CONCEPT IDEA NOTE FOR CLIMATE RELATED ACTIVITIES THAT MAY BE FUNDABLE BY THE GREEN CLIMATE FUND AND OTHER FINANCIAL SOURCES

This Concept Idea Note is based upon the GCF Concept Note. It is designed to prepare any Concepts or Project Ideas with GCF financing in mind, however, can also be applicable to other financial institutions. Once the Concept Idea Note is completed please send to the CCCI office (as the GCF National Focal Point), where an assessment will be undertaken as to whether the Concept could be eligible for funding under the GCF or other financial source, or both. CCCI will then communicate the result of the assessment back to the proponent, and outline what will next happen to the Concept Idea Note, such as require more information to make a clearer assessment, the submitted Concept is GCF eligible for funding and the next steps, or a determination that outlines the Concept is not eligible for GCF funding but may get funding from another source.

Title of Concept OR Project Idea: Major Upgrade for the Mangaia Harbor Basin and Wharf Facility

Date of Submission; 2 November 2018

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Indicate the areas for the Concept, which is based upon the CKI Country Program thematic areas	Mitigation: Reduced emissions from: ☐ Energy access and power generation ☑ Low emission transport ☑ Buildings, cities and industries and appliances ☑ Forestry and land use Adaptation: Increased resilience of: ☑ Most vulnerable people and communities

	☑ Health and well-being, and food and water security ☑ Infrastructure and built environment **Project Objectives;** **Upgrade the Mangaia Harbor and Wharf Facility to allow Barge and Ships birth and unload cargo safely in all weather conditions except during cyclones and extreme weather conditions.** **Protect and Secure Mangaia Harbor and Wharf Facility from Cyclones and extreme weather conditions.** 1. Provide Engineering and Structural Survey technicians to carry out thorough assessment of Mangaia Harbor site to clarify the best Design and Layout of the entrance/exit way to the mooring basin. 2. Confirm the best Design and layout of the Mooring basin's protection water breakers. 3. Obtain Project cost for Materials, Contractors, Machineries, Shipping Freight, and unforeseen costs. 4. Provide Professional Contractors to carry out Blasting and Dredging of the Exit/Entrance Way including the mooring basin. 5. Provide Professional Contractors to build all structural work required to Upgrade the Mangaia Harbor Facility.

	6. to enable Taio Shipping's Vessels and Cook Islands Towage Ltd Barge Service dock. ☐ Ecosystem and ecosystem services
Indicative total project cost	Amount: NZD __ $8,000,000.00 _____

Project/Programme rationale, objectives and approach of programme/project (max 100 words)

Brief summary of the problem statement and climate rationale, objective and selected implementation approach, including the executing entity(ies) and other implementing partners.

The project goal is to upgrade the Mangaia Harbor Facility to enable ships and barge to sail into the harbor basin and safely unload cargo instead of the Mangaia Island Government Infrastructure workers launching a small barge to go out to the ship to receive cargo and ferry it back ashore then unloading on the wharf and going out to the ship again. This method is time consuming and un-economical for the Shipping Companies and the Mangaia Island Government causing both ship and barge burning a lot of un necessary fuel to unload and load cargo.

This type of service has been happening on the island of Mangaia for the past 100 years and some incident has resulted with injuries, drowning, near fatal to fatal consequences.

For the past 50 years or more, one of the most common problem is the non-practicable of offloading cargo when the weather is bad forcing the ship to abandon the offloading and waiting for a few days for the weather to ease, otherwise return to Rarotonga resulting with a lot of fuel wasted and burnt in to the atmosphere.

From experience the Mangaia Island Government has also identified several hazardous risks with the existing service during boat days.

1. unloading cargo in rough weather.
2. unloading cargo at night.
3. the safety of the crew on the small barge.
4. the frequent damage and losses of cargos and cost recovery.
5. the amount of time taken to unload the ship.
6. Uneconomical fuel usage by the barge to transport cargo ashore.

Context and baseline (max. 2 pages)

Describe the climate vulnerabilities and impacts, GHG emissions profile, and mitigation and adaptation needs that the prospective intervention is envisaged to address.

Mangaia harbor and Wharf Facility Major upgrade

For the past 100 years, the island of Mangaia in the Cook Islands has never had a harbor/wharf facility built that will enable inter island shipping services to dock their vessels to unload and upload cargos both domestic and commercial purposes on the island. Instead the island relies on the service of a small barge to ferry the cargo back and forth from the ship to shore.

Impacts on the GHG profile from these services has resulted to the uneconomical burning of fuel by eight engines to run this service.

1 Ships engine

1 Ships cranes to load cargo onto the barge

2 Barge twin engines to drive barge to pick up cargo off the ship

1 Crane on the wharf to lift cargos off the barge

2 Forklifts on the wharf to clear cargo from unloading area

To address the GHG profile, this project will eliminate four out of seven engines from operating to run the service and therefore reducing fuel consumption and greenhouse emission.

