

# Simplified Approval Process

## Annex 2a: Logical framework



# LOGICAL FRAMEWORK TEMPLATE

LOGICAL FRAMEWORK				
<p><i>This section refers to the project/programme's logical framework in accordance with the <b>GCF's Integrated Results Management Framework</b> to which the project/programme contributes as a whole, including in respect of any co-financing.</i></p>				
<p><b>1. GCF Impact level: Paradigm shift potential (max. 300 words)</b></p>				
<p><i>This section of the logical framework is meant to help a project/programme monitor and assess how it contributes to the paradigm shift described in section D.2 above by applying three assessment dimensions - scale, replicability, and sustainability.</i></p> <p><i>Accordingly, for each assessment dimension (see the definition per assessment in the accompanying guidance note), describe the current state (baseline) and the potential scenario (target) and rate the current state (baseline) by using the three-point-scale rating (low, medium, and high) provided in the guidance note. Also describe how the project/programme will contribute to that shift/ transformation under respective assessment dimensions (scale, replicability and sustainability). In doing so, please refer to section D.2 (paradigm shift potential).</i></p>				
Assessment Dimension	Current state (Baseline)		Potential target scenario (Description)	How the project/programme will contribute (Description)
	Description	Rating		
Scale	<p>High demand from farmers to join the Naatangué farm</p> <p>Lack of financial instruments to provide financial and technical support to farmers for climate adaptation and improving value of commercialization.</p> <p>Limited technical capacity of advisory services to provide advice to farmers on climate-smart agriculture practices and commercial value chains.</p>	Medium	<p>The project's community-based contribution scheme is a key component of catalyzing farm sustainability and scalability. It helps reduce financial risks associated with farming, encourages farmers to adopt sustainable practices, and enables them to draw on resources during difficult times.</p> <p>The project's development of cooperatives and implementation of marketing activities also contribute to its replicability and scalability by generating a demand-driven farm model that can last beyond the project. Farms are becoming more financially sustainable as production is increased and diversified and commercialization is improved.</p> <p>The clear identification of a new typology of farms in Senegal through the project's marketing efforts can inspire other farmers and organizations to adopt similar approaches. This can</p>	<p>To enhance sustainability of Naatangué farms, a public-private partnership has been proposed to increase their financial sustainability. The community-based contribution scheme, outlined in Section 5, is a crucial component that catalyses farm sustainability and scalability. By reducing financial risks associated with farming, this scheme encourages farmers to adopt sustainable practices and enables them to access resources during difficult times. In case of crop destruction due to natural disasters, farmers can use the fund to purchase new seeds and other necessary inputs, without resorting to high-interest loans. Moreover, the contribution scheme supports replicability and scalability beyond the project area. New farmers can join the Naatangué farm model, using the communal scheme as collateral and subsequently contributing back to the fund as they earn income. This creates a self-sustaining system that can support farmers even after the project ends.</p>

			lead to a larger-scale paradigm shift in the agricultural sector towards sustainable farming practices.	
<b>Replicability</b>	<p><i>Farmers generally have one source of income (monocropping) that are highly specialized, which will make them more vulnerable to climate change as temperatures rise and as rain becomes more erratic (see climate rationale)</i></p> <p><i>Farmers may be reticent towards systemic change without financial support and training</i></p>	Medium	<p><i>Farmers facing similar limitations in terms of vulnerability to climate change, limited access to finance and marketing services will have a proven example with the project that there are options for farms to become more resilient to climate change and more financially sustainable.</i></p> <p><i>The Naatangue project mobilizes and pools resources at the community and project level, promoting collaboration and community-led approaches to foster trust and social cohesion, reduce risks, and increase resilience, especially for smallholder farmers.</i></p> <p><i>By consolidating individual farms into larger plots managed collectively as a village farm, the project promotes the implementation of sustainable agricultural practices, such as agroforestry and intercropping, and facilitates access to markets, inputs, and financing. Similarly, the community-based contribution scheme allows farmers to pool their resources, reducing the risks associated with individual farming operations and enabling them to benefit from shared resources. Overall, the mobilization and pooling of social resources through the creation of village farms is a key component of the Naatangue project's efforts to promote sustainable and inclusive agriculture in Senegal, aligning with GCF investment criteria for community-driven solutions.</i></p>	<p><i>The Naatangue project will contribute by promoting the uptake of innovative technologies, supporting climate-resilient practices, and demonstrating the potential for replication.</i></p> <p><i>Specifically, the project focuses on two key innovations: agroforestry and solar drip irrigation systems. Agroforestry involves the cultivation of trees and crops on the same plot of land, which can help to improve soil quality, increase biodiversity, and mitigate climate change. The solar drip irrigation system, on the other hand, involves the use of solar-powered pumps and drip irrigation technology, which can help to conserve water and reduce the reliance on fossil fuels.</i></p>
<b>Sustainability</b>	<i>Lack of knowledge and initial capital to improve farming models through the integration of agroforestry</i>	Medium	<i>The Naatangué farm model promotes sustainable agriculture practices that focus on improving soil fertility, water management, and crop yields for smallholder farmers. The use of localized irrigation enables farmers to</i>	<i>The Naatangue project places a strong emphasis on capacity building and training for farmers, training the trainers, and other project beneficiaries (training and technical assistance to farmers on climate-smart agriculture practices, such as soil conservation and water management) which could have a</i>

	<i>Farmers generally have one source of income (monocropping) that are highly specialized, which will make them more vulnerable to climate change as temperatures rise and as rain becomes more erratic (see climate rationale)</i>		<i>access groundwater through renewable energy sources, which allows them to work all year round and mitigate the effects of climate change.</i>  <i>In addition, the adoption of high-yield technical itineraries helps to increase production, while management procedures adapted to the economic and financial environment ensure the sustainability of the project in the long term.</i>	<i>transformative effect on the farming community.</i>  <i>By learning these practices, farmers are better equipped to cope with the impacts of climate change and maintain their operations even in difficult conditions. The project also uses local advisors to ensure that beneficiaries can access new markets and income streams in the future.</i>  <i>By investing in human capital in this way, the Naatangue project can ensure that the active population is better prepared to adapt to climate change while contributing to the overall goal of climate-resilient development pathways.</i>
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## 2.1. GCF Outcome level: Reduced emissions and increased resilience (IRMF core indicators 1-4, quantitative indicators)

Select appropriate IRMF core and supplementary indicators to monitor project/programme progress. More than one IRMF (core and or supplementary) indicators may be selected as applicable for each GCF results area and project/programme outcome (as defined in the table in section B.2.2). If IRMF indicators are unable to measure any given project/programme outcomes, project/programme-specific indicators should be developed under section 3 ("Project/programme specific indicators").

