



Pacific Community (SPC)

Government of the Republic of Kiribati

**GLOBAL CLIMATE CHANGE ALLIANCE PLUS: SCALING UP
PACIFIC ADAPTATION (GCCA+ SUPA) PROJECT**

PROJECT DESIGN DOCUMENT

Output 3

**Enhancing sustainable water security measures to adapt
to climate change and disasters in vulnerable remote islet
communities in Kiribati.**

April 2020

**Enhancing sustainable water security measures to adapt to climate change and disasters
in vulnerable remote islet communities in Kiribati**

Project Summary

This design document describes the framework for Kiribati's activities under Output 3 "Scale up resilient development measures in specific sectors" of the Global Climate Change Alliance Plus - Scaling up Pacific Adaptation (GCCA+ SUPA) Project. The Output 3 activities, described here for Kiribati, will be implemented in conjunction with related activities under Output 1 "Strengthen strategic planning at national levels" and Output 2 "Enhance the capacity of sub-national government stakeholders to build resilient communities" of the GCCA+ SUPA project.

Scaling up in the context of the GCCA+ SUPA Project is about enhancing, expanding, replicating and/or adding a complementary approach to existing, successful climate change adaptation interventions. The project will not set up demonstration projects but will instead use the lessons learnt from previous demonstration projects and apply them to scale up sector resilience.

The government of Kiribati has selected water security as their focus sector for Output 3. The island of Beru has been selected. The overall objective of the project is securing improved water resources in selected communities in the Southern Gilbert Islands. The specific objective is building capacity to provide water from multiple sources.

The three key result areas are: (1) Identify the water security measures for enhancement in Beru; (2) Design and install water security measures in Beru; (3) Build national capacity in desalination in Kiribati; (4) Recruit and employ a national coordinator based at the Ministry of Infrastructure and Sustainable Energy (MISE).

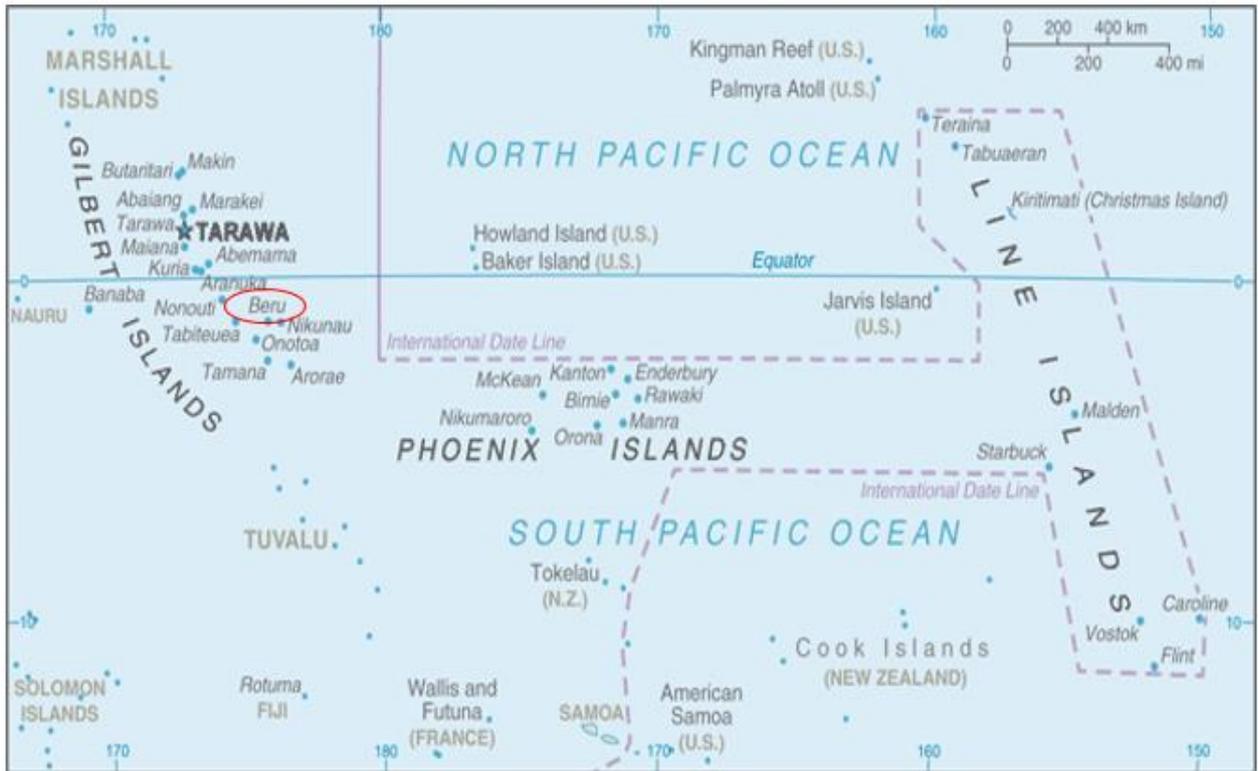
Kiribati is experiencing acute adverse impacts of climate change and related natural disasters. These impacts exacerbate the vulnerability of local communities' health, food security and in particular water security among others. Two consecutive national consultations in June and November 2019, involving key stakeholders confirmed that the SUPA project will focus on water security. The project will directly benefit the 2,051 persons (2015 Census) in the atoll communities of Beru, and indirectly the entire population of Kiribati.

The project will involve the national government agencies and wherever possible Non-Government Organizations (NGO) and the private sector. The project is about enhancing the resilience of people and communities, and in this respect a participatory and community-led approach is adopted throughout the design and implementation with a particular emphasis on applying a gender-sensitive/rights-based approach.

The project will hold community consultations and conduct water resource assessments to help design appropriate community water security measures. Using information gathered from the assessments and the community consultations as a guide, the project aims to build resilience to climate change through improved water security. Depending on the community needs, and water assessments, these measures may include activities such as installation of rainwater harvesting systems, ground water extraction systems, or installation of desalination units.. Building capacity in desalination in MISE is another key component of the project.

The implementation period for this project will commence on the date of signature of this Project Design Document and end on 31 December 2022. The project will be implemented by MISE in collaboration with the Office of the President. The project is consistent with the Kiribati Development Plan 2016-2019, Kiribati Climate Change Policy, Kiribati Joint Implementation Plan 2014-2023 and Kiribati 20-Year Vision 2016-2036.

Map of Kiribati



Map showing Kiribati SUPA project site circled in red namely Beru.

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List of Abbreviations

ACP	Africa, Caribbean, Pacific countries
ACSE	Adapting to Climate Change and Sustainable Energy
ADB	Asian Development
BSRP	Building Safety and Resilience in the Pacific
CSIRO	Commonwealth Scientific, Industrial Research Organisation (Australia)
CCCCDR	Cabinet Committee on Climate and Disaster Risk
DRM	Disaster Risk Management
EPS	Ecological Purification System
EU	European Union
EUR	Euros
FRDP	Framework for Resilient Development in the Pacific
GDP	Gross Domestic Product
GCCA: PSIS	Global Climate Change Alliance: Pacific Small Island States project
GCCA+ SUPA	Global Climate Change Alliance Plus: Scaling Up Pacific Adaptation
KNEG	Kiribati National Experts Group on Climate Change & Disaster Risk Management
KJIP	Kiribati Joint Implementation Plan for Climate Change and Disaster Risk Management
MISE	Ministry of Infrastructure and Sustainable Energy
M&E	Monitoring and Evaluation
NDMO	National Disaster Management Office
NGO	Non-governmental organisation
OB	Office of Te Beretitenti (the President)
PAN	Protected Area Network
R2R	Ridge to Reef
RENI	European Union – North Pacific - Readiness for El Niño project
RO	Reverse Osmosis
SDG	Sustainable Development Goal
SPC	Pacific Community
SPC-GEM	Pacific Community Geosciences, Energy and Maritime Division
SPC-LRD	Pacific Community Land Resources Division
SPC-RRRT	Pacific Community Regional Rights Resources Team
SPC-SDP	Pacific Community Social Development Programme
UN	United Nations
UNDP	United Nations Development Programme
USAID	United States Agency for International Development

Signature Page

The contents of this Project Design Document are endorsed by:

For Ministry of Finance and Economic Development

Name & Position	Signature	Date

For Ministry of Infrastructure and Sustainable Energy

Name & Position	Signature	Date

For Office of Te Beroitenti (the President)

Name & Position	Signature	Date

For Pacific Community

Name & Position	Signature	Date

**All parties signed by
18/05/20**

1. INTRODUCTION

This design document describes the framework for Kiribati's activities under Output 3 "Scale up resilient development measures in specific sectors" of the Global Climate Change Alliance Plus - Scaling up Pacific Adaptation (GCCA+ SUPA) Project. The Output 3 activities, described here for Kiribati, will be implemented in conjunction with related activities under Output 1 "Strengthen strategic planning at national levels" and Output 2 "Enhance the capacity of sub-national government stakeholders to build resilient communities" of the GCCA+ SUPA project. The government of Kiribati has selected water security as their focus sector for Output 3.

This section of the design document describes the background to Kiribati and the background to the SUPA Project.

Background to Kiribati

Geographical setting

The Republic of Kiribati is located in the central Pacific Ocean and is the only country that is situated within all four hemispheres. The islands are divided into three groups: Gilbert, Phoenix and Line Islands (see map). It consists of 32 low-lying atolls that rise to no more than two meters above sea level, and Banaba, a raised coral island with highest point of 81m. Banaba was once a rich source of phosphates, but mining was exhausted before independence in 1979. The rest of the land in Kiribati consists of atolls comprising sand and reef rock islets. The soil is thin and calcareous.

The capital of Kiribati is South Tarawa, which consists of a number of islets, connected by a series of causeways. Kiribati has a total land area of 811 km² dispersed over 3.5 million km² of the Pacific Ocean and an Exclusive Economic Zone of 3,441,810 km². Kiribati's total population is 110,136 (2015 Census), 51% of which live in urban areas. Around 56,388 people live in South Tarawa alone.

Kiribati has a subsistence economy with copra, seaweed and fisheries being the main sources of foreign exchange earnings. Revenue from the sale of fishing licenses for foreign vessels in the Kiribati exclusive economic zone contributes some AUD 2–3 million per annum. The public sector dominates Kiribati's economy. It provides two-thirds of all formal sector employment and accounts for almost 50% of the GDP. Remittances and earnings from the Revenue Equalization Reserve Fund are also important. Tourism plays a fairly modest role in the Gilbert Islands but for the Northern Line Islands, especially Christmas Island, tourism has a high priority. The country's GDP was USD 227 million in 2017.

Kiribati is highly exposed to external economic shocks, particularly surges in food and fuel commodity prices, due to its limited revenue base and high dependency on imports. High rates of population growth in urban centres stress water and sanitation infrastructure, causing high incidence of water-borne disease.

Achievement of Kiribati's development aspirations lie in maximising the development benefits from fisheries and key productive sectors. The development of these sectors are expected to stimulate the development of other sectors through backward and forward sectoral linkages. The contribution of fisheries and tourism sectors to the country's development aspirations is expected to directly contribute to achieving the Sustainable Development Goals (SDGs) for Kiribati by 2036.

Vulnerability and climate change projections for Kiribati

Climate projections for Kiribati based on the global climate models show that for the period to 2100:

- There is very high confidence that El Niño and La Niña events will continue to occur in the future, but there is little consensus on whether these events will change in intensity or frequency;
- There is very high confidence that annual mean temperatures and extremely high daily temperatures will continue to rise;
- There is high confidence that average rainfall will increase, along with more extreme rain events (high confidence);
- There is medium confidence that frequency of droughts will decline;
- There is very high confidence that ocean acidification will increase;
- There is very high confidence that the risk of coral bleaching will increase in the future;
- There is very high confidence that sea level will continue to rise; and
- There is low confidence that wave height will decrease in December–March, and that waves may approach from a more southerly direction in October.

(These climate projections are based on the 2014 Australian Bureau of Meteorology and CSIRO Report: Climate variability, extremes and changes in the Western Tropical Pacific: New science and updated country reports).

These changes in climate are likely to exacerbate water security issues in Kiribati.

National policies and strategies

Climate change and disaster risk management, coastal protection, food and water security, and social inclusion are among the key priorities for Kiribati and critical to achieve various policy and strategic objectives to achieve sustainable development. Among the key policies are the following:

- Kiribati Development Plan 2016-2019
- Kiribati 20-Year Vision 2016-2036
- Kiribati Joint Implementation Plan for Climate Change and Disaster Risk Management (KJIP) 2014-2023
- Kiribati Climate Change Policy

Related projects and activities

Listed below are some of key related projects and activities that are presently ongoing in Kiribati.

Project/Activity	Status
Global Climate Change Alliance Plus Intra ACP – Pacific Adaptation to Climate Change and Resilience (GCCA+ Intra ACP PACRES)	Ongoing
Institutional Strengthening in Pacific Island Countries to Adapt to Climate Change (ISACC)	Ongoing
GEF/Ridge to Reef (R2R): Regional component focuses on demonstrations, governance and knowledge management. The national component aims to improve biodiversity conservation and landscape level management	Ongoing
UN Women, Increasing Community Resilience through Empowerment of Women to Address Climate Change and Natural Hazards Programme.	Ongoing
EU-GIZ/ - Adapting to climate change and sustainable energy (ACSE) – Kiribati Solar Boarding Schools Project and Coastal Risk Assessment Project.	Ongoing
EU Intra ACP/NDMO/SPC, Building Safety & Resilience in the Pacific (BSRP) – Planning for community based disaster risk resilience	Ongoing
Adaptation Fund, Enhancing the resilience of the outer islands of Kiribati – Water and Sanitation Project	Ongoing
Kiribati Disaster Fund, Seawater Reverse Osmosis (SWRO) Project	Ongoing

About the SUPA Project

Description of the overall SUPA project

Climate change and natural disasters are among the greatest challenges jeopardising and undermining the ability of all countries, in particular Pacific countries, to achieve the sustainable development goals and reduce poverty. The Global Climate Change Alliance Plus – Scaling Up Pacific Adaptation (GCCA+ SUPA) project falls under the GCCA+ flagship initiative, which has three priorities: (i) mainstreaming climate change issues into poverty reduction and development efforts; (ii) increasing resilience to climate related stresses and shocks; and (iii) Supporting the formulation and implementation of concrete and integrated sector-based climate change adaptation and mitigation strategies.

The GCCA+ SUPA project is about scaling up climate change adaptation measures in specific sectors supported by knowledge management and capacity building. The 4.5-year project (2019 – 2023) is funded with EUR14.89 million from the European Union (EU) and implemented by the Pacific Community (SPC) in partnership with the Secretariat of the Pacific Regional Environment Programme (SPREP) and the University of the South Pacific (USP) in collaboration with the governments and peoples of Cook Islands, Federated States of Micronesia (FSM), Fiji, Kiribati, Republic of the Marshall Islands (RMI), Nauru, Niue, Palau, Tonga and Tuvalu.

The overall objective is to enhance climate change adaptation and resilience within ten Pacific Island countries. The specific objective is to strengthen the implementation of sector-based, but integrated, climate change and disaster risk management strategies and plans.

The three key outputs for the GCCA+ SUPA project are:

1. Strengthen strategic planning at national levels;
2. Enhance the capacity of sub-national government stakeholders to build resilient communities; and
3. Scale up resilient development measures in specific sectors.

The activities will adopt a gender-sensitive and rights-based approach throughout and will take into account lessons learnt and wise practices from the regional, national, sub-national and community-based projects and programmes implemented over the last decade.

The Action will contribute to the *Framework for Resilient Development in the Pacific (FRDP)*, the *Sendai Framework for Disaster Risk Reduction*, the *Paris Agreement to the United Nations Framework Convention on Climate Change*, and the *Sustainable Development Goals*, especially Goal 2: zero hunger, Goal 3: good health and well-being, Goal 6: clean water and sanitation and Goal 13: climate action, Goal 14: life below water and Goal 15: life on land.

The SUPA project in Kiribati

Kiribati is experiencing acute adverse impacts of climate change and related natural disasters. These impacts exacerbate the vulnerability of local communities' health, food security and in particular water security among others. It is affecting the quantity and quality of water available to the communities in the small island atolls of Kiribati. Following two consecutive national

consultations in June and November 2019, the Kiribati SUPA project key stakeholders determined that the SUPA project will focus on water security. The island atoll of Beru in the Southern Gilbert Islands were provisionally identified as the SUPA project site. The final selection and confirmation of community sites will be determined following the water assessments and community consultations under Key Result Area (KRA) 1.

The project aims to enhance community resilience to water security challenges brought about by climate change and disasters. This will be achieved by capacity building and enhancing the infrastructure for the storage and supply of potable water with measures such as installation of rainwater catchment systems, solar powered desalination units and sustainable groundwater extraction systems in communities with limited access to potable water. The project contributes to addressing health and social issues relating to water needs for the more vulnerable rural areas.