The concept can address the GHG Profile if the ship is able to dock in the Harbor basin to un load and pick up. With this adaptation change in place, the operation will only require the ships crane engine and the two forklifts on the wharf to provide the service.

GHG Elimination Target Action initiative.

Reduce GHG Emission by 50% within the next 50 years.

1. The ships main engine will be shut down in port saving fuel.

   (Fuel Usage per annum for 30 Mangaia Voyages (30,000 liters)

2. The two engines driving the barge back and forth will not be required. (Fuel Usage per annum to ferry cargos (6,000 liters)

3. The crane on the wharf is not required. (Fuel Usage per annum to unload cargo onto the wharf. 5,000 liters/annum

Note; This calculation was based on the 30 shipping voyages each year at 2.5 voyages per month. The fuel usage data is based on each boat day from 0800-1700.

Please indicate how the project fits in with the country's national priorities and its full ownership of the concept. Is the project/programme directly contributing to the country's INDC/NDC or national climate strategies or other plans such as NAMAs, NAPs or equivalent? If so, please describe which priorities identified in these documents the proposed project is aiming to address and/or improve.

The Harbor Project fall under the NSDP Protocol listed below;

Goal 1. Improve welfare, reduce inequity and economic hardship

Goal 2. Expand economic opportunities, improve economic resilience and productive employment to ensure decent work for all.

Goal 13. Strengthen resilience to combat the impacts of climate change and natural disasters

Describe the main root causes and barriers (social, gender, fiscal, regulatory, technological, financial, ecological, institutional, etc.) that need to be addressed.

The main barriers that need to be addressed to implement the Mangaia Harbor Project are;

1. The ability of securing financial support from Aid Donors to fund the project e.g. GCF and other funding organizations.
2. The technical support from Government and Private Agencies to carry out fiscal recommendations to the project.

4. **Mangaia Island Government/ Island Administration;**
- Provide local support when required to assist the project.
5. **Mangaia Aronga Mana /Island Leaders.**
- Provide support for local material for the project.
6. **Mangaia Religious Advisory Council.**
- Provide moral and spiritual support.

Sustainability and replicability of the project (exit strategy) (max. 1 page)

Please explain how the project/programme sustainability will be ensured in the long run and how this will be monitored, after the project/programme is implemented with support from the GCF and other sources.

The sustainability of the Mangaia Harbor and Wharf Upgrade project will be ensured for next fifty years by the ongoing development of Agriculture, Tourism, Small Business and potential timber export. With these sectors currently undeveloped to their full potential, it holds vital future economic benefits for the Harbor project and for the people of Mangaia.

Private Sector.

1. *Farmers and Growers*
- To develop local produce for export.
2. *Small Business / Shop owners/Tourist Operators*
- Import and export of niche items.
- Cater the growth of the Tourism industry.
3. *Potential Logging Operators*
- Harvest and Export Local timber in the form of logs.

The Mangaia Harbor Project is a capital investment for the island of Mangaia in partnership with the Green Climate Fund, Cook Islands Government, Cook Islands Investment Corporation, Infrastructure Cook Islands, Cook Islands Businesses based in Rarotonga, and Shipping Companies to fulfil trade, economic, and commercial development obligations for the Cook Islands.

Where relevant, and particularly for private sector project/programme, please describe the key characteristics and dynamics of the sector or market in which the project/programme will operate.

Private Sector Development.

1. Farmers and Growers

- To develop local produce for export.

2. Small Business / Shop owners/Tourist Operators

- Import and export of consumemable items.
- Cater the growth of the Tourism industry.

3. Potential Logging Operators

- Harvest and Export Local timber in the form of logs.

Engagement among the NDA, AE, and/or other relevant stakeholders in the country (max ½ page)

Please describe how engagement among the NDA, AE and/or other relevant stakeholders in the country has taken place and what further engagement will be undertaken as the concept is developed into a funding proposal.

Proposed Key Stake Holders to implement Project

1. **Aid Donors / Green climate Fund.**

Provide financial Support for the project.

2. **Cook Islands Government.**

Provide Technical Support and Resource Management including Funding management.

3. **Technical and Engineering Advisers.**

- Provide all structural and engineering detailed information's to the building contractors.
- Provide monitoring and advise to both contractor and other partners involved with the construction phase of the project.

The Management and Monitoring Process during and after the implementation of the project will be carried out by the Cook Islands Investment Corporation, Infrastructure Cook Islands, Green Climate Fund, and Mangaia Island Government.

For non-grant instruments, explain how the capital invested will be repaid and over what duration of time.

The Mangaia Harbor and Wharf Development Project should be entitled to Grant Funding under the Cook Islands Capital Outer Islands Development Scheme eligible for Green Climate and other available Grant Funding Initiatives.

The estimated timeframe to complete this project from start to finish is approximately four years allowing down time for disturbance from resource break downs, bad weather and cyclones.

Assessed By and Date: Tamaki Mayor

Recommendation: E.O. MFG. 7.11.18