GCF Result Area	IRMF Core Indicators (1-4) <sup>1</sup>	Means of Verification (MoV)	Baseline	Target		Assumptions / Note
				Mid-term	Final <sup>2</sup>	
<u>MRA1 Energy generation and access</u>	<u>Core 1: GHG emissions reduced, avoided or removed/sequestered</u>	<i>Project annual energy generation/Electricity receipts</i>	0	<i>Mitigate 500 T of CO2</i>	<i>Mitigate 921.9 T of CO2</i>  <i>The target at the end of the project's total lifespan is 18,314.16 T of CO2.</i>	<i>The project reduction are the results of the project activities supporting the shift from current diesel fuel irrigation to solar, the adoption of solar irrigation by farmers currently using basic irrigation without pumps, usage of solar panels for milk processing centers, and the usage of biodigesters.</i>
<u>ARA1 Most vulnerable people and communities</u>	<u>Core 2: Direct and indirect beneficiaries reached</u>	<i>Monitoring field reports Quarterly project reports</i>	0  0	<i>Total: 13,800 direct beneficiaries</i>  <i>Women: 5,500 direct</i>	<i>Total: 46,940 direct beneficiaries</i>  <i>Women: 18,776 direct</i>	<i>The direct beneficiaries include: 100 family farms with 1 farmer per farm with 10 members per household 3 employees per family farms with 10 members per</i>

<sup>1</sup> The IRMF Indicators are set out in the [Integrated Results Management Framework](#)

<sup>2</sup> The final target means the target at the end of project/programme implementation period. However, for core indicator 1 (GHG emission reduction), please also provide the target value at the end of the total lifespan period which is defined as the maximum number of years over which the impacts of the investment are expected to be effective.

				<i>beneficiaries</i>	<i>beneficiaries</i>	<i>household</i> <i>1 seasonal worker per farm with 10 members per household</i> <i>300 new cooperative members (these members are from already existing Naatangué family and village farms)</i> <i>40 village farms with 4 producers per farm with 10 members per household</i> <i>40 farms gate keeper (with 10 members per household)</i> <i>40 staff from extension/advisory services</i> <i>2,400 seasonal employments with 10 members per household</i>
<u>ARA2 Health, well-being, food and water security</u>	<u>Core 2: Direct and indirect beneficiaries reached</u>	<i>Monitoring and evaluation reports/ Quarterly project reports</i>	<i>Total: 0 direct beneficiaries</i>  <i>Women direct beneficiaries: 0</i>	<i>Total: 13,800 direct beneficiaries</i>  <i>Women direct beneficiaries: 5,500</i>	<i>Total: 46,940 direct beneficiaries</i>  <i>Women direct beneficiaries: 18,776</i>	<i>The project supports adoption of climate smart agricultural practices of small producers and family farms, which can reduce food security risks as well as pressures on water supply.</i>
<u>ARA2 Health, well-being, food and water security</u>	<u>Core 2: Direct and indirect beneficiaries reached</u>	<i>Monitoring and evaluation reports/ Quarterly project reports</i>	<i>Total indirect beneficiaries:</i> <i>0</i>  <i>Total women indirect beneficiaries:</i> <i>0</i>	<i>Total indirect beneficiaries:</i> <i>630,720</i>  <i>Total women indirect beneficiaries:</i> <i>315,360</i>	<i>Total indirect beneficiaries</i> <i>1,480,320</i>  <i>Total women indirect beneficiaries:</i> <i>740,160</i>	<i>The project supports adoption of climate smart agricultural practices of small producers and family farms, which can reduce food security risks as well as pressures on water supply. Indirect beneficiaries will include the population of the communes where small producers and family farms are supported by the project. These communes will benefit from the improved diversity, volume and quality of agricultural production of these producers and farms; a significant volume of the food produced will be</i>

						consumed locally contributing to food security. Other farmers (outside the project) in these communes will also benefit from the increased knowledge of climate smart agricultural practices of extension services (spill over of knowledge and practices).
<u>ARA2 Health, well-being, food and water security</u>	<u>Supplementary 2.1: Beneficiaries (female/male) adopting improved and/or new climate-resilient livelihood options</u>	Monitoring and evaluation reports/ Quarterly project reports	Male: 0  Women: 0	Male: 4,980  Women: 3,300	Male: 16,898  Women: 11,265	The project supports adoption of climate smart agricultural practices of small producers and family farms, which can reduce food security risks as well as pressures on water supply. The project various activities will lead to improved diversity, volume and quality of agricultural production of these producers and farms; a significant volume of the food produced will be consumed locally contributing to food security. The assumption is that 60 percent of farmers benefiting directly from project activities will manage to adopt improved or new climate-resilient livelihood options.
<u>ARA4 Ecosystems and ecosystem services</u>	<u>Core 4: Hectares of natural resources brought under improved low-emission and/or climate-resilient management practice</u>	Project monitoring reports on hectares of land under climate resilient practices and agroforestry.	0	100 To be further updated once beneficiaries have been identified during baseline collection	500 To be further updated once beneficiaries have been identified during baseline collection	Once a small producer or a farm has adopted climate resilient practices on its land then the hectares can be accounted for. These activities also contribute to carbon sequestration.

## 2.2. GCF Outcome level: Enabling environment (IRMF core indicators 5-8 as applicable)

Select at least two relevant IRMF core (enabling environment) indicators to monitor and elaborate the baseline context and project/programme's targeted outcome against the respective indicators. Rate the current state (baseline) vis-à-vis the target scenario and select the geographical scope of the outcome to be assessed. Describe how the project/programme will contribute towards the target scenario. Refer to a case example in the accompanying guidance to complete this section.

