

GEF-8 PROJECT IDENTIFICATION FORM (PIF)

TABLE OF CONTENTS

GENERAL PROJECT INFORMATION	3
Project Summary	4
Indicative Project Overview	4
PROJECT COMPONENTS	4
PROJECT OUTLINE	7
A. PROJECT RATIONALE.....	7
B. PROJECT DESCRIPTION.....	15
Project description.....	15
Coordination and Cooperation with Ongoing Initiatives and Project.....	25
Core Indicators.....	26
Key Risks.....	28
C. ALIGNMENT WITH GEF-8 PROGRAMMING STRATEGIES AND COUNTRY/REGIONAL PRIORITIES.....	30
D. POLICY REQUIREMENTS.....	31
Gender Equality and Women’s Empowerment:.....	31
Stakeholder Engagement	32
Private Sector.....	34
Environmental and Social Safeguard (ESS) Risks	34
E. OTHER REQUIREMENTS.....	35
Knowledge management.....	35
ANNEX A: FINANCING TABLES	35
GEF Financing Table.....	35
Project Preparation Grant (PPG)	35
Sources of Funds for Country Star Allocation	35
Indicative Focal Area Elements	36
Indicative Co-financing	36
ANNEX B: ENDORSEMENTS	36
GEF Agency(ies) Certification	36
Record of Endorsement of GEF Operational Focal Point (s) on Behalf of the Government(s):.....	36
ANNEX C: PROJECT LOCATION	37
ANNEX D: ENVIRONMENTAL AND SOCIAL SAFEGUARDS SCREEN AND RATING	39
ANNEX E: RIO MARKERS.....	39
ANNEX F: TAXONOMY WORKSHEET	39

General Project Information

Project Title

Water Security, Alternative Energy, and Vital Ecosystems Restoration (WAVE) Project

Region

Asia

GEF Project ID

12254

Country(ies)

Cook Islands

Type of Project

MSP

GEF Agency(ies):

ADB

GEF Agency ID

Executing Partner

Infrastructure Cook Islands

Executing Partner Type

Government

GEF Focal Area (s)

Climate Change

Submission Date

12/21/2025

Project Sector (CCM Only)

Climate Change Adaptation Sector

Taxonomy

Focal Areas, Climate Change, Climate Change Adaptation, Climate resilience, Disaster risk management, Influencing models, Transform policy and regulatory environments, Strengthen institutional capacity and decision-making, Private Sector, Beneficiaries, Communications, Small Island Developing States, Sea-level rise, Ecosystem-based Adaptation, SMEs, Individuals/Entrepreneurs, Local Communities, Type of Engagement, Partnership, Information Dissemination, Consultation, Participation, Stakeholders, Gender Equality, Sex-disaggregated indicators, Gender Mainstreaming, Gender-sensitive indicators, Capacity, Knowledge and Research, Enabling Activities, Capacity Development

Type of Trust Fund

SCCF

Project Duration (Months)

60

GEF Project Grant: (a)

2,752,500.00

GEF Project Non-Grant: (b)

0.00

Agency Fee(s) Grant: (c)

247,500.00

Agency Fee(s) Non-Grant (d)

0.00

Total GEF Financing: (a+b+c+d)

3,000,000.00

Total Co-financing

17,000,000.00

PPG Amount: (e)

0.00

PPG Agency Fee(s): (f)

0.00

PPG total amount: (e+f)

Total GEF Resources: (a+b+c+d+e+f)

0.00

3,000,000.00

Project Tags

CBIT: No NGI: No SGP: No Innovation: No Competitive Window: No

Project Summary

Provide a brief summary description of the project, including: (i) what is the problem and issues to be addressed? (ii) what are the project objectives, and if the project is intended to be transformative, how will this be achieved? (iii), how will this be achieved (approach to deliver on objectives), and (iv) what are the GEBs and/or adaptation benefits, and other key expected results. The purpose of the summary is to provide a short, coherent summary for readers. The explanation and justification of the project should be in section B “project description”. (max. 250 words, approximately 1/2 page)

The Cook Islands are highly vulnerable to severe weather events – mainly intense rainfalls, cyclones, droughts, and flooding. Risks and vulnerabilities differ from island to island. On Rarotonga, the principal island, where many communities have limited resilience, heavy rainfall and coastal inundations are impacting upon essential economic livelihoods (e.g. tourism) and the infrastructure. On the remote outer islands (Pa Enua), changes in rainfall patterns are causing both extreme rainfalls and droughts. These increasingly threaten economic livelihoods (e.g. agriculture), but also food and water security, and education and health sector activities. Climate change and sea level rise increase all risks.

The national approach to sustainable development is holistic, integrating cultural heritage, environmental conservation, economic growth, and social equity. In line with this, the proposed WAVE Project aims to increase climate adaptation and environmental protection measures for vulnerable communities in Rarotonga and the Southern Pa Enua. It includes nature-based solutions (NbS) and natural capital accounting. It supports broader resilience by addressing the enabling environment. It consists of:

- Output 1: Integrated flood risk management measures implemented and ecosystems enhanced. This will protect the resilience and the quality of Muri Lagoon on Rarotonga.
- Output 2: Enabling environment, institutional, and community capacity enhanced.
- Output 3: Southern Pa Enua water supply systems upgraded. The focus will be a small number of most vulnerable islands.
- Output 4: Southern Pa Enua battery energy storage systems (BESS) modernized. This will provide access to clean energy on a small number of most vulnerable islands.

Indicative Project Overview

Project Objective

Improved water and energy security in the Cook Islands.

Project Components

Flood control and basin management

Component Type

Trust Fund

Investment

SCCF-A

GEF Project Financing (\$)

Co-financing (\$)

9,200,000.00

Outcome:

1. Integrated flood risk management measures implemented and ecosystems enhanced

Output:

This Outcome will increase flood protection, sediment control and overall health of the Muri Lagoon on Rarotonga. It will optimize the functions of targeted areas and streams flowing into the lagoon.

Outputs may include (i) rehabilitated streams, including through riparian planting and stabilization measures; (ii) enhanced functions of existing wetlands to facilitate storage, stormwater treatment, and optimize community use for cultivation; (iii) small scale on-site sanitation interventions and regulatory support on land adjacent to the wetlands and waterways; and (iv) stabilized stream outlets to the lagoon.

See Annex I for details.

Enabling environment for resilience

Component Type

Trust Fund

Investment

SCCF-A

GEF Project Financing (\$)

Co-financing (\$)

1,100,000.00

Outcome:

2. Enabling environment, institutional, and community capacity enhanced.

Output:

Outputs may include capacity building to design and implement:

(i) policies to improve coordination on land use planning and development regulations;

(ii) sector-specific policies to optimize the functions and resilience of targeted streams and wetlands, such as onsite sanitation and wastewater management, lagoon protection management, community and operations and maintenance (O&M) practices;

(iii) knowledge sharing and capacity building measures on the water-energy-tourism nexus in relation to climate impacts and disaster risks; and

(iv) project implementation O&M support for solutions to the government agencies and communities.

Water security

Component Type

Trust Fund

Investment

SCCF-A

GEF Project Financing (\$)

Co-financing (\$)

2,600,155.00

200,000.00

Outcome:

3. Southern Pa Enua water supply systems upgraded

Output:

- 3.1 Increased water capture and storage, and enhanced distribution network, on A tiu Island.
- 3.2 Increased water capture and storage, and enhanced distribution network, on Mangaia Island.
- 3.3 Increased water capture and storage, and enhanced distribution network, on Mitiaro Island.
- 3.4 Management, operations and maintenance capacity on the three islands.

Energy security for resilience

Component Type	Trust Fund
Investment	SCCF-A
GEF Project Financing (\$)	Co-financing (\$)
	5,450,000.00

Outcome:

4. Southern Pa Enua battery energy storage systems (BESS) modernized.

Output:

- 4.1 Restored storage capacity and more stable power supply on Atiu Island.
- 4.2 Restored storage capacity and more stable power supply on Mangaia Island.
- 4.3 Restored storage capacity and more stable power supply on Mauke Island.
- 4.4 Restored storage capacity and more stable power supply on Mitiaro Island.

M&E

Component Type	Trust Fund
Investment	SCCF-A
GEF Project Financing (\$)	Co-financing (\$)
50,000.00	200,000.00

Outcome:

Monitoring and Evaluation conducted

Output:

Annual, Midterm and Terminal Evaluation Reports

Component Balances

Project Components	GEF Project Financing (\$)	Co-financing (\$)
Flood control and basin management		9,200,000.00
Enabling environment for resilience		1,100,000.00
Water security	2,600,155.00	200,000.00
Energy security for resilience		5,450,000.00
M&E	50,000.00	200,000.00
Subtotal	2,650,155.00	16,150,000.00
Project Management Cost	102,345.00	850,000.00
Total Project Cost (\$)	2,752,500.00	17,000,000.00

Please provide justification

PROJECT OUTLINE

A. PROJECT RATIONALE

Briefly describe the current situation: the global environmental problems and/or climate vulnerabilities that the project will address, the key elements of the system, and underlying drivers of environmental change in the project context, such as population growth, economic development, climate change, sociocultural and political factors, including conflicts, or technological changes. Describe the objective of the project, and the justification for it. (Approximately 3-5 pages) see guidance here

The Cook Islands

The Cook Islands are located south of the equator and consist of 15 islands with a total land area of 236.7km². The islands are spread across nearly 2 million km² of the southern Pacific Ocean (see maps Figure 1). The total population of the Cook Islands peaked at 21,322 in 1971, declining by 29.5% to 15,040. All Cook Islanders hold New Zealand citizenship and there are more than an estimated 50,000 Cook Islanders residing in New Zealand, as well as an estimated 15,000 in Australia.



Figure 1: Maps showing location of Cook Islands, and the two island groups

The Cook Islands are known for their natural beauty and attract significant numbers of tourists. Tourism accounted for an estimated 70% of GDP in 2018 and is the foundation of the economy. The Cook Islands is in free association with New Zealand which entails the sharing of some administrative and governance functions. Nevertheless, the Cook Islands faces very significant challenges, particularly in relation to natural hazards, remoteness and economic vulnerability.

