells in 5 old farms with excess flow in Kaffrine and Louga</p>	<p>In order to make the farms built under PASA Lou Ma Kaf self-sufficient and to use the excess flow of boreholes intended for rural water supply, it is important to provide them with water points (boreholes) so as to secure water management for irrigation, which has become very uncertain with the growing demand linked to population growth in the intervention areas, but also with the current reform implemented by OFOR, which is privatizing the use of boreholes in rural areas. Thus, five (5) agricultural boreholes will be built, four of which will be in the Kaffrine region, specifically in Tip Saloum, Diamaguene, Ndioum Guinthe and Bouchra, and one in the Louga region, namely in Sangué.</p>
<p>Activity 10: Solarization of pumping stations of 10 existing thermal farms</p>	<p>The high cost of diesel fuel in the crop budget has encouraged the adoption of a new mixed-energy strategy for pumping on farms. This approach has been strongly requested by the population, who have learned of the savings made by other farms that are implementing it.</p> <p>Thus it is planned, for this project, to generalize the mixed-energy in 10 farms carried out by PASA Lou Ma Kaf in the regions of Kaffrine and Louga by putting in each of them, a photovoltaic field and a variable speed drive.</p>
<p>Activity 11: Construction of 10 dairy barns and 10 modern poultry houses in old farms to diversify production and promote the integration of agriculture and livestock</p>	<p>In order to diversify production activities, improve food security and nutrition, and enhance the agronomic potential of the soil, the construction of stables and poultry houses on farms is a very important dimension to be taken into account in the new project. It is true that the farms can start their activity with vegetable production, but in the strategy of ANIDA, partner of the new project for the agricultural farm component, animal production comes to complete the diversification option at a time when the producers are more equipped in the management and operation of the farm, more organized for the production and marketing of their product and demonstrate a proven mastery of technical itineraries.</p>

	<p>This time lag is deliberate and makes it possible to avoid, from the beginning, an overflow of capacity of the beneficiaries who, for the most part, found out irrigation with the project. Thus, the envisaged integration of production (agriculture and livestock) will contribute to strengthening the agronomic properties of the cultivated land thanks to the organic manure produced by the cows and poultry and will offer fodder and crop residues that will be used for livestock feed. In total for the succession program, the activities are planned to be diversified in the old farms through the construction of 18 cowsheds with a capacity of 8 cows for milk production, 28 poultry houses with a capacity of 1000 to 2000 subjects.</p>
<p><u>Activity 12:</u> Creation of 10 village farms of 11 ha</p>	<p>10 farms are planned to be built in the departments of Nioro, Koumpentoum and Matam, each with a fenced-in area of 13 to 15 ha, a drip irrigation network covering 11 ha, 10 ha of which are for market gardening and 1 ha for fruit growing, a borehole equipped with an electric pump running on mixed energy (solar and thermal), a farm building for storage and packaging and a toilet block. These achievements will allow to install 40 young people in each farm working full time in modern farms with a total control of water.</p>
<p>Activity 13: Creation of 5 integrated village farms of 5 Ha in Koumpentoum and Nioro</p>	<p>The 5 farms are planned in the departments of Koumpentoum and Nioro and have the particularity of integrating diversification and sustainable agro-ecological practices in their cultivation methods. The farms will each have a wire fence, a drip irrigation network on 5 ha, a cowshed for 5 cows, a henhouse for 500 animals, a borehole equipped with a solar electric pump, a 16 m² store and a toilet block. They will allow for the development of market gardening, fodder crops and fruit growing. These farms will favor the presence of women and will greatly improve the food and nutritional security of the beneficiary villages. Each integrated farm will allow for the integration of 20 producers.</p>
<p><u>Activity 14:</u> Realization of 50 naatangue family farms (FFN) in Koumpentoum, Nioro and Matam</p>	<p>These are integrated farms that cover an area of 1 to 2 ha and are characterized by the diversity of the types of production they offer (horticulture, dairy production, poultry farming, fish farming, etc.) but also by the method of financing, which is cost-sharing (30%</p>

