EU-GIZ Adaptation to Climate Change and Sustainable Energy (ACSE) Programme

Country (ies): **Kingdom of Tonga**

Location within the country (ies) : **Western Tongatapu**

Concept focus:

[x] Climate change adaptation

[ ] Sustainable energy

[ ] Both

Project type:

[ ] Type 1 – 200,000 Euro maximum budget

[x] Type 2 – Maximum budget is the country allocation

Total requested budget: **EURO550,000**

Duration of project: **36 Months**

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Support for PDD development:

[x] Yes, consultant(s) or organisation(s) to be engaged: ……

[ ] No

[ ] Undecided

CONCEPT NOTE – Description (4 pages maximum)

1. Project title: Trialling of coastal protection measures in Western Tongatapu.

Project Pilot Sites: Six Coastal Communities (Fo'ui, Ha'avakatolo, Kolovai, 'Ahau, Kanokupolu, Ha'atafu) in Western Tongatapu.

2. Background and rationale (max ¾ page)

In Tonga, most of its socio-economic activities and critical infrastructures are located in low lying coastal areas rendering them as highly vulnerable to the adverse impacts of climate variability, climate change and extreme events. Topographic elevation of frontages of six coastal villages under this project is less than 2m above the mean sea level. Residents in these areas have for several decades experienced historical inundation and land loss due to coastal erosion. Aerial photography and discussions with these communities have indicated that the coast has been subject to coastal erosion of up to 20m to 30m since 1960s.

Attempts were made by the communities such as building a seawall to protect these coastal areas however, the design was not robust and inadequately engineered hence resulting in short-lived benefits and enhanced erosional problems downstream.

Intervention in this coastal area has been prioritised under Tonga's Joint National Action Plan (JNAP) for Climate Change Adaptation and Disaster Risk Management, 2010-2015. It contributes to the JNAP Goal 3:Analysis and assessment of vulnerability to climate change impacts and disaster risks; and Goal 4: Enhanced community preparedness and resilience to impacts of all disasters.

A feasibility study, coastal design, costing and Environment Impact Assessment were conducted on these coastal areas in 2013 by consultant companies (CTL and Geocare Ltd) under the Pacific Adaptation to Climate Change (PACC) Project. This project is executed in Tonga by the Ministry of Lands, Environment, Climate Change & Natural Resources (now Ministry of Environment, Energy, Climate Change, Disaster Management, Meteorology, Information and Communications). These consultancy services were funded by the Government of Australia under its International Climate Change Adaptation Initiative. Reports were completely prepared and approved in April 2014.

The project will significantly increase support to the implementation of the Pacific Adaptation to Climate Change (PACC) in Tonga to fast track the completion of the on-ground implementation of adaptation activities in relation to coastal management in these villages. The project will implement and evaluate different coastal protection measures along a 6 km stretch of low-lying (less than 2 m above mean sea level) coast in western Tongatapu. There are 2,353 people living in this area and 401 properties. The measures likely to be considered for implementation in this project is a mixture of soft and hard coastal engineering measures including coastal tree planting, mangrove rehabilitation, nurseries,, groynes (bamboo) /breakwaters, and sandbags revetment.

This project will not only provide coastal protection for the villages on western Tongatapu but also provide lessons and best practices for engineered coastal protection systems for other vulnerable coastal areas in Tonga and elsewhere in the Pacific Islands region. The project will adopt a consultative and participatory process with all sectors including government ministries, civil societal organisations and NGOs, women and youth groups, and particularly involving the communities residing in the vulnerable areas.

3. Objective (s) (two to three sentences)

The project aims to increase resilience of six coastal communities on Western Tongatapu to climate change impacts and to sustain their livelihoods. The aim is consistent with the ACSE objective; to 'enhance sustainable livelihoods in Pacific Island countries, strengthen countries' capacity to adapt to the adverse effects of climate change at the national, provincial and local/community levels'.

4. Expected project outcomes and Outputs (max ¼ page)

Outcome(s)	Output(s)