Twelve of the islands have permanent populations. The islands are geographically divided into two distinct groups, commonly referred to as the Northern and Southern Group islands. The two groups of islands portray marked differences in their social, cultural and economic activities. Table 1 lists the islands in each group along with their land area and populations.

The largest island in terms of both land area and population is Rarotonga see (Table 1). Rarotonga hosts over 70% of the total population and the capital city, the government and most economic activities. The other 14 islands are commonly referred to as the 'Pa Enua', translating to 'Sister Islands'. There are 6 northern Pa Enua and 8 Southern Pa Enua (see Figure 1).

The island of Rarotonga features a low-lying coastal fringe surrounding a densely forested interior with peaks exceeding 610 meters above sea level. The island's drainage system is influenced by its volcanic origins, with streams like Takuvaine and Avatiu originally draining a volcanic crater area, while other streams drain the outer slopes. Over time, erosion has significantly altered the landscape, reducing the original volcanic cone to a residual mountain. The coastal fringe is composed of weathered volcanic alluvium, forming fans and terraces. These are interspersed with swamps from beach deposits and coral debris. All other islands – excluding Rarotonga - are categorized as either low-lying atolls, sand cays^[1], or upraised coral limestone (makatea)^[2]. The Northern Cook Islands comprises six low-lying atolls; the Southern Cook Islands include Rarotonga, six volcanic islands and two atolls.

Table 1: Island groups, land areas and populations

Island	Group	Area (km2)	Population	%ge of total population
Rarotonga	Southern	67.1	10,898	72.5%
Aitutaki		18.3	1,782	11.8%
Mangaia		51.8	471	3.1%
Atiu		26.9	383	2.5%
Mauke		18.4	249	1.7%
Mitiaro		22.3	155	1%
Palmerston		2.1	25	0.2%
Manuae		6.2	0	0%
Takutea		1.25	0	0%
Pukapuka		1.3	456	3%
Penrhyn	Northern	9.8	233	1.5%
Manihiki		5.4	215	1.4%
Nassau		1.3	92	0.6%
Rakahanga		4.1	81	0.5%
Suvarrow		0.4	0	0%

Source: Cook Islands Census of Population and Dwellings 2021, Cook Islands Statistics Office, 2022.

Climate

Temperature. The Cook Islands experience a generally stable temperature regime fluctuating between an average of 26°C and 28°C all year round in the north, and between 23°C and 26°C in the cooler south (including Rarotonga). Maximum temperatures reach around 30°C and minimum temperatures around 20°C. There is an observed trend of increasing temperatures in the Cook Islands. Although the absence of comprehensive and reliable data complicates understanding, some studies indicate an average warming of around 0.7°C (0.4 to 1.0°C uncertainty range) since 1990.

Rainfall Annual average rainfall in the Cook Islands is 2,000 mm, with the northern group experiencing more rainfall. Annual rainfall ranges from approximately 1,100 to 3,000 mm in Rarotonga and between 800 to 4,700 mm at Penrhyn.^[3] The SPCZ significantly affects rainfall patterns in the country, with the highest rainfalls experienced from November to May when the SPCZ is most active. This also coincides with the country's tropical cyclone season. Interannual variability in rainfall is influenced by the El Niño-Southern Oscillation (ENSO), with opposite effects experienced in the northern and southern groups. During El Niño events, warmer and wetter conditions are experienced in the northern group, while drier and cooler conditions are in the south. The two groups experience the

opposite effects during La Niña events (BOM, 2014). The climate, rain climate in particular, is heavily influenced by the El Niño-Southern Oscillation (ENSO) and by the position of the South Pacific Convergence Zone (SPCZ).

There is a lack of a clear trend in rainfall observations across the Cook Islands (CSIRO and SPREP, 2021). Annual total rainfall shows large year-to-year variability, partly related to the El Niño Southern Oscillation, but no significant overall trends since 1960.

Cyclones The Cook Islands are located in an area that is highly exposed to tropical cyclones with associated damaging winds, intensive rainfall, storm surge and floods. Between 1969/70 and 2010/11 an average of 18 cyclones per decade developed within or crossed the Cook Islands EEZ. Cumulative average annual losses (AAL) due to natural hazards has been estimated at around \$5 million, approximately 2% of GDP.

Intensive rain and floods. The low-lying coastal communities of the Cook Islands are highly vulnerable to coastal flooding arising from storm surges, king tides and intensive rainfall (including associated with cyclones). This has previously resulted in damage to homes and infrastructure, loss of crops, and contamination of water sources from saltwater intrusion (SPREP, 2018). This is notably a problem on Rarotonga, where river (fluvial) flooding and urban (pluvial) flooding are common occurrences due to increased impervious areas and overwhelmed drainage systems.

Drought The Cook Islands also occasionally experience drought conditions. For example, the 2014 – 2015 drought experienced in the northern group of the Pa Enua resulted in significant water shortages. The communities were supported through the shipping of emergency water supplies and the deployment of desalination units. Towards the end of the El Nino season, drier than normal conditions develop in the Southern Islands.

Climate Change and Potential Impacts

The Government of Cook Islands (GoCI), with support from BECA, undertook a national vulnerability assessment in 2024/2025.^[4] The assessment was grounded in a strong foundation of cultural respect and community empowerment. It included inclusive community engagement approaches that ensured the full diversity of local voices was heard, especially women, people with disabilities, and other vulnerable groups. The assessment (BECA, 2025) identified five key climate hazards and their potential impacts at the national level. These are listed in Table 2.

Table 2: Key Climate Change Hazard and Impacts

Climate Hazards	Expected Change	Potential impacts
Air Temperature Changes	• Increase in annual mean surface temperature. • Increase in number of hot days (>30°C).	• Increased survival and establishment of invasive species which threaten indigenous ecosystems and species. • Agricultural productivity changes. • Higher energy demand for cooling or requirement for shaded areas. • Increase in vector-borne diseases with impacts on human health.
Rainfall Changes	• Increase in extreme rainfall intensity. • Changes in drought conditions. • Average annual rainfall change is uncertain but is linked to interdecadal climate patterns.	• Agricultural productivity and food security threatened. • Water security impacted. • Increased flooding events with impacts on infrastructure, health, and livelihoods.

		Increased drought periods with impacts on agriculture, water security, health, and food security.
Tropical Cyclones	There is large uncertainty in projections at a national scale; however, projections for the Southwest Pacific indicate a potential decrease in the frequency of tropical cyclones but an increase in their intensity, leading to more extreme events.	- More intense cyclones cause increased damage to homes, buildings, infrastructure, coastal erosion, and farming, thus resulting in impacts on livelihoods. - Increased impact on humans, risk of injury and loss of life. - Food security and biodiversity threatened. - Compounded impacts with SLR increasing wave energy and over wash.
Sea Level Rise	Slow increase over next century and into centuries beyond.	- Increased erosive impact of storm surges and wave events. - Coastal infrastructure damages increased. - Impacts on low-lying food growing areas. - Viability of atoll communities threatened. Groundwater aquifers impacted by seawater intrusion, threatening water security.
Oceanic Changes	- Increase in ocean temperature. - Increase in marine heat wave event intensity and frequency. - Increase in ocean acidification.	- Increased coral bleaching threatening biodiversity, tourism, and livelihoods. - Marine bio-diversity changes, impacting on food security. - Lagoon ecosystem deteriorations. - Coral reef growth decreased; shellfish populations threatened; coastal zones impacted more as reefs deteriorate. - Change in fisheries populations and locations.

Source: BECA, 2025

Vulnerability and Without Project Scenario

The vulnerability of Cook Islands to the climate hazards varies with the scale of the climate impact. Vulnerability is also heavily determined by the population's exposure to the hazard, and the ability of the population to adapt to the impact - or its resilience. As a result, vulnerability varies greatly from sector to sector, and from community to community. For example, the agriculture sector is clearly more vulnerable than the services sector – although tourism is vulnerable. Also, for example, poor communities, marginal groups and isolated communities have less adaptive capacity and are more vulnerable than urban, salaried workers.

BECA (2025) identified climate vulnerabilities that are common across all islands and nationally significant. These are notably:

- Water security was commonly raised as the greatest concern among communities due to dependence on rainwater harvesting, limited storage capacity, and dated infrastructure. Irregular rainfall and increasing droughts exacerbate these vulnerabilities.
- Built infrastructure primarily relates to regional connectivity, coastal protection, and buildings. However, much infrastructure is vulnerable, leaving the population serviced by the

infrastructure also vulnerable. While some adaptive strategies have been implemented, the resilience of this infrastructure varies.

- Food security vulnerabilities. These are not as significant as water security across the Cook Islands given there is often a mix of imported and locally grown food sources. However, droughts, flooding, variable soil quality, temperature fluctuations, and saltwater intrusion threaten crop yields and lead to a necessity for heightened water management.
- Health services are limited in the Pa Enua and there is a heavy reliance on costly medical evacuations to Rarotonga.
- The education sector is challenged by extreme weather, flooding, and heatwaves that disrupt infrastructure and educational processes.
- Climate change poses significant risks to essential economic livelihood sectors like agriculture and fishing.

Generally, climate hazards and the effects of climate change are more pronounced for communities and infrastructure in low lying areas, such as the atolls in the drier Northern Group. However, the Northern islands have already received significant support to resilience, notably for water security (see below). Further, it is noted that over 90% of the population lies in the Southern Group islands. Hence, the focus of this project is the southern islands, including Rarotonga. Annex H summarizes the BECA (2025) findings of the vulnerability assessment for the southern islands. The project will notably cover Rarotonga, Mangaia, Atiu, Mauke, and Mitiaro.

The details and components of vulnerability vary across these islands – in terms of the sectors, the priorities and the scale. The assessments, consultations and studies undertaken within BECA (2025), and other related community assessments and consultations have identified priority concerns for each of the targeted islands. These are summarized in Table 3.

Table 3: Summarizing the key climate risks and vulnerable sectors for the targeted islands.