	<p>beneficiaries and 70% the State directly or through the TFPs). These farms symbolize individual ownership and allow the beneficiaries to develop their own business and to be able to use 2 to 3 people from their family. The FFN includes a wire fence on 1 ha, a well or micro-borehole equipped with a solar pump, a 12 m² henhouse, a studio room with a toilet, a fish pond or a stable. This model of exploitation offers more important incomes. Thus, 50 FFN are planned, 20 in the department of Matam and 15 in each of the departments of Nioro and Koumpentoum.</p>
<p>Activity 15: Creation of 3 Waar wi farms in Koumpentoum, Nioro and Matam</p>	<p>The Waar wi farms are a variant of the previous model, where individual 1-ha farms are grouped together in a circular shape, sharing some collective infrastructure, notably the borehole and the central hut. This model is composed of a set of 10 "Naatangué" family farms with a surface area of 1 ha. Each Waar wi farm will allow for the integration of ten young people graduating from training schools.</p> <p>They are very suitable models in areas where the water table is very deep or where there are no productive wells. The 10 promoters share a borehole, a storage warehouse, and a hut equipped with a few amenities (television, computer, etc.) where they can meet to exchange ideas, watch television, etc.</p>
<p>Activity 16: Construction of 13 km of small sections of agricultural roads connecting to the main roads</p>	<p>This 13-km road will connect some farms to the axes leading to the distribution centers. They will be simple connection roads that will facilitate the evacuation of harvested products.</p>
<p>Activity 17: Project management (work control)</p>	<p>This activity consists in updating the studies carried out for the implementation of the works and ensuring the control of their execution. It will be a question of recruiting individual consultants, with proven expertise, but also resorting to private firms in order to carry out these various missions.</p>
<p>LIVESTOCK INFRASTRUCTURES</p>	
<p>Activity 1: Construction of 5 pastoral boreholes (boreholes, civil engineering and equipment)</p>	<p>The project will consist in the construction of boreholes including the drilling, the pump and its control cabinet, the generator, the accessories and the delivery and distribution pipes, the 200 m³ tank raised 25 m above the ground, the building housing the equipment around the catchment point, the housing for</p>

	the operator. The proposed works mainly concern the structures around the boreholes (water towers, standpipes, drinking troughs, gallows, housing for the borehole operator).
<u>Activity 2:</u> Extension of 40 km of drinking water supply networks (WSN) around pastoral boreholes already completed	These will be buried pipes completed with standpipes, equipped with volumetric meters. This water extension network will allow better access to water for the population at an affordable cost.
<u>Activity 3:</u> Construction of 02 pastoral ponds	This activity concerns the departments of Linguère and Koupentoum, following the silvopastoral zone. It involves developing ponds to increase their capacity and retention time in order to facilitate access to water for livestock. Priority will be given to ponds in the transhumance corridors.
<u>Activity 4:</u> Fodder crop development around the boreholes on an area of 1 ha/boring	Fodder crops are a major challenge for boosting animal production in the context of climate change.
<u>Activity 5:</u> Construction of 75 improved sheepfolds for vulnerable groups, women and disabled	With an equitable, inclusive and transparent targeting, members (youth, women and disabled) of vulnerable groups will be identified and supported as beneficiaries of the sheepfolds and chicken coops. The models and specifications of the sheepfolds and chicken coops are available. They will operate them for the production and marketing of sheep and chickens.
<u>Activity 6:</u> Construction of improved chicken coops for vulnerable groups (women and disabled)	In the difficult context of COVID 19, support for short-cycle industries is a necessity and an opportunity to sustainably boost the economy of poor households and help them escape poverty. The poultry houses will be built according to available and used models.
<u>Activity 7:</u> Construction of 50 individual sheepfolds (for women and youth)	With a good targeting strategy, vulnerable people (especially young people and women) will be identified and assisted in reaching them.
<u>Activity 8:</u> Construction of 10 modern poultry houses	The construction of these modern poultry houses will be directed towards initiative holders so that they may increase their income.
<u>Activity 9:</u> Construction of 10 modern poultry houses for egg layers	The main beneficiaries of these poultry farms will be the initiative holders in the field of poultry farming
<u>Activity 10:</u> Construction of 15 dairy barns for the	The support to the local milk chain goes

emergence of dairy ponds	through the stalling. The focus will be on the dairy basins in the intervention area.
Activity 11: Construction of 20 mixed vaccination parks (cattle/small ruminants) to strengthen animal health support	The construction of these vaccination parks will increase the rate of vaccination in cattle and sheep. Veterinary services are strengthened.
Activity 12: Construction of a solar dairy (with technical standards)	To strengthen the dairy basin on the Dahra-Ourrossogui axis, the establishment of a modernized dairy will significantly reduce losses in the sector and modernize the sector to boost production in the project area. This unit will have a greater processing capacity because it will be able to centralize the production of secondary dairy units collecting fresh milk. It will be based in Dahra. It will diversify dairy products.
Activity 13: Construction of 50 fodder storage sheds for agribusiness sheepfolds and dairy barns	The construction of storage sheds will allow the storage of fodder at the level of sheepfolds and cowsheds, which will allow the beneficiaries to manage food deficit periods.
Activity 14: Construction of a departmental slaughterhouse	Due to the dilapidated state of the facilities, which no longer meet the conditions for the production of quality meat, the construction of a slaughterhouse is necessary to ensure the transport and distribution of meat in compliance with health and hygiene regulations and to strengthen the organizational and operational capacities of livestock and meat professionals. The slaughterhouse will be built in Linguère. The one in Dahra will be rehabilitated. Kiosks will be set up near consumers.
Activity 15: Construction (2) and rehabilitation (10) of veterinary stations	For better access to quality veterinary care in the production units (sheepfolds, poultry houses and stables), the following 10 veterinary stations will be rehabilitated and 2 built. Rehabilitated veterinary stations: Department of Linguère: 04 (Thiél, Thiargny, Téssékéré, Gassane) Department of Matam: 02 Department of Kanel: 01 Department of MalèmeHodar : 01 Department of Koungueul : 01 Department of Koupentoum : 01 Veterinary stations built :

