

Global Climate Change Alliance Plus (GCCA+) Scaling Up Pacific Adaptation Project (SUPA)

Project Concept Note

Name of Country	Tuvalu
Name of Lead Agency/Ministry	Climate Change Department, Ministry of Finance.
General Information	
Project Title	Strengthening Water Security in Funafuti Island Communities
Project Site(s)	Funafuti Island, Tuvalu
Project Duration	2.5 years
Project Partners	<ul style="list-style-type: none"> - Pacific Community (SPC), - Department of Public Works (PWD), - Department of Education - Funafuti Kaupule (Local Government)
Indicative Project Cost	EURO 500,000.00
Funding modality: Indicate below your country's preference for funding arrangements for national coordinator and implementation.	
Do you need a national coordinator (<u>Yes</u> or No)? Yes	
If you answered "No" above, proceed to question 3.	
1. Place a tick in the box on the right to indicate the modality for funding the national coordinator position.	

Country recruits and pays the national coordinator through a Grant Agreement with SPC	✓
SPC recruits the national coordinator so he/she becomes an SPC staff based in-country	
<p>2. In which agency will the national coordinator be housed?</p> <p>Climate Change Department, Ministry of Finance</p>	
<p>3. Place a tick in the box on the right to indicate the modality for funding implementation of activities.</p>	
Country carries out procurement for all activities through a Grant Agreement with SPC (and according to SPC's procurement policies and procedures)	✓
SPC carries out procurement for all activities	
Blend of the above two modalities	

<p>Project Description and Link to SUPA Output 3</p>	<p>The project is envisaged to focus on enhancing water security in Funafuti Island. Tuvalu is a low-lying atoll and therefore freshwater is a scarce commodity. Strengthening water security is an ongoing priority for the Government of Tuvalu over the years.</p> <p>Water shortage in Tuvalu is a national challenge particularly in Funafuti Island where approximately 60% of the total country’s population reside. Water insecurity on the island is presently exacerbated by various factors in Tuvalu which include overpopulation, lifestyle, pollution, high salinity of groundwater, high water demands from government buildings, schools and the hospital and limited land space. These are compounded by the adverse impacts of climate change. In 2011, Tuvalu experienced a severe drought which led to the declaration of a national state of emergency by the government. During this historic event, water was significantly scarce and was rationed to 40 liters per household per day.</p> <p>Various efforts by the Government of Tuvalu to improve water security have been undertaken in the past which include the refurbishment and maintenance of water storage systems and the purchase of water desalination plants to enable the country to better meet the national demand on water supply. GCCA+SUPA will scale up these national efforts to improve fresh water supply to and access by the residents of Funafuti Island.</p> <p>The proposed scale-up activities to be covered under this project, are as follows:</p> <ol style="list-style-type: none"> a. Procurement of a portable desalination plant and provision of training on operations and maintenance; b. Refurbish and maintain primary (2) and secondary (1) schools water systems in Funafuti; c. A feasibility study for a development of a Road Drainage Management Plan for Funafuti; d. Recruitment of a National Coordinator to manage and drive the implementations of the GCCA+SUPA project activities in Tuvalu.
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Proposed Project Outputs	<p>The proposed project is anticipated to have five direct outputs:</p> <ol style="list-style-type: none"> 1. Successful procurement of a portable desalination plant for Funafuti Island. 2. Improved capacity and knowledge by the PWD staff on the operations and maintenance of the portable desalination plant 3. Refurbished and maintained water systems in the three schools in Funafuti. 4. A completed feasibility study on the development of a road drainage management plan for Funafuti Island. 5. Adequate support from National Coordinator on the coordination and management of water security activities under this project
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General Criteria for Identification of Projects	
Criteria	How does the proposed project adhere to the criterion?
<p>1. Each country is to select one sector from the following list for scaling up: <i>i) Food security, ii) Water security, iii) Human health, iv) Coastal protection, v) Marine resources</i>; and the sector selected must be linked to national priorities.</p>	<p><u>Sector selected:</u> <i>Water Security</i></p> <p><u>How is this sector selection linked to national priorities:</u></p> <p>The Tuvalu National Strategy for Sustainable Development (NSSD) 2016-2020 under <u>Goal: 1</u> ‘Climate Change’ acknowledged that the projected effect of climate change will pose high uncertainty in the amount of rainfall , frequent land inundations, severity of ENSO(La-Nina & El-Nino) variability and projected prolong dry spells. Enhancing water supply and storages will contribute indirectly to other strategic goals identified in the national plan which include: Goal 3: Enriched Economic Growth; Goal 4: Healthy Environment and Natural Resources; and Goal 8 and 10: Fisheries and Agriculture. Water Security is also identified as a national priority in the national water and sanitation policy the ‘Te Kumete’ (Tuvalu Sustainable and Integrated Water and Sanitation Policy (SIWSP) 2012-2021).</p>
<p>2. Identify the tested and effective previous measure that has elements of sustainability, and is to be scaled up in the project timeframe.</p>	<p>Improving water security in all levels of society in Tuvalu has been a national priority for decades. Government and the assistance from international communities have played pivotal roles in the efforts to building community adaptation towards severe droughts, prolong dry spells and water shortages. These measures consist of the following:</p>