4.1. Reduced climate change vulnerability and enhanced adaptive capacity in six coastal communities on Western Tongatapu focussing on coastal protection and management.	4.1.1. Coastal protection measures selected, evaluated and implemented in coastal communities not covered under the PACC Project. 4.1.2. Good practices and lessons learnt are documented and shared with relevant stakeholders
4.2. Enhanced education and awareness on coastal management in the context of climate change in Tonga.	4.2.1. Communication Plan prepared and published for coastal communities. 4.2.2. Awareness programmes conducted in the communities and other stakeholders. 4.2.3. Awareness materials are developed and distributed to relevant stakeholders.
4.3. Effective monitoring of the coastal protection measures, in collaboration with key stakeholders other related projects and programs.	4.3.1. Monitoring program developed and implemented to ensure effectiveness of the coastal protection measures and changes on adjacent coastal areas. 4.3.2. Training conducted for relevant stakeholders on how to effectively conduct monitoring and evaluation of coastal protection measures that contribute to sound coastal management. 4.3.3. Staff at MEECCDMMIC regularly engaged in beach monitoring. 4.3.4. Schools involved in coastal monitoring
4.4. Strengthened partnerships of project with communities	4.4.1. Communities directly engaged to empower them and for the sustainability of the project 4.4.2. Committee consists of representatives from pilot communities established. 4.4.3. Series of meetings with the committee held to report on the progress of the project and discuss issues arise during the implementation of the project.

5. Beneficiaries (max ½ page)

-***Six pilot communities on Western Tongatapu***- The project will benefit the 2,353 people living in the six pilot communities as it will enhance their resilience to climate change impacts. The project will also encourage communities to take ownership and be responsible to manage their own coastal areas in close collaboration with key stakeholders as the project finishes its lifetime. The partnership of pilot communities with the project, government ministries and NGOs will be strengthened.

-***Other vulnerable communities***: Good practices and lessons learnt in the pilot communities will be replicated in other coastal areas in Tonga and even in the Pacific Island Region that have experienced similar problems

-***Staff of MEECCDMIC and MOI***: Management capacity and Technical capacity in terms of coastal monitoring and evaluation will be enhanced. This wealth of management and technical knowhow will be shared and transferred to the staff who did not participate in project management and coastal monitoring and evaluation exercise.

-***School children***: Capacity will be built not only with coastal monitoring but also enhance their knowledge and understanding of climate change and its impacts on the pilot communities.

-***Local people***: This project will provide job opportunities for the locals.

- -***Gender equality***: The involvement of both men and women in planning, awareness raising, meetings and the implementation of the project will be promoted. Their involvement contribute to the successful implementation of the project.

People of Tonga as a whole: Knowledge and understanding about climate change and its impacts, coastal processes/dynamics will be enhanced. People will get to better understand that seawall is not the best option to protect the coastline as there are other potential options as trialled in the project.

6. Indicative budget (max ½ page)

Item	Indicative budget (EUROS)
Outcome 4.1/Outputs 4.1.1-4.1.2	310,000
Outcome 4.2/Outputs 4.2.1-4.2.3	20,000
Outcome 4.3/Outputs 4.3.1-4.3.4	100,000
Outcome 4.4/Outputs 4.4.1-4.4.3	10,000
Other budget items as required	
National coordination including Project management costs	70,000
Monitoring and evaluation	10,000
Communication and visibility	10,000
Contingencies	20,000
Co-financing / In-kind contribution (optional)	
TOTAL	**550,000**

7. Project management (max ½ page)

The project will be managed and implemented by the Ministry of Environment, Energy, Climate Change, Disaster Management, Meteorology, Information and Communications (MEECCDMMIC) in partnership with the Ministry of Infrastructure (MOI). A Letter of Agreement will be signed by EU- GIZ and the Government of Tonga for this Project. The Tongan signatories to the Letter of Agreement are the CEO for MEECCDMMIC and the Secretary for Ministry of Finance and National Planning.

7.1. Project Oversight, Technical & project management Committees

Similar to the other climate change projects and programmes (JNAP on CCADRM, EU SPC Tonga Global Climate Change Alliance Project, GIZ Coping with Climate Change in the Pacific Island Region, the Pacific Adaptation to Climate Change, Tonga National Communication, Strategic Program for Climate Resilience) that are currently implementing in Tonga, the National Environmental Coordinating Committee (NECC) will provide oversight and also provide guidance on policy issues to the project implementation. The JNAP Technical Team will provide the technical support relating to the implementation of the project. NECC and JNAP Technical Team comprise of representatives from government Ministries, NGOs and statutory board.

A committee for this project at the pilot communities will be also established and to report to the JNAP Technical Team and NECC.

There will be a EU-GIZ ACSE Project Management Unit (PMU) based at MEECCDMMIC consisting of the National Coordinator, civil engineer and administrative assistant. PMU will be the secretariat to the NECC and JNAP Technical Team and also committee at the pilot communities on this project

7.2. Reporting

The EU ACSE PMU will be responsible for the overall management and implementation of project activities and providing quarterly narrative and financial reports to the Oversight Committee and donor. A template for the quarterly report will be provided by the project to be used and followed accordingly.