Island	Key Climate Risks	Vulnerable sectors*
Rarotonga (note the large population, and many communities with limited resilience and adaptive capacity).	Increased heavy rainfall.	Essential economic livelihoods (e.g. tourism)
	Coastal inundation from sea level rise and storm surges (all can be cyclone related).	Built infrastructure
Mangaia (note the limited adaptive capacity and low resilience due to remote, isolated population).	Change in rainfall patterns leading to extreme rainfall or drought (note, this is to be exacerbated by sea level rise that damages freshwater and infrastructure).	Essential economic livelihoods (e.g. agriculture)
		Education
		Health
		Water security
Atiu (note the limited adaptive capacity and low resilience due to remote, isolated population).	Change in rainfall patterns leading to extreme rainfall or drought.	Water security
		Food security
		Education
		Essential economic livelihoods
		Health

Mauke (note the limited adaptive capacity and low resilience due to remote, isolated population).	Change in rainfall patterns leading to extreme rainfall or drought. Tropical cyclones. Saltwater intrusion to aquifers.	Education Essential economic livelihoods Food security Health
Mitiaro (note the limited adaptive capacity and low resilience due to remote, isolated population).	Extreme rainfall	Health Education Essential economic livelihoods Food security Water security

* This table does not list **all** the vulnerable sectors that were identified. It lists the highly and moderately vulnerable sectors that are to be addressed through this project. Where appropriate, highly vulnerable sectors are listed first; the others sectors are listed alphabetically.

The baseline, without project scenario includes increasing water insecurity on Atiu, Mangaia and Mitiaro; essential livelihoods undermined on all five islands; and increasing challenges for health, education and food security on Atiu, Mangaia, Mauke, and Mitiaro

Stakeholders and Institutional Relationships

Stakeholder mapping and stakeholder engagement is ongoing and undertaken through a four-phase process. It covers four categories of stakeholder: direct and indirect, government stakeholders and non-government. More information and lists of stakeholders are provided in Annex G.

According to ADB policy, the Ministry of Finance and Economic Management (MFEM) will be the executing agency. MFEM is a central agency for advising the Government on financial and economic issues, providing policy advice and oversight of the public sector. The Major Projects and Procurement Support Division (MPPS) under MFEM will play a key role.

The ADB implementing agencies for the project will be Infrastructure Cook Islands (ICI) (Outcomes 1, 2 and 3) and MFEM (Outcome 4). ICI, as the GEF “executing partner,” will oversee the project outcomes related to flood management, water security and capacity building. MFEM will oversee the renewable energy strengthening outcome.^[5] ICI is responsible for much of the delivery of infrastructure policy and development. The role of ICI facilitating the right policy settings and developing infrastructure within tight fiscal envelopes is critical. ICI are currently involved with implementation of stormwater, flood protection works, as well as other government infrastructure projects in Rarotonga and Pa Enua.

Another key national government agency is the National Environment Service (NES). The National Environment Service (NES) protects and controls water and land resources in the Cook Islands. Under the Environment Act (2003), the NES regulates activities affecting foreshore, wetlands, and streams, requiring permits for these areas. The Act applies only to certain islands: Rarotonga, Aitutaki, Atiu, Mauke, Mitiaro, and Suvarrow. Individual islands are required to adopt the legislation in order for it to take effect. NES will notably play key roles in: Outcome 1, guiding and overseeing

the roll out of nature-based solutions, and; all Outcomes – overseeing due diligence and safeguards. Finally, under the Office of the Prime Minister, the Climate Change Unit is involved in the development of climate change adaptation programmes that includes building of resilient freshwater resources.

At the national level, the government is establishing a Project Steering Committee to oversee the project and support coordination. Finally, a Central Project Management Unit will be established under ICI to manage overall project implementation.

Local government commitment and support is essential to achieving a sustainable project impact on each island. Since 2013, Island Governments administer devolved government functions on behalf of the National Government. The Island Government is a Council consisting of elected members (mayor and councillors) and appointed members (traditional leaders, religious representatives, and members of parliament, who serve as ex-officio members). The Island Council serves as the primary decision-making authority for Central Government functions on each island, aiming to provide efficient and effective governance. Local Government services include health, education, policing and justice. The Island Council will play a strong role in overseeing and coordinating project activities at the island level. The Island Councils have also established island water committees and island disaster risk management committees.

Investment Landscape

A sector assessment was undertaken and sector development plan (SDP) prepared. The SDP identified 11 required investment projects. Using multi-criteria assessment, four high priority sub-projects were identified, i.e.:

- Flood management in Muri catchment using nature-based solutions and integrated flood risk management institutional strengthening to build community and urban resilience to flood risks.
- Enabling environment with enhanced policy, standards, knowledge sharing mechanisms and investment plans that foster national resistance.
- Improved water security and sanitation pilots in Pa Enua to build resilience to growing threats of drought and flood.
- Battery replacement for renewable energy systems on 5 Pa Enua: enhancing performance and ensuring critical service continuity when disasters occur.

See Annex G for more information on the SDP and prioritization process. Annex G also provides information on related ongoing initiatives. The proposed SCCF co-financed WAVE Project^[6] has activities in three traditional sectors: water security, flood control and energy security. Each of these sectors has past and ongoing projects, as follows:

Water security Since 2005, GoCI have been working with the Local Island Governments and communities to improve water supply access on all islands, especially through improving rainwater harvesting systems - the main sources of water supply for these islands. Traditionally, the northern islands have been more exposed to water shortages given the lengthier dry periods. Hence the Pa Enua Action for Resilient Livelihoods (PEARL) program, approved 2018, included significant activities to upgrade northern Pa Enua water security. Subsequently, the Managing Water Scarcity through Strengthened Water Resources Management was initiated. Collectively, these projects have largely addressed the challenge of water security in the Northern Islands.

Flood control/Muri Basin The government has aimed to improve integrated catchment management of the Muri basin for many years. The initial aim was to focus on engineering solutions to sanitation, then to focus on ensuring sanitation is climate resilient. The government, with support from international partners, has undertaken many assessments and scientific studies. The government's latest aim is to focus on *all round climate resilience* - reflecting latest understanding and priorities.

Renewable energy The Renewable Energy Sector Project, financed by ADB, EU, GCF and GEF (\$4.26 million approved in 2016) has been developing renewable energy capacity throughout all islands. This project has installed and updated solar PV power systems on 6 islands ((Mauke, Mitiaro, Mangaia, Atiu, Aitutaki and Rarotonga). This included the installation of Battery Energy Storage Systems (BESS).

Other In addition, the following pertinent GEF funded projects are underway in the Cook Islands. Appropriate collaboration and coordination arrangements will be established.

- Reducing Single-use Plastics on Small-island Economies (RESPONSE - Plastic IP) (UNEP).
- Enhancing biodiversity considerations and effective protected area management to safeguard the Cook Islands integrated ecosystems and species (UNDP).

^[1] A low sandy island found on the surface of coral reefs.

^[2] These are defined as composite islands with three key geomorphic traits: makatea limestone, a depression with swamps and streams, and an exposed volcanic core.

^[3] It is important to note that while Rarotonga is situated in the southern group and experiences a drier climate along its coastal margins, central areas of the island have reported annual rainfall of up to 4,000 mm

^[4] This section draws substantially from Cook Islands Vulnerability & Adaptation Assessment Report, prepared by BECA Consultants for the Government of the Cook Islands (BECA, 2025)

^[5] ICI is the GEF "Executing Partner" for GEF-funded elements.

^[6] Note: During much of the design process the project was tentatively entitled the "Climate Resilience and Environmental Improvement for Communities" or CREIC Project. Hence many of the planning and design documents, for example Annex G, Annex H and Attachment 1, refer to CREIC.

B. PROJECT DESCRIPTION

Project description

This section asks for a theory of change as part of a joined-up description of the project as a whole. The project description is expected to cover the key elements of good project design in an integrated way. It is also expected to meet the GEF's policy requirements on gender, stakeholders, private sector, and knowledge management and learning (see section D). This section should be a narrative that reads like a joined-up story and not independent elements that answer the guiding questions contained in the PIF guidance document. (Approximately 3-5 pages) see guidance here

The Objective of the WAVE Project is improved water and energy security in the Cook Islands. The project will focus on priority climate vulnerability issues as identified by communities in consultation with local and national government. The Project's theory of change is illustrated in Figure 2.

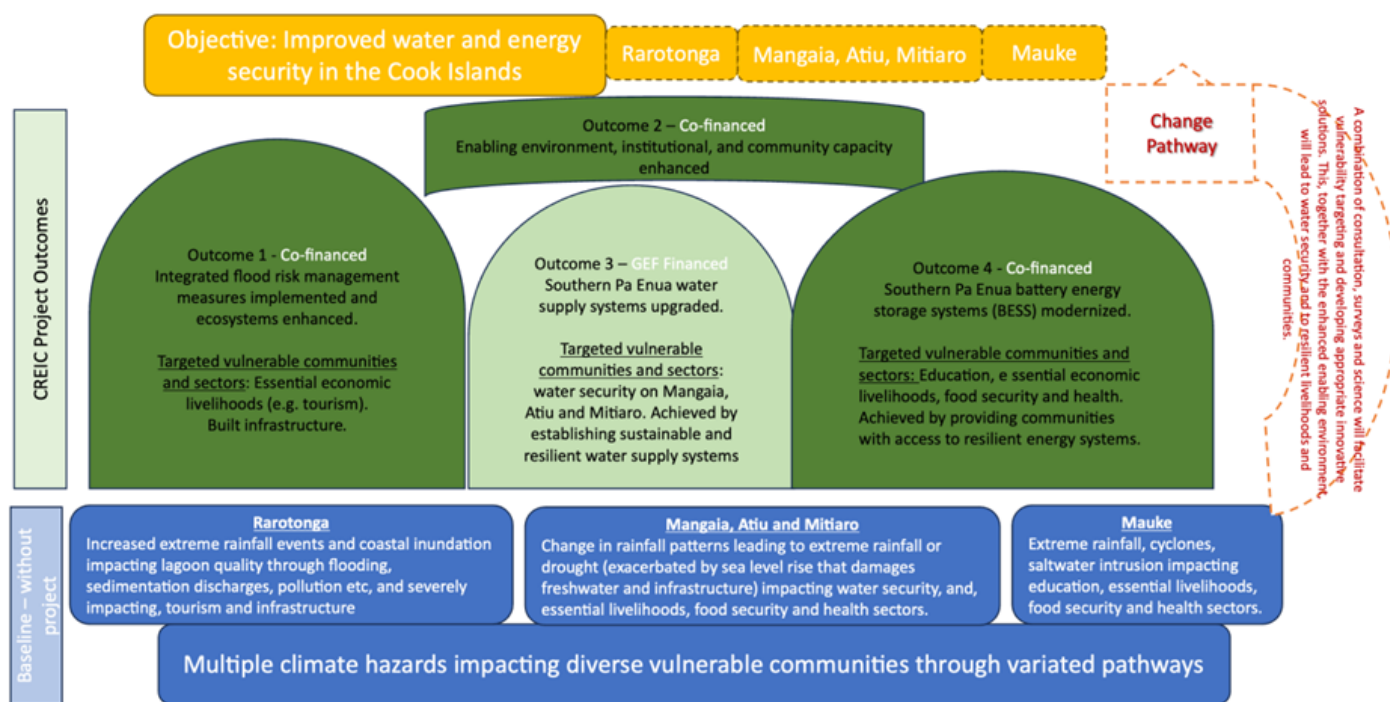


Figure 2: Theory of Change - illustrating vulnerable sectors/communities from Table 3.