IRMF Core Indicators (5-8) <sup>3</sup>	Baseline context (Description)	Rating for current state (Baseline)	Target scenario (Description)	How the project will contribute	Coverage
Core Indicator 6: Degree to which GCF investments contribute to technology deployment, dissemination, development or transfer and innovation	<ul style="list-style-type: none"> <li>- Limited knowledge and dissemination of solar drip irrigation and biodigester technologies.</li> <li>- Weak access to solar drip irrigation technology and biodigester due to lack of financing and services.</li> </ul>	Medium	<p>Farmers are adopting solar drip irrigation and biodigester technologies.</p> <p>Advisory services and farmers have increased knowledge and capacity to manage solar drip irrigation and biodigester technologies.</p> <p>Farmers have access to finance through cooperatives to finance solar drip irrigation and bio digester (without the financial support of the project)</p>	<p><i>Finance adoption of solar drip irrigation and biodigester for targeted farmers.</i></p> <p><i>Train advisory services and farmers on the relevance, usage and maintenance of solar drip irrigation and biodigesters.</i></p> <p><i>Increase access to funds through community contributions schemes to support operation and maintenance.</i></p> <p><i>Development of Cooperatives.</i></p>	Multiple subnational areas within a country
Core indicator 7: Degree to which GCF Investments contribute to market development/transformation at the sectoral, local, or national level	<ul style="list-style-type: none"> <li>- Marketing of agricultural products is disorganized and farmer cooperatives are not integrated in the supply chain at national level.</li> <li>- Lack of awareness and availability of developed value chains</li> <li>- Exposure to climate impacts and limited ability to respond</li> </ul>	medium	<p>Farmers' entrepreneurship, producer groups and agricultural cooperatives strengthened to promote access to finance and marketing.</p> <p>Farmers have increased access to markets including at national level.</p>	<p><i>Finance Community-based contribution scheme.</i></p> <p><i>Development of Cooperatives</i></p> <p><i>Financial agreements between Bank and cooperatives with ANIDA support</i></p> <p><i>Formalize and structure of existing processes of cooperatives.</i></p> <p><i>Organize forums for dialogue between farming</i></p>	National level (one country)

<sup>3</sup> The IRMF Indicators are set out in the [Integrated Results Management Framework](#)

	effectively.			cooperatives and national, financial institutions to provide advice on risk mitigation for farm-level investments.	
Core indicator 8: Degree to which GCF investments contribute to effective knowledge generation and learning processes, and use of good practices, methodologies and standards	<ul style="list-style-type: none"> <li>- Rural communities with low adaptive capacity to climate change.</li> <li>- Weak capacity of farmers, and farm labor to leverage information on climate impacts and implement climate smart practices.</li> <li>- Limited knowledge and dissemination of climate smart practices by advisory services.</li> </ul>	medium	<p>Advisory services are disseminating climate smart practices for the project and will beyond the project scope.</p> <p>Farmers are adopting climate smart practices. They are integrating agroforestry and gardening practices into traditional farming and using solar drip irrigation.</p>	<p>Climate smart practices are taken from international best practices like PICSA, Farms of the Future, Family Farms Nataangué, etc.</p> <p>Capacity building of advisory services on climate smart practices (including solar drip irrigation, bio-digester, and agroforestry).</p> <p>Training of farmers on climate smart practices by advisory services and provision of services, infrastructures, and equipment.</p>	National level (one country)

### 3. Project/programme specific indicators (project outcomes and outputs)

This section should list out project/programme-specific performance indicators (outcomes and outputs) that are not covered in sections above (1-2). List down tailored indicators to monitor /track progress against relevant project/programme results (outcomes/outputs). AEs have the freedom to decide against which outcomes they would like to set project/programme specific indicators. If any co-benefits are identified in sections B.2.2, and D.3, AEs are encouraged to add and monitor co-benefit indicators under the “**Project/programme co-benefit indicators**” section in table below. Add rows as needed.

Please number each outcome and output as shown below to indicate association of outputs to the contributing outcome. The numbering for outputs under this section should correspond to the output numbering in annex 3 (budget plan that provides breakdown by type of expense ).

Project/programme results (outcomes/ outputs)	Project/programme specific Indicator	Means of Verification (MoV)	Baseline	Target		Assumptions / Note
				Mid-term	Final	
<b>Outcome 1: Establishing Naatangué farm models for sustainable agriculture in 8 regions</b>	Percentage of farms with increased production diversity	Campaign report Independent baseline survey Independent mid-line survey Independent end line survey Survey of a random sample of farms	Total: Current level of production diversity to be determined.	Total: 50%  Female Headed	Total: 70%  Female Headed	Production will be considered diverse when the farm (i) has increase cropping diversity; (ii) has some livestock activities and (iii) is undertaking agroforestry. All 3 elements are necessary.

		Results disaggregated by total and female headed farms	Female Headed Household: Current level of production diversity to be determined.	Household: 40%	Household: 40%	140 village and family farms
	Percentage of farms financing adequately and timely their next agricultural campaign after benefiting for at least 1 year from the project activities	Campaign report Independent baseline survey Independent mid-line survey Independent end line survey Survey of a random sample of farms Results disaggregated by total and female headed farms	Total: 0 Female Headed Farms: 0	Total: 40%  Female Headed Farms: 40%	Total: 60%  Female Headed Household: 60%	140 village and family farms
	Percentage change in farms' volume of marketed crops (disaggregate per type of crop)	Cooperatives report Independent baseline survey Independent mid-line survey Independent end line survey Survey of a random sample of farms Results disaggregated by total and female headed farms	Total: Farms' volume marketed products to be determined Female: Female headed households farms' volume marketed products to be determined	Total: 15%  Female Headed Household: 10%	Total: 30%  Female Headed Household: 20%	300 existing Naatangué farmers will be joining cooperatives (some data will be available directly from the cooperatives) 40 village farms 100 family farms
<b>Output 1.1: Naatangué family farms developed with Operational and Management plan</b>	Number of family farms developed and fully operational  (Disaggregated by total, female headed farms and youth headed farms)	PV Beneficiary Evaluation Committee Monitoring and evaluation reports  Engineering commissioning reports	Total: 0  Female Headed Farms: 0  Youth Headed Farms: 0	Total: 40 Female Headed Farms: 40%  Youth Headed Farms: 70%	Total: 100 Female Headed Farms: 40%  Youth Headed Farms: 70%	Operational is defined as meeting all the characteristics of Naatangué farm by including: (i) increased cropping diversity; (ii) some livestock activities and (iii) some agroforestry.  The targeting beneficiaries will pay particular attention to women and youth.
	Percentage of beneficiaries contributing funds to the community-based contribution scheme through agreements with ANIDA	ANIDA agreements	In the target areas no funds are currently being contributed to a community-based contribution scheme	50% of beneficiaries have signed agreements with ANIDA to contribute 30% of total farm cost to community-based contribution	100% of beneficiaries have signed agreements with ANIDA to contribute 30% of total farm cost to community-based	Beneficiaries are willing to contribute to the community-based contribution scheme. This scheme provides farmers with access to finance for agricultural activities and will enhance sustainability of the activities undertaken under the project.
<b>Output 1.2: Village farms improved with climate-resilient farming systems and new value chains</b>	Number of village farms improved and operational	PV Beneficiary Evaluation Committee Monitoring and evaluation reports  Engineering commissioning reports	Total: 0  Female Headed Farms: 0	Total: 0  Female Headed Farms: 30%	Total: 40  Female Headed Farms: 30%	There are significantly less village farms that are female headed.  A checklist will be developed defining all the key elements required for a village farm to be considered improved and