The project objective is also consistent with the goals and strategies of the Government of Kiribati as identified in the Kiribati Development Plan (KDP) 2016-2019 and Government Party manifesto or “Te Motinnano” that calls to “*improve access to quality climate change resilient infrastructure in urban and rural areas*” with specific objective “*to explore and promote the use of water desalination from reverse osmosis technology using solar energy for isolated communities.*” The goal is to “*provide 75% of the population with access to potable water by the end of 2020.*” The KJIP calls for the identification and implementation of most appropriate technological and sustainable management measures to increase water safety (quantity and quality) at the village level based on assessments of groundwater resources and assessment of rainwater catchment capacity on outer islands. This includes the most appropriate water sources and technological actions such as filtration galleries; protection of household wells from wave overtopping, contamination and heavy rain; rainwater harvesting; and desalination plants.

Kiribati’s disaster risks are almost entirely climate-related and of these the main concern is drought. Droughts, usually associated with La Niña events, are occasionally severe in Kiribati. The *Climate Change in the Pacific: Scientific Assessment and New Research* report for Kiribati, noted that only 205 mm of rainfall was received over the 18-month period from July 1988 to December 1989, and over the six months from August 1998 to February 1999 total rainfall was only 95 mm. These figures are very much lower than the mean annual rainfall of approximately 2100 mm, and the dry season average of just over 900 mm between May and October.

The report notes, the recent drought from April 2007 to early 2009 severely affected water supplies in the southern Gilbert Islands and Banaba Island. During this period ground water turned brackish and the leaves of most plants turned yellow. Copra production, the main income source for people in the outer islands, declined. During the 1970/71 drought, rainfall suppression was significant across the southern islands of the Gilbert Group. At Kenna on Abemama the drought was severe enough for hardy coconut trees to die.

In 2011, The European Union, in partnership with the Pacific Community, UNICEF and the Government of Kiribati, initiated the Water and Sanitation in the Outer Islands of the Republic of Kiribati (KIRIWATSAN I) as a way of reducing water, sanitation and hygiene related

diseases. The EU funded project had two phases, with the second phase of the project, KIRIWATSAN II, targeting 35 villages across the 16 islands of the Gilbert Group and ending in 2019. The islands benefitting from KIRIWATSAN II project included Makin, Butaritari, Marakei, Nikunau, Maina, Beru, Abaiang, and Nonouti.

The objectives of KIRIWATSAN II was to improve access to clean drinking water and appropriate sanitation, and local capacity building. The project included the implementation of various water security measures for each of the 35 villages identified. These measures included installation of rainwater harvesting systems, communal wells or enhancing individual and village wells using low yielding solar submersible powered pumps to provide water.

Since Cyclone Pam in 2015, the Government of Kiribati has embarked on an extensive programme to install solar powered desalination plants in the Southern Gilbert Islands with the support of the Kiribati Disaster Fund. Four units have been installed and ten units are in the process of being installed. This approach is at least partly a response to the very dry climate of the Southern Gilbert Islands, and has been incorporated into Government policies such as the KDP 2016 – 2019 and KJIP 2014 - 2023.

Community based impact assessments, using a methodology developed under the RENI project, will be conducted for two of these existing desalination plants, and the output will contribute to the selection of the water security measures to be implemented under the GCCA+ SUPA project.

The project site of Beru in the Southern Gilbert islands has been selected based on Integrated Vulnerability Assessments (IVA) made by MISE and the Office of the President, which include projections of annual rainfall, vulnerability to drought, seawater intrusion, inundation hazards, and water security projects previously implemented on the site and in the Southern Gilbert Islands as a whole. In addition, Beru Island was one of the only two islands that submitted follow-up requests to the national government through the Islands Mayor and Clerks Office prioritising the need for improving drinking water availability and accessibility for the island.

The SUPA project will conduct water assessments and community consultations in communities in Beru. These will guide the selection and design of the water security measures to be implemented under the SUPA project.

Capacity building and maintenance training will be a key component of the SUPA project and will be designed specifically for the water technicians and communities in the selected sites, as well as for the water technicians employed by MISE. The training will address the operation and maintenance of existing water security infrastructure in Kiribati, including rainwater harvesting, groundwater extraction and desalination units. So as to achieve this capacity building, a technical advisor, qualified and experienced in desalination, will be placed with MISE for one year so as to provide training and on-the-job guidance to MISE staff and especially the water technicians.

The 2015 population estimate for Beru where prioritised water security infrastructure will be built are shown in the table below. These include direct and indirect beneficiaries. It is

anticipated that the wider population of Kiribati will benefit indirectly from the SUPA project water technician’s capacity building and maintenance trainings.

Population figures (2015 census) for the direct and indirect beneficiaries of the SUPA Project

State	Total population 2015 census	Number of households 2015 census
Direct beneficiaries		
Beru	2,051	458
Total	2,051	458
Indirect beneficiaries		
Kiribati	110,136	17,772
Total	110,136	17,772

Under Key Result Area (KRA) 1 of the Kiribati SUPA project, the enhanced water capacity measures for Beru will be identified. Measures will include holding of inclusive community consultations, using a gender sensitive/rights based approach and water assessments to help inform the selection and design of appropriate and prioritised water security measures.

KRA 2 of the Kiribati SUPA project will involve the design, procurement and installation of the selected water security measures in Beru. Training in operations and maintenance of the installed water security measures will also be a key component of KRA 2 activities.

KRA 3 will involve the 12-month hiring of a technical advisor and trainer, skilled and experienced in desalination, and based with MISE. The technical advisor will focus on providing technical advice to MISE on the operation of desalination plants in Kiribati and capacity building via on-the-job trainings and courses for existing water technicians in MISE including those in outer islands and Tarawa. The terms of reference for this advisor will include basic and intermediate desalination systems installation, operations and maintenance training for MISE water technicians, and the revision of existing operations manual.

The fourth KRA will focus on the recruitment and employment of a SUPA project National Coordinator based in MISE to help in coordination of the various project activities.

The SUPA project will adopt a gender-sensitive/rights based approach throughout the design and implementation period with the assistance of SPC’s Social Development Programme and Regional Rights Resources Team. The Ministry of Infrastructure and Sustainable Energy will lead in the implementation of the Kiribati SUPA project, in partnership with the Office of the President.

Rationale

Based on the foregoing the justification and rationale for the SUPA project in Kiribati is as follows:

- The sector selected by Kiribati is one of the five sectors identified in the EU Delegation Agreement as priority sectors needing scaling up interventions for the SUPA project.
- The identified scaling up measure is an effective and tested measure that has elements of sustainability and can be implemented within the timeframe of the SUPA project.
- The selected scaling up measure has socio-economic benefits for the communities and can be implemented using an evidence-based gender-sensitive and rights-based approach
- The selected scaling up measure fits within the scope of the SUPA project budget.
- The geography and location of Kiribati makes its people highly vulnerable to disaster and climate risks.
- Future projections for climate changes show a very high confidence in the El Niño/La Niña patterns continuing through to 2100; added to which there is a very high confidence in the projected increase in annual mean and daily extreme temperatures, and in sea level rise. These projections will continue to increase the vulnerability of persons living in Kiribati.
- The government of the Kiribati, through its policies, strategies and plans, places a high priority on upscaling water security infrastructures.
- The SUPA project will provide tangible outcomes that will help the people of Kiribati cope with future water security challenges.
- Adopting a gender-sensitive/rights-based approach will ensure that the principles of equality and equity are provided to rights holders in Kiribati.

2. PROJECT SELECTION PROCESS

This section provides a timeline of the planning activities that have led to this Project Design Document. Activities are listed below in chronological order.

March 2019: The SUPA Planning and Inception Meeting was held in Suva from 4-6 March 2019. The project was introduced to various stakeholders and partners including representatives from SUPA project countries namely Cook Islands, Federated States of Micronesia (FSM), Fiji, Kiribati, Republic of the Marshall Islands (RMI), Nauru, Niue, Palau, Tonga and Tuvalu. Participants contributed to the development of the draft criteria for scaling up climate change adaptation interventions under Output 3 of the project.

July 2019: During an initial consultation, water security was selected as the focus sector by the Kiribati National Expert Group (KNEG) and the four islets of Bangai, Aiwa and Tenatorua in Tabiteuea North, and Takuu in Tabiteuea South was identified as the specific location.

September 2019: A concept note was submitted by Kiribati and was approved by EUD with some concerns expressed about long-term maintenance and the overall sustainability of desalination units. SPC proposed modifying proposed the outputs to Kiribati in light of EUD comments.

November 2019: A project design workshop was held in Tarawa, Kiribati on 19 November 2019. Participants came from the Ministry of Health and Medical Services, Ministry of Infrastructure & Sustainable Energy, Ministry of Environment, Lands and Agriculture Developments, University of the South Pacific (USP) and Kiribati Local Government Association (KILGA). Discussions focused on the SUPA project activities and sites. The objectives, KRAs and budget were discussed and agreed. Representatives from other government ministries were not able to attend due to various reasons.

February 2020: A third visit was made to Kiribati, 10-13 February 2020, to hold further discussions with MISE, Office of the President and the Ministry of Finance and Economic Development.

March-April 2020: Discussions between MISE and SPC about the selection of the sites and the training in desalination. Finally MISE confirmed the selection of Beru Island, and the replacement of the short-term consultancies for desalination training with a one-year placement of a technical advisor experienced in desalination at MISE.

April 2020: The full Project Design Document was submitted for review and signature.

3. DETAILED PROJECT DESCRIPTION

This section describes the overall objective, specific objective and outputs, as well as the logical framework that is used to monitor progress. The section also includes the project budget and the schedule.

Overall Objective

Securing improved water resources in selected communities in the Southern Gilbert Islands.

Specific Objective

Building capacity to provide water from multiple sources.

Key result areas and activities

KRA 1: Identify the water capacity measures for enhancement in Beru

1.1 Conduct water assessments in Beru

This will involve the contracting of a water resources consultant to conduct water assessments in Beru island to help inform the design of appropriate water security measures for selected communities.

1.2 Conduct community consultations around water security in Beru

This will involve holding community consultations in Beru to help understand community concerns, challenges and water security priorities.

1.3 Conduct community based impact assessments for two of the reverse osmosis plants already established in the Southern Gilbert Islands

This will involve conducting community-based impact assessments, using a methodology developed under the RENI project, of two existing desalination units in the Southern Gilbert Islands. This will contribute to technical assessments already conducted, and provide information to government and key stakeholders about the sustainability of the desalination units.

1.4 Select the water security measures to be scaled up in Beru

Informed by the water assessments and community consultations around water security in Beru, prioritise and select the most appropriate water security measures for selected communities in Beru island in consultation with MISE, OB, Island councils, SPC and other key partners.

KRA 2: Design and install water security measures in Beru

2.1 Design, procure, purchase and install enhanced water security measures in Beru Island.

The water security measures will be designed by an expert team, in collaboration with MISE. Engineering drawings will be prepared, materials procured, purchased and delivered, and the measures will be installed in the selected communities.

2.2 Provide training in operations and maintenance of the water security measures in Beru Island

Training in the maintenance and management of the water security measures, as well as materials and small tools required for maintenance, will be provided to key stakeholders including water technicians, selected community members, and others as appropriate.

KRA 3: Build national capacity in desalination

3.1 Hire a Technical Advisor to conduct a training needs assessment for existing water technicians in MISE, deliver on-the-job training and courses for the water technicians, revise existing operations manual, and provide technical advice to MISE on the operation of the desalination plants in Kiribati.

This will involve the hiring of a Technical Advisor and trainer (1-year contract), qualified and experienced in desalination plant to provide on-the-job capacity building, trainings and courses for the MISE water technicians based in Tarawa atoll and other outer islands in Kiribati. The Technical Advisor will conduct training needs assessment to inform the design and implementation of the water technicians' capacity building trainings and courses. The Technical Advisor will also provide technical advice to MISE on the operation of the desalination plants in Kiribati, review and revise the existing MISE operational manual.

The Technical Advisor will work closely with the SUPA National Coordinator to coordinate the implementation and reporting of the SUPA project activities. The Technical Advisor together with the SUPA National Coordinator will hold joint quarterly meetings with the EU-funded Technical Assistant based in the Ministry of Finance and Economic Development in Tarawa and attend the WASH coordination group.

3.2 Administrative and logistical costs for training courses

This will cover local transportation, as well as administrative and logistical costs related to the training courses.

KRA 4: Recruitment and employment of a National Coordinator based in MISE

4.1 Recruitment and employment of a National Coordinator to be based at MISE for 2.5 years

A SUPA Project National Coordinator will be hired by the MISE for a period of 2.5 years to be housed at the MISE. The National Coordinator will help coordinate, report and support implementation of SUPA project activities in Kiribati by the implementing government

agencies and partners. The National Coordinator will collaborate with the Technical Advisor to coordinate the implementation and reporting of the SUPA project activities. The National Coordinator together with the Technical Advisor will hold joint quarterly meetings with the EU-funded Technical Assistant based in the Ministry of Finance and Economic Development in Tarawa and attend the WASH coordination group.

4.2 Support for National Coordinator

The SUPA project will provide funds to cover the National Coordinator's workstation including laptop, office furniture and office supplies.

4. INSTITUTIONAL ARRANGEMENTS, RISK MANAGEMENT AND EXIT STRATEGY

Institutional arrangements

Implementation

Implementation of this project in Kiribati will be the responsibility of the Ministry of Infrastructure and Sustainable Energy in collaboration with the Office of Te Beretitenti (Office of the President). The SUPA project in Kiribati is being implemented under the ambit of the Co-Delegation Agreement, Global Climate Change Alliance Plus – Scaling Up Pacific Adaptation (GCCA+ SUPA), CRIS number: ENV/2018/398237, which was signed by representatives from the European Union Delegation to the Pacific, SPC and SPREP on 27th December 2018.

Project Oversight Committee

A Project Oversight Committee will be established consisting of representatives from the Ministry of Infrastructure and Sustainable Energy, Office of the President, Ministry of Public Works and Utilities, Ministry of Internal Affairs, Island Councils, local government, and the Ministry of Finance and Economic Development. The EU-funded Technical Assistant based in the Ministry of Finance and Economic Development in Tarawa will also participate. Other members such as the Ministry of Health and Medical Services, NGO's and private sector may be added as required.

The Kiribati SUPA National Coordinator will be responsible for establishing and providing administrative support for this Committee. It is expected that the Project Oversight Committee will meet quarterly and more often as required. Meetings will be kept. The Kiribati SUPA National Coordinator will provide regular (quarterly) updates on progress with the project and raising any concerns or problems that have been encountered. The committee will provide advice on how problems and issues may be addressed. Their main responsibility is the initial selection of activities and guidance and oversight during project implementation.

Reporting

The Kiribati SUPA National Coordinator will be responsible for providing quarterly narrative and financial progress reports to the SUPA project team in SPC in Suva. A template for reporting will be provided. Short monthly progress reports will also be prepared.

Day to day implementation of the project

The Kiribati SUPA National Coordinator situated in MISE will have the responsibility for overall coordination of the SUPA activities, including regular financial and narrative reporting to Kiribati government and to SPC as required. The National Coordinator is also responsible for day-to-day coordination of the delivery of the KRAs. The National Coordinator reports to the MISE Water and Sanitation Unit and the SUPA Project Manager in SPC. The National Coordinator is expected to liaise very closely with the Office of the President.

In addition, the SUPA MISE Technical Advisor and the National Coordinator will have joint quarterly meetings with the EU-funded Technical Assistant based in the Ministry of Finance and Economic Development in Tarawa, and will attend the WASH Coordination group to improve coordination and complementarity of the SUPA and MISE WASH Project.

Risk management

Risk	Risk level	Mitigating measure
Procurement challenges		
Procurement delays	High	<ul style="list-style-type: none"> • Programme in sufficient time for procurement procedures • Investigate option to have SPC do procurement of large items.
Extreme events		
Project implementation delayed by an extreme weather event e.g. cyclone, ocean surge, severe El Niño drought, or major social/cultural events.	High	<ul style="list-style-type: none"> • Ensure planning of activities contains sufficient buffering for minimum one severe and disruptive weather event. • Despite the above mitigating measure, a severe drought or cyclone will likely delay full and timely delivery of all activities.
COVID-19 pandemic may result in significant delays to the delivery of activities	High	<ul style="list-style-type: none"> • Reschedule activities and work plans
Challenges with Implementation in outer islands		
Logistical challenges of implementing activities in outer islands become overwhelming	Moderate	<ul style="list-style-type: none"> • Build on lessons learnt about scheduling and logistics from previous projects; adopt flexible and back-up planning approaches such that alternatives (e.g. moving activities to a different location) can be prioritised if and when necessary. • Consider chartering vessels to deliver all the equipment at the start of implementation so that shipping delays do not impede delivery of activities

National capacity and challenges to full stakeholder involvement		
Countries have insufficient capacity to fully implement the project activities	Moderate	<ul style="list-style-type: none"> • Obtain assistance from island councils and local government to identify persons who will be committed to the project. • Obtain assistance from Ministry of Internal Affairs. • Ensure full commitment of local government.
Assumptions <ul style="list-style-type: none"> • There are many uncertainties around the ongoing COVID-19 pandemic, which represents a serious constraint to project implementation. As more information becomes available, further mitigation measures will be developed • Global economic conditions and national governance do not prevent economic growth. • Global support for the Paris Agreement and Sendai Framework is maintained. • Continual high-level national government commitment to prioritising climate change and disaster risk management in the national development agendas. • Social and political stability is maintained. • Continuous collaboration amongst development partners occurs and is documented to ensure coherence, complementarity and efficiency amongst climate change and disaster risk management interventions. 		