	<p>1. <u>Procurement of a new desalination plant and local training on operations and maintenance.</u> The desalination machine for years played a vital role in supplying back-up water supply before and during dry weather periods. Although it is often a costly measure that comes with specialized technical capacities, it is found to be highly essential in times of water shortage crisis as Tuvalu relies solely on rainwater for its supply of freshwater. The desalination plant becomes a critical back-up source.</p> <p>As part of a scaling up initiative, Tuvalu is seeking assistance under the SUPA project to procure a portable desalination plant for Funafuti. Portable plants can be mobilized between villages and islands and therefore is the preferred model in the context of Funafuti and the outer islands of Tuvalu. The GCCA+SUPA will also provide training on the plant's operation and maintenance to the staff of Tuvalu's PWD to mitigate technical capacity deficiencies.</p> <p>2. <u>Refurbishment and maintenance of schools and government buildings water system (gutters, roofing, water tanks, water pressure pumps):</u> Regular maintenance, cleaning, repair and replacement of water systems are considered to be one of the most effective options for the schools and buildings in Tuvalu in terms of cost and water access. Over the years, the Australian government (AUSAID), NZAID and NAPA 1 have undertaken similar activities in Funafuti and several of the outer islands of Tuvalu and were found not only to be effective in terms of improving water supply but also environmental friendly i.e. measures normally utilize minimal space and are user-friendly and do not require specialized technical capacities for maintenance. For the GCCA+ SUPA project, the water system refurbishment and maintenance initiatives would be scaled-up to primary and secondary schools in Funafuti. This is envisaged to significantly benefit the students that are dependent on the school water systems and to address the issues the Government of Tuvalu is currently facing in terms of capacity constraints on water system maintenance.</p> <p>3. <u>A feasibility study on the development of a water drainage system for some parts of the public roads and airport runway in Funafuti.</u> The rationale behind this activity is to allow the rainwater on roads and the runway to be collected, treated and re-used for agricultural purposes. A large volume of rainfall run-off from the roads and runway are wasted particularly during rainy periods. The Government of Tuvalu is therefore, exploring avenues on how the run-off can be collected and put to essential use in domestic and commercial agricultural practices and services. Tuvalu was inspired by the model from the Republic of Marshall Islands' waste-water treatment systems.</p>
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<p>3. The selected scaled up measures must have socio-economic benefits for the communities and be implemented using an evidence-based gender-sensitive and rights-based approach.</p>	<p>The selected scaled up activities proposed under this project are anticipated to have significant socio-economic benefits for all communities in Funafuti Island.</p> <ol style="list-style-type: none"> 1. Good Quality of Life: There is no doubt that water is life, and in Tuvalu, a good life is deterred by water insecurity. Improved water security will contribute to improved social security, lifestyle and well-being. This is especially so for women who bear the role of securing and managing water supply in the family during times of drought. 2. Employment & Opportunities: The unemployment rate in Tuvalu sits at 6.5% (2002, Statistic) and it is expected to rise every year. This proposed project is expected to bring with it employment opportunities for the Funafuti communities both amongst men and women. The procurement and maintenances of the desalination plants will also give opportunities for the <i>PWD</i> staff to enhance their knowledge and technical capacities on the maintenance and operation of a desalination machine. The proposed scaling up activities in general will provide important opportunities and learning grounds in Tuvalu's goal towards sustainable development. 3. Better Health and Wellness: Enhanced water supply will contribute to better health, hygiene and a cleaner environment in the targeted communities in Funafuti, particularly in schools and the national hospital. Tuvalu has recorded increased cases of water-borne diseases such as typhoid, scabies, dengue fever and hepatitis. Improved water supply and improved access to quality water will reduce the epidemic of these communicable diseases. 4. Improved Agricultural sectors: An improved water availability and quality throughout Funafuti can boost agricultural productivity. The impact assessment from the 2011 drought, found a vast majority of crops to be severely stressed, in particular the local root staple known as the <i>pulaka</i>, which is a giant swamp taro. The government of Tuvalu through its NSSD promotes gender equality (Goal: 4 Health & Social Development) at all levels of development and national discussions. This includes equal involvement of women in wage employments, projects development and implementations, politics, local government practices, private businesses etc. The <u>National Gender Policy (NGP) 2013-2020</u>, the <u>Family Protection and Domestic Violence Act</u>, and the <u>Tuvalu National Human Right Action Plan 2016-2020</u> are key government frameworks that drive and promote gender equality and rights of both women, children and disable groups. 5. The <u>Department of Gender Affair (DGA)</u> oversees the implementation of gender matters at all levels and is responsible to
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	<p>ensure all government affairs promotes and apply gender equality, sensitive and rights-based approaches.</p> <p>The GCCA+SUPA activities in Tuvalu will be planned and implemented according to the national gender and rights-based approach.</p>
<p>4. The selected scaled up measure must fit within the scope of the SUPA budget</p>	<p>The overall budget (Eur 500,000) covers the projected activities and will be further itemized during the design stages.</p>
<p>5. Recognizing that maintenance of government-owned infrastructure is the responsibility of the particular government agency, provisions for maintaining the newly scaled up measure must be included in the SUPA intervention as this is essential for sustainability.</p>	<p>A mandate of the <u>Public Work Department (PWD)</u> under the <u>Ministry of the Public Utilities and Infrastructures</u> is to maintain and sustain any government developments and efforts either through government budget or international support. It has been a practice extended to external projects and will be applied similarly to this project. Additionally, the PWD is one of the implementing partners of this project and will therefore take ownership of the activities beyond the project's lifespan.</p>