			Youth Headed Farms: 0	Youth Headed Farms: 70%	Youth Headed Farms: 70%	operational. It will be based on a need assessment of each farm.
	Number of milk processing units and poultry houses functional	PV Beneficiary Evaluation Committee Monitoring and evaluation reports Engineering commissioning reports	Milk processing units: 0  Poultry houses/processing units: 0	Milk processing units: 2  Poultry houses/processing units: 3	Milk processing units: 6  Poultry houses/processing units: 6	Milk processing units installed have an estimated capacity of around 50,000 liters per year.  Poultry houses and chicken processing units installed have an estimated capacity of 40 tons/year.
<b>Output 1.3:</b> <b>Agroforestry practices adopted into Naatungue family and village farms</b>	Number of agroforestry practices disseminated	Training reports Monitoring and evaluation reports	0	20	40	The project will pay particular attention to include some women advisors to increase women farmers access to knowledge and capacity building activities. Agroforestry involves the cultivation of trees and crops on the same plot of land, which can help to improve soil quality, increase biodiversity, and mitigate climate change. The identified agroforestry practices include windbreaks / hedgerows, alley farming (green manures), improvement of soil fertility, diversification and integration of production, agro-ecological options through the introduction of trees on farms, organic fertilization, organic, agricultural waste management, etc.
	Number of producers adopting agroforestry practices	Monitoring and evaluation reports Producer surveys	Total: 0  Female: 0	Total: 40  Female: 16	Total: 120  Female: 48	The level of adoption will be measured once trainings have been conducted to assess the level of adoption (it is usually measured several months after the trainings took place among a sample of farmers).
<b>Outcome 2:</b> <b>Strengthening the capacity of agricultural advisors and smallholder farms</b>	Percentage of producers from village and family farms adopting climate smart technology packages and climate-smart agroforestry practices	Campaign report Project-level field surveys comprising interviews with local communities Monitoring and evaluation reports Qualitative evaluation of adoption climate smart technology packages and climate-smart agroforestry practices by farmers (use of	Total: 0  Female: 0	Total: 35%  Female: 35%	Total: 80%  Female: 80%	Tools will be developed to assess practices adoption (checklists). It is expected that established farming practices will be applied from the first campaigns. The pumping system (solar) will be considered adopted when it is functional and optimally working 80% of the time.

		checklist)				
<b>Output 2.1: Advisory staff trained on climate smart technological packages</b>	Climate smart technology packages and climate-smart agroforestry practices developed	Monitoring and evaluation reports	No	Yes	Yes	
	Number of agricultural advisors trained on climate smart technological packages, domestication of forest fruit trees and agroforestry resilient practices	Monitoring and evaluation reports Training reports	Total:0	Total: 20	Total: 40	Advisors are trained on climate smart packages as well as directly on the usage and maintenance of infrastructures.  The project will try to include several women advisors as they will help with women farmers outreach.
<b>Output 2.2: Farmers have knowledge and skills for climate smart technologies and integrated data usage</b>	Number of producers trained in utilizing climate smart tools and technology packages	Training reports	Total: 0  Female: 0	Total: 50  Female: 40%	Total: 140  Female: 40%	The project will pay particular attention to women farmers to make sure they fully benefit from these activities.  Trainings will include trainings on the domestication of high-value forest fruit tree additives, agroforestry resilient practices and climate-resilient agroforestry technological packages.
<b>Outcome 3: Empowering farmer entrepreneurship through market integration and accelerating new agricultural markets</b>	Number of farming cooperatives established and leveraging private financing, in support to producers' entrepreneurship activities	Monitoring and evaluation reports Producer surveys Conventions Rules of Procedure Code of Conduct	0	2 cooperatives	5 cooperatives	Farming cooperatives are well organized and are capable of leveraging financing within local banks such as Agricultural Bank.
	Number of producers receiving marketing support from ANIDA and agricultural advisors		Total: 0 Female: 0	Total: 50 Female: 20	Total: 100 Female: 40	Producers' groups are strengthened when they join a cooperative.
<b>Output 3.1: Producer organizations trained in organizational development and entrepreneurship</b>	Number of agricultural advisors trained on value chains, organizational dynamics, and marketing	Training reports Monitoring and evaluation reports	0 agricultural advisors trained on value chains	20 agricultural advisors trained on value chains	40 agricultural advisors trained on value chains	
	Number of producers trained in entrepreneurship and organizational development	Monitoring and evaluation reports Producer surveys	Total: 0  Female: 0 30%	Total: 30  Female: 10	Total: 80  Female: 24	Producers are trained in entrepreneurship and are well organized
<b>Output 3.2: Agriculture cooperatives established</b>	Number of agricultural cooperatives established		0	2	5	

<b>for enhanced market access for farmers</b>	and operational					
<b>Output 3.3: Community-based savings funds operational</b>	Number of communities saving funds operational		0	2	5	Farmers are contributing to the fund and the fund is in use.

#### Project/programme co-benefit indicators

Co-benefit 1 Creation of jobs for young people and women	Number of jobs created	Monitoring and evaluation reports Producer surveys	Total: 0 Female: 40% Youth: 70%	Total: 20 Female: 40% Youth: 70%	Total: 300 Female: 40% Youth: 70%	Jobs are defined as direct jobs from family farms and direct jobs from village farms.
Co-benefit 2 Sustainable water management and soil quality improved	Area under sustainable water management and climate smart agricultural practices	Monitoring and evaluation reports	0 hectares	30 hectares (To be updated more precisely during baseline data collection)	90 hectares (To be updated more precisely during baseline data collection)	Sustainable water management is defined by the use of solar drip irrigation and the efficient management of water.  Climate agricultural practices includes diverse practices including climate-smart crop, livestock agroforestry techniques including domestication of local forest fruit trees.  The project will also have capacity building activities on collecting of soil fertility data, once functional it will be collected to complement the indicator.