Exit strategy

Strategy: Mainstreaming

The concept and practice of scaling up water security measures rather than delivering individual demonstration projects will contribute to the strategies and plans of the water sector, and strengthen the sector beyond project life. The SUPA project will be conducting water resources assessments and community consultations using a participatory, rights-based and gender sensitive approach. It will incorporate current and future climate and disaster risk challenges and projections. In keeping with the Framework for Resilient Development for the Pacific (FRDP), the integration of measures that address climate risk and disaster risk within a sector is another example of a mainstreaming approach that contributes to sector resilience beyond project life. Lessons learnt in applying a gender-sensitive/rights-based approach from the RENI project will be applied.

Strategy 2: Further funding

Identifying alternative sources of grant funding or loan finance, or national government funds in order to continue a project's activity is a second exit strategy. SUPA also provides an opportunity for local stakeholders to voice their concerns directly to National Government, as was done during the Project Design Consultation in June and November 2019.

SUPA is working closely with a number of climate change adaptation and disaster risk management projects being implemented by SPC, as well as other projects implemented by regional and international organisations. Throughout the course of the project, routes to create

synergies with other longer running activities will be pursued and where appropriate, developed.

Strategy 3: Private enterprise

Developing an alternative business and/or operational model, through commercialising aspects of the project, is a third exit strategy. Within the scope of SUPA, community and private sector involvement in disaster risk management and climate change adaptation interventions will be encouraged where appropriate. Discussions with the MISE, Island Councils and other avenues will be pursued.

Strategy 4: Project closure

Winding down a project's activities as efficiently and effectively as possible in order not to impact adversely on the project's staff and its stakeholders, and to capture the benefits and any lessons learned is a fourth exit strategy. The project will work to efficiently wind down the activities as the end date is approached.

Lessons learnt from the Global Climate Change Alliance: Pacific Small Island States (GCCA: PSIS) and RENI project will be applied and include allowing sufficient time and staff for an efficient and complete closure process, complete documentation of all narrative and financial materials, and perhaps most importantly the compilation and sharing of lessons learnt through interactive discussion sessions with national stakeholders and regional partners.

Annex 1 Indicative Logframe Matrix SUPA Activities in Kiribati

The activities, the expected outputs and all the indicators, targets and baselines included in the logframe matrix are indicative and may be updated during the implementation of the action. Note also that indicators will be disaggregated by sex whenever relevant

Intervention logic	Indicators	Baselines (2020)	Target 2022	Sources and means of verification	Assumptions
<p>Overall objective: Securing improved water resources in selected communities in the Southern Gilbert Islands</p>	<ol style="list-style-type: none"> 1. Comprehensive water resources planning approach, including rain and groundwater sources and desalination, adopted in minimum one islet. 2. Specific climate change resilience and water security measures incorporated into engineering designs and plans. 3. Number of persons benefitting from improved access to water 	<ol style="list-style-type: none"> 1. Similar approach in 35 villages (sites) under KIRIWATSAN II (but without desalination) 2. 6 village action plans developed under KIRIWATSAN Plans for 4 + 10 existing/in progress desalination plants in the Southern Gilberts 3. Not available 	<ol style="list-style-type: none"> 1. +1 plan 2. +1 new water security plans with climate resilience incorporated. 3. 2,051 persons 	<ul style="list-style-type: none"> • Community pre and post project questionnaire surveys. • Engineering designs prepared for the SUPA project and other projects. • Reports from previous water security projects • Reporting on SDGs especially 3, 5, 6, 13. • Reporting on national and sector policies & plans. 	
<p>Specific objective: Building capacity in water resources management</p>	<ol style="list-style-type: none"> 1. Number of different community groups participating in the 	<ol style="list-style-type: none"> 1. None 	<ol style="list-style-type: none"> 1. +2 different community groups actively participate 	<ul style="list-style-type: none"> • Census data • Questionnaire survey 	<ul style="list-style-type: none"> • Kiribati government continues to

	<p>selection of measures in each islets.</p> <p>2. Number of water technicians with enhanced understanding of climate change and water security.</p>	<p>2. +20 water technicians (potential participants)</p>	<p>in the selection process e.g. island council, mayors, faith based organizations.</p> <p>2. +20 technicians trained</p>	<ul style="list-style-type: none"> • Reports from previous water security projects, KIRIWATSAN Disaster Fund projects • Reports of community meetings • Media reports • Newspaper and other media reports. • Progress reports 	<p>prioritise water security</p> <ul style="list-style-type: none"> • Communities willing to contribute to the planning process.
<p>KRA 1: Identify the water security measures for enhancement in Beru</p>	<p>1. Number of water assessments conducted in Beru.</p> <p>2. Number of community consultations about water security conducted in Beru.</p> <p>3. Number of community based impact assessments of existing reverse osmosis installation in the Southern Gilbert Islands</p>	<p>1. 0 Water assessments conducted 2 Integrated vulnerability assessments.</p> <p>2. 1 Number of previous community consultations focusing on water security</p> <p>3. 0 community based impact assessments conducted</p>	<p>1. +2 water assessments</p> <p>2. +4 community consultations</p> <p>3. +2 community based impact assessment of existing RO plants.</p>	<ul style="list-style-type: none"> • Meeting reports • Reports on consultation • Impact assessments • Water assessment technical reports • Water technician reports • MISE reports on installation and maintenance of existing RO plants • MISE annual reports • Kiribati Disaster Fund Reports • Census data 	<ul style="list-style-type: none"> • Qualified water expert/team available to conduct water assessments.

<p>KRA 2: Design and install water security measures in Beru</p>	<ol style="list-style-type: none"> 1. Special needs of vulnerable groups (elderly, persons with disabilities) addressed in the design of the water security measures. 2. Number of water security measures installed in minimum one islet. 3. Number of persons trained in operations and maintenance of water infrastructure conducted Beru. 4. Number of women trained in operation and maintenance 	<ol style="list-style-type: none"> 1. Not available 2. Not available 3. Not available 4. not available 	<ol style="list-style-type: none"> 1. Evidence of 1 special design element in each of the planned measures for Beru. 2. +2 new measures in Beru 3. 20 persons trained in Beru 4. 5% 	<ol style="list-style-type: none"> 1. Meeting reports 2. Site investigation and inspection reports 3. Reports on consultations 4. Impact assessments 5. Water assessment technical reports 6. Water technician reports 7. MISE annual reports 8. Kiribati Disaster Fund Reports 9. Census data. 	<ol style="list-style-type: none"> 10. Sufficient time available for the procurement of and transportation of water security equipment to the selected communities in Beru.
<p>KRA 3: Build national capacity in desalination</p>	<ol style="list-style-type: none"> 1. Number of training needs assessments of MISE water technicians 2. Number of training events for water technicians 3. Number of water technicians trained in desalination 	<ol style="list-style-type: none"> 1. 1 conducted under KIRIWATSAN 2. 1/year in 2017, 2018 under KIRIWATSAN 3. To be determined in 2020 	<ol style="list-style-type: none"> 1. +1 needs assessment 2. +1 3. +20 	<ul style="list-style-type: none"> • Training needs assessment reports • Training reports for water technicians • New and revised operational manual • Assessment reports of uptake of training course 	<ul style="list-style-type: none"> • Qualified technical advisor available to be placed at MISE.

	4. Number of existing operational manual revised	4. 1 operational manual exists		<ul style="list-style-type: none"> • MISE reports • Media releases • Trip reports • 	
KRA 4: Recruitment and employment of a National Coordinator based in MISE	<ul style="list-style-type: none"> • Number of quarterly narrative and financial reports submitted by SUPA National Coordinator 	<ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> • 8 reports 	<ul style="list-style-type: none"> • Quarterly narrative and financial reports • Payment receipts and assets register 	<ul style="list-style-type: none"> • SUPA National Coordinator is recruited by Q2 2020

Annex 2 Project Activities and Indicative Budget

Activity	Item Cost Euros	KRA total Euros
KRA 1: Identify the water security measures for enhancement in Beru		
1.1 Conduct water assessments in Beru	20,000	
1.2 Conduct community consultations around water security in Beru	20,000	
1.3. Conduct community-based impact assessments for two of the reverse osmosis plants already established in the Southern Gilbert Islands since 2015.		
1.4 Select the water security measures to be scaled up in Beru		
KRA 1 Total	40,000	40,000
KRA 2: Design and install water security measures in Beru		
2.1 Design, procure, purchase and install enhanced water security measures in communities in Beru Island	225,000	
2.2 Provide training in operations and maintenance of the water security measures in communities in Beru Island		
KRA 2 Total	225,000	225,000
KRA 3: Build national capacity in desalination		
3.1 Hire a technical advisor to conduct a training needs assessment for existing water technicians in MISE, deliver on-the-job training and courses for the water technicians, revise existing operations manual, and provide technical advice to MISE on the operation of the desalination plants in Kiribati.	130,000	
3.2 Administrative and logistical costs for the training courses	20,000	
KRA 3 Total	150,000	150,000
KRA 4: Recruitment and employment of a National Coordinator based in MISE		
4.1 Employment of a National Coordinator to be based at MISE for 2.5 years	60,000	
4.2 Support for National Coordinator	5,000	
KRA 4 total	65,000	65,000
Total KRA 1-4	480,000	
Contingencies	20,000	
Grand total	500,000	500,000

At the request of the Government of Kiribati, the National Coordinator (KRA 4) is to be recruited by Kiribati and housed by the MISE.

Grant Agreements or Service Contracts may be entered into to fund selected activities described under KRA 1, 2, 3 and 4. Alternatively SPC may undertake the procurement for some activities.

All procurement will be based on SPC's Procurement Policy

- SPC Procurement Policy



SPC procurement
Policy.pdf

Other information

The Government of Kiribati will oversee accurate and regular records and accounts of the implementation of the Action. The following conditions will also apply:

- Fixed assets (equipment): All fixed assets (equipment) will remain the property of SPC until the closure of the project. On closure of the project, the assets will officially be handed over by SPC to the respective stakeholders in Kiribati. An asset register of all assets purchased should be maintained by the SUPA Project National Coordinator and kept in the Ministry of Infrastructure and Sustainable Energy.

Annex 3 Schedule of Activities

Activity	M 1-6 2020	M7-12 2020	M1-6 2021	M7-12 2021	M1-6 2022	M7-12 2022
KRA 1: Identify the water security measures to be enhanced in Beru						
1.1 Conduct water assessments in Beru						
1.2 Conduct community consultations around water security in Beru						
1.3. Conduct community-based impact assessments for two of the reverse osmosis plants already established in the Southern Gilbert Islands since 2015.						
1.4 Select the water security measures to be scaled up in Beru						
KRA 2: Design and install water security measures in Beru						
2.1 Design, procure, purchase and install enhanced water security measures in communities in Beru Island						
2.2 Provide training in operations and maintenance of the water security measures to communities in Beru Island.						
KRA 3: Build national capacity in desalination						
3.1 Hire a technical advisor to conduct a training needs assessment for existing water technicians in MISE, deliver on-the-job training and courses for the water technicians, revise existing operations manual, and provide technical advice to MISE on the operation of the desalination plants in Kiribati.						
3.2 Administrative and logistical costs for training courses						
KRA 4: Recruitment and employment of a National Coordinator based in MISE						
4.1 Employment of a National Coordinator to be based at MISE for 2.5 years						
4.2 Support for National Coordinator						



Pacific Community (SPC)

Government of the Republic of Kiribati

**GLOBAL CLIMATE CHANGE ALLIANCE PLUS: SCALING UP
PACIFIC ADAPTATION (GCCA+ SUPA) PROJECT**

PROJECT DESIGN DOCUMENT

Output 3

Version 2

**Enhancing sustainable water security measures to adapt
to climate change and disasters in vulnerable remote islet
communities in Kiribati.**

October 2020

**Enhancing sustainable water security measures to adapt to climate change and disasters
in vulnerable remote islet communities in Kiribati**

Project Summary

This project design document (version 2) describes the framework for Kiribati's activities under Output 3 "Scale up resilient development measures in specific sectors" of the Global Climate Change Alliance Plus - Scaling up Pacific Adaptation (GCCA+ SUPA) Project. The Output 3 activities, described here for Kiribati, will be implemented in conjunction with related activities under Output 1 "Strengthen strategic planning at national levels" and Output 2 "Enhance the capacity of sub-national government stakeholders to build resilient communities" of the GCCA+ SUPA project.

Scaling up in the context of the GCCA+ SUPA Project is about enhancing, expanding, replicating and/or adding a complementary approach to existing, successful climate change adaptation interventions. Lessons learnt from previous demonstration projects will be applied to scale up sector resilience.

The government of Kiribati selected water security as their focus sector for Output 3. The island of Beru has been selected as the geographical location for the project. This was confirmed during two community consultations in 2019. The overall objective of the project is building national capacity in desalination systems' operation and maintenance. The specific objective is securing improved water resources in Beru Island. The project will directly benefit the 2,051 persons (2015 Census) in the atoll communities of Beru, and indirectly the entire population of Kiribati.

Given the ongoing travel restrictions due to the COVID-19, which are likely to continue into 2021, the activities listed in the first version of the project design document (signed in May 2020) have been revised to accommodate these changed circumstances.

The activities are now divided into two phases. Phase 1, from the date of signing to the end of 2021, includes those activities that can be accommodated within the framework of the existing international travel restrictions. Key Result Area (KRA) 1 involves the purchase three solar powered desalination plants and a pilot installation in South Tarawa with remote guidance from the supplier; KRA 2 includes site assessments and consultations in Beru and other islands. KRA 3 covers the recruitment and employment of a national coordinator based at the Ministry of Infrastructure and Sustainable Energy (MISE).

A provisional design for Phase 2 has been included in this document. However, the activities proposed for Phase 2 will be reviewed and likely revised towards the end of 2021 when it is anticipated that international travel will resume. Phase 2 covers KRA 4, which includes a second pilot installation in South Tarawa, with onsite guidance from the supplier's technical team, and involvement of all the water technicians from the Southern Gilbert Islands; as well as the full installation of one desalination plant in Beru Island with onsite guidance from the supplier's technical team.

The project will involve the national government agencies and wherever possible non-government organizations and the private sector. The project is about enhancing the resilience of people and communities, and in this respect a participatory and community-led approach is adopted throughout the design and implementation with a particular emphasis on applying a people-centred approach.

The project will purchase three desalination plants compatible with the existing plants already supplied under the Disaster Fund and from the same supplier. This will ensure compliance with the request from the Government of Kiribati to standardise their desalination systems to facilitate maintenance, repair and the supply of parts. One plant will be installed in Beru while the installation sites for the remaining two units will be determined later by the Government of Kiribati.

The implementation period for this project will commence on the date of signature of this Project Design Document and end on 31 December 2022. The project will be implemented by MISE in collaboration with the Office of Te Beretitenti (OB). The project is consistent with the Kiribati Development Plan 2016-2019, Kiribati Climate Change Policy, Kiribati Joint Implementation Plan 2014-2023 and Kiribati 20-Year Vision 2016-2036.

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List of Abbreviations

ACP	Africa, Caribbean, Pacific countries
ACSE	Adapting to Climate Change and Sustainable Energy
ADB	Asian Development
BSRP	Building Safety and Resilience in the Pacific
CSIRO	Commonwealth Scientific, Industrial Research Organisation (Australia)
CCCCDR	Cabinet Committee on Climate and Disaster Risk
COVID-19	Corona Virus Disease Pandemic 2019
DRM	Disaster Risk Management
EPS	Ecological Purification System
EU	European Union
EUR	Euros
FRDP	Framework for Resilient Development in the Pacific
GDP	Gross Domestic Product
GCCA: PSIS	Global Climate Change Alliance: Pacific Small Island States project
GCCA+ SUPA	Global Climate Change Alliance Plus: Scaling Up Pacific Adaptation
KNEG	Kiribati National Experts Group on Climate Change & Disaster Risk Management
KJIP	Kiribati Joint Implementation Plan for Climate Change and Disaster Risk Management
MISE	Ministry of Infrastructure and Sustainable Energy
M&E	Monitoring and Evaluation
NDMO	National Disaster Management Office
NGO	Non-governmental organisation
OB	Office of Te Beretitenti (the President)
PAN	Protected Area Network
R2R	Ridge to Reef
RENI	European Union – North Pacific - Readiness for El Niño project
RO	Reverse Osmosis
SDG	Sustainable Development Goal
SPC	Pacific Community
SPC-GEM	Pacific Community Geosciences, Energy and Maritime Division
SPC-LRD	Pacific Community Land Resources Division
SPC-RRRT	Pacific Community Regional Rights Resources Team
SPC-SDP	Pacific Community Social Development Programme
UN	United Nations
UNDP	United Nations Development Programme
USAID	United States Agency for International Development

1. INTRODUCTION

This project design document describes the framework for Kiribati's activities under Output 3 "Scale up resilient development measures in specific sectors" of the Global Climate Change Alliance Plus - Scaling up Pacific Adaptation (GCCA+ SUPA) Project. The Output 3 activities, described here for Kiribati, will be implemented in conjunction with related activities under Output 1 "Strengthen strategic planning at national levels" and Output 2 "Enhance the capacity of sub-national government stakeholders to build resilient communities" of the GCCA+ SUPA project. The government of Kiribati has selected water security as their focus sector for Output 3.

