

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

### Project Concept Note

Name of Country	Fiji	
Name of Lead Agency/Ministry	Ministry of Economy in collaboration with Ministry of Waterways & Environment	
<b>General Information</b>		
Project Title	Scaling up the Soasoa drainage system for 2050	
Project Site	Soasoa drainage area (5 km from Labasa Town), Macuata Province	
Project Duration	3 years	
Project Partners	Climate Change & International Cooperation Division, National Adaptation Plan Steering Committee, Ministry of Finance	
Indicative Project Cost	EUR 500,000	
<i>Funding modality: Indicate below your country's preference for funding arrangements for a national coordinator and implementation.</i>		
Do you need a national coordinator (Yes or No)? <b>Yes</b>		
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		<input type="checkbox"/>
SPC recruits the national coordinator so he/she becomes an SPC staff based in-country		<input checked="" type="checkbox"/>
2. In which agency will the national coordinator be housed? <b>Ministry of Economy specifically within the Climate Change &amp; International Cooperation Division</b>		
3. Place a tick in the box on the right to indicate the modality for funding implementation of activities.		
Country carries out procurement for all activities through a Grant Agreement with SPC (and according to SPC’s procurement policies and procedures)		<input type="checkbox"/>
SPC carries out procurement for all activities		<input type="checkbox"/>
Blend of the above two modalities		<input checked="" type="checkbox"/>
Project Description and Link to SUPA Output 3	Climate-resilient infrastructure is critical for adaptation particularly along coastal and flood-prone areas, and serves to protect communities against hazards such as sea level rise, saltwater intrusion, tidal surges, flooding and coastal erosion. The need to scale-	

up the existing infrastructure is paramount, especially to ensure climate resilient communities. The proposed activity supports the Government of Fiji's development goals and adaptation priorities to enhance the resilience of vulnerable coastal communities to climate change through the provision of climate-resilient infrastructures via scaling up of current infrastructure<sup>1</sup>. This is specified in the National Adaptation Plan (NAP) as:

*12.A.13: Maintain, adapt and construct sea wall and drainage infrastructure to reduce saltwater intrusion on agricultural land due to sea level rise and increased tidal surges.*

The proposed activities will be undertaken in the Soasoa Drainage Scheme where much of the land has been reclaimed and is used for agricultural activities like sugarcane farming. Levees and a series of floodgates were constructed in the late 1970s to protect the reclaimed area and discharge water during low tide. The infrastructure was designed in the 1970s and has served its purpose well, until the last decade when its efficiency to discharge floodwaters and stop saltwater intrusion has been reduced due to an increased frequency of short intense rainfall events and rising sea level. Satellite data indicates that sea level has risen in Fiji by about 6 mm per year since 1993. This is larger than the global average of 2.8–3.6 mm per year<sup>2</sup>. As such, there is now a need to strengthen this infrastructure to address climate-related changes such as rising sea levels and changing rainfall patterns and extreme rainfall events.

Existing baseline information and expert opinion indicates that in Fiji, the current infrastructure of drainage networks is unlikely to cope with increased water flow due to projected changes in rainfall and sea level rise<sup>3</sup>.

This submission supports the Fijian Government's efforts to enhance the resilience of vulnerable coastal communities to climate change through the scaling up of drainage and coastal protection infrastructure supported by a drainage management plan for the entire catchment.

The project aims to build the resilience of the communities living close to the Soasoa Drainage Scheme by raising the levee and scaling up the current floodgates, flap-gates and floodway to adapt to more frequent extreme precipitation events and sea level rise. The project will also develop a watershed management plan (30-year plan) for the Soasoa Drainage Scheme. The on-the-ground activities of the project

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<sup>1</sup> 5 and 20-Year National Development Plan (NDP)

<sup>2</sup> PCCSP: Current and Future Climates of Fiji Islands

<sup>3</sup> PACC Technical Report 2015

	will contribute to the watershed management plan.
Proposed Project Outputs	<p><b>Output 1:</b> Development of a watershed management plan (2020-2050) for Soasoa Drainage Scheme</p> <p><b>Output 2:</b> Preparation of a survey and detailed engineering design for scaling up aspects of the Soasoa levee and drainage system</p> <p><b>Output 3:</b> Implementation of the scaling up activities identified for the Soasoa Drainage Scheme.</p> <p><b>Output 4:</b> Recruitment and employment of a National Coordinator to be based in the Climate Change and International Cooperation Division in Fiji</p>