#### 4. Project/programme activities and deliverables

*All project activities should be listed here with a description and sub-activities. Significant deliverables should be also reflected in the project/programme Timetable (Annex 5). Add rows as needed.*

*Please number the activities as shown below to indicate association of activities to the related outputs provided above in section 5. Similarly, please number sub-activities as shown below to associate to the related activity.*

Output	Activities	Description	Deliverables
<i>Please number each Output Output 1.1, Output 1.2)</i>	<i>List of the project activities below.</i>	<i>Provide a brief description of each of the activity listed in the previous column.</i>	
<b>Output 1.1: The Naatangue family farms developed with Operational and Management plan</b>	Activity 1.1.1. Selection of beneficiaries for Naatangué family farms	The selection of beneficiaries for the 100 family farms is made utilizing data from a database of requests aggregated by ANIDA. A committee is established to decide on the requests by evaluating them against pre-defined selection	<ul style="list-style-type: none"> <li>- Selection criteria</li> <li>- Technical folders</li> <li>- List of beneficiaries disaggregated by women and youth</li> </ul>

		criteria. Among these criteria include: age (priority is given to people between 18 and 35 years), gender aspects (priority is given to women), the availability of land (each person must own the site), and legal formalization (the farm must be created as a business). Once the files have been received, they are processed and projects are set up to define the specific elements needed by the beneficiary of the farm (market gardening, arboriculture, animal production (breeding, poultry farming, fish farming), etc.).	
	Activity 1.1.2 Create low-carbon and climate-resilient family farms	<p>This activity entails the planning and implementation of the Naatangue family farms in the intervention areas. Once sites are selected and contracts/technical files are in place, the project will specifically accomplish the following general tasks:</p> <ul style="list-style-type: none"> <li>- build a wire fence on one hectare reinforced by a living hedge;</li> <li>- Install a drip irrigation system over an area of 0.5 ha (400 micron ducts with a flow rate of 2 litres per hour and 1 bar of pressure);</li> <li>- build a storage room, caretaker's room and toilets;</li> <li>- build water points (wells with a maximum depth of 30m);</li> <li>- acquire and install solar equipment consisting of a photovoltaic station and solar pump (6 solar panels (1.5 KW) and 1 solar pump of 45m<sup>3</sup>/day);</li> </ul> <p>Depending on the identified needs of the farm for livestock production, the following tasks will be undertaken:</p> <ul style="list-style-type: none"> <li>- Building a 12 square metre chicken house with strips of 120 broilers or 60 layers;</li> <li>- Procurement of livestock equipment and accessories (1st and 2nd age water troughs, feeding troughs, lighting lamp (60W), small equipment (shovel, buckets, basin, wheelbarrow, etc.).</li> <li>- Developing a 280 m<sup>3</sup> fishpond filled from well water including initial purchase of fry and feed at start-up.</li> </ul>	<ul style="list-style-type: none"> <li>- Fence, drip irrigation system, storage warehouse, well, photovoltaic station and solar pump (6 solar panels (1.5 KW) and 1 solar pump 45m<sup>3</sup> / day)</li> <li>- Chicken houses, drinking troughs, watering troughs, feeders, lighting (60W), small equipment (shovel, buckets, basin, wheelbarrow, etc.)</li> <li>- Fish pond 280 m<sup>3</sup></li> </ul>
	Activity 1.1.3. Monitoring/control of productive works	This activity focuses on monitoring and controlling the different productive farm elements introduced by the project including the	<ul style="list-style-type: none"> <li>- Field mission</li> <li>- Field mission reports</li> </ul>

		<p>small solar irrigation pumps (1.1.2) for improved water control to overcome vulnerability and develop a mix of production (both winter and off-season) and integrated (plant and animal). In addition, the use of solar energy minimizes production costs related to the purchase of diesel fuel. The agro-ecological approach to valorize agricultural residues through composting, allows among others to manage this agricultural waste. Diversification of production (cereals, fruits, vegetables, meat, eggs, fish, etc.) contributes to the food security of producers by improving food and nutrition as well as rural livelihoods, in particular that of women and children.</p> <p>During the execution of the work, a joint ANIDA team will be deployed, composed of a rural engineering engineer (RG), an agronomist, an environmentalist and, if necessary, other specialists will be involved in order to assess the quality of the work and compliance with environmental clauses.</p>	
<b>Output 1.2: Village farms improved with climate-resilient farming systems and new value chains</b>	Activity 1.2.1. Acquisition and installation of solar equipment	<p>This activity focuses on the acquisition and installation of solar equipment for consolidated village farms. More specifically, the following tasks are included:</p> <ul style="list-style-type: none"> <li>- Prepare the tender documents and carry out the technical analysis and award of contracts;</li> <li>- Acquire a solar pumping system composed of solar panels and solar pumps with a total number of 4,622 panels of 260 watt each for the 40 farms to be consolidated;</li> <li>- Install the equipment;</li> <li>- Reinforce farm fence through the acquisition of fencing;</li> <li>- Train beneficiaries in the use and maintenance of the equipment;</li> </ul> <p>Deploy solar energy on farms will result in significant energy and cost savings by avoiding diesel costs, thereby improving farmers' resilience and adaptive potential, while providing a greenhouse gas mitigation benefit through diesel combustion.</p>	<ul style="list-style-type: none"> <li>- Solar pumping systems installed and functional</li> <li>- Fence for 40 farms</li> <li>- 4,622 solar panels</li> <li>- Company for the works</li> <li>- Beneficiaries trained on the use of and maintenance of equipment</li> </ul>
	Activity 1.2.2. Establishment and integration of poultry farming (acquisition of chickens, construction of the building, acquisition of equipment, accessories and inputs)	<p>This activity will integrate poultry farming into 6 of the consolidated village farms (Mont Rolland, Diossong, Gapakh, Passy mbelbouck, Kafess and Diacksao). Specifically, the following activities will be undertaken:</p>	<ul style="list-style-type: none"> <li>- 2000 broilers</li> <li>- Chicken house (200m<sup>2</sup>)</li> <li>- 60 W lighting lamps</li> <li>- Small equipment (shovel, buckets, basin,</li> </ul>