This section of the design document describes the background to Kiribati and the background to the SUPA Project.

Background to Kiribati

Geographical setting

The Republic of Kiribati is located in the central Pacific Ocean and is the only country that is situated within all four hemispheres. The islands are divided into three groups: Gilbert, Phoenix and Line Islands (see map). It consists of 32 low-lying atolls that rise to no more than two meters above sea level, and Banaba, a raised coral island with highest point of 81m. Banaba was once a rich source of phosphates, but mining was exhausted before independence in 1979. The rest of the land in Kiribati consists of atolls comprising sand and reef rock islets. The soil is thin and calcareous.

The capital of Kiribati is South Tarawa, which consists of a number of islets, connected by a series of causeways. Kiribati has a total land area of 811 km² dispersed over 3.5 million km² of the Pacific Ocean and an Exclusive Economic Zone of 3,441,810 km². Kiribati's total population is 110,136 (2015 Census), 51% of which live in urban areas. Around 56,388 people live in South Tarawa alone.

Kiribati has a subsistence economy with copra, seaweed and fisheries being the main sources of foreign exchange earnings. Revenue from the sale of fishing licenses for foreign vessels in the Kiribati exclusive economic zone contributes some AUD 2–3 million per annum. The public sector dominates Kiribati's economy. It provides two-thirds of all formal sector employment and accounts for almost 50% of the GDP. Remittances and earnings from the Revenue Equalization Reserve Fund are also important. Tourism plays a fairly modest role in the Gilbert Islands but for the Northern Line Islands, especially Christmas Island, tourism has a high priority. The country's GDP was USD 227 million in 2017.

Kiribati is highly exposed to external economic shocks, particularly surges in food and fuel commodity prices, due to its limited revenue base and high dependency on imports. High rates of population growth in urban centres stress water and sanitation infrastructure, causing high incidence of water-borne disease.

Achievement of Kiribati's development aspirations lie in maximising the development benefits from fisheries and key productive sectors. The development of these sectors is expected to

stimulate the development of other sectors through backward and forward sectoral linkages. The contribution of fisheries and tourism sectors to the country's development aspirations is expected to directly contribute to achieving the Sustainable Development Goals (SDGs) for Kiribati by 2036.

Vulnerability and climate change projections for Kiribati

Climate projections for Kiribati based on the global climate models show that for the period to 2100:

- There is very high confidence that El Niño and La Niña events will continue to occur in the future, but there is little consensus on whether these events will change in intensity or frequency;
- There is very high confidence that annual mean temperatures and extremely high daily temperatures will continue to rise;
- There is high confidence that average rainfall will increase, along with more extreme rain events (high confidence);
- There is medium confidence that frequency of droughts will decline;
- There is very high confidence that ocean acidification will increase;
- There is very high confidence that the risk of coral bleaching will increase in the future;
- There is very high confidence that sea level will continue to rise; and
- There is low confidence that wave height will decrease in December–March, and that waves may approach from a more southerly direction in October.

(These climate projections are based on the 2014 Australian Bureau of Meteorology and CSIRO Report: Climate variability, extremes and changes in the Western Tropical Pacific: New science and updated country reports).

These changes in climate are likely to exacerbate water security issues in Kiribati.

National policies and strategies

Climate change and disaster risk management, coastal protection, food and water security, and social inclusion are among the key priorities for Kiribati and critical to achieve various policy and strategic objectives to achieve sustainable development. Among the key policies are the following:

- Kiribati Development Plan 2016-2019
- Kiribati 20-Year Vision 2016-2036
- Kiribati Joint Implementation Plan for Climate Change and Disaster Risk Management (KJIP) 2014-2023
- Kiribati Climate Change Policy

Related projects and activities

Listed below are some of key related projects and activities that are presently ongoing in Kiribati.

Project/Activity	Status
Global Climate Change Alliance Plus Intra ACP – Pacific Adaptation to Climate Change and Resilience (GCCA+ Intra ACP PACRES)	Ongoing
Institutional Strengthening in Pacific Island Countries to Adapt to Climate Change (ISACC)	Ongoing
GEF/Ridge to Reef (R2R): Regional component focuses on demonstrations, governance and knowledge management. The national component aims to improve biodiversity conservation and landscape level management	Ongoing
UN Women, Increasing Community Resilience through Empowerment of Women to Address Climate Change and Natural Hazards Programme.	Ongoing
EU-GIZ/ - Adapting to climate change and sustainable energy (ACSE) – Kiribati Solar Boarding Schools Project and Coastal Risk Assessment Project.	Ongoing
EU Intra ACP/NDMO/SPC, Building Safety & Resilience in the Pacific (BSRP) – Planning for community-based disaster risk resilience	Ongoing
Adaptation Fund, Enhancing the resilience of the outer islands of Kiribati – Water and Sanitation Project	Ongoing
Kiribati Disaster Fund, Seawater Reverse Osmosis (SWRO) Project	Ongoing

About the SUPA Project

Description of the overall SUPA project

Climate change and natural disasters are among the greatest challenges jeopardising and undermining the ability of all countries, in particular Pacific countries, to achieve the sustainable development goals and reduce poverty. The Global Climate Change Alliance Plus – Scaling Up Pacific Adaptation (GCCA+ SUPA) project falls under the GCCA+ flagship initiative, which has three priorities: (i) mainstreaming climate change issues into poverty reduction and development efforts; (ii) increasing resilience to climate related stresses and shocks; and (iii) Supporting the formulation and implementation of concrete and integrated sector-based climate change adaptation and mitigation strategies.

The GCCA+ SUPA project is about scaling up climate change adaptation measures in specific sectors supported by knowledge management and capacity building. The 4.5-year project (2019 – 2023) is funded with EUR14.89 million from the European Union (EU) and implemented by the Pacific Community (SPC) in partnership with the Secretariat of the Pacific Regional Environment Programme (SPREP) and the University of the South Pacific (USP) in collaboration with the governments and peoples of Cook Islands, Federated States of Micronesia (FSM), Fiji, Kiribati, Republic of the Marshall Islands (RMI), Nauru, Niue, Palau, Tonga and Tuvalu.

The overall objective is to enhance climate change adaptation and resilience within ten Pacific Island countries. The specific objective is to strengthen the implementation of sector-based, but integrated, climate change and disaster risk management strategies and plans.

The three key outputs for the GCCA+ SUPA project are:

1. Strengthen strategic planning at national levels;
2. Enhance the capacity of sub-national government stakeholders to build resilient communities; and
3. Scale up resilient development measures in specific sectors.

The activities will adopt a gender-sensitive and rights-based approach throughout and will take into account lessons learnt and wise practices from the regional, national, sub-national and community-based projects and programmes implemented over the last decade.

The Action will contribute to the *Framework for Resilient Development in the Pacific (FRDP)*, the *Sendai Framework for Disaster Risk Reduction*, the *Paris Agreement to the United Nations Framework Convention on Climate Change*, and the *Sustainable Development Goals*, especially Goal 2: zero hunger, Goal 3: good health and well-being, Goal 6: clean water and sanitation and Goal 13: climate action, Goal 14: life below water and Goal 15: life on land.

The SUPA project in Kiribati

Kiribati is experiencing acute adverse impacts of climate change and related natural disasters. These impacts exacerbate the vulnerability of local communities' health, food security and in particular water security among others. It is affecting the quantity and quality of water available to the communities in the small island atolls of Kiribati.

Following two consecutive national consultations in June and November 2019, the Kiribati SUPA project key stakeholders determined that the SUPA project will focus on water security, and the island atoll of Beru in the Southern Gilbert Islands was identified as the SUPA project site. Version 1 of the Project Design Document (PDD) signed in May 2020 focused on capacity building and enhancing the infrastructure for the storage and supply of potable water. Proposed measures for consideration included solar powered desalination units, rainwater catchment systems and sustainable groundwater extraction systems in communities with limited access to potable water. However, in September 2020, and due to the travel restrictions imposed by the COVID-19 pandemic the project was redesigned by SPC and Kiribati stakeholders. Based on the best information available, it was clear that travel for overseas technical experts for the purpose of building local capacity was not going to be feasible until late 2021 and possibly not until early 2022. Given this scenario, the project was re-focused.

The activities have been designed in two phases. Phase 1, from the last quarter of 2020 to whenever overseas travel is feasible (likely end of 2021 or beginning 2022) will focus on the purchase of three solar powered desalination units similar to those already purchased by the Kiribati Disaster Fund for Outer Islands in 2019/20 and from the same supplier. This is in line with the strong recommendation expressed by the Government of Kiribati to standardise their desalination plants to facilitate maintenance, repair and the supply of parts. A pilot installation will be conducted in South Tarawa, with remote guidance and support from the supplier. Other activities scheduled for Phase 1 include community consultations and rapid water assessments in Beru Island and other islands, and the recruitment and employment of a National Coordinator.

A provisional design for Phase 2 has been included in this document. However, the activities proposed for Phase 2 will be reviewed and likely revised towards the end of 2021 when it is anticipated that international travel will resume. Phase 2 covers KRA 4, which includes a second pilot installation in South Tarawa, with onsite guidance from the supplier's technical team, and involvement of all the water technicians from the Southern Gilbert Islands; as well as the full installation of one desalination plant in Beru Island with onsite guidance from the supplier's technical team. The placement of the other two desalination units to be purchased by the project will be determined by the Government of Kiribati and depending on the project's budget their installation costs may or may not be beyond the scope of this project.

The project aims to enhance community resilience to water security challenges brought about by climate change and disasters. The project contributes to addressing health and social issues relating to water needs for the more vulnerable rural areas.

The project objective is also consistent with the goals and strategies of the Government of Kiribati as identified in the Kiribati Development Plan (KDP) 2016-2019 and Government Party manifesto or "Te Motinnano" that calls to "*improve access to quality climate change resilient infrastructure in urban and rural areas*" with specific objective "*to explore and promote the use of water desalination from reverse osmosis technology using solar energy for isolated communities.*" The goal is to "*provide 75% of the population with access to potable water by the end of 2020.*" The KJIP calls for the identification and implementation of most appropriate technological and sustainable management measures to increase water safety

(quantity and quality) at the village level based on assessments of groundwater resources and assessment of rainwater catchment capacity on outer islands. This includes the most appropriate water sources and technological actions such as filtration galleries; protection of household wells from wave overtopping, contamination and heavy rain; rainwater harvesting; and desalination plants.

Kiribati's disaster risks are almost entirely climate-related and of these the main concern is drought. Droughts, usually associated with La Niña events, are occasionally severe in Kiribati. The *Climate Change in the Pacific: Scientific Assessment and New Research* report for Kiribati, noted that only 205 mm of rainfall was received over the 18-month period from July 1988 to December 1989, and over the six months from August 1998 to February 1999 total rainfall was only 95 mm. These figures are very much lower than the mean annual rainfall of approximately 2100 mm, and the dry season average of just over 900 mm between May and October.

The report notes, the recent drought from April 2007 to early 2009 severely affected water supplies in the southern Gilbert Islands and Banaba Island. During this period ground water turned brackish and the leaves of most plants turned yellow. Copra production, the main income source for people in the outer islands, declined. During the 1970/71 drought, rainfall suppression was significant across the southern islands of the Gilbert Group. At Kenna on Abemama the drought was severe enough for hardy coconut trees to die.

In 2011, The European Union, in partnership with the Pacific Community, UNICEF and the Government of Kiribati, initiated the Water and Sanitation in the Outer Islands of the Republic of Kiribati (KIRIWATSAN I) as a way of reducing water, sanitation and hygiene related diseases. The EU funded project had two phases, with the second phase of the project, KIRIWATSAN II, targeting 35 villages across the 16 islands of the Gilbert Group and ending in 2019. The islands benefitting from KIRIWATSAN II project included Makin, Butaritari, Marakei, Nikunau, Maina, Beru, Abaiang, and Nonouti.

The objectives of KIRIWATSAN II was to improve access to clean drinking water and appropriate sanitation, and local capacity building. The project included the implementation of various water security measures for each of the 35 villages identified. These measures included installation of rainwater harvesting systems, communal wells or enhancing individual and village wells using low yielding solar submersible powered pumps to provide water.

Since Cyclone Pam in 2015, the Government of Kiribati has embarked on an extensive programme to install solar powered desalination plants in the Southern Gilbert Islands with the support of the Kiribati Disaster Fund. Four units have been installed and ten units were purchased in 2019/2020. This approach is at least partly a response to the very dry climate of the Southern Gilbert Islands and has been incorporated into Government policies such as the KDP 2016 – 2019 and KJIP 2014 - 2023.

Community based impact assessments, using a methodology developed under the RENI project, will be conducted for two of these existing desalination plants, and the findings will contribute to the proposed installation of a desalination unit in Beru Islands.

The project site of Beru in the Southern Gilbert islands has been selected based on Integrated Vulnerability Assessments (IVA) made by MISE and the Office of Te Beretitenti, which include projections of annual rainfall, vulnerability to drought, seawater intrusion, inundation hazards, and water security projects previously implemented on the site and in the Southern Gilbert Islands as a whole. In addition, Beru Island was one of the only two islands that submitted follow-up requests to the national government through the Islands Mayor and Clerks Office prioritising the need for improving drinking water availability and accessibility for the island.

The SUPA project will conduct community consultations and basic water assessments in Beru to guide site selection of the installation of the desalination unit. This will provide important information on the operations, benefits and issues with desalination units faced by communities.

Capacity building and maintenance training will be a key component of the proposed Phase 2 of the SUPA project and will be designed specifically for the outer island water technicians and those based in South Tarawa. The training will address the installation, operation and maintenance of the desalination units. The training will be delivered by the supplier of the units purchased by the Kiribati Disaster Fund for Outer Islands in 2019/20 (the same units and supplier will be utilised for the GCCA+ SUPA project's units). The supplier will provide solar and desalination experts to provide installation, operations and maintenance training remotely and on onsite to MISE staff and the water technicians. Onsite training is provisional to the reopening of flights to Kiribati.

The 2015 population estimate for Beru where prioritised water security infrastructure will be built are shown in the table below. These include direct and indirect beneficiaries. It is anticipated that the wider population of Kiribati will benefit indirectly from the SUPA project's water technicians capacity building and maintenance trainings.

Population figures (2015 census) for the direct and indirect beneficiaries of the SUPA Project

State	Total population 2015 census	Number of households 2015 census
Direct beneficiaries		
Beru	2,051	458
Indirect beneficiaries		
Kiribati	110,136	17,772

Under Key Result Area (KRA) 1 of the Kiribati SUPA project, three desalination plants will be procured, purchased and delivered to South Tarawa. One plant is to be installed in Beru (Under Phase 2) while the installation sites for the remaining two will be decided upon by the Government of Kiribati and confirmed at a later stage. A pilot installation in South Tarawa will

be conducted using remote training from the desalination unit supplier for MISE staff and water technicians on South Tarawa.

KRA 2 will involve community consultations and basic water assessments in Beru to inform site selection for the installation of the desalination unit. A community-based impact assessment will also be conducted for communities benefitting from the existing TRUNZ desalination units in two of the outer islands, (Riboono islet, Tamana, Arorae and Onotoa Southern Gilberts) in 2015 in response to Cyclone Pam.

The third KRA will focus on the recruitment and employment of a SUPA project National Coordinator based in MISE to help in coordination of the various project activities.

Phase 2 and KRA 4 is entirely dependent on the opening of international flights to Kiribati and is therefore flexible for change to suit conditions. This fourth KRA will involve a pilot installation on South Tarawa which will be led by the supplier's solar specialist and the desalination specialist. The activity will bring in the water technicians in the outer islands to participate. The specialist(s) will then travel to Beru island to oversee the installation of the desalination plant on the island. The installation training covers operations and maintenance of the desalination units.

The SUPA project will adopt a gender-sensitive/rights-based approach throughout the design and implementation period with the assistance of SPC's Human Rights and Social Development Division. The Ministry of Infrastructure and Sustainable Energy will lead in the implementation of the Kiribati SUPA project, in partnership with the Office of Te Beretitenti.

Rationale

Based on the foregoing the justification and rationale for the SUPA project in Kiribati is as follows:

- The sector selected by Kiribati is one of the five sectors identified in the EU Delegation Agreement as priority sectors needing scaling up interventions for the SUPA project.
- The identified scaling up measure is an effective and tested measure that has elements of sustainability and can be implemented within the timeframe of the SUPA project.
- The selected scaling up measure has socio-economic benefits for the communities and can be implemented using an evidence-based gender-sensitive and rights-based approach
- The selected scaling up measure fits within the scope of the SUPA project budget.
- The geography and location of Kiribati makes its people highly vulnerable to disaster and climate risks.
- Future projections for climate changes show a very high confidence in the El Niño/La Niña patterns continuing through to 2100; added to which there is a very high confidence in the projected increase in annual mean and daily extreme temperatures, and in sea level rise. These projections will continue to increase the vulnerability of persons living in Kiribati.
- The government of Kiribati, through its policies, strategies and plans, places a high priority on upscaling water security infrastructures.

- The SUPA project will provide tangible outcomes that will help the people of Kiribati cope with future water security challenges.
- Adopting a gender-sensitive/rights-based approach will ensure that the principles of equality and equity are provided to rights holders in Kiribati.