Theory of Change

As illustrated in Figure 2, WAVE uses a combination of consultation, surveys and science to identify vulnerable sectors and communities. And then to determine appropriate and innovative technical and enabling solutions for those sectors/communities. This, together with the enhanced enabling environment, will lead to the following outcomes:

Outcome 1 (entirely co-financed) - Integrated flood risk management measures implemented and ecosystems enhanced. As a result of WAVE interventions, the critical Muri Basin on Rarotonga will be managed in a more sustainable and more resilient manner. It will then provide an improved basis for sustainable livelihoods for vulnerable people, notably in the tourism sector.

Outcome 2 (entirely co-financed) - Enabling environment, institutional, and community capacity enhanced. Outcome 2 will strengthen the enabling environment for the concerned sectors. Outcome 2 underlies all three other Outcomes. It will contribute to the Muri lagoon resilience, as well as to water security and improved energy access on Pa Enua.

Outcome 3 (GEF Financed) - Southern Pa Enua water supply systems upgraded. This will be achieved by establishing sustainable, adapted and resilient water supply systems on the islands of Atiu, Mangaia and Mitiaro.

Outcome 4 (entirely co-financed) - Southern Pa Enua BESS modernized This will ensure that vulnerable groups and communities have access to resilient energy systems, which can be used to drive activities in the health, education and economic livelihood sectors (encompassing food security).

Table 4 provides an overview of how the WAVE project interventions respond to the vulnerabilities on each of the targeted islands.

Table 4: Showing how Proposed WAVE Interventions Respond to each Island's Priority Vulnerabilities

Island	Priority vulnerable sectors*	WAVE Intervention
Rarotonga (note the large population, and many communities with limited resilience and adaptive capacity).	Essential economic livelihoods (e.g. tourism), Built infrastructure.	Outcome 1. This will (i) enable resilient livelihoods and (ii) protect public and private infrastructure.
Mauke (note the limited adaptive capacity and low resilience due to remote, isolated population).	Education Essential economic livelihoods, Food security, Health.	Outcome 4. This is to be achieved through battery energy storage systems.
Mangaia (note the limited adaptive capacity and low resilience due to remote, isolated population).	Essential economic livelihoods (e.g. agriculture), Education, Health Water security.	Outcome 3, through improved water collection and management. Outcome 4. This is to be achieved through battery energy storage systems.
Atiu (note the limited adaptive capacity and low resilience due to remote, isolated population).	Water security, Food security Education Essential economic, livelihoods Health.	Outcome 3, through improved water collection and management. Outcome 4. This is to be achieved through battery energy storage systems.
Mitiaro (note the limited adaptive capacity and low resilience due to remote, isolated population).	Health, Education Essential economic livelihoods, Food security, Water security.	Outcome 3, through improved water collection and management. Outcome 4. This is to be achieved through battery energy storage systems.

* As identified in Table 3.

Targeting vulnerability.

WAVE targets vulnerability by focusing on vulnerable sectors on vulnerable islands. In addition, through all Outcomes, appropriate efforts will be made to target vulnerable and marginal groups to ensure they benefit entirely from the project interventions and have full access to the project Outcomes. More information is provided in Table 5.

Table 5: Showing how WAVE targets vulnerable groups

WAVE Intervention	Approach to vulnerability targeting
Outcome 1 - Integrated flood risk management measures implemented and ecosystems enhanced.	Outcome 1 will ensure that all flood management and response mechanisms are fully inclusive. It will ensure that any poor or marginalized communities benefit fully from the improved flood control.
Outcome 2 - Enabling environment, institutional, and community capacity enhanced	Outcome 2 will seek inclusive governance and policy and management frameworks that lock-in appropriate access for marginal and vulnerable groups.

Outcome 3 - Southern Pa Enea water supply systems upgraded	Outcome 3 will be designed to ensure that all marginal and vulnerable people have full access to the improved water services in a sustainable manner.
Outcome 4 - Southern Pa Enea BESS modernized	Outcome 4 will be designed to ensure that all marginal and vulnerable people have full access to the improved energy services and follow-on activities (in health, education, etc), and in a sustainable manner.

Project Components

Outcome 1 - Integrated flood risk management measures implemented and ecosystems enhanced.

Attachment 1 (*Assessment of Water, Sanitation and Flood Conditions, Sector Analysis*, GHD, 2025) includes an assessment of current flood management on Rarotonga. Rarotonga is particularly vulnerable to flooding from extreme weather events. The vulnerability of existing assets to flooding is a growing concern. Recent studies have highlighted that a future wastewater reticulation network would be highly vulnerable to tropical cyclones, heavy rainfall, and flash floods. Further, sea level rise could also impact sewer network functionality. Due to its topography, the Muri catchment is highly vulnerable to coastal and river flooding during heavy rainfall and cyclonic events. Titikaveka catchment lies adjacent to Muri and is similarly exposed, although less populated.

The Muri basin coastline is critical to the nation's tourism sector and in-turn to the nation's economic resilience. Inland and coastal flooding across the Muri catchment are a direct threat to tourism as they cause damage to physical assets, temporary downtime of public service and tourist amenities, flushing of biological and chemical pollutants into the Muri lagoon (thereby also contributing to degradation of the unique ecosystem), etc. This is exacerbated by droughts that exacerbate pollution, complicate stormwater management, and locally affect domestic water quality.

As set out in Table 6, initial findings suggest the priority climate stressors on the Muri lagoon are increased intensive rainfalls, sea level rise, rising temperatures and extreme events.

Table 6 (source: GHD Revised TOR for Outcome 1)

Climate driver	Impact on catchment	Impact on lagoon
Increased rainfall intensity	Higher runoff, erosion and septic overflow	Elevated nutrient and sediment loads
Sea level rise	Reduced lagoon flushing	Accumulation of pollutants
Rising temperatures	Enhanced algal growth	Coral stress, fish mortality
Extreme events	Infrastructure damage	Ecosystem degradation, coral damage

This Outcome will enhance multiple existing areas to provide flood attenuation and sediment treatment along the streams within the two of the primary catchments that flow into the Muri Lagoon. Ongoing feasibility studies are determining the optimum interventions, which are expected to include several nature-based solutions. Ongoing feasibility studies are also determining likely environmental degradation (Table 6), and how the degradation will evolve with climate change, and then estimate the impact of proposed interventions on the environmental degradation.

Under this Outcome, tools such as hydrodynamic and hydraulic modelling, and integrated flood risk assessment and extensive community consultations will guide decision-making to ensure integrated,

climate-resilient, community focused and sustainable solutions. Despite the main focus being on pluvial and fluvial flooding, integrated modelling will evaluate combined pluvial and coastal flooding scenarios to ensure robust solutions that address both inland and coastal hazards and their compound events.

Depending on life-cycle and sustainability analysis, NbS interventions using native species will be considered to support the restoration of natural hydrological functions, increase infiltration, and reduce pollutant loads entering Muri Lagoon. Riparian and wetland restoration is expected to enhance biodiversity, improve habitat connectivity, and strengthen ecosystem services such as carbon sequestration and water purification, contributing to climate resilience and sustainable livelihoods.

It is likely that the Outcome will include some or all of the following interventions:

- Stream rehabilitation and repair.
- Streambank reinforcement.
- Enhancement of wetlands.
- Culvert review and resizing.
- Vegetation clearance.
- Debris management.
- Outlet improvements.
- Overland flow management.

Outcome 1 is entirely financed by co-finance.

See Annex I for details of the approach and design considerations for Outcome 1.

Outcome 2 (Co-financed) - Enabling environment, institutional, and community capacity enhanced.

Outcome 2 aims to strengthen the institutional, policy, and community foundations necessary to enhance climate resilience, environmental protection, and sustainable development across the Cook Islands. This will notably cover Muri Lagoon flood management and water security on Pa Enea. The project will provide capacity building and implementation support to design and implement (i) policies to improve coordination on land use planning and development regulations; (ii) sector-specific policies to optimize the functions and resilience of targeted streams and wetlands, such as onsite sanitation and wastewater management, lagoon protection management, community and operations and maintenance (O&M) practices; (iii) knowledge sharing and capacity building measures on the water-energy-tourism nexus in relation to climate impacts and disaster risks; and (iv) project implementation O&M support for solutions to the government agencies and communities.

A number of interventions are being assessed, and, specifically, some of the following interventions may be supported:

- WAVE investment activity implementation support.
- Supporting knowledge sharing and capacity building on the water-energy-tourism nexus in relation to climate impacts and disaster risk.
- Lagoon protection governance committee – establishing and supporting the mobilization phase.
- Government staff and community training in the operation and maintenance of the flood management catchment works, and associated nature based and engineering interventions implemented by the WAVE project.