	Department of Linguère : 01 (Ouarkhokh) Department of Koungueul 01
Activity 16: Insemination of 500 cows	In collaboration with the CNAG in Dahra, 500 cows will be inseminated to increase the mestizo population in the project area and increase the potential for milk production. Regularly installed private vets will be associated with care and/or as inseminators. Their training will be supported by the Project with inputs and equipment (hormones, gloves, gel, insemination kits, etc.). Private vets will be asked to make a financial contribution.
Activity 17: Construction of 05 feed storage warehouses with a capacity of 100 tons	The construction of 100-ton warehouses will allow farmers to store the feed made available to them and managed on a revolving basis, thus completing the network already established by the project.
Component B: Support for the development of value chains	
ACCESS OF SMALL PRODUCERS AND BREEDERS TO PRODUCTION FACTORS	
Activity 1: Setting up and supporting agricultural cooperatives around the developed sites	The activity focuses on professionalizing producer organizations to ensure sustainability. The aim is to foster the development of organizations capable of ensuring the upkeep and maintenance of structures, input supply, group marketing, representation and advocacy. The idea is to transform existing federations into cooperatives and to create the new cooperatives needed in the new zones. Finally, it will be a matter of inserting itself into the networks and large national consultation frameworks to ensure the viability of the strategies and their sustainability.
Activity 2: Input support for rice and vegetable production in developed sites	The purpose of this activity is to create the conditions for the optimal valorization of the facilities created. Support will be provided for initial allocations of seed, fertilizer and phytosanitary products. These inputs will be renewed according to a revolving scheme managed by the agricultural cooperatives.
Activity 3: Support for agricultural equipment and materials	This activity involves the provision of small-scale seeding and plowing equipment, such as seeders and hoes. Primarily intended for women, this equipment will allow the start of production operations without interfering with field crops such as groundnuts in the central

	<p>regions. Support will also be provided for post-harvest equipment such as threshers and hullers in the newly developed areas. Lastly, support will be provided for market gardening by providing kits for the areas that have been developed.</p>
<p>Activity 4: Support to the private sector to facilitate plowing and post-harvest operations</p>	<p>The idea is to make an equipped tractor available in each department for a private individual with proven management capacity who will enter into a contract with the agricultural cooperatives to provide plowing services to members.</p> <p>This heavy equipment will be subject to a management protocol managed by the cooperatives with an identified private party, but will remain the property of the producer organizations. The objective is to bring the plowing service closer to the producers and to strengthen the financial capacities of the private sector while promoting rural employment.</p>
<p>Activity 5: Technical and organizational capacity building for producers and their organizations</p>	<p>The capacity building activities are cross-cutting and involve training producers on new agricultural techniques, environmental protection and the professionalization of organizations. These trainings will be carried out mainly as part of the protocols with the technical services and the local operator. Some topics will require the recruitment of consultants.</p>
<p>Activity 6: Exchange visits and participation in fairs</p>	<p>The purpose of the exchange visits is to create a positive emulation based on successful experiences and good practices elsewhere. They will also aim to assess the relevance of the project's strategies for the implementation of the various activities. Exchange visits will be organized wherever necessary.</p> <p>Participation in fairs allows producers and their organizations to establish contacts and partnerships that will allow them to decompartmentalize their activities. It also allows them to successfully market their products.</p>
<p>Activity 7: Establishment and professionalization of SFC groups</p>	<p>The Savings for Change (SFC) system allows for the mobilization of local savings, development of endogenous income-generating activities, health coverage for producers and strengthening of their solidarity. It will be</p>

