Project Idea Sustainable City – TT Senegal

1. Project Title	**Promoting Urban Green Infrastructure to Improve the Quality of Life in Dakar: An Integrated Approach for a Resilient City**
2. Climate Justification	In the current climate change context, rising average temperatures and more frequent extreme heat events – commonly known as heat waves – are becoming increasingly evident worldwide. This issue is particularly severe in urban areas, where the phenomenon of urban overheating intensifies the effects through the formation of urban heat islands (UHIs). UHIs refer to areas within cities that experience significantly higher temperatures than surrounding rural or less-developed areas, primarily due to the nature of built environments, urban density, and intense human activity (Gartland, 2008). Research has shown that UHIs exacerbate the impacts of heat waves, increasing their severity and posing serious, sometimes fatal, risks to public health and comfort (Smargiassi et al., 2009; Jan et al., 2010). In Dakar, the effects of rapid urbanization are intensifying the urban heat island (UHI) phenomenon, diminishing thermal comfort and overall quality of life for residents. An analysis of land use changes between 1986 and 2023 reveals a significant expansion of built-up areas, accompanied by a decline in bare soil, vegetation, and water bodies. To assess the impact of UHIs on Dakar's urban environment, the Urban Thermal Field Variation Index (UTFVI) was applied. Findings indicate that areas with poor ecological conditions were concentrated in the northeastern part of the city in 1986, extended across much of the city by 2000, and were predominantly located in the southeastern zones by 2013 and 2023. These shifts in UHI distribution over time are likely linked to ongoing changes in land use patterns. To mitigate the impacts of extreme heat, cities are increasingly called upon to adopt adaptive strategies. Among the most effective are nature-based solutions (NBS), such as urban green and blue networks, which help lower ambient temperatures. Strengthening these green and blue

	infrastructures is therefore essential for fostering more sustainable and climate-resilient urban environments.
3. Objectives and Expected Results	
3.1. General Objective	This project is designed to enhance green infrastructure in the Dakar metropolitan area, contributing to improved urban living conditions in the face of climate change.
3.2. Specific Objectives (Outcome)	The specific objectives are : ● Examine the limitations of green infrastructure management and/or development strategies; ● Strengthen green networks across the city of Dakar (Nature-Based Solutions) through community actions; ● Develop policies and practical guides for local decision-makers to effectively integrate green spaces into urban planning and management projects. The project will be structured around three (3) components: ● Experimental protocol for evaluating the effectiveness of green infrastructure ● Community mobilization for the regreening of the City of Dakar (public and private spaces) ● Multi-stakeholder framework for promoting sustainable cities
3.3. Expected Results (Outputs)	● Detailed mapping showing the potential for green infrastructure in Dakar; ● Knowledge of the level of thermal comfort across Dakar: the ICT will integrate data on perceived temperature and the characteristics of green infrastructure to provide a comparative measurement; ● Capacity building for local stakeholders on the promotion of green infrastructure ● Recommendations for urban policies: Recommendations will be provided for the effective consideration of green infrastructure and its services in urban policies for the Dakar metropolitan area.
4. Alignment with National and Sectoral Priorities	- This project aligns with areas 2 and 3, "**Quality Human Capital and Social Equity**" and "**Planning and Sustainable**

	Development" of the "Senegal 2050" National Transformation Agenda. - It also aligns with the NDC, particularly regarding mitigation.
5. Responses to Climate Investment Criteria (used the 6 GCF criteria)	This project is well aligned with the Green Climate Fund (GCF) criteria, notably through its focus on enhancing investments in infrastructure and the built environment, thereby strengthening urban resilience to climate change. It supports key national policy frameworks, including the Nationally Determined Contributions (NDC), the Local Development Program (PDL), and the Regional Local Development Plan (PRDL). Its implementation will actively engage youth and women, ensuring inclusive participation and impact.
6. Proposal for an Institutional Arrangement	Steering Committee (CSE, UCAD, Ministry of Planning, DCCTEVF) UGP : CSE, UCAD, DCCTEVF, Mairie de Dakar AE : CSE IE : CSE, UCAD, Dakar City Hall Partenaires de mise en œuvre : UCAD, UAM, Mairie de Dakar, ministère de l'aménagement, les sociétés civiles, les ONGs
7. Target groups	Population of the city of Dakar
8. Final beneficiaries	Dakar City Hall; Ministry of Urban Planning, Housing and Public Hygiene (Green Spaces Department); DCCTEFV; UCAD
9. Duration of implementation	4 ans
10. Location	City of Dakar
11. Total cost	10000 USD