- Government staff training in environmental management, climate change adaptation, and natural capital conservation.
- Supporting community education on water conservation in the Pa Enua.
- Supporting the development of a regenerative tourism action plan for Rarotonga.
- Supporting the development of Policies to improve coordination on land use planning and development regulations.
- Supporting the development of Sector-specific policies to support climate change and disaster resilience.
- Institutional Capacity Assessments to establish forward planning, training plans, access to support / specialist input etc. for key CIG agencies associated with the Muri lagoon environment.
- Establish and agree mandate gaps and overlaps for key CIG agencies associated with the Muri lagoon environment.
- Pa Enua on-island O&M training.
- Feasibility study for establishing a regional emergency response facility, equipped with tools, spare parts, and personnel to support the southern Pa Enua.

Outcome 2 is supported entirely by co-finance.

Outcome 3 (GEF Financed) - Southern Pa Enua water supply systems upgraded.

Attachment 1 (*Assessment of Water, Sanitation and Flood Conditions, Sector Analysis*, GHD, 2025) includes an assessment of current water supply systems on the Pa Enua. The water supply and availability of drinking water across the Pa Enua vary from island to island, influenced by factors like population size, geographical features, and infrastructure development. Most islands rely on private rainwater tanks provided by the government with some islands having small public reticulated systems that rely on rainwater, especially during the dry season. The variability of rainfall and the absence of advanced treatment infrastructure mean that water quality and availability can be

inconsistent across the Pa Enua, particularly during dry periods. The water supply system and current risks for the targeted islands are summarized in Table 7.

Table 7: Existing water systems on the targeted islands

Island	Existing system	Supply risks
Atiu	Atiu's public water supply relies on a basic reticulated system that collects rainwater in communal tanks, supplemented by a few wells and natural springs, which are not reliable year-round. Households primarily depend on rainwater harvested from rooftops and stored in individual tanks, with some using untreated spring water for non-drinking purposes. The main reticulated network is currently out of service at the direction of the island council.	The availability of safe drinking water largely depends on rainfall, with shortages often occurring during the dry season, prompting residents to boil water to ensure it is safe to drink.
Mangaia	Mangaia's public water supply system combines rainwater collection and groundwater extraction from boreholes, with water stored in communal tanks and distributed through a basic reticulated network. Most households also have their own rainwater tanks to supplement the public supply.	While drinking water is generally available, its quality can be inconsistent, especially in areas dependent on untreated borehole water.
Mitiaro	Mitiaro's public water supply system relies on rainwater collection and limited groundwater extraction, with water stored in communal tanks and distributed through a basic pipeline network. The network is however currently out of service due to a collapsed water tower. Residents primarily depend on private rainwater tanks for their water needs.	While drinking water availability is generally sufficient, quality issues can occur after heavy rains. Boiling water is a common practice.

The southern Pa Enua face significant challenges in relation to natural hazards and their remoteness. They are exposed to tropical cyclones with associated damaging winds, intensive rainfall, storm surge and floods. Also, localized dry periods are an important hazard, creating risks to both food and water security. Climate change is projected to lead to sea level rise and to increases in cyclone and non-cyclonic storm intensities and potentially increased intensity in droughts. All of this is projected to exacerbate pluvial and coastal flooding as well as water and food insecurity. Vulnerability is further exacerbated by the fact that there are no permanent surface water bodies. They rely on a mixture of rainwater harvesting and underground water galleries. Available water quality and quantity is therefore influenced by rainfall and temporary sea levels.

Based on initial assessments, the key climate-induced stressors are reduced rainfall, extended dry seasons, increased evaporation rates, cyclone-related infrastructure damage and sea level rise. Ongoing feasibility studies are to:

- Determine needs by providing a clear evidence-based assessment for the installation or rehabilitation of community water tanks, including analysis of water demand, optimal storage needs (sizing), and equitable allocation based on population vulnerability.
- Evaluate and make recommendations for rainwater harvesting approach, encompassing roof capture, conveyance systems (gutters and downpipes), and the tank infrastructure itself. And to also consider the most practical tank-to-tap distribution options for users.
- Understand community needs and preferences for community storage tanks and the catchment feeding those tanks. The needs and preferences of the community may include drivers that are not strictly water security related.
- Identify impacts of future climate variability on water supply security and population vulnerabilities, and present appropriate design options to enhance water resilience and reduce risk.

- Evaluate a range of implementation options focused on technical options (e.g. materials, site suitability, structural standards) and community options (e.g. management structures, local labor mobilization, and capacity building).
- Work with local governments and utilities to confirm the scope of work.
- Undertake detailed design and due diligence.

BECA 2025 looked at adaptation options for Pa Enea and determined that “*enhancing rainwater harvesting and storage may offer more cost-effective improvements for future water security*”. It also noted that communities suggest establishing water reservoirs in each village to address shortages, increasing water storage capacity at the household level, and enhancing water harvesting through improved spouting.

In line with the above, this Outcome will develop a stronger system of emergency water storage for times of drought across three islands (Atiu, Mitiaro, and Mangaia). The optimal improvement is through rainwater harvesting at community facilities such as schools, meeting halls, and churches, together with additional water storage (some at households will also be considered) and improved distribution networks. This Outcome will supplement ongoing ICI activities to improve water security on all Pa Enea.

The Outputs are:

- 3.1 Increased water capture and storage, and enhanced distribution network, on Atiu Island.
- 3.2 Increased water capture and storage, and enhanced distribution network, on Mangaia Island.
- 3.3 Increased water capture and storage, and enhanced distribution network, on Mitiaro Island.
- 3.4 Management, operations and maintenance capacity on the three islands.

Outcome 3 is financed by GEF/SCCF.

Outcome 4 (Co-financed) – Southern Pa Enea battery energy storage systems (BESS) modernized.

The Government of the Cook Islands has an ambitious target to achieve 100% renewable energy generation across all 12 inhabited islands. Previous interventions have installed solar PV electricity generation and battery storage (BESS) systems. However, these and other energy systems on the Pa Enea are increasingly stressed by climate and operational challenges. The BESS installed in the renewable energy power stations of the Southern Group islands (Atiu, Mauke, Mitiaro, and Mangaia) have reached the end of their design lives. As storage capacity declines, reliability of supply is reduced, forcing greater reliance on costly and logistically difficult diesel generation and undermining renewable energy integration. This exposes communities to heightened risks during disasters, when continuous electricity is critical to sustain services such as health care, water pumping, ice-making for fisheries, and communications.

Replacement of aging BESS units is therefore essential to (i) restore reliable storage capacity and system stability, (ii) enable higher renewable energy penetration and reduce fuel dependency, (iii) build resilience of essential services during cyclone and drought events, and (iv) ensure environmentally sound disposal and removal of end-of-life batteries. Without this investment, energy

insecurity will continue to constrain climate adaptation, water security, and livelihood resilience on the Pa Enea.

Ongoing feasibility studies will determine the optimum interventions. These studies include:

- An analysis of load data (historical and forecast) and renewable integration requirements;
- A determination of optimal BESS sizing, configuration, and design per island;
- An assessment of the need for complementary PV generation;
- An identification of obsolete components, and propose replacements;
- Prepare lifecycle cost estimates;
- Develop logistics plan for safe removal and disposal of existing lead batteries;
- Detailed design and due diligence for selected interventions.

The interventions under this Outcome will replace end-of-life Battery Energy Storage Systems (BESS) on up to five Pa Enea in the Southern Group. This will restore reliable storage capacity to maintain power supply stability, improve integration of renewable energy, and strengthen resilience of critical community services during natural disasters. It also incorporates environmentally responsible removal and disposal of used battery units, ensuring compliance with international standards and minimizing environmental risks.

Outcome 4 is supported financed by co-finance.

Global Environmental Benefits (GEBs)

These are described in the section SCCF Core Indicators below.

Stakeholder Engagement, Gender and Women's Empowerment, and Private Sector

Annex G provides more details of the approach, findings and next steps related to stakeholder engagement, gender and the private sector.

Stakeholder Engagement. Several rounds of consultations have already taken place with government and non-government stakeholders. The final project design will include a detailed stakeholder engagement plan and stakeholder communication plan or equivalents.

Gender Equality and Women's Empowerment. The project will specifically include support for women and vulnerable groups that depend on coastal ecosystems. Good practice gender methods will be applied to ensure women are well represented in workshops and training sessions. Hence, the project has the potential to contribute to gender equality and/or women's empowerment. Further, the project is not expected to have any adverse impact on women and/or girls or widen gender inequality. Full due diligence is being conducted and will include preparation of gender assessment and gender action plan.

Private Sector will benefit from project activities and also may be involved in project implementation. Under Outcome 1, an eco-compensation fund is being considered that would involve private entities (i.e., hotels, eco-tourism). The strategic procurement plan is under development and will explore opportunities for private sector participation - the project may include design-build contracts.

Knowledge management, innovation and policy coherence.

ADB emphasizes the importance of knowledge management across its portfolio. ADB's Knowledge Management Action Plan (KMAP), 2021-2025^[1], aims to improve how knowledge is managed across all business processes. It emphasizes increasing collaboration, improving the quality and efficiency of knowledge services, making knowledge work more attractive, and using a country-focused approach to benefit DMCs. It has 10 key actions, of which the most pertinent to this WAVE project are: Recruit, develop, foster, and incentivize staff members who have the needed knowledge management competencies; strengthen country knowledge programming; create a connected enterprise knowledge network; strengthen and clarify measures to guide teams in developing quality knowledge products; and strengthen the resident missions' role in advancing relationships. Knowledge management will be guided by GEF's Knowledge Management Approach Paper.^[2] It will notably be carried out in conjunction with the project's Stakeholder Engagement Plan and Gender Action Plan.

Outcome 2 (*Enabling environment, institutional, and community capacity enhanced*) includes a specific focus on sharing knowledge. This will include supporting knowledge sharing and capacity building on the water-energy-tourism nexus in relation to climate impacts and disaster risks. Finally, the project development process has a particular focus on indigenous knowledge – with the principle that engineering and science-based solutions must be considered concurrently with local knowledge and the feedback and insight from the communities to achieve the appropriate balance of the outcomes sought.