8. Complementarity and replicability (max ¼ page)

This project directly relates to the activities implemented under the JNAP Project, EU-SPC Tonga Global Climate Change Alliance: Pacific Small Island States (EU-SPC Tonga GCCA:PSIS) Project, Pacific Adaptation and Strategy Assistance Program, Strategic Program for Climate Resilience with their objectives to increase resilience of vulnerable sectors/communities to climate change impacts. This project will also add value to the existing Pacific Adaptation to Climate Change (PACC) Project.

Lessons learnt and good practises from this project could easily be replicated in other areas of Tonga and Pacific Island Countries that experience similar issues.

9. Sustainability and risks (max ¼ page)

The overall design of this project which has attempted to use a more comprehensive framework by looking at the entire geomorphological section of coastline and understanding the processes and coastal dynamics, provides a good example for the MEECCDMMIC and the Ministry of Infrastructure to use in the future. This should lead the way to replace the short time reactive approach with a longer term, planned and proactive approach. This is further enhanced by the development of the coastal management plan for Tongatapu as a priority activity implemented and funded under the EU-SPC Tonga GCCA:PSIS Project which will provide clear guidance for the long term planning of the coastal area for Tongatapu and will also incorporate long term climate change especially sea level rise.
Coastal communities in western Tongatapu, as in other small islands, believe that a solid seawall is their best possible option for protection. Experience has shown that this is often not the case, and this project will provide an opportunity for communities to see and learn about other options and how they perform.
Longer term monitoring of the performance of the coastal protection measures is planned and be conducted.
Replication of these measures, if successful will be carried out in areas in Tonga and in the Pacific who have experienced similar problems.

Communities will be directly involved in this project to empower them and to take ownership of this project when its implementation period completes.

Risks & Mitigation actions

Risk 1: Natural hazards such as tropical cyclones, extreme rainfall events and tsunamis could dramatically damage the coast/delay construction/ shift project focus away from implementation to other emergency response activities.
Mitigation action : Schedule construction works outside of the cyclone season and sound early warning system

Risk 2: Availability of materials**:** unavailability of materials for construction
Mitigation action: Project designed to utilise materials that can be made locally

Risk 3: Funding for maintenance**:** Inadequate maintenance of structures will lead to failure
Mitigation actions : Maintenance plan designed and implemented, funds set aside for maintenance and adjustment in project budget, monitoring of structures continued beyond project life by MEECCDMMIC and MOI and related projects in the future.

Risk 4: Lack of stakeholder's engagement: Unclear division of roles between government agencies and climate change projects, Lack of involvement of local communities.
Mitigation actions: Ensure existing committees take on oversight role, close collaboration with other projects (PACC), all stakeholders and local communities involved in project planning and design, local communities and schools to be included in coastal monitoring, full involvement of coastal communities in coastal management plan

10. Timeline for planned measures (max ¼ page)

The detailed outlining of the activities under each outcome and output will be addressed in the Project Design Document.

Description	Planned Measures and Timeline
Objectives: The project aims to increase resilience of six coastal communities on Western Tongatapu to climate change impacts and to sustain their livelihoods.	• Level of awareness about climate change adaptation and coastal management raised by 06/2016 for 10% of population of Tongatapu. • Climate change adaptation measures incorporated into the integrated coastal management plan by 06/2015 • Lessons learnt from these coastal protection interventions shared with key stakeholders and climate related projects by 06/2016 • At least six communities provide feedbakc to the integrated coastal management plan by 03/2015
Outcome 1: Reduced climate change vulnerability and enhanced adaptive capacity in six coastal communities on Western Tongatapu focussing on coastal protection and management.	• Coastal protection measures selected, evaluated and implemented by 09/2016 • One coastal protection measure completed and in place by 12/2016
Outcome 2: Enhanced education and awareness on coastal management in the context of climate change in Tonga.	• Communications plan and schedule of education and awareness activities developed and published by 06/2016. • At least 3 education and awareness activities conducted by 12/2016. • Awareness materials developed, published and distributed to stakeholders by 09/2016.
Outcome 3: Effective monitoring of the coastal protection measures, in collaboration with key stakeholders other related projects and programs.	• At least 5 staff in MEECCDMMIC regularly engaged in beach monitoring by 12/2016 • At least two schools involved in coastal monitoring by 12/2016
Outcome 4: Strengthened partnerships of project with communities	• Committee at the pilot communities under the project established by 09/2015 • At least three meetings held with the communities by 12/2015.

11. Stakeholder engagement in concept note development (maximum three sentences)

Stakeholders engaged in concept note development were; JNAP Secretariat, Climate Change Project Coordinators, and JNAP Technical Team.