	<p>generalized in all the sites covered, depending on opportunities. This scaling up will require linking with micro-finance structures to improve the financial capacity of the groups and thus increase credit opportunities.</p>
<p><u>Activity 8:</u> Support for the implementation of fish farming and beekeeping activities</p>	<p>The idea is to further diversify activities so as to enhance the value of the structures in place. In addition to agricultural activities, the project will develop fish farming and beekeeping in the Koumpentoum and Kougheul areas.</p> <p>The fish farming activity will consist of setting up specific facilities, stocking fish, providing supplementary food and training users in suitable sites.</p> <p>For beekeeping, the activity will consist of setting up beehives and improving local capacities.</p>
<p><u>Activity 9:</u> Improving nutrition</p>	<p>This activity aims to promote good nutritional practices through the improvement of household food rations. It supports and completes the strategies of diversification of the productions and allows for the improvement of the health of the populations, especially children, women and other vulnerable groups.</p>
<p><u>Activity 10:</u> Study and support for the organization of the commodity chains (rice and market gardening)</p>	<p>This activity is part of the sustainability of the actions undertaken. In many areas, rainfed rice and lowland market gardening are relatively new. It is therefore necessary to organize these promising sectors in order to ensure that all the links in the chain are effectively managed and that all the stakeholders are involved. To this end, a reference situation will be established and organizational strategies implemented.</p>
<p><u>Activity 11:</u> Acquisition of chicks and feed</p>	<p>The activity consists of helping the beneficiaries to start their activity until they are self-sufficient. It is an activity that will speed up the economic recovery of these farmers who were hit hard by Covid.</p>
<p><u>Activity 12:</u> Small materials support for start-up</p>	<p>The activity consists in helping the beneficiaries to start their activity until they are self-sufficient. It is an activity that speed up the economic recovery of these farmers who were hit hard by Covid.</p>
<p><u>Activity 13:</u> Acquisition of dairy cows</p>	<p>The idea is to acquire pregnant or lactating females that will be made available to women,</p>

	<p>most of whom have been in the dairy sector for several years. The objective is to increase the production potential of the cows in order to strengthen the processing capacities of our units.</p>
<p>Activity 14: Selection, structuring and technical training of beneficiaries</p>	<p>The different beneficiaries who will be selected will receive capacity building sessions that will allow them to better master their activity. All of these beneficiaries, depending on the activity, will be organized into a cooperative to create a link between them, first in the project area, and then with others.</p>
<p>Activity 15: Support for the establishment of umbrella structures (cooperative, network, federation)</p>	<p>The UPs set up in the first phase and those that will be set up in this second phase will be organized in a network of UPs. The members of the borehole management committee will be networked to better manage their infrastructures. The project will support them in structuring by establishing different management bodies. The actors of the milk sector;</p>
<p>Activity 16: Acquisition of start-up feed stocks for sheepfolds, chicken coops, dairy barns and feed stores</p>	<p>For all income-generating activities, the acquisition of start-up stock of feed will be planned to restart the activities. For feed stores, the start-up stock will be used as revolving funds and will be aligned with the defined strategy.</p>
<p>Activity 17: Selection, structuring and training of farm producers (technical production itinerary, management, market access, processing, agro-ecological approach...)</p>	<p>The beneficiaries of the farms will be selected on the basis of a participatory and transparent procedure led by local authorities and the territorial administration represented by the prefect and sub-prefect. The selection criteria are well-tested in the farms developed by PASA Lou Ma Kaf and will be applied in this project. The selected producers are then organized into an Economic Interest Group (EIG), which is a formal structure recognized by the financing institutions. They continue to be set up and trained in all aspects related to the value chain of their production activity.</p>
<p>Activity 18: Organization and establishment of 6 cooperatives of farm producers</p>	<p>The activity focuses on professionalizing producer organizations to ensure sustainability. The aim is to promote the development of producers' organizations capable of ensuring the upkeep and maintenance of structures, the supply of inputs, group marketing, representation and advocacy. This will involve grouping the unions of MSEs of existing farms</p>