The project is expected to support transformation and the broader resilience of Cook Islands (CI) ecological and economic systems by addressing critical needs in terms of policy/planning/standards/knowledge. The sub-projects may be considered pilots with opportunities for replication under future projects, particularly in remote and vulnerable SIDS that are vulnerable to the climate change and natural hazards. Finally, the use of nature-based solutions and potentially natural capital accounting could have significant impacts on the design of future tourism projects with a focus on natural amenities.

Outcome 2 (*Enabling environment, institutional, and community capacity enhanced*) also includes a specific focus on improving national policies and policy coherence. The following are being considered under Outcome 2: Establishing a lagoon protection governance committee; Supporting the development of a regenerative tourism action plan for Rarotonga; Supporting the development of Policies to improve coordination on land use planning and development regulations, and; Supporting the development of sector-specific policies to support climate change and disaster resilience.

Environmental and social safeguards

Environmental and social safeguards are a cornerstone of ADB's support to inclusive economic growth and environmentally sustainable growth. Accordingly, ADB's safeguard policy^[1] aims to help developing member countries (DMCs) address environmental and social risks in development projects and minimize and mitigate, if not avoid, adverse project impacts on people and the environment. The Safeguard Policy Statement (2009, amended from time to time) covers environment, involuntary resettlement, and indigenous peoples in a consolidated policy framework. It applies to all ADB-financed projects, including ADB-administered co-financing. The Statement also provides a platform for participation by affected people and other stakeholders in project design and implementation. ADB is fully compliant with GEF minimum fiduciary standards, including environment

and social safeguards (ESS). Annex D provides the completed ADB ESS Checklist for GEF-financed Projects.

ADB has classified the project as category 'B' for environment safeguards. Any environmental impacts are expected to be site-specific, mostly or fully reversible, and with readily available mitigation measures. An initial environmental examination (IEE) is underway and a draft environmental management plan prepared. This finds that no major environmental impacts are anticipated during construction or upon completion.

ADB has classified the project as category B for involuntary resettlement. Due diligence is being undertaken to assess potential involuntary resettlement impacts on all the proposed sites. Consultations were held with affected persons and this included the disclosure of draft safeguard documents; this process will continue during project implementation. Very limited impacts are identified for Outcomes 3 and 4, as they will be located on crown-owned or already leased lands. Limited impacts are expected for the Outcome 1 and they are anticipated to be temporary. A resettlement plan (RP) is being prepared. This is expected to be available for review during May 2026.

Based on the available information, the project is expected to be categorized as C for impacts on Indigenous Peoples since no impacts are expected under the project on distinct and vulnerable groups, noting that there are no indigenous peoples in the country as defined by ADB and GEF.

All relevant safeguards documents, including above mentioned IEE and RP, when finalized, will be publicly disclosed and available through ADB websites.

Finally, the approved baseline project includes institutional arrangements to ensure effective implementation of safeguards and includes a funding provision for project management and project implementation assistance, which includes the necessary expertise to cover environmental safeguards, resettlement, gender and stakeholder consultations.

^[1] <https://www.adb.org/documents/safeguard-policy-statement>

^[1] ADB, 2021

^[2] Global Environment Facility. 2015. *GEF Knowledge Management Approach Paper*. Washington, DC.

Coordination and Cooperation with Ongoing Initiatives and Project.

Does the GEF Agency expect to play an execution role on this project?

If so, please describe that role here. Also, please add a short explanation to describe cooperation with ongoing initiatives and projects, including potential for co-location and/or sharing of expertise/staffing

No.

Table 8 illustrates potential collaboration possibilities and modalities with other initiatives and projects. This is to be elaborated before full project approval.

Table 8: Potential cooperation partners

Project	Parties	Potential Cooperation
Renewable Energy Sector Project (ongoing)	ADB administered (co-finance by EU, GCF and GEF)	Share data and documentation. Share expertise. Share office space as possible.
Rarotonga Airport Infrastructure Upgrade Project (soft pipeline)	ADB (NZAID, others to be determined)	Share data and documentation. Share expertise. Share office space as possible.
Reducing Single-use Plastics on Small-island Economies (RESPONSE - Plastic IP) (ongoing)	UNEP/GEF	Cooperation possibilities to be explored.
Enhancing biodiversity considerations and effective protected area management to safeguard the Cook Islands integrated ecosystems and species (UNDP) (ongoing)	UNDP/GEF	Cooperation possibilities to be explored.
Others		Project and cooperation possibilities to be explored.

Core Indicators

Explain the methodological approach and underlying logic to justify target levels for Core and Sub-Indicators (max. 250 words, approximately 1/2 page)

META INFORMATION – SCCF

LDCF false	SCCF-B (Window B) on technology transfer false	SCCF-A (Window-A) on climate Change adaptation true
Is this project LDCF SCCF challenge program? true		
This Project involves at least one small island developing State(SIDS). true		
This Project involves at least one fragile and conflict affected state. false		
This Project will provide direct adaptation benefits to the private sector. false		
This Project is explicitly related to the formulation and/or implementation of national adaptation plans (NAPs). false		
This project will collaborate with activities begin supported by other adaptation funds. If yes, please select below		

Green Climate Fund false	Adaptation Fund false	Pilot Program for Climate Resilience (PPCR) false
------------------------------------	---------------------------------	---

This Project has an urban focus.

true

This project will directly engage local communities in project design and implementation

true

This project will support South-South knowledge exchange

false

This Project covers the following sector(s)[the total should be 100%]: *

Agriculture	0.00%
Nature-based management	0.00%
Climate information services	0.00%
Coastal zone management	0.00%
Water resources management	50.00%
Disaster risk management	0.00%
Other infrastructure	50.00%
Tourism	0.00%
Health	0.00%
Other (Please specify comments)	0.00%
Total	100.00%

This Project targets the following Climate change Exacerbated/introduced challenges: *

Sea level rise true	Change in mean temperature true	Increased climatic variability true	Natural hazards true
Land degradation false	Coastal and/or Coral reef degradation false	Groundwater quality/quantity true	

CORE INDICATORS – SCCF

	Total	Male	Female	% for Women
CORE INDICATOR 1 Total number of direct beneficiaries	1200	600.00	600.00	50.00%
CORE INDICATOR 2 (a) Area of land managed for climate resilience (ha) (b) Coastal and marine area managed for climate resilience (ha)	12,800.00 12,800.00			

CORE INDICATOR 3 Number of policies/plans/ frameworks/institutions for to strengthen climate adaptation	1.00			
CORE INDICATOR 4 Number of people trained or with awareness raised	0.0	0.00	0.00	0.00%
CORE INDICATOR 5 Number of private sector enterprises engaged in climate change adaptation and resilience	1.00			

Key Risks

	Rating	Explanation of risk and mitigation measures
CONTEXT		
Climate	Low	Initial assessments have identified no climate significant risks. Further assessments will confirm this situation or otherwise.
Environmental and Social	Moderate	Removal and transport of end-of-life batteries from remote islands carry environmental and logistical risks. Mitigation: The project will prepare an environmentally sound disposal and logistics plan aligned with international standards and Cook Islands regulations, ensuring safe handling, storage, and export/recycling pathways.
Political and Governance	Low	Initial assessments have identified no significant political/governance risks on Cook Islands. Further assessments will confirm this situation or otherwise.
INNOVATION		
Institutional and Policy	Low	Initial assessments have identified no significant institutional/policy risks on Cook Islands. The project component 2 aims to strengthen institutions and policy as needed. Further assessments will confirm this situation or otherwise.
Technological	Moderate	A high resolution design risk assessment has been undertaken. Eleven potential design risks have been identified and assessed. The potential impact, and mitigation measures, have been identified for each. These risks are: (i) Designs are based on what is practically achievable within site constraints, rather than targeting fixed performance standards, (ii) NBS and informal wetlands may not meet conventional water quality treatment benchmarks, (iii) Reliance on timing of modelling outputs from other partner projects, (iv) Low resolution of early-stage modelling, (v) Reliance on historical or incomplete data for hydrology and infrastructure, (vi) High-energy coastal environments and tidal interactions may complicate outlet design (vii) Misalignment with local expectations, (viii) Overlap with other infrastructure projects or services may cause conflicts, (ix) unknown geotechnical conditions or site-specific assessments available, (x) Climate change and sea level rise uncertainty, (xi) The project could require significant volumes of mature vegetation that is

		currently not available. Full risk assessment being undertaken will further design mitigation measures.
Financial and Business Model	Low	Initial assessments have identified no significant risks. The project component 2 aims to strengthen institutions and policy as needed. Further assessments will confirm this situation or otherwise
EXECUTION		
Capacity	Moderate	Delays in preparation, processing and implementation. Mitigation: The ADB team will identify and discuss potential issues early on with relevant government agencies and ADB departments. Moreover, the project will be working with customary land ownership structures which may require additional time and engagement. For the principal implementation agency, ICI (for Outcomes 1, 2 and 3), this is the first ADB project in 10 years. Mitigation: Capacity assessment and continuous coordination are put in place to orient ICI and sustain dialogues on due diligence requirements. Likewise, MFEM, as the implementing agency for Outcome 4, has limited experience in managing technical renewable energy procurements (Previous ADB-supported technical energy projects were implemented through TAU, the national utility or the Renewable Energy Development Division (REDD) under the President's Office). Mitigation: Capacity support will be embedded in project preparation and implementation, including advisory input from international experts, standardized bidding documents, and close ADB supervision. For the principal implementation agency, ICI (for Outcomes 1, 2 and 3), this is the first ADB project in 10 years. Mitigation: Capacity assessment and continuous coordination are put in place to orient ICI and sustain dialogues on due diligence requirements. Likewise, MFEM, as the implementing agency for Outcome 4, has limited experience in managing technical renewable energy procurements (Previous ADB-supported technical energy projects were implemented through TAU, the national utility or the Renewable Energy Development Division (REDD) under the President's Office). Mitigation: Capacity support will be embedded in project preparation and implementation, including advisory input from international experts, standardized bidding documents, and close ADB supervision.
Fiduciary	Low	Delays in preparation, processing and implementation. Mitigation: The ADB team will identify and discuss potential issues early on with relevant government agencies and ADB departments. Moreover, the project will be working with customary land ownership structures which may require additional time and engagement.
Stakeholder	Low	Initial assessments have identified no significant stakeholder related risks on Cook Islands. The project component 2 aims to strengthen institutions and policy as needed. Further assessments will confirm this situation or otherwise.
Other	Moderate	The scope of the project changed significantly during early preparation. The scope of Outcomes 3 and 4 may need to be further reduced if additional

		financing cannot be secured. Mitigation: Prioritization criteria will be established (e.g., system condition, population served, vulnerability to hazards) and additional co-financing will be pursued with development partners.
Overall Risk Rating	Moderate	Initial assessments have identified a small number of moderate risks only. All other risks are low. The overall risk is therefore considered moderate.