General Criteria for Identification of Projects	
Criteria	How does the proposed project adhere to the criterion?
<p>1. Each country is to select <b>one</b> 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><b>Sector selected:</b> Coastal protection (drainage)</p> <p><b>How is this sector selection linked to national priorities?</b></p> <p>The proposed project will contribute to the following in the Fiji National Adaptation Plan (2018):</p> <p><u>Action 14.1:</u> Scale up efforts to strengthen coastal boundaries of urban centres and rural communities through hybrid or nature-based solutions to risk reduction purposes and to slow the need to relocate communities and infrastructure</p> <p><u>Action 15.D.3:</u> Implement coastal protection measures in highly vulnerable communities (e.g. foreshore protection, artificial wave breaks, etc.).</p> <p><u>Action 15.D.7:</u> Improve and maintain drainage networks in urban and rural areas as measures to protect against inland floods, considering that drainage defects are the dominant cause of floods</p> <p>The project will also contribute to the achievement of the following objectives of the 5-Year &amp; 20-Year National Development Plan:</p> <p>3.2.9: Sustainable Cities and Towns through “Creating vibrant and environmentally sustainable urban centers”</p> <p>3.2.10: Expanding the Rural Economy through “Promoting equal opportunities, access to basic services and building resilient</p>

	<p>communities”</p> <p>3.2.11: “A sustainable sugar industry” through provision of proper drainage services</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><b>Outputs 2 &amp; 3:</b> The Soasoa Drainage Scheme was developed in 1978 by the then Labasa Drainage Board under the Land and Water Resources Management Division of the Ministry of Agriculture. The scheme was designed to protect reclaimed land for sugarcane production through a levee (commonly referred to as seawall), outfall structures including floodgates, flap-gates and a drainage network. The scheme has been maintained by government, as part of the average FJD 2-3 million national allocation each year for maintenance efforts. The scheme continues to perform its function however, it was designed for a maximum rainfall of 100 mm in 24 hours. The increased rainfall variability and rise in average sea level over recent decades has had profound impact on the infrastructure. The rising sea level has shortened the opening time for the flood and flap gates from 3 hours in 1980s to less than an hour in 2019. Moreover, there is a need to widen the current main drainage systems in the scheme to cater for higher peak flows during flood events. The current drainage dimensions are not able to cater for peak flows, often flooding homes, farms and the road, disrupting connection between Labasa Town and immediate areas past Soasoa.</p> <p>As such, to ensure maximum discharge during peak flows, the current drainage and flood and flap gates need to be revamped by adding more gates and adjusting the invert levels (taking into consideration sea level rise). The scale-up efforts will see increased discharge of floodwaters through provision of “room for water” by increasing the width of flood channel and putting more gates.</p> <p>Rising sea level also means that the current height of the levee needs to be increased in order to eliminate the risk of seawater overtopping during high tide and storm surge events. Currently, during king tides, the levee is bridged and seawater overtopping occurs inundating farms.</p> <p>As such to avoid saltwater inundation and ensure maximum discharge during floods the above interventions are necessary.</p>
<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>For outputs 1 to 3 the project will engage different groups in the communities in the planning and implementation so that project ownership is promoted and awareness raising reaches everyone and not just a select few. Development of the watershed management plan (Output 1) will incorporate a people-centred approach and include ecosystem-based adaptation measures to ensure better rainfall runoff in the catchment Lessons drawn from current ecosystem-based</p>

	<p>adaptation approaches such as the use of the Vetiver grass for riparian vegetation and as erosion control will be implemented.</p> <p>Furthermore, the gender-sensitive approach will be guided by the following objectives:</p> <ul style="list-style-type: none"> <li>i. Adaptation measures in communities, and all replication and up-scaling activities, address gender-specific vulnerabilities and result in gender-specific benefits for both women and men; and</li> <li>ii. Women and men at local and national levels acquire technical knowledge and skills to be able to plan for and respond to climate change risks.</li> </ul> <p>It is envisaged that the benefits of the project will be equitable as the project is aimed at enhancing the adaptive capacity of the beneficiaries through tangible on-the-ground interventions and capacity building.</p>
<p>4. The selected scaled up measure must fit within the scope of the SUPA budget.</p>	<p>The activities fit within the overall budget of EUR 500,000.</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>Provision will be made during the implementation phase for ensuring the sustainability of the project's activities with support from the Government of Fiji and the beneficiaries.</p>