2. PROJECT SELECTION PROCESS

This section provides a timeline of the planning activities that have led to this Project Design Document. Activities are listed below in chronological order.

March 2019: The SUPA Planning and Inception Meeting was held in Suva from 4-6 March 2019. The project was introduced to various stakeholders and partners including representatives from SUPA project countries namely Cook Islands, Federated States of Micronesia (FSM), Fiji, Kiribati, Republic of the Marshall Islands (RMI), Nauru, Niue, Palau, Tonga and Tuvalu. Participants contributed to the development of the draft criteria for scaling up climate change adaptation interventions under Output 3 of the project.

July 2019: During an initial consultation, water security was selected as the focus sector by the Kiribati National Expert Group (KNEG) and the four islets of Bangai, Aiwa and Tenatorua in Tabiteuea North, and Takuu in Tabiteuea South was identified as the specific location.

September 2019: A concept note was submitted by Kiribati and was approved by EUD with some concerns expressed about long-term maintenance and the overall sustainability of desalination units. SPC proposed modifying proposed the outputs to Kiribati in light of EUD comments.

November 2019: A project design workshop was held in Tarawa, Kiribati on 19 November 2019. Participants came from the Ministry of Health and Medical Services, Ministry of Infrastructure & Sustainable Energy, Ministry of Environment, Lands and Agriculture Developments, University of the South Pacific (USP) and Kiribati Local Government Association (KILGA). Discussions focused on the SUPA project activities and sites. The objectives, KRAs and budget were discussed and agreed. Representatives from other government ministries were not able to attend due to various reasons.

February 2020: A third visit was made to Kiribati, 10-13 February 2020, to hold further discussions with MISE, Office of Te Beretitenti (The President) and the Ministry of Finance and Economic Development.

March-April 2020: Discussions between MISE and SPC about the selection of the sites and the training in desalination. Finally, MISE confirmed the selection of Beru Island, and the replacement of the short-term consultancies for desalination training with a one-year placement of a technical advisor experienced in desalination at MISE.

April 2020: The full Project Design Document was submitted for review and signature.

May 2020: Version 1 of the Project Design Document was signed.

August to September 2020: Due to the ongoing COVID-19 border closures, the 12-month placement of the technical advisor in desalination in Kiribati was deemed impossible for this project. The PDD was revised to reflect new activities and submitted for review and signature.

3. DETAILED PROJECT DESCRIPTION

This section describes the overall objective, specific objective and outputs, as well as the logical framework that is used to monitor progress. The section also includes the project budget and the schedule.

Overall Objective

Building national capacity in desalination systems operation and maintenance

Specific Objective

Securing improved water resources in selected communities in Beru Island.

Key result areas and activities

PHASE 1

KRA 1: Purchase 3 solar powered desalination units and complete a pilot installation in South Tarawa

1.1 Design, procure, purchase and deliver to South Tarawa three solar powered desalination units (22,710 litres/24hr)

This will involve confirmation of the full specifications of the units, the procurement of the three units from the supplier already identified by the government of Kiribati. SPC will work closely with MISE to procure three units using SPC's procurement policy.

1.2 Remote training for pilot installation in South Tarawa

The desalination unit supplier as identified in KRA 1.1 will provide remote training for the pilot installation of one unit in South Tarawa. Water technicians and MISE other staff based in South Tarawa will participate in the pilot installation and training. The scope and content of training will be discussed with and agreed upon by MISE and SPC prior to the training. The supplier to provide training materials to MISE and SPC in advance. The training materials and services to be provided by the supplier will include (i) Manual for installation, operation and maintenance, (ii) trouble shooting manuals and (iii) real time, online responses to queries and concerns relating to the desalination units.

1.3 Training logistics for pilot installation (materials, local travel, catering arranged by MISE)

The training logistics including the materials needed for the pilot installation, travel and catering will be arranged by MISE in consultation with SPC.

KRA 2: Site assessments in Beru

2.1 Identify the site for the desalination unit, conduct basic water assessments and community consultations in Beru Island.

MISE and the National Coordinator will conduct basic household water assessments and community consultations in Beru to identify the site for the installation of the desalination unit, and will take into considerations lessons learned from Disaster Fund project site selection process.

2.2 Conduct community-based impact assessments of two existing desalination units.

MISE and the National Coordinator, in collaboration with SPC, will conduct community-based impact assessments with communities benefitting from two existing TRUNZ desalination units previously installed after Cyclone Pam (2015) in the outer islands of Riboono islet, Tamana, Arorae and Onotoa Southern Gilberts. The assessment should provide a situation analysis report on the operations, benefits, challenges of a desalination unit from a community perspective.

KRA 3: Recruitment and employment of a National Coordinator based in MISE

3.1 Recruitment and employment of a National Coordinator to be based at MISE

A SUPA Project National Coordinator will be hired by the MISE for a period of 2 years to be housed at the MISE. The National Coordinator will help coordinate, report and support implementation of SUPA project activities in Kiribati by the implementing government agencies and partners. The National Coordinator will hold quarterly meetings with the EU-funded Technical Assistant based in the Ministry of Finance and Economic Development in Tarawa and attend the WASH related coordination meetings.

3.2 Support for National Coordinator

The SUPA project will provide funds to cover the National Coordinator's workstation including laptop, office furniture and office supplies.

PHASE 2

The activities under KRA 4 are provisional (depending on re-opening of international flights) and flexible to change as deemed appropriate by the Government of Kiribati and SPC. These activities will be reviewed during the second half of 2021 and likely revised.

KRA 4: Install one desalination unit in Beru Island and provide capacity building on desalination systems for water technicians.

4.1 Supplier to provide onsite training for one pilot installation in South Tarawa

The desalination unit supplier will provide one solar specialist and one desalination specialist to oversee training and installation of one unit as a pilot on South Tarawa. The solar specialist to spend at least one week in South Tarawa and the desalination specialist to spend at least 2 weeks or more as required. The trainings and installations will be done in close collaboration with MISE and SPC and to be delivered to the MISE and its water technicians including those based in the outer islands.

4.2 Travel, logistics, catering and materials for outer island water technicians to participate in the pilot installation in South Tarawa.

MISE and the National Coordinator, in close consultation with SPC, to arrange logistics for the installation training in South Tarawa to be attended by the outer island water technicians. This includes the flight or boat transport and accommodation arrangements for the water technicians based in the outer islands to travel and stay in South Tarawa for the duration of training. All procurement will be done in accordance with SPC's procurement policy.

4.3 Supplier to oversee the installation of one desalination unit in Beru Island.

The specialists identified in KRA 4.1 will travel to Beru Island and oversee the installation of the desalination unit on the island. The mission will include a team from MISE and the National Coordinator. The solar specialist is expected to spend 2 weeks (for this mission and the desalination specialist 4 weeks. (The duration on their stay may be expanded where necessary).

4.4 Travel, logistics, catering and materials for MISE and National Coordinator to assist with installation in Beru Island.

MISE and the National Coordinator, in close consultation with SPC, to arrange logistics for the installation of the desalination unit in Beru Island. This includes the flight and accommodation arrangements from Tarawa to Beru for the MISE team and the National Coordinator. All procurement will be done in accordance with SPC's procurement policy.

4. INSTITUTIONAL ARRANGEMENTS, RISK MANAGEMENT AND EXIT STRATEGY

Institutional arrangements

Implementation

Implementation of this project in Kiribati will be the responsibility of the Ministry of Infrastructure and Sustainable Energy in collaboration with the Office of Te Beretitenti (Office of the President). The SUPA project in Kiribati is being implemented under the ambit of the Co-Delegation Agreement, Global Climate Change Alliance Plus – Scaling Up Pacific

Adaptation (GCCA+ SUPA), CRIS number: ENV/2018/398237, which was signed by representatives from the European Union Delegation to the Pacific, SPC and SPREP on 27th December 2018.

Project Oversight Committee

A Project Oversight Committee will be established consisting of representatives from the Ministry of Infrastructure and Sustainable Energy, Office of Te Beretitenti, Ministry of Internal Affairs, Island Councils, local government, and the Ministry of Finance and Economic Development. The EU-funded Technical Assistant based in the Ministry of Finance and Economic Development in Tarawa will also participate. Other members from other relevant government ministries including the Ministry of Health and Medical Services, NGO's and private sector may be added as required.

The Kiribati SUPA National Coordinator will be responsible for establishing and providing administrative support for this Committee. It is expected that the Project Oversight Committee will meet quarterly and more often as required. Minutes will be kept. The Kiribati SUPA National Coordinator will provide regular (quarterly) updates on progress with the project and raising any concerns or problems that have been encountered. The committee will provide advice on how problems and issues may be addressed. Their main responsibility is guidance and oversight during project implementation.

Reporting

The Kiribati SUPA National Coordinator will be responsible for providing quarterly narrative and financial progress reports to the SUPA project team in SPC in Suva. A template for reporting will be provided. Short monthly progress reports will also be prepared.

Day to day implementation of the project

The Kiribati SUPA National Coordinator situated in MISE will have the responsibility for overall coordination of the SUPA activities, including regular financial and narrative reporting to Kiribati government and to SPC as required. The National Coordinator is also responsible for day-to-day coordination of the delivery of the KRAs. The National Coordinator reports to the MISE Water and Sanitation Unit and the SUPA Project Manager in SPC. The National Coordinator is expected to liaise very closely with the Office of Te Beretitenti.

In addition, the National Coordinator will have quarterly meetings with the EU-funded Technical Assistant based in the Ministry of Finance and Economic Development in Tarawa and will attend the WASH Coordination meetings to improve coordination and complementarity of the SUPA and MISE WASH Project.

Risk management

Risk	Risk level	Mitigating measure
Procurement challenges		
Procurement delays	High	<ul style="list-style-type: none"> • Programme in sufficient time for procurement procedures • SPC to directly procure large items.
Extreme events		

Project implementation delayed by an extreme weather event e.g. cyclone, ocean surge, severe El Niño drought, or major social/cultural events.	High	<ul style="list-style-type: none"> • Ensure planning of activities contains sufficient buffering for minimum one severe and disruptive weather event. • Despite the above mitigating measure, a severe drought or cyclone will likely delay full and timely delivery of all activities.
COVID-19 pandemic delays may further impeded delivery of activities	High	<ul style="list-style-type: none"> • Work closely with partners including WHO, SPC Public Health Division and Health authorities in Kiribati. • Reschedule activities and work plans
Challenges with Implementation in outer islands		
Logistical challenges of implementing activities in outer islands become overwhelming	Moderate	<ul style="list-style-type: none"> • Build on lessons learnt about scheduling and logistics from previous projects; adopt flexible and back-up planning approaches such that alternatives (e.g. moving activities to a different location) can be prioritised if and when necessary. • Consider chartering vessels to deliver all the equipment at the start of implementation so that shipping delays do not impede delivery of activities
National capacity and challenges to full stakeholder involvement		
Countries have insufficient capacity to fully implement the project activities	Moderate	<ul style="list-style-type: none"> • Obtain assistance from island councils and local government to identify persons who will be committed to the project. • Obtain assistance from Ministry of Internal Affairs. • Ensure full commitment of local government.
Assumptions <ul style="list-style-type: none"> • There are many uncertainties around the ongoing COVID-19 pandemic, which represents a serious constraint to project implementation. As more information becomes available, further mitigation measures will be developed • Global economic conditions and national governance do not prevent economic growth. • Global support for the Paris Agreement and Sendai Framework is maintained. • Continual high-level national government commitment to prioritising climate change and disaster risk management in the national development agendas. • Social and political stability is maintained. • Continuous collaboration amongst development partners occurs and is documented to ensure coherence, complementarity and efficiency amongst climate change and disaster risk management interventions. 		

Exit strategy

Strategy: Mainstreaming

The concept and practice of scaling up water security measures rather than delivering individual demonstration projects will contribute to the strategies and plans of the water sector and strengthen the sector beyond project life. The SUPA project will be conducting water resources assessments and community consultations using a participatory, rights-based and gender sensitive approach. It will incorporate current and future climate and disaster risk challenges and projections. In keeping with the Framework for Resilient Development for the Pacific (FRDP), the integration of measures that address climate risk and disaster risk within a sector is another example of a mainstreaming approach that contributes to sector resilience beyond project life. Lessons learnt in applying a gender-sensitive/rights-based approach from the RENI project will be applied.

Strategy 2: Further funding

Identifying alternative sources of grant funding or loan finance, or national government funds in order to continue a project's activity is a second exit strategy. SUPA also provides an opportunity for local stakeholders to voice their concerns directly to National Government, as was done during the Project Design Consultation in June and November 2019.

SUPA is working closely with a number of climate change adaptation and disaster risk management projects being implemented by SPC, as well as other projects implemented by regional and international organisations. Throughout the course of the project, routes to create synergies with other longer running activities will be pursued and where appropriate, developed.

Strategy 3: Private enterprise

Developing an alternative business and/or operational model, through commercialising aspects of the project, is a third exit strategy. Within the scope of SUPA, community and private sector involvement in disaster risk management and climate change adaptation interventions will be encouraged where appropriate. Discussions with the MISE, Island Councils and other avenues will be pursued.

Strategy 4: Project closure

Winding down a project's activities as efficiently and effectively as possible in order not to impact adversely on the project's staff and its stakeholders, and to capture the benefits and any lessons learned is a fourth exit strategy. The project will work to efficiently wind down the activities as the end date is approached.

Lessons learnt from the Global Climate Change Alliance: Pacific Small Island States (GCCA: PSIS) and RENI project will be applied and include allowing sufficient time and staff for an efficient and complete closure process, complete documentation of all narrative and financial

materials, and perhaps most importantly the compilation and sharing of lessons learnt through interactive discussion sessions with national stakeholders and regional partners.

Annex 1 Indicative Logframe Matrix SUPA Activities in Kiribati

The activities, the expected outputs and all the indicators, targets and baselines included in the logframe matrix are indicative and may be updated during the implementation of the action. Note also that indicators will be disaggregated by sex whenever relevant

Intervention logic	Indicators	Baselines (2020)	Target 2022	Sources and means of verification	Assumptions
<p>Overall objective: Building national capacity in desalination operations and maintenance.</p>	<p>Number of persons benefitting from improved access to water on Beru Island. Number of water technicians with enhanced understanding of operations and maintenance of desalination units.</p>	2-5 water technicians (to be verified)	+20 technicians trained	<ul style="list-style-type: none"> • Questionnaire survey • Reports from previous water security projects, KIRIWATSAN Disaster Fund projects • Reports of community meetings • Media reports • Newspaper and other media reports. • Progress reports 	<ul style="list-style-type: none"> • Kiribati government continues to prioritise water security • Flights reopen and desalination specialists are able to conduct onsite installations and trainings to the water technicians in Kiribati.
<p>Specific objective: Securing improved water resources in Beru Island.</p>	<p>Number of persons benefitting from improved access to water on Beru Island.</p>	Not available	2,051 persons	<ul style="list-style-type: none"> • Community pre and post project questionnaire surveys. • Reports from previous water security projects • Reporting on SDGs especially 3, 5, 6, 13. 	

				<ul style="list-style-type: none"> • Reporting on national and sector policies & plans. • 	
<p>KRA 1: Purchase 3 solar powered desalination units and complete a pilot installation in South Tarawa.</p>	<ol style="list-style-type: none"> 1. Number of desalination units purchased and installed. 2. Number of remote pilot desalination installations with remote training on South Tarawa 	<ol style="list-style-type: none"> 1. 3 desalination units installed in Arorae, Onotoa and Ribono (Abaiang), 10 purchased by Disaster Fund 2. 0 remote training on pilot installation 	<ol style="list-style-type: none"> 1. +3 desalination units purchased 2. +1 pilot installation with remote training 	<ul style="list-style-type: none"> • Meeting reports • Reports on consultation • Impact assessments • Water assessment technical reports • Water technician reports • MISE reports on installation and maintenance of existing RO plants • MISE annual reports • Kiribati Disaster Fund Reports • Census data 	<ul style="list-style-type: none"> • A remote training on installations of desalination units is possible.
<p>KRA 2: Site assessments in Beru and other islands</p>	<ol style="list-style-type: none"> 1. Number of people consulted on water security 2. Installation site identified 3. Number of community-based 	<ol style="list-style-type: none"> 1. 0 2. 0 site identified 3. 0 community-based impact assessments conducted 	<ol style="list-style-type: none"> 1. +100 community members consulted. 2. 1 installation site identified for installation. 3. +2 community-based impact assessments 	<ul style="list-style-type: none"> • Meeting reports • Reports on consultation • Impact assessments • Water assessment technical reports 	<ul style="list-style-type: none"> • Beru Island agrees to have the desalination unit installed and assist to identify a

	impact assessments of existing reverse osmosis installation in the Southern Gilbert Islands		of existing RO plants.	<ul style="list-style-type: none"> Water technician reports MISE reports on installation and maintenance of existing RO plants MISE annual reports Kiribati Disaster Fund Reports Census data 	location for installation.
KRA 3: Recruitment and employment of a National Coordinator based in MISE	<ul style="list-style-type: none"> Number of quarterly narrative and financial reports submitted by SUPA National Coordinator 	<ul style="list-style-type: none"> 0 	<ul style="list-style-type: none"> 8 reports 	<ul style="list-style-type: none"> Quarterly narrative and financial reports Payment receipts and assets register 	<ul style="list-style-type: none"> SUPA National Coordinator is recruited by Q4 2020
KRA 4: Install one desalination unit in Beru Island and provide capacity building on desalination systems for water technicians.	<ol style="list-style-type: none"> Number of pilot installation on South Tarawa with onsite training. Number of water technicians trained Desalination unit installed in Beru Island. Number of people trained in desalination installation on Beru island. 	<ol style="list-style-type: none"> 0 0 0 0 	<ol style="list-style-type: none"> +1 installation +15 water technicians trained +1 desalination installed in Beru island. +5 people in Beru trained in desalination installation, operations and maintenance 	<ul style="list-style-type: none"> Training needs assessment reports Training reports for water technicians New and revised operational manual Assessment reports of uptake of training course MISE reports Media releases Trip reports 	<ul style="list-style-type: none"> Qualified trainers are available and are able to travel to Beru island to undertake desalination installation and training.