		<ul style="list-style-type: none"> <li>- Construction of a 200 m<sup>2</sup> capacity chicken house with 2000 broilers or 1000 layers;</li> <li>- Purchase of equipment and accessories (1st and 2nd age water troughs, feeders, 60W lighting lamps, small equipment (shovel, buckets, basin, wheelbarrow, etc.).</li> <li>- Purchase of chicks and feed at startup.</li> </ul> <p>The realization of henhouses on the consolidated farms contributes to the diversification of productive activities. This diversification will increase the income of the producers but also their time of occupation. The capacity building of producers in good practices will take into account the training on the valuation of poultry waste in market garden plots. Management training will contribute to the sustainability of the activity by ensuring the renewal of equipment and accessories.</p>	<p>wheelbarrow, etc.)</p> <ul style="list-style-type: none"> <li>- Contract with company for the works</li> </ul>
	Activity 1.2.3. Establishment of chicken processing units	<p>This activity will consist of making the following equipment available to producers:</p> <ul style="list-style-type: none"> <li>- a refrigerator powered by 2 solar panels for the conservation of chicken;</li> <li>- a feather remover machine to better ensure the hygiene of the product;</li> <li>- cutting material and biodegradable packaging bags;</li> <li>- tricycle for transport;</li> <li>- labelled kiosks</li> </ul> <p>This activity is an important link in the value chain because the conservation challenges that often drive producers to sell their products at low prices are diminished. The processed products will raise the income level of the producers and will impact a larger number of the population.</p>	<ul style="list-style-type: none"> <li>- Refrigerator</li> <li>- Cutting material and biodegradable packaging bags</li> </ul>
	Activity 1.2.4. Establishment of milk processing units (3)	<p>With regard to the 3 dairy farms included in the consolidation (Djilakh, Taïba Niassène and Agagababou), the following tasks will be undertaken to establish solar-powered milk processing units:</p> <ul style="list-style-type: none"> <li>- Solar panels</li> <li>- 3 cooling systems;</li> <li>- 3 Refrigerators/pasteurizers;</li> <li>- 3 Packaging machines;</li> </ul>	<ul style="list-style-type: none"> <li>- 3 Milk solar processing unit</li> <li>- Solar panels</li> <li>- Cooling systems</li> <li>- Refrigerators</li> <li>- Packaging machines</li> <li>- Training package</li> <li>- Galvanized cans</li> <li>- Milking pots</li> </ul>

		<ul style="list-style-type: none"> <li>- 6 Galvanized cans;</li> <li>- 3 milking pots</li> <li>- 3 batches of milk quality control equipment;</li> <li>- Acquisition of packaging;</li> <li>- Training on dairy processing</li> </ul> <p>These processing units will be powered by solar energy. 1.2.1</p> <p>Conservation and processing of milk production will be critical to improving the income and resilience of producers. With this transformation, the risks of health contamination and quality problems can also be avoided.</p>	
	Activity 1.2.5. Establishment of compost pits for the management and recovery of waste and sale of organic fertilizer	<p>Composting has important benefits such as improving soil fertility and quality, resulting in increased agricultural productivity, improved soil biodiversity, reduced ecological risks and a more favourable growing environment. The adoption of composting techniques is a fundamental objective of improving soil productivity on farms and protecting the environment from degradation. The raw organic waste materials such as weeds, stems, fallen leaves, pruning, remains of bales and fodder are all present on the farms and can be collected and piled in the pit to produce soil amendments. Specific activities include:</p> <ul style="list-style-type: none"> <li>- Construction of 3 pits per farm with 4 m² and a depth of 0.5m;</li> <li>- Collection of biodegradable waste for filling by producers;</li> <li>- Training of producers on composting techniques for producers.</li> </ul>	<ul style="list-style-type: none"> <li>- Compost pits</li> <li>- Training package</li> </ul>
<b>Output 1.3: Agroforestry practices adopted into Naatangué family and village farms</b>	Activity 1.3.1. Introduction of resilient climate-smart crop-livestock agroforestry practices technologies	<p>Introduction of resilient climate-smart crop-livestock agroforestry practices technologies. Deployment of resilient agroforestry technologies (windbreaks / hedgerows, alley farming (green manures), improvement of soil fertility, diversification and integration of production, agro ecological options through the introduction of trees on farms, organic fertilization, fustigation organic, agricultural waste management, promotion of bio digesters, securing farms, etc.) to strengthen and diversify the productive base of Naatangué farms. This activity will also produce seedlings for domestication on consolidated village farms.</p>	<ul style="list-style-type: none"> <li>- Training package/ equipment</li> <li>- Small equipment</li> <li>- Consultant</li> </ul>

	Activity 1.3.2. Domestication of priority forest fruit trees	Domestication of priority forest fruit trees – This activity will identify and introduce priority and high-value tree species <sup>4</sup> into the 40 village farms to improve food security and support income diversification. These plants will be produced at the central nursery of the CNRF and then implemented in local nurseries before being introduced in the various village farms. Based on the Farmer Field School approach, the plantation will reach the largest number of producers who, through the "learning by doing" method, will be able to replicate the practices / technologies that will enable them to achieve their objectives.	<ul style="list-style-type: none"> <li>- Farmers trained in domestication of forest fruit trees</li> <li>- Plants</li> <li>- Small material</li> <li>- Local workforce</li> <li>- Consultant</li> </ul>
<b>Output 2.1: Advisory staff trained on climate smart technological packages</b>	Activity 2.1.1. Development of training materials	This activity consists of developing training materials for all of the trainings undertaken under this output.	Technical supports/materials of the training Methodology and approach
	Activity 2.1.2. Training of trainers for agricultural advisors on technological packages, domestication of forest fruit trees and agroforestry resilient practices	Strengthening the capacities of 40 agricultural advisers on the domestication of high-value forest fruit tree additives, agroforestry resilient practices and climate-resilient agroforestry technological packages.	<ul style="list-style-type: none"> <li>- Training package/ equipment</li> <li>- Advisors trained on domestication of high-value forest fruit tree additives, agroforestry resilient practices and climate-resilient agroforestry technological packages</li> <li>- Consultant</li> </ul>
	Activity 2.1.3. Hands on training on infrastructures and equipment of agricultural advisors	This activity consists of practical application of climate smart technologies.	<ul style="list-style-type: none"> <li>- Training report</li> <li>- Evaluation report</li> </ul>
<b>Output 2.2: Farmers have knowledge and skills for climate smart technologies and integrated data usage</b>	Activity 2.2.1. Training of farmers on climate-smart technological packages, domestication of forest fruit trees and agroforestry resilient practices	Capacity building (sensitization and training) of producers on use of climate smart technologies, climate information tools <sup>5</sup> and their linkages with soil, water, nutrient and pest management. This will consist of training 40 agricultural advisers - who will in turn train producers selected farms - on decision making utilizing climate data specific to their localities, as well as locally available crop, livestock and other livelihood data. This activity will also inventory and prioritize <sup>6</sup> promising climate-smart crop-livestock-agroforestry practices that could be integrated.	<ul style="list-style-type: none"> <li>- Farmers trained on using climate data and other available data</li> <li>- Training package</li> <li>- TORs Consultant</li> </ul>
<b>Output 3.1: Producer organizations</b>	Activity 3.1.1. Training of agricultural advisors	ANIDA's internal expertise on agricultural value	- Training packages on value chains (NTFPs,

