

Project Idea Climate & Energy – TT Senegal

<p>1. Project Title</p>	<p style="text-align: center;">Solar energy production for the development of agricultural activities</p>
<p>2. Climate justification</p>	<p>Senegal is confronted with significant challenges stemming from rising greenhouse gas (GHG) emissions, primarily driven by the agriculture sector (accounting for 43% of emissions) and the energy sector (23%). This upward trend poses a serious threat to sustainable development and heightens the vulnerability of rural communities to the impacts of climate change, such as irregular rainfall patterns, rising temperatures, land degradation, and food insecurity.</p> <p>In this context, shifting to renewable energy is crucial for advancing socio-economic development while cutting greenhouse gas emissions. Despite Senegal’s strong solar potential—averaging about 50 kWh climatologically—this resource is showing a gradual decline (–0.124 kWh per year), largely attributed to global warming, with the most pronounced effects observed in the southeastern regions of the country.</p> <p>Senegal's solar potential is still adequate to support local energy initiatives, especially in rural regions where energy access is limited. The project titled “Renewable Energy Production—Primarily Solar—for Agricultural Development” aligns closely with national goals for energy transition and climate resilience. By leveraging solar power for key agricultural processes such as irrigation, product processing, and storage, this project will make a direct contribution to:</p> <ul style="list-style-type: none"> ● Reducing poverty by generating green jobs and increasing agricultural earnings; ● Enhancing the adaptive capacity of rural communities through dependable energy access, which in turn improves food security and economic resilience; ● Mitigating climate change impacts by reducing emissions from fossil fuel.
<p>3. Objectives and Expected Results</p>	

<p>3.1. Main Objective</p>	<p>The main goal of this project is to generate solar energy to support the development of agricultural activities in Senegal's silvopastoral zone.</p>
<p>3.2. Specific Objectives (Outcome)</p>	<ul style="list-style-type: none"> ▪ Set up solar-powered infrastructure such as water pumps, dryers, and cold storage facilities tailored to the energy requirements of agricultural operations (including irrigation, processing, and preservation). ▪ Promote income-generating activities linked to renewable energy. ▪ Generate employment opportunities. ▪ Enhance local incomes by expanding access to energy and encouraging agricultural entrepreneurship.
<p>3.3. Expected Results (Outputs)</p>	<ul style="list-style-type: none"> ▪ Increased access to renewable energy sources ▪ Improved agricultural productivity ▪ Development of income-generating activities ▪ Creation of green jobs ▪ Improved community resilience
<p>4. Alignment with National and Sectoral Priorities</p>	<p>As part of its Senegal 2050 vision, the country has made energy transition and sustainable development at the heart of its national priorities. To achieve universal access to reliable, sustainable, and affordable energy, Senegal is prioritizing rural electrification, improving energy efficiency, and diversifying its energy mix through solar, wind, hydro, and biomass sources. Despite notable progress, rural areas still face limited, costly, and unequal access to energy, posing a significant barrier to socioeconomic growth and regional resilience</p> <p>This project offers a tangible and innovative solution to that challenge. By investing in solar and wind infrastructure tailored to agricultural needs, it helps bridge energy gaps, boost rural economies, generate green jobs, and enhance community resilience to climate change. Aligned with the country's strategic objectives, the project supports the transition to a more resilient, inclusive, and low-carbon Senegal by 2050.</p>

<p>5. Responses to Climate Investment Criteria (used the 6 GCF criteria)</p>	<p>Ce projet contribue à la réduction des émissions de gaz à effet de serre (GES) et renforce la résilience des communautés rurales face aux impacts du changement climatique. Par la substitution des énergies fossiles par des sources d'énergie renouvelables, le projet répond aux objectifs d'atténuation tout en assurant un accès durable à l'électricité pour les activités cruciales telles que l'irrigation, la transformation et la conservation des produits agricoles.</p> <p>En plus de favoriser l'adaptation locale, le projet génère des co-bénéfices significatifs sur le plan économique et social. Il crée des opportunités d'emplois verts, stimule l'augmentation des revenus des populations rurales, et promeut l'inclusion sociale tout en valorisant les ressources locales. Ce modèle offre également des opportunités pour attirer des investissements privés dans les secteurs des technologies solaires et éoliennes, notamment via des micro-entreprises agricoles ou des coopératives énergétiques locales.</p> <p>Le financement par le Fonds Vert pour le Climat (FVC) est particulièrement pertinent dans ce contexte, en raison de la faible accessibilité à l'énergie dans les zones rurales, des coûts initiaux élevés associés aux technologies propres et de la vulnérabilité climatique élevée de la zone cible. En outre, ce modèle est répliquable dans d'autres régions du Sénégal ou au-delà, présentant un potentiel d'expansion significatif grâce à l'abondance des ressources renouvelables dans plusieurs zones.</p> <p>Les coûts associés au projet sont bien proportionnés aux bénéfices attendus, et la viabilité économique à long terme est garantie par l'intégration de la production énergétique locale avec le développement des chaînes de valeur agricole, permettant ainsi de garantir une croissance durable et inclusive</p>
<p>6. Proposal for an Institutional Arrangement</p>	<p>The accredited entity for this project is the Ecological Monitoring Center (CSE), operating under the technical supervision of the Ministry of the Environment and Ecological Transition (METE). CSE's mandate is to promote the sustainable management of natural resources and the environment. Its areas of intervention include support for regional planning, land use management, environmental</p>

	<p>assessments, and monitoring efforts to combat poverty and climate change. CSE will be responsible for monitoring and evaluating the project to ensure that objectives are achieved and environmental impacts are closely tracked in line with commitments.</p> <p>The Ministry of Energy, Petroleum, and Mines (MEPM) will oversee the energy component of the project, issuing necessary permits for solar and wind installations and ensuring compliance with national and international renewable energy standards. The Senegalese Rural Electrification Agency (ASER) will support the deployment of renewable energy infrastructure.</p> <p>The Ministry of Agriculture, Food Sovereignty, and Livestock (MASAE) will ensure that solar and wind technologies are suited to the needs of farmers – particularly for irrigation, product processing, and storage. MASAE will also support the integration of this infrastructure into local agricultural value chains by working with producer organizations.</p> <p>Funding for the project will come primarily from both local and international financial partners.</p> <p>Private partners, including local and international companies, will supply the necessary equipment – such as solar panels and wind turbines – and oversee the construction and maintenance of energy systems.</p> <p>Cheikh Anta Diop University of Dakar (UCAD) will contribute significantly to the project’s scientific and technical oversight.</p> <p>Local authorities will be actively involved in managing the infrastructure and supporting income-generating activities. They will play a crucial role in engaging rural communities, mobilizing beneficiaries, promoting the inclusion of women and youth, and facilitating the local governance of energy resources.</p>
<p>7. Target groups</p>	<p>The primary beneficiaries of this project are farmers and breeders, with a strong focus on inclusivity. Gender equality is a key priority, with women playing a central role in managing solar infrastructure and actively participating in all stages of the project. The project will be implemented through a</p>

	<p>participatory and inclusive approach, ensuring that all voices are heard in the decision-making process. The economic model is also designed to be inclusive of other marginalized groups – for instance, individuals with disabilities will have opportunities to engage in income-generating activities.</p>
8. Final Beneficiaries	<ul style="list-style-type: none"> - The local population, - Farmers, - Livestock breeders, - Economic Interest Groups (EIGs) and General Partnership Groups (GPFs) (e.g., women's processing groups)
9. Duration of Implementation	24 months
10. Location	Sénégal
11. Total Cost	USD 1160 000,00