Annex 2 Project Activities and Indicative Budget

Activity	Item Cost Euros	KRA total Euros
Phase 1		
KRA 1: Purchase 3 solar powered desalination units and complete a pilot installation in South Tarawa		
1.1 Design, procure, purchase and deliver to South Tarawa 3 solar powered desalination units (22,710 litres/24hr)	180,000	
1.2 Supplier to provide remote training for a pilot installation in South Tarawa	5,000	
1.3. Training logistics for pilot installation in South Tarawa	10,000	
KRA 1 Total	195,000	195,000
KRA 2: Site assessments in Beru and other islands		
2.1 Identify site for desalination unit, conduct basic water assessments and community consultations in Beru island	15,000	
2.2 Conduct community-based impact assessments of two existing desalination units in other islands	10,000	
KRA 2 Total	25,000	25,000
KRA 3: Recruitment and employment of a National Coordinator based in MISE		
4.1 Employment of a National Coordinator to be based at MISE	60,000	
4.2 Support for National Coordinator	5,000	
KRA 3 Total	65,000	65,000
Phase 2 PROVISIONAL - WHEN TRAVEL OPENS		
KRA 4 Install one desalination unit in Beru Island and provide capacity building on desalination systems for water technicians		
4. 1 Supplier to conduct one onsite pilot installation in South Tarawa	30,000	
4.2 Travel, logistics, catering and materials for outer island water technicians to participate in the pilot installation in South Tarawa	40,000	
4.3 Supplier to oversee the installation of 1 desalination unit in Beru Island	80,000	
4.4 Travel, logistics, catering and materials for MISE and National Coordinator to assist with the installation in Beru	20,000	
KRA 4 total	170,000	170,000
Total KRA 1-4	455,000	
Contingencies	45,000	
Grand total	500,000	500,000

The modalities for implementation will be direct procurement by SPC, Grant Agreements or Service Contracts.

All procurement will be based on SPC's Procurement Policy

- SPC Procurement Policy



SPC procurement
Policy.pdf

Other information

The Government of Kiribati will oversee accurate and regular records and accounts of the implementation of the Action. The following conditions will also apply:

- Fixed assets (equipment): All fixed assets (equipment) will remain the property of SPC until the closure of the project. On closure of the project, the assets will officially be handed over by SPC to the respective stakeholders in Kiribati. An asset register of all assets purchased should be maintained by the SUPA Project National Coordinator and kept in the Ministry of Infrastructure and Sustainable Energy.

Annex 3 Schedule of Activities

Activity	M 1-6 2020	M7-12 2020	M1-6 2021	M7-12 2021	M1-6 2022	M7-12 2022
Phase 1						
KRA1: Purchase 3 solar powered desalination units and complete a pilot installation in South Tarawa						
1.1 Design, procure, purchase and deliver to South Tarawa 3 solar powered desalination units (22,710 litres/24hr)						
1.2 Supplier to provide remote training for a pilot installation in South Tarawa						
1.3. Training logistics for pilot installation in South Tarawa						
KRA 2: Site assessments in Beru and other islands						
2.1 Identify site for desalination unit and conduct a basic water assessment and community consultations in Beru island						
2.2 Conduct community-based impact assessments of two existing desalination units in other islands						
KRA 3: Recruitment and employment of a National Coordinator based in MISE						
4.1 Employment of a National Coordinator to be based at MISE						
4.2 Support for National Coordinator						
Phase 2 PROVISIONAL - WHEN TRAVEL OPENS UP						
KRA 4 Install one desalination unit in Beru Island and provide capacity building on desalination systems for water technicians						
4.1 Supplier to undertake 1 onsite pilot installation in South Tarawa						
4.2 Travel, logistics, catering and materials for outer island water technicians to participate in the pilot installation in South Tarawa.						
4.3 Supplier to oversee the installation of 1 desalination unit in Beru Island						
4.4 Travel, logistics, catering and materials for MISE and National Coordinator to assist with the installation in Beru						



Pacific Community (SPC)

Government of the Republic of Kiribati

**GLOBAL CLIMATE CHANGE ALLIANCE PLUS: SCALING UP
PACIFIC ADAPTATION (GCCA+ SUPA) PROJECT**

PROJECT DESIGN DOCUMENT

Version 3

**Enhancing sustainable water security measures to adapt
to climate change and disasters in vulnerable remote islet
communities in Kiribati.**

October 2021

**Enhancing sustainable water security measures to adapt to climate change and disasters
in vulnerable remote islet communities in Kiribati**

Project Summary

This project design document (version 3) describes the framework for Kiribati's activities under Output 3 "Scale up resilient development measures in specific sectors" of the Global Climate Change Alliance Plus - Scaling up Pacific Adaptation (GCCA+ SUPA) Project. The Output 3 activities, described here for Kiribati, will be implemented in conjunction with related activities under Output 1 "Strengthen strategic planning at national levels" and Output 2 "Enhance the capacity of sub-national government stakeholders to build resilient communities" of the GCCA+ SUPA project.

Scaling up in the context of the GCCA+ SUPA Project is about enhancing, expanding, replicating and/or adding a complementary approach to existing, successful climate change adaptation interventions. Lessons learnt from previous demonstration projects will be applied to scale up sector resilience.

The government of Kiribati selected water security as their focus sector for Output 3. The two previous project design documents (PDDs) for GCCA+ SUPA activities in Kiribati (version 1 signed on 18.05.20, and version 2 signed on 12.11.20) focused on the supply and installation of small solar powered desalination units in the southern Gilbert Islands and the provision of training by positioning long-term technical expertise in desalination in MISE.

These activities were consistent with the specific objective of the Kiribati Development Plan "to explore and promote the use of water desalination from reverse osmosis technology using solar energy for remote communities".

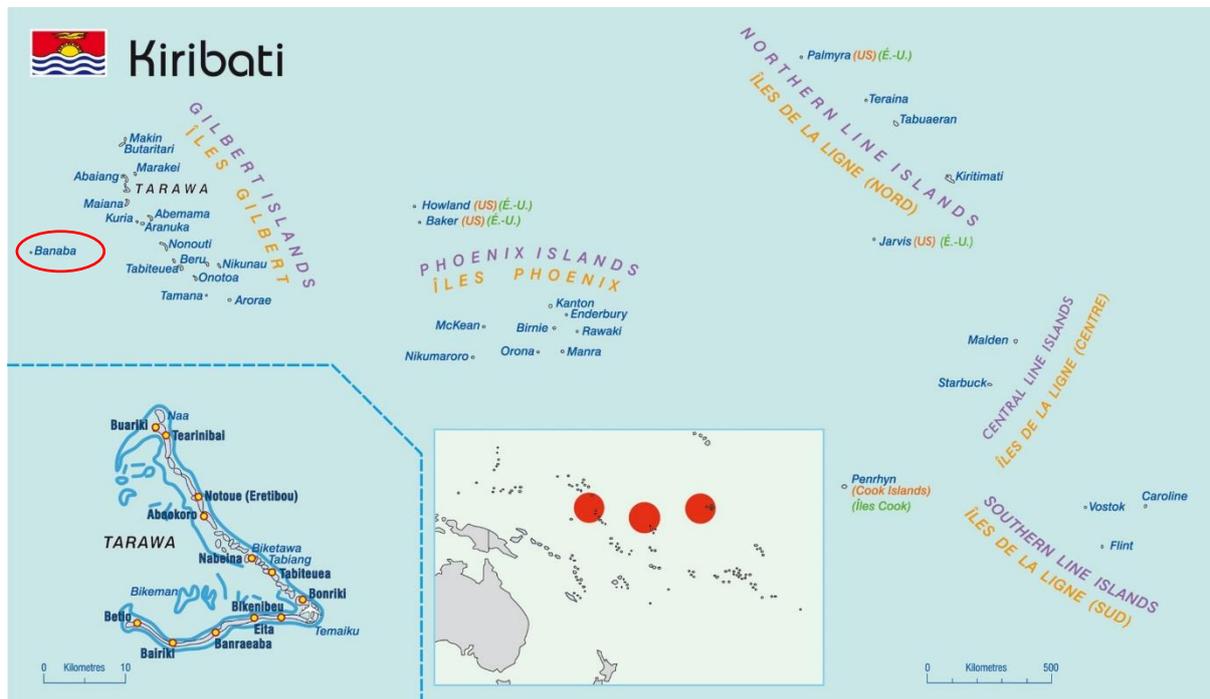
Due to the spread of COVID-19 community transfer in the Pacific Island region in 2021 the national partners, the implementing agency (SPC) and EUD determined that the proposed activities were not feasible and agreed to propose alternative activities that could be completed by the end of the project's implementation period (30.06.23)

The project will now scale up water security measures in Banaba Island, which is a remote raised atoll, lying to the west of the Gilbert Islands. Following a severe 12-month drought in 2020-2021, two emergency solar powered desalination units were shipped and installed in a temporary building in Banaba Island in March 2021. The GCCA+ SUPA project will construct a new, fit-for-purpose building and facility for the desalination units with access for the water truck. New pumps and water storage tanks will be purchased and installed, together with additional tanks for rainwater storage using the roof of the new building as a catchment. Spare parts for the pumps, desalination units and the water truck will also be purchased. On-the-job training will be provided to the water technicians in Banaba. These measures will strengthen the existing emergency measures such that the population of Banaba Island has a secure water supply. Small scale, on-the-ground water security measures, such as rainwater harvesting tanks, will be purchased for Beru Island, which was the original focus of the project and where community expectations have been raised here.

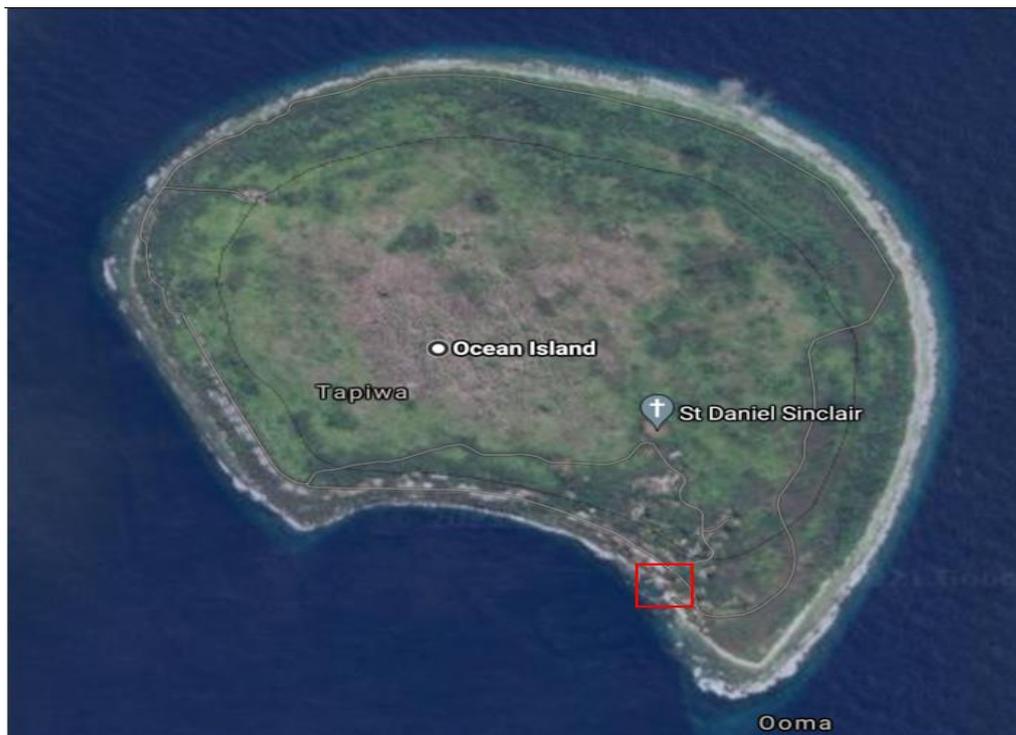
The project will involve the national government agencies and wherever possible non-government organizations and the private sector. The project is about enhancing the resilience of people and communities, and in this respect a participatory and community-led approach is adopted throughout the design and implementation with a particular emphasis on applying a people-centred approach.

The implementation period for this project will commence on the date of signature of this Project Design Document and end on 30.06.23. The project will be implemented by MISE in collaboration with the Office of Te Beretitenti (OB). The project is consistent with the Kiribati Development Plan 2016-2019, Kiribati Climate Change Policy 2018, Kiribati Joint Implementation Plan 2014-2023, and Kiribati 20-Year Vision 2016-2036.

Map of Kiribati



Map showing Kiribati SUPA project site, Banaba Island, circled in red



Map of Banaba, with indicated location of the old shed (red box)

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List of Abbreviations

ACP	Africa, Caribbean, Pacific countries
ACSE	Adapting to Climate Change and Sustainable Energy
ADB	Asian Development
BSRP	Building Safety and Resilience in the Pacific
CSIRO	Commonwealth Scientific, Industrial Research Organisation (Australia)
CCCCDR	Cabinet Committee on Climate and Disaster Risk
COVID-19	Corona Virus Disease Pandemic 2019
DRM	Disaster Risk Management
EPS	Ecological Purification System
EU	European Union
EUR	Euros
FRDP	Framework for Resilient Development in the Pacific
GDP	Gross Domestic Product
GCCA: PSIS	Global Climate Change Alliance: Pacific Small Island States project
GCCA+ SUPA	Global Climate Change Alliance Plus: Scaling Up Pacific Adaptation
KNEG	Kiribati National Experts Group on Climate Change & Disaster Risk Management
KJIP	Kiribati Joint Implementation Plan for Climate Change and Disaster Risk Management
MISE	Ministry of Infrastructure and Sustainable Energy
M&E	Monitoring and Evaluation
NDMO	National Disaster Management Office
NGO	Non-governmental organisation
OB	Office of Te Beretitenti (the President)
PAN	Protected Area Network
R2R	Ridge to Reef
RENI	European Union – North Pacific - Readiness for El Niño project
RO	Reverse Osmosis
SDG	Sustainable Development Goal
SPC	Pacific Community
SPC-GEM	Pacific Community Geosciences, Energy and Maritime Division
SPC-LRD	Pacific Community Land Resources Division
SPC-RRRT	Pacific Community Regional Rights Resources Team
SPC-SDP	Pacific Community Social Development Programme
UN	United Nations
UNDP	United Nations Development Programme
USAID	United States Agency for International Development

1. INTRODUCTION

This design document describes the framework for Kiribati’s activities under Output 3 “Scale up resilient development measures in specific sectors” of the Global Climate Change Alliance Plus - Scaling up Pacific Adaptation (GCCA+ SUPA) Project. The Output 3 activities, described here for Kiribati, will be implemented in conjunction with related activities under Output 1 “Strengthen strategic planning at national levels” and Output 2 “Enhance the capacity of sub-national government stakeholders to build resilient communities” of the GCCA+ SUPA project. The government of Kiribati has selected water security as their focus sector for Output 3.

This section of the design document describes the background to Kiribati and the background to the SUPA Project.

Background to Kiribati

Geographical setting

The Republic of Kiribati is located in the central Pacific Ocean and is the only country that is situated within all four hemispheres. The islands are divided into three groups: Gilbert, Phoenix and Line Islands (see map). It consists of 32 low-lying atolls that rise to no more than two meters above sea level, and Banaba, a raised coral island with highest point of 81m. Banaba was once a rich source of phosphates, but mining was exhausted before independence in 1979. The rest of the land in Kiribati consists of atolls comprising sand and reef rock islets. The soil is thin and calcareous.

The capital of Kiribati is South Tarawa, which consists of a number of islets, connected by a series of causeways. Kiribati has a total land area of 811 km² dispersed over 3.5 million km² of the Pacific Ocean and an Exclusive Economic Zone of 3,441,810 km². Kiribati’s total population is 110,136 (2015 Census), 51% of which live in urban areas. Around 56,388 people live in South Tarawa alone.

Kiribati has a subsistence economy with copra, seaweed and fisheries being the main sources of foreign exchange earnings. Revenue from the sale of fishing licenses for foreign vessels in the Kiribati exclusive economic zone contributes some AUD 2–3 million per annum. The public sector dominates Kiribati's economy. It provides two-thirds of all formal sector employment and accounts for almost 50% of the GDP. Remittances and earnings from the Revenue Equalization Reserve Fund are also important. Tourism plays a fairly modest role in the Gilbert Islands but for the Northern Line Islands, especially Christmas Island, tourism has a high priority. The country’s GDP was USD 227 million in 2017.