<sup>4</sup> Ziziphus mauritiana, Tamarindus indica, Adansonia digitata, Detarium senegalensi, Saba senegalensis, Aphania senegalensis, etc.

<sup>5</sup> PICSAs, climate analogue / farms of the future

<sup>6</sup> Prioritization will take into account the following criteria: (i) sustainable improvement of agricultural productivity; ii) income generation; iii) sustainability as an adaptation strategy; iv) potential for reducing greenhouse gas emissions (mitigation); v) potential for extension; vi) economic viability (cost and benefit), vii) impact on ecosystem services.

<b><i>trained in organizational development and entrepreneurship</i></b>	on value chains, organizational dynamics and marketing	<p>chains, supplemented by additional consultant support as needed, will be leveraged to train 40 agricultural advisors on different elements of the agricultural value chain including specifically, on correctly implementing the training modules which are focused on organizational dynamics, marketing and value chains. In this way, the system becomes more flexible and the agricultural adviser becomes more responsible for achieving sustainable and sufficiently profitable production objectives.</p> <p>It will be the same for the technical trainings of poultry production, dairy, NTFP, market gardening, etc.), the organizational management, the marketing strategies, the farm maintenance and the maintenance of the solar equipment and the agro-equipment, the good practices (use composting, safe use of pesticides (USP) and the management and rational use of water for irrigation.</p> <p>The targeted trainers are the agricultural advisers who are deployed in each of the village farms. Once trained, the advisers will be able to redeploy these trainings to the 80 economic interest groups at village farm level (2 per village farms).</p>	vegetable products, etc.), organizational, marketing
	Activity 3.1.2. Organizational analysis of producer organizations and capacity building in organizational development and entrepreneurship	Development and implementation of tailored training plans for producer organizations to better drive agricultural competitiveness and efficiency	<ul style="list-style-type: none"> <li>- Training modules</li> <li>- Training material/equipment</li> </ul>
<b><i>Output 3.2: Agriculture cooperatives established for enhanced market access for farmers</i></b>	Activity 3.2.1. Establishment of farming cooperatives	<p>The creation of farm cooperatives will be carried out gradually in specific coordination/aggregation areas (west, central, south and east)</p> <p>The main steps are:</p> <ul style="list-style-type: none"> <li>- Elaborate the terms of reference and the concept note and share it with all stakeholders;</li> <li>- Host information and exchange meetings at the farm level in each coordination area;</li> <li>- Draft statutes (direction to the Ministry for the management of cooperatives) and internal regulations should be examined taking into account specific gender considerations;</li> <li>- Hold workshops at the level of each coordination area with farm representatives to finalize the statutes and internal regulations and create a committee through voting amongst the representatives, ensuring participation and representation in line with the ANIDA requirements on gender and vulnerable groups. This committee is responsible for identifying all members and preparing the general meeting of</li> </ul>	<ul style="list-style-type: none"> <li>- Terms of reference</li> <li>- Training modules and material</li> </ul>

		<p>the cooperative of farm producers in each zone. The establishment of agricultural cooperatives will result in the information and sensitization of producers but also training and preparation on the labeling of their products. This will be due to the introduction of good agricultural practices with a strong use of green manures. Support for the establishment of co-operatives in the co-ordination zones will also help to reduce producer burdens through group sales and purchases, joint management of equipment and the search for financing. In addition, a community-based savings fund will be set up and managed by the cooperatives</p>	
	<p>Activity 3.2.2. Provision of marketing support to producers and farmer cooperatives</p>	<p>Marketing support in the form of:</p> <p><b>Monitoring information on food prices:</b> Directing production at the farm level towards better selling products whose production pathways are controlled. This orientation is fed by data collected in the grouping markets of Senegal, namely Notto, Thiaroye, Touba and Kaolack. Monthly reports will allow us to define the price range of the area's flagship products. Thus, producers will integrate this information into campaign programming and cultural choices. In this way, production from farms will be less exposed to the risk of slump and the risks associated with seasonal overproduction.</p> <p><b>Connecting with operators and markets:</b> Producing for the market requires an organization that takes into account the specific needs of consumers. Between the marketing or consumer areas and the agricultural farms, the process will work to facilitate the sale of products from farms through the canvassing of operators, awareness of availability and speculation.</p> <p><b>Monitoring of sales transactions:</b> with the farm's agricultural adviser, all production is quantified. And with the help of collection sheets, sales transactions become traceable. This task is also crucial for the agricultural advisory system in that it allows for an economic analysis of production.</p> <p><b>Organization of agricultural leases:</b> between producers and consumers, the presence of intermediaries deteriorates the quality of the exchange and exposes agricultural activity to the risks of non-profitability and overbidding. It is the reason why the project will organize agricultural Louma (specific agricultural market in urban areas) whose objective is to increase margins to producers and reduce costs to</p>	<ul style="list-style-type: none"> <li>- Training modules and material</li> <li>- Technical assistance.</li> <li>- Price monthly reports.</li> <li>- Sales transaction reports.</li> </ul>