C. ALIGNMENT WITH GEF-8 PROGRAMMING STRATEGIES AND COUNTRY/REGIONAL PRIORITIES

Describe how the proposed interventions are aligned with GEF- 8 programming strategies and country and regional priorities, including how these country strategies and plans relate to the multilateral environmental agreements.

Confirm if any country policies that might contradict with intended outcomes of the project have been identified, and how the project will address this.

For projects aiming to generate biodiversity benefits (regardless of what the source of the resources is - i.e., BD, CC or LD), please identify which of the 23 targets of the Kunming-Montreal Global Biodiversity Framework the project contributes to and explain how. (max. 500 words, approximately 1 page)

The project is designed to align with and contribute to “*The GEF Programming Strategy on Adaption to Climate Change for LDCF and SCCF, 2022 – 2026*” (GEF, 2022). Notably, it makes an important contribution to the SCCF Priority Area 1: *Supporting the Adaptation Needs of SIDS*. Cook Islands is a SIDS and consists of remote and isolated islands with highly vulnerable populations. All Cook Islands is facing critical climate change impacts due to increased heat, increased intensive rainfall and drought, sea level rise and coastal storms. The project will help the vulnerable populations with climate resilience, improved water security and energy solutions.

The project is aligned to three of the four themes in GEF (2022) as illustrated in Table 12:

Table 12: Alignment to GEF Policies and Priorities

GEF (2022) theme	Project Contribution
1: Agriculture, Food Security, and Health	Outcome 4 will support sustainable energy systems for communities that currently do not have this. The focus of the energy systems will be to provide food and water security, livelihoods for the vulnerable, It should also contribute to basic health and energy needs. Financial sustainability is a main focus of this.
2: Water	Outcome 3 will support sustainable water supply systems for many communities that currently do not have this. Financial sustainability is a main focus of this. Outcome 1 will also increase resilience to floods, improve the hydrological cycle on Rarotonga, and contribute to sanitation objectives.
3. Nature Based Solutions.	Outcome 1 has the primary objective of improving climate resilience through the reconstruction and protection of wetlands and shorelines. It is expected to become a showcase for integrating nature-based solutions into structural measures for addressing climate considerations in a resilient flood risk management project.

The project also contributes to the following aims included in GEF (2022):

- Focus on communities in coastal areas;

- Community empowerment;
- An important emphasis on transformation levers such as: mainstreaming climate adaptation, strengthening governance for adaptation, and knowledge exchange and collaboration.

Finally, the project contributes to the SCCF aim of building relations with GCF, and notably has close connections with the emerging RPACA initiative.

National Policies

To ensure a sustainable and climate resilient development pathway, the GoCI prepared the *National Sustainable Development Agenda, Te Ara Akapapa'anga Nui 2020+ (2021-2121)*. This emphasizes a holistic approach to progress, integrating cultural heritage, environmental conservation, economic growth, and social equity. Key areas of focus include protecting the natural environment for both cultural and economic reasons as well as addressing climate change, disaster preparedness, and self-sufficiency in energy, water, and food. Other national plans that support resilience and economic development include: (i) *Cook Islands Climate Change Policy, 2018-2028* which recommends strengthening community based and ecosystem approaches to climate resilience building, including water security and (ii) *Cook Island Economic Development Strategy 2030 (CIEDS)*. These identify that improved implementation and standards for climate resilient services, such as water supply and renewable energy, are prerequisites for further tourism development. More specifically for each Outcome:

Outcome 1: The Muri basin coastline is critical to the nation's tourism sector and in-turn to the nation's economic resilience. CIEDS specifically notes the importance of environmental improvement to the Muri Basin as essential to the nation's resilience. Inland and coastal flooding across the Muri catchment are a direct threat to tourism as they cause: damage to physical assets, temporary downtime of public service and tourist amenities, flushing of biological and chemical pollutants into the Muri lagoon, etc.

Outcome 3: GoCI has been implementing programs to address outer island water security for over a decade. Back in 2015, the 2nd Joint National Action Plan, 2016-2020 (JNAPII) identified '*Water and Food' Security*' as Strategy no. 2, of which the first action was "*Promote long term water security for all islands to cope with prolonged dry spells and other impacts of climate change*". Outcome 3 also supports implementation of the National Water Policy (2016) that has the following Objective: "*Ensure water systems are resilient and mitigate the impacts of Climate Change and disasters.*"

Outcome 4, Pa Enea energy systems are increasingly stressed by coastal threats, unpredictability in fuel supply, increased need to provide adaptation services (e.g. desalination, agricultural tools, ice-making). In response, both the *National Infrastructure Investment Plan 2021- 2030* and the *Cook Islands Renewable Energy Investment Plan (2021)* outlined investment pathways for renewable energy and storage infrastructure, including BESS for the Pa Enea. Further, the vulnerability of energy infrastructure and supply and storage systems, particularly on the Pa Enea, was identified in the JNAP (II).

D. POLICY REQUIREMENTS

Gender Equality and Women's Empowerment:

We confirm that gender dimensions relevant to the project have been addressed as per GEF Policy and are clearly articulated in the Project Description (Section B).

Yes

Stakeholder Engagement

We confirm that key stakeholders were consulted during PIF development as required per GEF policy, their relevant roles to project outcomes and plan to develop a Stakeholder Engagement Plan before CEO endorsement has been clearly articulated in the Project Description (Section B).

Yes

Were the following stakeholders consulted during project identification phase:

Indigenous Peoples and Local Communities: Yes

Civil Society Organizations: Yes

Private Sector: Yes

Provide a brief summary and list of names and dates of consultations

Summary of stakeholder consultations:

As a start point, below is a high-level summary of stakeholder consultations undertaken to date during the baseline project preparation phase (PPP), including engagement with CIG agencies, local community groups and landowners during CREIC (ADB baseline project) and WAVE (GEF) project development. To support this, attached is a suite of documents which provide further details should you require.

The project team in the process of updating due diligence documents to reflect the progression of design, and these include social assessment outputs e.g. Summary Poverty Reduction and Social Strategy (SPRSS), Resettlement Plan, Indigenous Peoples Plan, GAAP, IEE and Stakeholder Engagement Plan. This detailed information will inform and also be available during project proposal stage.. There is also further consultation just about to kick off in country - the land agreement team, led by ICI, are currently implementing targeted community meetings with affected landowners, with the first round of meetings taking place tomorrow for Paringaru and Nukupure landowners in Muri.

Phase 0 – Project scoping and problem definition (Jun–Jul 2024)

9

Early consultations were undertaken with national and sector stakeholders to inform project scope and priorities. Agencies consulted included Ministry of Finance and Economic Management (MFEM), Infrastructure Cook Islands (ICI), National Environmental Service (NES), Ministry of Health (TMO), Ministry of Marine Resources (MMR), CIIC. The focus was on institutional capacity, regulatory context, climate/environmental and public health risks, and longer term implementation and O&M constraints.

This consultation phase informed the Sector Development Plan, initial long list of investment activities, and expanded the scope of the project to a multi output climate resilience program.

☐ File attached

Relevance

S182402 TVKA Consultation Phase 0 -
Summary Paper_Final.pdf

Further detail on the Project scoping and problem definition phase in
June / July 2024.

Phases 1 & 2 – Investment identification, screening and prioritisation (Sep–Nov 2024)

This phase was targeted interagency consultation and workshops, held to shortlist and prioritise investment activity options. Participants included MFEM, ICI, NES, CIIC, TMO, MMR, MoAg, Crown Law, To Tatou Vai, and ADB.

Key events included:

- Inception Workshop (September 2024) – MFEM, ICI, ADB
- Investment Activity Selection Criteria Workshop (September 2024) – MFEM, ICI, ADB (criteria endorsed by MFEM in October 2024)
- Follow-up prioritisation meetings (November 2024)

This phase focussed on implementing a transparent multi-criteria assessment of investment activities, alignment with government initiatives, and feasibility and sequencing of potential physical and non physical works interventions.

Refer to Sector Development Plan.

Phase 3 – Investment scoping and refinement (Feb–Mar 2025)

Further consultations were undertaken during the ADB mission (February 2025) and follow-up engagement activities, involving ADB, MFEM, ICI, NES, Office of the Prime Minister, TMO, MMR, CIIC, and selected non-government stakeholders.

The focus was to establish Outputs 1, 2 and 3 scope, implementation modality, safeguards considerations, nature-based solutions for flood management, and Pa Enea water security priorities.

Targeted discussions were also held with local NGOs including Muri Environment Care, to incorporate local knowledge and community led approaches.



File attached

12558738-GHD-PAP-WAVE Consultation
Phase 3 Summary_1.0_S4-03062026.pdf

Relevance

This paper summarises the ADB February 2025 mission and 'Consultation Phase 3' with key government stakeholders. These activities aimed to develop and refine the scope of Outputs 1, 2 and 3. The discussions were undertaken over the week of 17 February 2025 to 24 February 2025 (ADB mission) and the weeks 24 February 2025 to 8 March 2025 (Consultation Phase 3)

Community engagement

For Output 1, community level consultation throughout 2025 has focused on the Muri and Titikaveka catchments, including community forums, household-level surveys, site walkovers and participatory mapping. Participants included community members, landowners, Aronga Mana (traditional leaders), NGOs, elected representatives, and relevant government agencies. This engagement informed preliminary flood management concepts, identified land access and safeguard sensitivities, and supported preparation of IEE, RP, GAAP and SPRSS inputs.