	into cooperatives to enable them to pool together many of the activities related to their operations. This approach will further professionalize the producers and will help them to better trade with banks, suppliers and with all the actors involved in the value chain of their production.
Activity 19: Marketing support for producer organizations on farms (acquisition of 20 marketing tricycles and construction of 25 kiosks, acquisition of processing equipment)	In the new farms, tricycles will be acquired for the settled producers. This inexpensive means of transport will facilitate the evacuation of products but could also be used for various tasks on the farm
Activity 20: Material support for the tillage of the farms (Acquisition of 06 tractors equipped with cart and harrow...)	Six 80 to 100-hp tractors will be acquired to accompany the producers. A mutual management procedure for these tractors has been developed by PASA Lou Ma Kaf and will allow producers to manage heavy agricultural equipment in a grouped fashion for a set of farms in the same zone or department.
Activity 21: Support for various small agricultural equipment for the farms (rake, wheelbarrow, crate, pick, shovel, gans, sprayer...)	The project will support newly settled producers by acquiring small agricultural equipment for them. This support is a seed money for the development of the project, which is done only at the start-up.
Activity 22: Input support for farm start-up activities	This is support for inputs (fertilizer, seed, pesticides) to start development activities. This measure will make it possible to anticipate the delay in financing institutions starting production as soon as the development is completed while the campaign credit is being set up.
Activity 23: Acquisition of dairy cows for the diversification of production activities in agricultural farms	Fifty (50) full-fed Jersey cows will be acquired for the 10 farms with dairy barns to start milk production. Each farm will be equipped with 5 cows that will allow an average daily production of 15 liters of milk. The choice of the Jersey breed is justified by its robustness in relation to the climatic context of Senegal and its productivity. This breed has been proven for almost 15 years in the integrated farms of ANIDA, which will be the implementing agency for the project.
Activity 24: Inter-producer exchange visits and participation in trade fairs and exhibitions of farm beneficiaries	Exchange visits will be organized for the producers of the farms to capitalize on successful experiences and good practices proven elsewhere. Exchange visits will be organized between villages, regions, and

	<p>outside the country.</p> <p>Participation in the fairs allows the producers' organizations to develop partnerships with promoters, traders and distributors involved in market gardening production.</p>
<p>Activity 25: Establishment of 05 UP/UASP (characterization, mapping, development of management plans)</p>	<p>In connection with the ecological monitoring center, these five new UPs will be established in the following departments: Linguère (1); Koupentoum (3); Kanel (1). The development of these management plans will allow for the rational exploitation of natural resources with equitable access for users.</p>
<p>Activity 26: Establishment of management committees for the 5 new boreholes and capacity building for the members of the MCs</p>	<p>The boreholes located in these pastoral units will all have management committees for the rational use of the infrastructure. The maintenance of these hydraulic infrastructures is a major problem in livestock areas.</p>
<p>Activity 27: Establishment of UP/UASP management committees and capacity building of MC members</p>	<p>In addition to the management bodies of the new boreholes, other old boreholes will have their management committees revitalized through capacity building sessions.</p>
<p>Activity 28: Support for the development of vaccination parks (20 vaccination parks)</p>	<p>At each park built, a management committee will be set up for the maintenance and management of the infrastructure.</p>
<p>Activity 29: Acquisition of fodder seeds and small mowing equipment</p>	<p>It will consist in acquiring fodder seeds for the 7 hectares that will be developed at the level of the boreholes (1 hectare per borehole). The excess flow will be used for the development of each hectare of fodder crop. Small diversified equipment will also be acquired for the development of these fodder plots.</p>
<p>Activity 30: Acquisition of nuclei of breeding females and broodstock for the benefit of small breeders</p>	<p>Breeding females will also be acquired to support small-scale farmers in the project area. Through the phenomenon of reproduction, the beneficiaries will have births that will increase their income in the long term.</p>
<p>Activity 31: Acquisition of 50 dairy heifers for small producers</p>	<p>This activity will be concentrated around the dairy basins (the Dahra, Linguère and Ourosogui axis). Thus, women who own cows will be selected</p>
<p>Activity 32: Acquisition of small start-up materials (feeders and waterers)</p>	<p>The beneficiaries of the chicken coops will be assisted in setting up their business by providing them with start-up equipment.</p>
<p>Activity 33: Acquisition of broiler and layer chicks for</p>	<p>For the relaunch of their activities, the</p>