		<p>consumers.</p> <p><b>Support for processing:</b> the gross production surplus is hardly profitable at the farm level and for some is a significant post-harvest loss. To overcome this difficulty, support will be given for the transformation of part of the production for its profitability. Experience from the PASA LouMaKaf project for the processing of raw tomatoes into concentrate that can be stored or sold on the local market will be leveraged. Dairy production and poultry production can also follow a similar logic.</p> <p><b>Establishment of points of sale on the main arteries:</b> Some arteries at the national level such as in the major cities in project areas will be receptacles for the local marketing of products from farms. Distribution kiosks will provide visibility for the project and an opportunity to become better known amongst consumers and other producers.</p> <p><b>Creation of innovation platforms and exchanges around value chains:</b> the networking of actors around agricultural production is imperative. The organization of a platform will allow actors to share knowledge and innovation to help solve shared problems. This awareness building platform will be a combination of physical forums and meetings, specific communication materials like newsletters and bulletins, and a website. Following this schema, the standardization of practices will make it possible to define a long-term strategy to better respond to the concerns that have not been addressed. The platform will act as a vehicle for discussing issues of major importance and the impetus for the strategic orientation of producer organizations</p>	
<b>Output 3.3: Community-based savings funds operational</b>	Activity 3.3.1. Establishment of community-based savings funds	<p>Beneficiary communities are supported by a savings fund that can help with operational expenses and derricking new farms. This fund will be used for: the construction of other family farms to reduce the financial impact on the State and the beneficiary, provide a risk guarantee for traditional finance institutions, and to supply the working capital for the agricultural development of farms including the maintenance, repair and renewal of defective equipment during operation.</p>	<ul style="list-style-type: none"> <li>- Monitoring report</li> <li>- Evaluation report</li> </ul>
<b>5. Monitoring, reporting and evaluation arrangements (max. 300 words)</b>			
<i>Besides the arrangements (e.g. annual performance reports) laid out in Accreditation Master Agreement (AMA), please give a summary of the project/programme specific arrangements for monitoring, reporting and evaluation including a description of the monitoring and reporting system that will be used to assess the climate results of the proposed</i>			

project/programme. Please also summarize the types of interim and final evaluations. Describe Accredited Entity (AE) project reporting relationships, including to the National Designated Authority (NDA)/Focal Point and between AE and Executing Entity (EE) as relevant, identifying reporting obligations from the EE to the AE.

The Monitoring and Evaluation system of the project will be developed according to the procedures established by the CSE and GCF. GCF's Integrated Results Management Framework provides the performance indicators against which the project will be evaluated and specifies the baseline as well the objectives to be achieved. The project M&E system proposed include the following tools for results based management: (i) the Monitoring, Evaluation, Reporting and Analysis System (MERAS) that has been used in past projects for day to day collection of data, M&E activities coordination, timely dissemination of quality data to various implementers (including APRs) and stakeholders and storage of the relevant data in the Management Information System; (ii) the M&E plan that will clearly describe the overall M&E system including the roles and responsibilities of each implementer regarding data collection, aggregation, auditing and analysis; (iii) the collection of a baseline study, a mid-term evaluation, and final evaluation (which will be in line with GCF evaluation policy), which will be used to collect data for some of the indicators of the logframe but also to investigate specific questions and topics of interest for the project, it will be essential to capture the full impact of the project as well as for future dissemination of lessons learned; (iv) some independent evaluations to better inform on the quality of results and provide recommendations for future implementation such as technical audit of infrastructures and gender qualitative assessment; and (v) beneficiaries' case stories and best practices (paper based with pictures and videos) to integrate in trainings of beneficiaries but also to disseminate within government and to donors. The table below shows a list of all the products of the M&E system, responsibility for the outputs, timeframe, and recipient.

Outputs	Responsibility for the Outputs	Timeframe	Recipient
Inception Report	Project management unit (ANIDA) CSE	Six (6) months after the FAA Effective Date	CSE, GCF
M&E Plan <sup>7</sup>	Project management unit (ANIDA) CSE	Six (6) months after the FAA Effective Date, submitted as an annex to the Inception Report	CSE, GCF
National Steering committee meeting reports	Project management unit (ANIDA) CSE	Once per year	CSE, GCF
CSE supervision field mission reports	CSE	Monthly in year 1 Quarterly from year 2 to completion	National Steering committee (NSC), CSE
Final M&E Plan (Including baseline)	Project management unit (ANIDA)/CSE	Upon submission of the baseline report	NSC, GCF
Monthly progress report	Project management unit (ANIDA)/ISRA/CNRF CSE	The 5th of each month	NSC
Campaign report	Project management unit (ANIDA)/ISRA/CNRF	Periodically (after each agricultural campaign)	CSE
Quarterly report including financial reports	Project management unit (ANIDA)Task Manager CSE	End of each quarter	NSC, CSE, GCF
Independent baseline survey report	Consultants CSE	Once beneficiaries have been identified	NSC, CSE, GCF
Independent mid-term survey and	Consultants	At project mid-term	NSC, CSE, GCF

<sup>7</sup> As indicated in the table below, the detailed M&E plan will be developed during the start-up phase. It will be designed based on the logical framework, ESMP and Gender monitoring plan. The planning of the M&E activities will be also developed with the aim to achieve the targeted results

evaluation report	CSE		
Independent final survey and Project Completion Report	Consultants CSE	At project completion	NSC, CSE, GCF
Qualitative evaluation of gender	Consultant CSE	At project mid-term	NSC, CSE, GCF
Qualitative evaluation of climate smart practices and technologies adoption	CSE and technical services, ISRA/CNRF	Annually starting year 2	NSC, CSE, GCF
Technical audit of infrastructures (irrigation)	Consultant CSE	At project mid-term At project completion	NSC, CSE, GCF
Case stories/success stories	CSE and technical services (SRA/CNRF)	At project mid-term and completion	NSC, CSE, GCF
Audit Report	External auditors	By end of project	NSC, CSE, GCF
Maps of project activities, posters, videos, photos, etc.	CSE, Project team	Rolling, upon availability	Diverse
Monitoring of the implementation of the Environmental and Social Management Plan	CSE, technical services (SRA/CNRF), project management unit (ANIDA), SRA/CNRF, community-based associations	Periodically	NSC, CSE
Monitoring of the implementation of the Gender Action Plan	CSE, technical services (SRA/CNRF), project management unit (ANIDA), , community-based associations	Periodically	NSC, CSE