For Output 3 in the Pa Enea, public consultation was undertaken in Atiu on 11 September 2025 as part of an ADB mission, with participation from community members, Island Government representatives, local agencies and community groups (including disability representation), and officials from MFEM, ICI, NES and ADB safeguards specialists. This engagement confirmed a preferred shift toward community-level rainwater storage on government/Crown land to address equity, land tenure and vulnerability concerns. Further island-level engagement is planned as Output 3 advances. We have recently conducted site visits to Atiu and Mitiaro, including meeting with the Islands Councils, and site visits to Mangaia are taking place later this week.



File attached	Relevance
12558738-summary of engagement to date-WIP 2026-04-21.pdf	High level summary of consultation undertaken during PPP phase.
12558738-SPRSS-Section 9 DRAFT WIP_2026-04-21.pdf	Extract from current version of draft SPRSS being updated. Section provides more details on consultation undertaken, and what the themes of community feedback were. It talks to both Output 1 and Output 3.

During PPG ADB will present an updated stakeholder engagement plan.

(Please upload to the portal documents tab any stakeholder engagement plan or assessments that have been done during the PIF development phase.)

Private Sector

Will there be private sector engagement in the project?

Yes

And if so, has its role been described and justified in the section B project description?

Yes

Environmental and Social Safeguard (ESS) Risks

We confirm that we have provided indicative information regarding Environmental and Social risks associated with the proposed project or program and any measures to address such risks and impacts (this information should be presented in Annex D).

Yes

Overall Project/Program Risk Classification

PIF	CEO Endorsement/Approval	MTR	TE
Medium/Moderate			

E. OTHER REQUIREMENTS

Knowledge management

We confirm that an approach to Knowledge Management and Learning has been clearly described in the Project Description (Section B)

Yes

ANNEX A: FINANCING TABLES

GEF Financing Table

Indicative Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	Grant / Non-Grant	GEF Project Grant(\$)	Agency Fee(\$)	Total GEF Financing (\$)
ADB	SCCF-A	Cook Islands	Climate Change	SCCF-A Country allocation	Grant	2,752,500.00	247,500.00	3,000,000.00
Total GEF Resources (\$)						2,752,500.00	247,500.00	3,000,000.00

Project Preparation Grant (PPG)

Is Project Preparation Grant requested?

false

PPG Amount (\$)

PPG Agency Fee (\$)

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	Grant / Non-Grant	PPG(\$)	Agency Fee(\$)	Total PPG Funding(\$)
Total PPG Amount (\$)						0.00	0.00	0.00

Please provide justification

Sources of Funds for Country Star Allocation

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Sources of Funds	Total(\$)
Total GEF Resources					0.00

Indicative Focal Area Elements

Programming Directions	Trust Fund	GEF Project Financing(\$)	Co-financing(\$)
CCA-2-1	SCCF-A	2,752,500.00	17000000
Total Project Cost		2,752,500.00	17,000,000.00

Indicative Co-financing

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount(\$)
GEF Agency	Asian Development Bank	Grant	Investment mobilized	15000000
Recipient Country Government	Ministry of Finance and Economic Management	In-kind	Investment mobilized	2000000
Total Co-financing				17,000,000.00

Describe how any "Investment Mobilized" was identified

The project was conceived through a detailed sector assessment which yielded a water and energy sector development plan (SDP) for the Cook Islands. The SDP identified 11 main investment projects. Using multi-criteria overlay, four high priority sub-projects were identified. This WAVE project was designed in close collaboration with the Government of Cook Islands, as part of the ADB-Cook Islands country programming strategy, and addresses key elements related to water security, flood control and energy security.

ANNEX B: ENDORSEMENTS

GEF Agency(ies) Certification

GEF Agency Type	Name	Date	Project Contact Person	Phone	Email
GEF Agency Coordinator	Yoko Watanabe	12/21/2025	Kristina Katich		kkatich@adb.org

Record of Endorsement of GEF Operational Focal Point (s) on Behalf of the Government(s):

Name	Position	Ministry	Date (MM/DD/YYYY)
------	----------	----------	-------------------

Halatoa Fua	Director	National Environment Service	12/17/2025
Halatoa Fua	Director	National Environment Service	3/21/2026

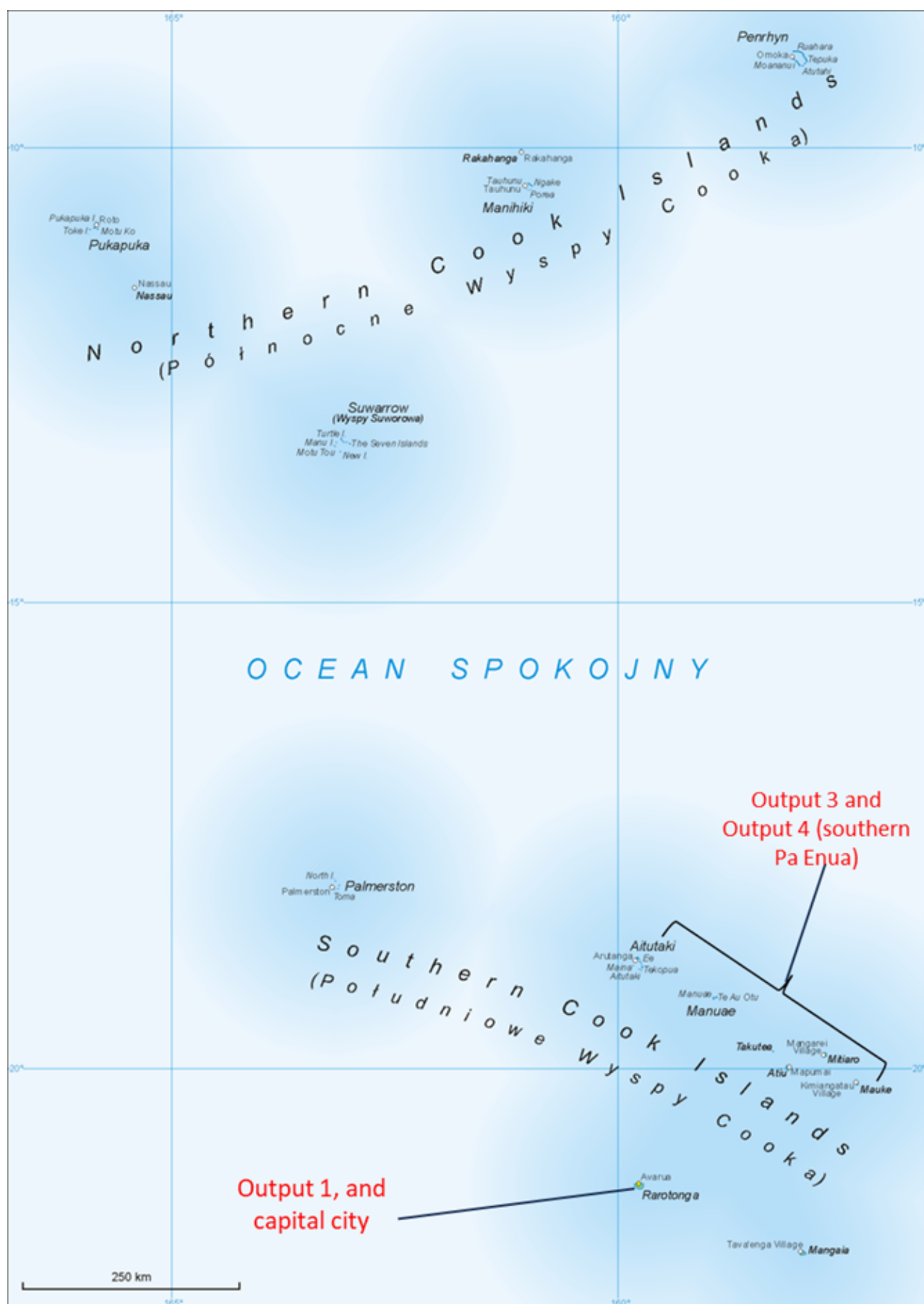
ANNEX C: PROJECT LOCATION

Please provide geo-referenced information and map where the project interventions will take place



The Cook Islands consists of 15 islands with a total land area of approximately 236.7 square kilometers (91 sq mi) distributed over an ocean exclusive economic zone of 1,960,027 square kilometers. It lies between approximately 8°S and 22°S, and between 157°W and 167°W (see map).

The capital, Avarua, on the island of Rarotonga, lies at [21°12'S 159°46'W](#). The capital and the approximate project sites are indicated on the map below.



Source: Coastal Adaptation Needs for Extreme Events and Climate Change, Avarua, Rarotonga, Cook Islands. Project Stage 1: Scoping and Collation of Existing Data. M. Blacka, 2013 (downloaded via *ResearchGate*)

ANNEX D: ENVIRONMENTAL AND SOCIAL SAFEGUARDS SCREEN AND RATING

(PIF level) Attach agency safeguard screen form including rating of risk types and overall risk rating.

Title

25-12-21 Annex D ESS Screening WAVE COO

ANNEX E: RIO MARKERS

Climate Change Mitigation	Climate Change Adaptation	Biodiversity	Land Degradation
No Contribution 0	Principal Objective 2	No Contribution 0	No Contribution 0

ANNEX F: TAXONOMY WORKSHEET

			Note (internal)
Influencing models	Transform policy and regulatory environments		Outcome 2 - lagoon and Pa Enea
	Strengthen institutional capacity and decision making		Outcome 2 – lagoon and Pa Enea
Stakeholders	Private Sector	SME	Outcome 1, as project contractors
		Individual Entrepreneurs	Outcome 1, hotels and tourism
	Beneficiaries		All Outcomes
	Local Communities		Outcomes 1, 3 and 4
	Type of Engagement	Information dissemination	Outcomes 1, 3 and 4
		Partnership	Outcomes 1 and 3
		Consultation	Outcomes 1, 3 and 4
		Participation	Outcome 1
Capacity knowledge research	Enabling activities		Outcome 2
	Capacity development		All Outcomes
Gender equality	Beneficiaries		All Outcomes
	Sex-disaggregated indicators		All Outcomes
	Gender sensitive indicators		All Outcomes
Focal Area themes	Climate Change	Climate Change adaptation	SIDS
			Disaster risk management
			Sea level rise
			Climate Resilience
			Eco-system based approach