Kiribati is highly exposed to external economic shocks, particularly surges in food and fuel commodity prices, due to its limited revenue base and high dependency on imports. High rates of population growth in urban centres stress water and sanitation infrastructure, causing high incidence of water-borne disease.

Achievement of Kiribati's development aspirations lie in maximising the development benefits from fisheries and key productive sectors. The development of these sectors is expected to stimulate the development of other sectors through backward and forward sectoral linkages. The contribution of fisheries and tourism sectors to the country's development aspirations is expected to directly contribute to achieving the Sustainable Development Goals (SDGs) for Kiribati by 2036.

Vulnerability and climate change projections for Kiribati

Climate projections for Kiribati based on the global climate models show that for the period to 2100:

- There is very high confidence that El Niño and La Niña events will continue to occur in the future, but there is little consensus on whether these events will change in intensity or frequency;
- There is very high confidence that annual mean temperatures and extremely high daily temperatures will continue to rise;
- There is high confidence that average rainfall will increase, along with more extreme rain events (high confidence);
- There is medium confidence that frequency of droughts will decline;
- There is very high confidence that ocean acidification will increase;
- There is very high confidence that the risk of coral bleaching will increase in the future;
- There is very high confidence that sea level will continue to rise; and
- There is low confidence that wave height will decrease in December–March, and that waves may approach from a more southerly direction in October.

(These climate projections are based on the 2014 Australian Bureau of Meteorology and CSIRO Report: Climate variability, extremes and changes in the Western Tropical Pacific: New science and updated country reports).

These changes in climate are likely to exacerbate water security issues in Kiribati.

National policies and strategies

Climate change and disaster risk management, coastal protection, food and water security, and social inclusion are among the key priorities for Kiribati and critical to achieve various policy and strategic objectives to achieve sustainable development. Among the key policies are the following:

- Kiribati Development Plan 2016-2019
- Kiribati 20-Year Vision 2016-2036
- Kiribati Joint Implementation Plan for Climate Change and Disaster Risk Management (KJIP) 2019-2028
- Kiribati Climate Change Policy 2018

Related projects and activities

Listed below are some of key related projects and activities that are presently ongoing or recently completed in Kiribati.

Project/Activity	Status
Global Climate Change Alliance Plus Intra ACP – Pacific Adaptation to Climate Change and Resilience (GCCA+ Intra ACP PACRES)	Ongoing
New Zealand Ministry of Foreign Affairs and Trade "Managing Water Scarcity through strengthened Water Resources Management" regional project	Ongoing
GEF/Ridge to Reef (R2R): Regional component focuses on demonstrations, governance and knowledge management. The national component aims to improve biodiversity conservation and landscape level management	Ongoing
UN Women, Increasing Community Resilience through Empowerment of Women to Address Climate Change and Natural Hazards Programme.	Ongoing
Adaptation Fund, Enhancing the resilience of the outer islands of Kiribati – Water and Sanitation Project	Under Review
Solar Desalination systems for 10 vulnerable islets	Ongoing
Institutional Strengthening in Pacific Island Countries to Adapt to Climate Change (ISACC)	Completed
EU-GIZ/ - Adapting to climate change and sustainable energy (ACSE) – Kiribati Solar Boarding Schools Project and Coastal Risk Assessment Project.	Completed
EU Intra ACP/NDMO/SPC, Building Safety & Resilience in the Pacific (BSRP) – Planning for community-based disaster risk resilience.	Phase II scheduled to start 2022
KIRIWATSAN I. 2011. Water and Sanitation in the Outer Islands of the Republic of Kiribati. EU, UNICEF, SPC and the Government of Kiribati.	Completed 2015
KIRIWATSAN II. 2016. Water and Sanitation in the Outer Islands of the Republic of Kiribati. EU, UNICEF, SPC and the Government of Kiribati, targeting 35 villages across the 16 islands of the Gilbert Group and ending in 2019.	Completed 2019

About the SUPA Project

Description of the overall SUPA project

Climate change and natural disasters are among the greatest challenges jeopardising and undermining the ability of all countries, in particular Pacific countries, to achieve the sustainable development goals and reduce poverty. The Global Climate Change Alliance Plus – Scaling Up Pacific Adaptation (GCCA+ SUPA) project falls under the GCCA+ flagship initiative, which has three priorities: (i) mainstreaming climate change issues into poverty reduction and development efforts; (ii) increasing resilience to climate related stresses and shocks; and (iii) Supporting the formulation and implementation of concrete and integrated sector-based climate change adaptation and mitigation strategies.

The GCCA+ SUPA project is about scaling up climate change adaptation measures in specific sectors supported by knowledge management and capacity building. The 4.5-year project (2019 – 2023) is funded with EUR14.89 million from the European Union (EU) and implemented by the Pacific Community (SPC) in partnership with the Secretariat of the Pacific Regional Environment Programme (SPREP) and the University of the South Pacific (USP) in collaboration with the governments and peoples of Cook Islands, Federated States of Micronesia (FSM), Fiji, Kiribati, Republic of the Marshall Islands (RMI), Nauru, Niue, Palau, Tonga and Tuvalu.

The overall objective is to enhance climate change adaptation and resilience within ten Pacific Island countries. The specific objective is to strengthen the implementation of sector-based, but integrated, climate change and disaster risk management strategies and plans.

The three key outputs for the GCCA+ SUPA project are:

1. Strengthen strategic planning at national levels;
2. Enhance the capacity of sub-national government stakeholders to build resilient communities; and
3. Scale up resilient development measures in specific sectors.

The activities will adopt a gender-sensitive and rights-based approach throughout and will take into account lessons learnt and wise practices from the regional, national, sub-national and community-based projects and programmes implemented over the last decade.

The Action will contribute to the *Framework for Resilient Development in the Pacific (FRDP)*, the *Sendai Framework for Disaster Risk Reduction*, the *Paris Agreement to the United Nations Framework Convention on Climate Change*, and the *Sustainable Development Goals*, especially Goal 2: zero hunger, Goal 3: good health and well-being, Goal 6: clean water and sanitation and Goal 13: climate action, Goal 14: life below water and Goal 15: life on land.

The SUPA project in Kiribati

Kiribati is experiencing acute adverse impacts of climate change and related natural disasters. These impacts exacerbate the vulnerability of local communities' health, food security and in particular water security among others. It is affecting the quantity and quality of water available to the communities in the small island atolls of Kiribati.

Following discussion with MISE and OB from January to August 2019, the Kiribati SUPA project key stakeholders determined that the SUPA project will focus on water security, and the island of Beru in the Southern Gilberts was identified as the SUPA project site. Version 1 of the Project Design Document (PDD) signed in May 2020 focused on capacity building and enhancing the infrastructure for the storage and supply of potable water. Proposed measures included solar powered desalination units, rainwater catchment systems and sustainable groundwater extraction systems in communities with limited access to potable water. However, in September 2020 and due to travel restrictions resulting from the COVID-19 pandemic, the project was redesigned by SPC and Kiribati stakeholders.

Version 2 of the PDD, signed on 12.11.20, has two phases. Phase 1 focused on the supply and delivery of three portable desalination units to South Tarawa and a pilot installation in South Tarawa with remote virtual guidance from the supplier. The provisional activities for Phase 2 included in-situ training in the installation of desalination units and were dependent on travel restrictions being eased.

Due to the spread of COVID-19 community transfer in the Pacific Island region in 2021 the national partners and implementing agency (SPC) determined that the proposed activities were not feasible. At the end of June 2021, after consultation with EUD, it was agreed to seek alternative activities that could be completed by the end of the project's implementation period (30.06.23).

The project will now involve scaling up water security measures in Banaba Island, which is a remote raised atoll, lying to the west of the Gilbert Islands. In Banaba the main sources of water are rainwater harvesting tanks and one desalination plant. In March 2021, Banaba Island faced an extreme drought and water crisis since the island had been almost a year without substantial rain. The water tanks were empty and the desalination plant was not working. As an emergency measure in 2021, the Government of Kiribati chartered a vessel with the support of the New Zealand and Australian High Commissions to install two new solar powered desalination units which had been purchased under the Kiribati Disaster Fund for other islands in the Gilbert Group.

The desalination units are presently housed in a temporary building. The GCCA+ SUPA project will construct a new, fit-for-purpose building and facility for the desalination units. New pumps and water storage tanks will be purchased and installed, together with additional tanks for rainwater storage using the roof of the new building as a catchment. Spare parts for the pumps, desalination units and the water truck will also be purchased. These measures will strengthen the existing emergency measures such that the population of Banaba Island has a secure water supply. For the most part the necessary materials are available in South Tarawa, however a vessel will have to be chartered for transportation.

Under Key Result Area (KRA) 1 of the Kiribati SUPA project, Construction of a new building to house the RO units in Banaba Island, Kiribati, the existing old, abandoned building will be demolished and a new structure will be built to house the desalination (RO) units, solar panels, batteries, cabinets, and other accessories. KRA 2, Enhancing existing water security measures in Banaba Island, Kiribati, will involve the purchase and installation of tanks for storage of

desalination water and tanks for rainwater harvesting, purchase of pumps and purchase of spare parts for the existing water truck and spare parts for RO units. The third KRA will focus on the employment of a SUPA project National Coordinator based in MISE to help in coordination of the various project activities. (A grant agreement has been signed and the National Coordinator is already in place). KRA 4 will cover the purchase of small scale, on-the-ground water security measures, such as rainwater harvesting tanks for Beru Island. This island was the original focus of the project as identified in versions 1 and 2 of the PDD, and community expectations have been raised here.

The SUPA project will adopt a gender-sensitive/rights-based approach throughout the design and implementation period with the assistance of SPC's Human Rights and Social Development Division. The Ministry of Infrastructure and Sustainable Energy will lead in the implementation of the Kiribati SUPA project, in partnership with the Office of Te Beretitenti.

The project aims to enhance community resilience to water security challenges brought about by climate change and disasters. The project contributes to addressing health and social issues relating to water needs for the more vulnerable rural areas.

The project objective is also consistent with the goals and strategies of the Government of Kiribati as identified in the Kiribati Development Plan (KDP) 2016-2019 and Government Party manifesto or "Te Motinnano" that calls to "*improve access to quality climate change resilient infrastructure in urban and rural areas*" with specific objective "*to explore and promote the use of water desalination from reverse osmosis technology using solar energy for isolated communities.*" The goal is to "*provide 75% of the population with access to potable water by the end of 2020.*" The KJIP calls for the identification and implementation of most appropriate technological and sustainable management measures to increase water safety (quantity and quality) at the village level based on assessments of groundwater resources and assessment of rainwater catchment capacity on outer islands. This includes the most appropriate water sources and technological actions such as filtration galleries; protection of household wells from wave overtopping, contamination and heavy rain; rainwater harvesting; and desalination plants.

Kiribati's disaster risks are almost entirely climate-related and of these the main concern is drought. Droughts, usually associated with La Niña events, are occasionally severe in Kiribati. The *Climate Change in the Pacific: Scientific Assessment and New Research* report for Kiribati, noted that only 205 mm of rainfall was received over the 18-month period from July 1988 to December 1989, and over the six months from August 1998 to February 1999 total rainfall was only 95 mm. These figures were very much lower than the mean annual rainfall of approximately 2100 mm, and the dry season average of just over 900 mm between May and October.

The report notes, the drought from April 2007 to early 2009 severely affected water supplies in the southern Gilbert Islands and Banaba Island. During this period ground water turned brackish and the leaves of most plants turned yellow. Copra production, the main income source for people in the outer islands, declined.

Since Cyclone Pam in 2015, the Government of Kiribati has embarked on an extensive programme to install solar powered desalination plants in the Southern Gilbert Islands with the

support of the Kiribati Disaster Fund project. Four units have been installed and ten units were purchased in 2019/2020. This approach is at least partly a response to the very dry climate of the Southern Gilbert Islands and has been incorporated into Government policies such as the KDP 2016 – 2019 and KJIP 2019-2028

The 2015 population estimate for Banaba Island where prioritised water security infrastructure will be built are shown in the table below.

Population figures (2015 census) for the direct beneficiaries of the SUPA Project

State	Total population 2015 census	Number of households 2015 census
Direct beneficiaries		
Banaba	268	77

Rationale

Based on the foregoing the justification and rationale for the SUPA project in Kiribati is as follows:

- The sector selected by Kiribati is one of the five sectors identified in the EU Delegation Agreement as priority sectors needing scaling up interventions for the SUPA project.
- The identified scaling up measure is an effective and tested measure that has elements of sustainability and can be implemented within the timeframe of the SUPA project.
- The selected scaling up measure has socio-economic benefits for the communities and can be implemented using an evidence-based gender-sensitive and rights-based approach.
- Links to national priorities for desalination in outer islands (Kiribati development plan)
- The selected scaling up measure fits within the scope of the SUPA project budget and criteria for scaling up as it makes an existing emergency measure more sustainable.
- Maintenance - during the construction MISE technical staff will provide additional training and spare parts to Banaba Island water technician.
- The geography and location of Kiribati makes its people highly vulnerable to disaster and climate risks.
- Future projections for climate changes show a very high confidence in the El Niño/La Niña patterns continuing through to 2100; added to which there is a very high confidence in the projected increase in annual mean and daily extreme temperatures, and in sea level rise. These projections will continue to increase the vulnerability of persons living in Kiribati.
- The government of Kiribati, through its policies, strategies and plans, places a high priority on upscaling water security infrastructures.
- The SUPA project will provide tangible outcomes that will help the people of Kiribati cope with future water security challenges.
- Adopting a gender-sensitive/rights-based approach will ensure that the principles of equality and equity are provided to rights holders in Kiribati.

2. PROJECT SELECTION PROCESS

This section provides a timeline of the planning activities that have led to this Project Design Document. Activities are listed below in chronological order.

March 2019: The SUPA Planning and Inception Meeting was held in Suva from 4-6 March 2019. The project was introduced to various stakeholders and partners including representatives from SUPA project countries namely Cook Islands, Federated States of Micronesia (FSM), Fiji, Kiribati, Republic of the Marshall Islands (RMI), Nauru, Niue, Palau, Tonga and Tuvalu. Participants contributed to the development of the draft criteria for scaling up climate change adaptation interventions under Output 3 of the project.

July 2019: During an initial consultation, water security was selected as the focus sector by the Kiribati National Expert Group (KNEG) and the four islets of Bangai, Aiwa and Tenatorua in Tabiteuea North, and Takuu in Tabiteuea South was identified as the specific location.

September 2019: A concept note was submitted by Kiribati and was approved by EUD with some concerns expressed about long-term maintenance and the overall sustainability of desalination units. SPC proposed modifying proposed the outputs to Kiribati in light of EUD comments.

November 2019: A project design workshop was held in Tarawa, Kiribati on 19 November 2019. Participants came from the Ministry of Health and Medical Services, Ministry of Infrastructure & Sustainable Energy, Ministry of Environment, Lands and Agriculture Developments, University of the South Pacific (USP) and Kiribati Local Government Association (KILGA). Discussions focused on the SUPA project activities and sites. The objectives, KRAs and budget were discussed and agreed. Representatives from other government ministries were not able to attend due to various reasons.

February 2020: A third visit was made to Kiribati, 10-13 February 2020, to hold further discussions with MISE, Office of Te Beretitenti (The President) and the Ministry of Finance and Economic Development.

March-April 2020: Discussions between MISE and SPC about the selection of the sites and the training in desalination. Finally, MISE confirmed the selection of Beru Island, and the replacement of the short-term consultancies for desalination training with a one-year placement of a technical advisor experienced in desalination at MISE.

April 2020: The full Project Design Document (PDD) was submitted for review and signature.

May 2020: Version 1 of the PDD was signed.

August to September 2020: Due to the ongoing COVID-19 border closures, the 12-month placement of the technical advisor in desalination in Kiribati was deemed impossible for this project. The PDD was revised to reflect new activities and submitted for review and signature.

November 2020: Version 2 of the PDD was signed.

February -March 2021: Written direction received from Secretaries OB and MISE to proceed with on-site training and direct procurement (using a non-competitive process) of three RO units from Avanale Water Solutions (AWS).

April-June 2021: Several discussions conducted with AWS and MISE:

- Onsite training by AWS not feasible due to COVID-19 travel restrictions.
- Detailed specifications prepared for 3 x AWS RO units and sent to MISE for review.
- MISE indicated that (a) they wished to revise the specifications and utilise open procurement; (b) they wanted to proceed with long term technical assistance to be based in Kiribati (c) they requested a project extension

July 2021: Consultation with EUD who advised: (a) Kiribati to propose alternative water security activities (not RO units); (b) Long term technical assistance is not feasible due to the present COVID-19 restrictions; and (c) The project will not be extended at the present time. These points were shared with MISE.

August 2021: MISE presented a list of 7 activities for SUPA funds and SPC selected the construction of the building to house the desalination units and related activities in Banaba Island. A concept note was prepared and approved by the EU.

October 2021: Version 3 of the PDD signed

3. DETAILED PROJECT DESCRIPTION

This section describes the overall objective, specific objective and outputs, as well as the logical framework that is used to monitor progress. The section also includes the project budget and the schedule.