small-scale poultry farmers	identified beneficiaries will also be supported by providing them with broiler chicks and layers to start their activities.
Activity 34: Purchase of poultry feed for small-scale poultry farmers	Still, to boost the beneficiaries, a quota of food will be provided to them at the beginning of their activity.
Activity 35: Acquisition of medicines and vaccines for IGA beneficiaries	These medicines and vaccines acquired will be used for the sanitary monitoring of the species used in the IGAs (poultry, small ruminants)
Activity 36: Acquisition of medicines, vaccines and multivitamin supplements for livestock farmers	All beneficiaries of IGAs (sheepfolds, poultry houses) will be supported with medicines, vaccines and vitamin supplements to sustain their activities
Activity 37: Inseminate 500 local cows in barns (Acquisition of hormones and artificial insemination inputs)	In collaboration with the National Genetic Improvement Center, 500 cows will be inseminated during this second phase of the project in order to increase the number of crossbred cows in the project area. Hormones, gloves, gel and other inputs will be acquired for this activity.
Activity 38: Acquisition of revolving stock of livestock feed for livestock feed stores (support to LSO)	The 25 stores that will be built will each receive 100 tons of start-up feed support as well as a revolving fund. This activity will be based on the Ministry of Livestock's management model for livestock safeguard operation.
Activity 39: Acquisition of 10 motor mowers for stables and sheepfolds	These mowers will be mainly intended for the beneficiaries of the cowsheds to ensure a good feeding with the constitution of fodder reserves. To do this, the beneficiary will have to develop strategies for mowing at the right time and then store the fodder in the shed that will be built for this purpose.
Activity 40: technical and organizational capacity building for 5,000 producers (in animal health, good production techniques, conservation/storage, group purchasing techniques)	The objective is to strengthen the technical and organizational capacities of various producers in the project area, even if they have not benefited from the project's IGAs. For example, many poultry vaccinators will be trained in this way to support public service agents in improving the vaccination rate.
Activity 41: Capacity building of livestock organizations and breeders through supervision (5 facilitators) and IGAs (500 fattening operations, 200 sheepfolds, 50 chicken coops, installation/use/servicing/maintenance of 50 motor mowers, 100 fodder sheds);	The idea is to organize training sessions for all the beneficiaries of income-generating activities (poultry houses, sheepfolds, mowers, sheds, etc.). The focus will be on the mode of operation and maintenance of the infrastructure in order to make it as profitable

	as possible.
Activity 42 : realization and rehabilitation of firewalls	This activity aims essentially to participate alongside the territorial communities in the fight against bush fires. Old firewalls will be rehabilitated and new ones built in the departments of Linguère, Ranérou, Kanel, Koungueul and Koupentoum.
Activity 43: Capacity building, retraining and job adaptation training for MEPA field agents (region, departments, veterinary posts) (DIREL agreement)	The agents of the field mechanism, which is the technical arm of the project in its intervention zone, will have to undergo capacity building sessions to better articulate the objectives of the project and those of MEPA. Thus, the institutional anchoring of the project is strengthened.
Activity 44: Acquisition of animal health and vaccination materials	Equipping the veterinary services with vaccination and cold equipment is a major challenge for MEPA. The acquisition of this health and vaccination equipment will go in these directions
Activity 45: Acquisitions of PRP vaccines (MEPA's 2025 PRP Eradication Strategy) and cold equipment.	The purpose of these acquisitions will be to support MEPA in its strategy to eradicate peste des petits ruminants by 2025 by providing them with enough vaccine at the right time. The major problem for the state to reach this objective is the availability of vaccines
Activity 46: Training of village livestock and vaccination relays (Agreement with DIREL)	Women in particular will be targeted in these training sessions. The target disease is New Castle disease. These trainers will be able to support the field supervisors, which will improve the vaccination rate among poultry at a cost.
Activity 47: Support in small conservation/vaccination equipment for village livestock relays	Small conservation materials (syringes, needles, coolers, etc.) and vaccination materials will be acquired for women to carry out this activity.
CAPACITY BUILDING FOR OPERATORS	
Activity 1: AGEX DBRLA Agreement	The mission of the Directorate of Retention Basins and Artificial Lakes is to implement the State's sectoral policy in the field of surface water mobilization and development. It supervises development activities involving surface water. In this respect, the DBRLA acts as the executing agency for the part that ensures the implementation of these developments. It provides technical support in the preparation of files, in the implementation and development

	<p>of the facilities as well as in the handover of the works. It also supports the operational functioning of the component, within the framework of social mobilization around the facilities, development and capacity building.</p>
<p>Activity 2: Proximity operator (animation mechanism)</p>	<p>The local operator is a private firm or NGO, chosen for its skills in social mobilization and organizational support around the developed sites. It provides the project with a facilitation system and trainers to strengthen the organizational capacities of producers. The facilitation system is an extension of the project's operational team and serves as an interface with producers, their organizations, territorial communities, local administrative authorities and other local actors. Finally, it supports the implementation of the EPC sub-component.</p>
<p>Activity 3: DRDR protocols for 2 components (Kaffrine, Kaolack, Tambacounda, Louga and Matam)</p>	<p>The Regional Directorates of Rural Development implement and supervise agricultural policies at the regional level. As such, they support the implementation of the project's agricultural activities, including capacity building, monitoring of the operation of structures and facilities in the lowlands and of agricultural farms, the establishment of agricultural cooperatives, the production and distribution of seeds, and the validation of agricultural statistics. The DRDRs support the project team in monitoring the campaigns through their departmental members.</p> <p>They will also provide farms and lowlands with all the facilities granted by the State in terms of inputs or subsidized agricultural equipment.</p>
<p>Activity 4: IREF protocols (Kaffrine, Kaolack and Tambacounda, Louga and Matam)</p>	<p>The Regional Inspectorates of Water and Forestry support producers in the lowlands and on farms in the implementation of CES/DRS activities, in the provision and planting of tree nurseries and in training. They monitor reforestation and ANR on behalf of the project, while implementing activities such as the laying of stone barriers, the installation of bunds, fascines and gabions, and also the implementation of agricultural activities, the installation of windbreaks, hedgerows and even fruit-bearing plants on the farms. The objective is to protect the production base in the lowlands and farms and to promote arboriculture in Kaffrine, Kaolack, Tambacounda and Matam. Regional Water and Forestry</p>

	Inspectorates will facilitate access, training and development of the agro-ecology approach.
Activity 5: ANCAR Protocols (North Zone, BAS, East Zone)	<p>Agricultural and rural advisory activities that accompany agricultural production will be implemented by the national agency for rural agricultural advice through its regional members. Activities will include capacity building, variety selection, implementation and monitoring of agricultural campaigns, and marketing support.</p> <p>The agricultural advisors will work with producers' organizations, the local operator, the DRDRs and the project's operational team in the area of lowland and market gardening production.</p>
Activity 6: Tripartite agreement (project, Regional Fisheries Service and ANA)	The purpose of this agreement will be to define the activities as well as the actors involved in the implementation of fish farming activities. It is a question of carrying out, in a subsidiary manner, the activities of development, stocking, harvesting and marketing of the fish resulting from these operations. The fisheries department provides supervision and monitoring, the ANA provides technical assistance, and the project mobilizes the necessary resources and organizes the actors.
Activity 7: Capacity building for sheepfold beneficiaries	All the beneficiaries of the sheepfolds will have their capacity strengthened in the management and operation of the activity. Issues such as feeding and animal health will be developed.
Activity 8: Capacity building for the beneficiaries of the poultry houses	As with the sheepfolds, the beneficiaries of the poultry houses will also have their management capacity strengthened. Aspects related to health, feeding and housing will be addressed during these training sessions.
Activity 9: Establishment/training of the MCs for the 5 feed stores (DIREL Agreement)	All feed stores built will have management committees. These members will be trained on how to manage a store among other topics
Activity 10: Establishment and capacity building of the CG of pastoral pools	As with the other infrastructures realized by the project, the ponds will be equipped with a management committee to better organize the exploitation; thus the management capacities of these members will be reinforced in order to better identify the problems related to the environment for example.
Activity 11: Training/advisory support for the	The beneficiaries of these fodder crop plots will

<p>beneficiaries of the 05 ha of fodder crop/mariculture perimeters (DIREL Convention)</p>	<p>be trained on the technical itineraries of the different fodder species used for this purpose.</p>
<p><u>Activity 12: Establishment/renewal of the management bodies of 25 UPS/UASPs</u></p>	<p>The management bodies of the various UPS created during the first phase of the project will be renewed with the support of the technical services (livestock, Water and Forestry). The new UPS will have their management committees set up</p>
<p>Activity 13: Marking of boundaries and routes of UPS/UASPs (signs, markers) in UPS/UASPs</p>	<p>With the support of the ecological monitoring center and in application of the agreement between the two institutions, the limits and routes of the UPS will be identified and delimited by a system of markers.</p>
<p><u>Activity 14: AGEX/ DIREL Agreement</u></p>	<p>The livestock department remains the project's focal point for all production activities and the construction of pastoral infrastructure aimed at improving productivity. For that purpose, the monitoring of IGAs, the realization of infrastructures, and capacity building sessions require the mobility of the system. Thus, travel means could be acquired within the framework of this agreement</p>
<p><u>Activity 15: AGEX ANIDA Agreement</u></p>	<p>The National Agency for Insertion and Agricultural Development (ANIDA) is the structure of the Ministry of Agriculture in charge of the creation of agricultural farms to promote the integration of young people and women in the agricultural sector. As such, it ensures the delegated management of several projects and programs in the agricultural sector in terms of farm development, including the PASA Lou Ma Kaf. As the executing agency of the new project, it will provide technical support in the design and preparation of the CAD, monitoring of execution and control, selection and organization of beneficiaries, and support for development and marketing and all the work of agricultural advice and training. It will mobilize for this purpose, in addition to the agricultural advisers recruited within the framework of the project, its technicians (GR engineers, electromechanics, agronomist, veterinarian, etc.) to accompany the realization of the drilling works, the installation of the pumping equipment, the emergency interventions of the pumping equipment and the activities of agricultural production and breeding.</p> <p>This support will mobilize financial and material</p>