Overall Objective

Strengthen water security measures for remote atolls in Kiribati

Specific Objective

Scale up existing emergency water security measures in Banaba Island

Key result areas and activities

KRA 1: Construction of a new building to house the RO units in Banaba Island, Kiribati

1.1 Demolition of the existing building

MISE will work on the demolition of the old abandoned building.

1.2 Construction of a new building to house the RO units, materials and labour

Construction of new, fit-for-purpose structure to house the desalination (RO) units, solar panels batteries, cabinets, and other accessories. SPC will work closely with MISE to procure the materials using SPC's procurement policy. This will involve materials and labour for the construction of a new concrete block building, concrete loading bay, electrical and plumbing installation.

1.3 Transportation from Tarawa to Banaba

MISE and the National Coordinator, in close consultation with SPC, to arrange logistics for the construction in Banaba Island. It is anticipated that two trips may be required to Banaba Island, the first trip for shipment of materials and MISE team to Banaba Island for oversight of the installation and the second trip to transport the MISE team back to Tarawa after the installation had been completed. This will also involve handling and other logistical charges such as the cost for the transportation of materials to the wharf and port clearance charges.

1.4 Design services, logistics and oversight for construction of new building

Overall design and preparation of bill of quantities, and supervision by MISE of the construction of the new building, facilities, and placement of the desalination plants and associated equipment. This will include MISE staff cost, travel allowances, meals and associated items. As part of the oversight on-the-job training in the operation and maintenance of desalination units will be provided to the water technicians based on Banaba Island.

KRA 2: Enhancing existing water security measures in Banaba Island, Kiribati

2.1 Purchase and installation of water storage tanks

SPC will work closely with MISE to procure and install the water storage tanks. This involves the purchase and installation of tanks for storage of desalination water and tanks for storage of rainwater. This will include plumbing materials; and for the rainwater storage tanks materials for tank bases, guttering and first flush diverters.

2.2 Purchase of pumps

Two new pumps for seawater intake and a seawater transfer and associated spare parts will be purchased to support the operation of the desalination units.

2.3 Purchase of spare parts for existing water truck

The existing water truck (4 tonnes) delivers water to the household and communal tanks on Banaba Island. It was purchased over 10 years ago and is still operational. Spare parts will be purchased for maintenance.

2.4 Purchase of spare parts for the RO units.

Spare parts for the two emergency Avanale desalination units will be purchased. The status of the non-operational ACE unit will be investigated and if it can be re-instated, additional parts will be provided.

2.5 Purchase and install rain gauge for the targeted Island(s) by KMS

MISE to discuss with Kiribati Meteorological Services the type of rain gauge to be installed and the targeted island(s). The installation of the rain gauge would enable targeted islands to be included in the rainfall and climate watch alerts issued by Kiribati Meteorological Services, providing routine reporting of storage levels to the National Drought Committee.

KRA 3: Employment of a National Coordinator based in MISE

3.1 Employment of a National Coordinator to be based at MISE

A SUPA Project National Coordinator will be employed and housed at MISE. The National Coordinator will help coordinate, report and support implementation of SUPA project activities in Kiribati by the implementing government agencies and partners. The National Coordinator will hold quarterly meetings with the EU-funded Technical Assistant based in the Ministry of Finance and Economic Development in Tarawa and attend the WASH coordination group.

3.2 Support for National Coordinator

The SUPA project will provide funds to cover the National Coordinator's workstation including laptop, office furniture and office supplies.

KRA 4: Purchase of water security measures for Beru Island.

4.1 Purchase of water security measures for Beru Island

This island was the original focus of the project as specified in versions 1 and 2 of the PDD, and community expectations have been raised here. Discussions will be held with the representative and the island council to determine the need for on-the-ground water security measures such as rainwater harvesting materials.

4. INSTITUTIONAL ARRANGEMENTS, RISK MANAGEMENT AND EXIT STRATEGY

Institutional arrangements

Implementation

Implementation of this project in Kiribati will be the responsibility of the Ministry of Infrastructure and Sustainable Energy in collaboration with the Office of Te Beretitenti (Office of the President). The SUPA project in Kiribati is being implemented under the ambit of the Co-Delegation Agreement, Global Climate Change Alliance Plus – Scaling Up Pacific Adaptation (GCCA+ SUPA), CRIS number: ENV/2018/398237, which was signed by

representatives from the European Union Delegation to the Pacific, SPC and SPREP on 27th December 2018.

Project Oversight Committee

A Project Oversight Committee will be established consisting of representatives from the Ministry of Infrastructure and Sustainable Energy, Office of Te Beretitenti, Ministry of Public Works and Utilities, , Ministry of Internal Affairs, Island Councils, local government, and the Ministry of Finance and Economic Development, and Beru and Banaba Island Councils where possible. The EU-funded Technical Assistant based in the Ministry of Finance and Economic Development in Tarawa will also participate. Other members such as the Ministry of Health and Medical Services, NGO's and private sector may be added as required. The Kiribati SUPA National Coordinator will be responsible for establishing and providing administrative support for this Committee. It is expected that the Project Oversight Committee will meet quarterly and more often as required. Minutes will be kept. The Kiribati SUPA National Coordinator will provide regular (quarterly) updates on progress with the project and raising any concerns or problems that have been encountered. The committee will provide advice on how problems and issues may be addressed. Their main responsibility is guidance and oversight during project implementation.

Reporting

The Kiribati SUPA National Coordinator will be responsible for providing monthly narrative reports, as well as quarterly narrative and financial progress reports to the SUPA project team in SPC in Suva. A template for reporting will be provided.

Day to day implementation of the project

The Kiribati SUPA National Coordinator situated in MISE will have the responsibility for overall coordination of the SUPA activities, including regular financial and narrative reporting to Kiribati government and to SPC as required. The National Coordinator is also responsible for day-to-day coordination of the delivery of the KRAs. The National Coordinator reports to the MISE Water and Sanitation Unit and the SUPA Project Manager in SPC. The National Coordinator is expected to liaise very closely with the Office of Te Beretitenti.

In addition, the National Coordinator will have quarterly meetings with the EU-funded Technical Assistant based in the Ministry of Finance and Economic Development in Tarawa and will attend the WASH Coordination group to improve coordination and complementarity of the SUPA and MISE WASH Project.

Risk management

Risk	Risk level	Mitigating measure
Procurement challenges		
Procurement delays including disruptions in the global supply chain	High	<ul style="list-style-type: none"> • Programme in sufficient time for procurement procedures • Design the measures so as to utilise materials available in Kiribati wherever possible • Commence procurement as soon as possible to avoid global supply chain disruptions • SPC to directly procure large items.
Extreme events		
Project implementation delayed by an extreme weather event e.g. cyclone, ocean surge, severe El Niño drought, or major social/cultural events.	High	<ul style="list-style-type: none"> • Ensure planning of activities contains sufficient buffering for minimum one severe and disruptive weather event. • Despite the above mitigating measure, a severe drought or cyclone will likely delay full and timely delivery of all activities.
COVID-19 pandemic-related delays may further impede delivery of activities	High	<ul style="list-style-type: none"> • Work closely with partners including WHO, SPC Public Health Division and Health authorities in Kiribati. • Provide for flexibility in scheduling the activities and work plans
Challenges with Implementation in outer islands		
Logistical challenges of implementing activities in outer islands become overwhelming	Moderate	<ul style="list-style-type: none"> • Build on lessons learnt about scheduling and logistics from previous projects; adopt flexible and back-up planning approaches such that alternatives can be prioritised if and when necessary. • Consider chartering vessels to deliver all the equipment at the start of implementation so that shipping delays do not impede delivery of activities
National capacity and challenges to full stakeholder involvement		
Countries have insufficient capacity to fully implement the project activities	Moderate	<ul style="list-style-type: none"> • Obtain assistance from island councils and local government to identify persons who will be committed to the project. • Obtain assistance from Ministry of Internal Affairs. • Ensure full commitment of local government.
Assumptions		
<ul style="list-style-type: none"> • There are many uncertainties around the ongoing COVID-19 pandemic, which represents a serious constraint to project implementation. As more information becomes available, further mitigation measures will be developed • Global economic conditions and national governance do not prevent economic growth. • Global support for the Paris Agreement and Sendai Framework is maintained. • Continual high-level national government commitment to prioritising climate change and disaster risk management in the national development agendas. 		

- Social and political stability is maintained.
- Continuous collaboration amongst development partners occurs and is documented to ensure coherence, complementarity and efficiency amongst climate change and disaster risk management interventions.

Exit strategy

Strategy: Mainstreaming

The concept and practice of scaling up water security measures rather than delivering individual demonstration projects will contribute to the strategies and plans of the water sector and strengthen the sector beyond project life. The SUPA project will be conducting water resources assessments and community consultations using a participatory, rights-based and gender sensitive approach. It will incorporate current and future climate and disaster risk challenges and projections. In keeping with the Framework for Resilient Development for the Pacific (FRDP), the integration of measures that address climate risk and disaster risk within a sector is another example of a mainstreaming approach that contributes to sector resilience beyond project life. Lessons learnt in applying a gender-sensitive/rights-based approach from the RENI project will be applied.

Strategy 2: Further funding

Identifying alternative sources of grant funding or loan finance, or national government funds in order to continue a project's activity is a second exit strategy. SUPA also provides an opportunity for local stakeholders to voice their concerns directly to National Government, as was done during the Project Design Consultation in June and November 2019.

SUPA is working closely with a number of climate change adaptation and disaster risk management projects being implemented by SPC, as well as other projects implemented by regional and international organisations. Throughout the course of the project, routes to create synergies with other longer running activities will be pursued and where appropriate, developed.

Strategy 3: Private enterprise

Developing an alternative business and/or operational model, through commercialising aspects of the project, is a third exit strategy. Within the scope of SUPA, community and private sector involvement in disaster risk management and climate change adaptation interventions will be encouraged where appropriate. Discussions with the MISE, Island Councils and other avenues will be pursued.

Strategy 4: Project closure

Winding down a project's activities as efficiently and effectively as possible in order not to impact adversely on the project's staff and its stakeholders, and to capture the benefits and any

lessons learned is a fourth exit strategy. The project will work to efficiently wind down the activities as the end date is approached.

Lessons learnt from the Global Climate Change Alliance: Pacific Small Island States (GCCA: PSIS) and RENI project will be applied and include allowing sufficient time and staff for an efficient and complete closure process, complete documentation of all narrative and financial materials, and perhaps most importantly the compilation and sharing of lessons learnt through interactive discussion sessions with national stakeholders and regional partners.

Annex 1 Indicative Logframe Matrix SUPA Activities in Kiribati

The activities, the expected outputs and all the indicators, targets and baselines included in the logframe matrix are indicative and may be updated during the implementation of the action. Note also that indicators will be disaggregated by sex whenever relevant

Intervention logic	Indicators	Baselines 2021	Target 2023	Sources and means of verification	Assumptions
<p>Overall objective: Strengthen water security measures for remote atolls in Kiribati</p>	<ul style="list-style-type: none"> Number of persons benefitting from scaled up water security measures in Banaba and Beru Islands. Improved data available for drought planning 	<ul style="list-style-type: none"> Existing population (Banaba = 268, Beru=2,051) Zero direct data available for rainfall in outer Island (site TBC) 	<ul style="list-style-type: none"> 2,319 people 1 rain gauge installed in Banaba Island 	<ul style="list-style-type: none"> Reports from previous water security projects, KIRIWATSAN Disaster Fund projects Reports of community meetings Media reports Progress reports Trip reports 	<ul style="list-style-type: none"> Kiribati government continues to prioritise water security
<p>Specific objective: Scale up existing water security measures in Banaba Island</p>	<ul style="list-style-type: none"> Capacity of water technicians in Banaba Island enhanced 	<ul style="list-style-type: none"> Unknown 	<ul style="list-style-type: none"> 2 water technicians provided with on-the-job training in desalination operation and maintenance by MISE staff during installation and construction 	<ul style="list-style-type: none"> Reports from previous water security projects Reporting on SDGs especially 3, 5, 6, 13. Water resource assessment (Banaba) 	<ul style="list-style-type: none"> Kiribati governments national priority is desalination in outer islands (Kiribati development plan)

Intervention logic	Indicators	Baselines 2021	Target 2023	Sources and means of verification	Assumptions
KRA 1: Construction of a new building to house the RO units in Banaba Island, Kiribati	<ul style="list-style-type: none"> One permanent structure to house the RO units and accessories 	<ul style="list-style-type: none"> 1 existing temporary structure 	<ul style="list-style-type: none"> 1 fit-for-purpose building constructed and handed over to Island Council 	<ul style="list-style-type: none"> Meeting reports Water assessment technical reports MISE annual reports Kiribati Disaster Fund Reports Census data 	<ul style="list-style-type: none"> Kiribati governments national priority is desalination in outer islands (Kiribati development plan)
KRA 2: Enhancing existing water security measures in Banaba Island, Kiribati	<ul style="list-style-type: none"> Additional storage for rainwater harvesting. New pumps and spare parts provided 	<ul style="list-style-type: none"> Up-to-date information on household and communal storage not available 2 pumps 	<ul style="list-style-type: none"> + 10 x 10,000L tanks to be provided at the new building + 2 pumps 	<ul style="list-style-type: none"> Meeting reports Water technician reports MISE annual reports Census data 	<ul style="list-style-type: none"> Beru Island agrees to have the desalination unit installed and assist to identify a location for installation.
KRA 3: Recruitment and employment of a National Coordinator based in MISE	<ul style="list-style-type: none"> Number of quarterly narrative and financial reports submitted by SUPA National Coordinator 	<ul style="list-style-type: none"> 0 	<ul style="list-style-type: none"> 8 reports 	<ul style="list-style-type: none"> Quarterly narrative and financial reports Payment receipts and assets register 	<ul style="list-style-type: none"> SUPA National Coordinator is recruited by Q4 2020
KRA 4: Purchase and installation of water security measures for Beru Island	<ul style="list-style-type: none"> Additional measures to be designed 	<ul style="list-style-type: none"> To be determined 	<ul style="list-style-type: none"> To be determined 	<ul style="list-style-type: none"> MISE reports Media releases Trip reports 	

Annex 2 Project Activities and Indicative Budget

Activity	Item Cost Euros	KRA total Euros
KRA 1: Construction of a new building to house the RO units in Banaba Island, Kiribati		
1.1 Demolition of the existing building	20,000	
1.2 Construction of a new building to house the RO units, materials and labour	90,000	
1.3. Transportation from Tarawa to Banaba	150,000	
1.4 Design services, logistics and oversight for construction of new building	35,000	
KRA 1 Total	295,000	295,000
KRA 2: Enhancing existing water security measures in Banaba Island, Kiribati		
2.1 Purchase and installation of water storage tanks	50,000	
2.2 Purchase and installation of pumps	30,000	
2.3 Purchase of spare parts for existing water truck	10,000	
2.4 Purchase of spare parts for the RO units	10,000	
2.5 Purchase and install rain gauge (site TBC with Kiribati Meteorological Services)	5,000	
KRA 2 Total	105,000	105,000
KRA 3: Recruitment and employment of a National Coordinator based in MISE		
4.1 Employment of a National Coordinator to be based at MISE	60,000	
4.2 Support for National Coordinator	5,000	
KRA 3 Total	65,000	65,000
KRA 4 Purchase of water security measures for Beru Island.		
4. 1 Purchase and installation of water security measures (e.g. water tanks) for Beru Island	50,000	
KRA 4 total	50,000	50,000
Total KRA 1-4	515,000	
Contingencies	35,000	
Grand total	550,000	550,000

The modalities for implementation will be direct procurement by SPC, Grant Agreements or Service Contracts.

All procurement will be based on SPC's Procurement Policy

- SPC Procurement Policy



SPC procurement
Policy.pdf

Other information

The Government of Kiribati will oversee accurate and regular records and accounts of the implementation of the Action. The following conditions will also apply:

- Fixed assets (equipment): All fixed assets (equipment) will remain the property of SPC until the closure of the project. On closure of the project, the assets will officially be handed over by SPC to the respective stakeholders in Kiribati. An asset register of all assets purchased should be maintained by the SUPA Project National Coordinator and kept in the Ministry of Infrastructure and Sustainable Energy.

Annex 3 Schedule of Activities

Activity	M7-12 2020	M1-6 2021	M7-12 2021	M1-6 2022	M7-12 2022	M 1 -6 2023
KRA 1: Construction of a new building to house the RO units in Banaba Island, Kiribati						
1.1 Demolition of the existing building						
1.2 Construction of a new building to house the RO units, materials and labour						
1.3. Transportation from Tarawa to Banaba						
1.4 Design services, logistics and oversight for construction of new building						
KRA 2: Enhancing existing water security measures in Banaba Island, Kiribati						
2.1 Purchase and installation of water storage tanks						
2.2 Purchase of pumps						
2.3 Purchase of spare parts for existing water truck						
2.4 Purchase of spare parts for the RO units						
2.5 Purchase and install rain gauge (site to TBC with Kiribati Meteorological Services)						
KRA 3: Employment of a National Coordinator based in MISE						
4.1 Employment of a National Coordinator to be based at MISE						
4.2 Support for National Coordinator						
KRA 4 Purchase and installation of water security measures for Beru Island						
4. 1 Purchase and installation of water security measures for Beru Island						