	resources and logistics, in particular motorcycles for agricultural advisers, which will be paid for under the agreement with ANIDA, including their operation (fuel, maintenance and upkeep).
Activity 16: DREEC protocol for 2 components (Kaffrine, Kaolack, Tambacounda, Louga and Matam)	This agreement will allow the Direction Régionale de l'Environnement et des EtablissementsClassés to follow up on the ESMP, but also carry out environmental screening in the farms and lowlands in order to provide mitigation solutions in case of non-compliance and to supervise the implementation of the Environmental and Social Management Plan.
Component C: Project Coordination and Management	
Sub-component C1:	
Activity 1: Environmental monitoring and surveillance with EMC and DREEC	These activities are part of the implementation of the environmental and social management plan. For the ecological monitoring center, it will monitor the environmental impacts of the intervention while supporting the project to correct negative impacts. As for the DREECs, they ensure environmental monitoring both during the implementation of the facilities and during their operation.
Activity 2: Awareness raising for the fight against water-borne diseases, HIV and Covid_19 (Medical regions)	The implementation of the ESMP requires contractualization with the medical regions to ensure continuous sensitization around the developed sites. The purpose of this sensitization is to fight against water-borne diseases and pandemics that have a negative impact on the population and therefore on the activities to be carried out. It will be implemented by the health relays, the heads of post under the supervision of the health districts.
Activity 3: Protocols with community radios	Community radio stations play a role in relaying information and raising awareness among the population. This is why the project will work with these tools through continuous thematic programs, event coverage as well as on-site reports and testimonies. The materials will be kept at the project level to capitalize on good practices. They will also be used to raise awareness about the activities of the ESMP, the fight against bush fires, climate information and the management of structures.

Sous composante C2 : Sub-component C2:	
Activity 1 : Rehabilitation and equipment of facilities (coordination)	<p>The idea is to rehabilitate and expand the project's facilities within the livestock department in Kaffrine. Indeed, the planned coordination system will require the creation of three additional offices and the development of a functional guarding block, and the reinforcement of the existing building. In order to secure the facilities and equipment, it is also necessary to complete the fence wall of the livestock service compound.</p> <p>The renewal of the office furniture and the equipment of a functional meeting room that can also be used as a training room must be carried out to make the team based in Kaffrine more operational.</p>
Activity 2: Acquisition of vehicles and motorcycles	<p>The idea is to reinforce the existing vehicle fleet with the acquisition of three additional vehicles (one station wagon and two pick-ups) for the PMU and 6 pick-ups for the three antennas, at a rate of two pick-ups per antenna. Indeed, the coordination and the antennas have vehicles acquired in 2014 and whose frequent breakdowns do not allow the mobility of teams in the field. These teams will also be reinforced by other experts, which implies reinforcing the logistic means.</p>
Activity 3: Staff support for the surface water component	<p>The coordination will be reinforced by 1 sectoral expert, the expert in charge of agricultural production and capacity building, in addition to the component coordinator and the rural engineering expert. This reinforcement of the framework is justified by the scope of the capacity building activities but also by the support to the development of the facilities. In summary, the component team will be composed of one coordinator, 2 sectoral experts and support staff. This support staff is composed of one accountant, one assistant, 3 drivers and 2 security guards.</p>
Activity 4: Staff support for the groundwater component	<p>The coordination of the activities will be ensured following the same approach as the PASA Lou Ma kaf with a coordinator (GR Engineer) supported by a GR assistant based at the AGEX ANIDA and 2 supervisors (Agronomist) based in Kaffrine and Louga. The supervisor in Kaffrine covers Koumpentoum and Nioro and the one in Louga covers Louga and Matam. This</p>

	core staff will be supported by one accountant, one assistant, 3 drivers and one security guard.
Activity 5: Computer equipment	All core staff (Coordinator, Assistant GR, 2 supervisors) and part of the support staff (Assistant, accountant) will be provided with computer equipment (Computer, printer...)
<u>Activity 6: Office equipment and supplies</u>	Office equipment and supplies, consumables (paper, printing ink, pens, folders ...) will be acquired regularly for the activities of the coordination and supervisors
<u>Activity 7: Institutional support to MAER</u>	For the proper implementation of project activities and better supervision, institutional support is planned to enable the MAER to conduct regular reviews of the sector's performance with all stakeholders. This institutional support will also enable the MAER to strengthen its capacities in the preparation and monitoring of agricultural campaigns, national food day campaigns, as well as the provision of supervision and control services for the transfer of agricultural inputs and equipment by the military agents of the Logistics Unit (CELOG). The MAER's participation in the good preparation and holding of the FIARA could be taken in charge, in part, by this support.