



**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).

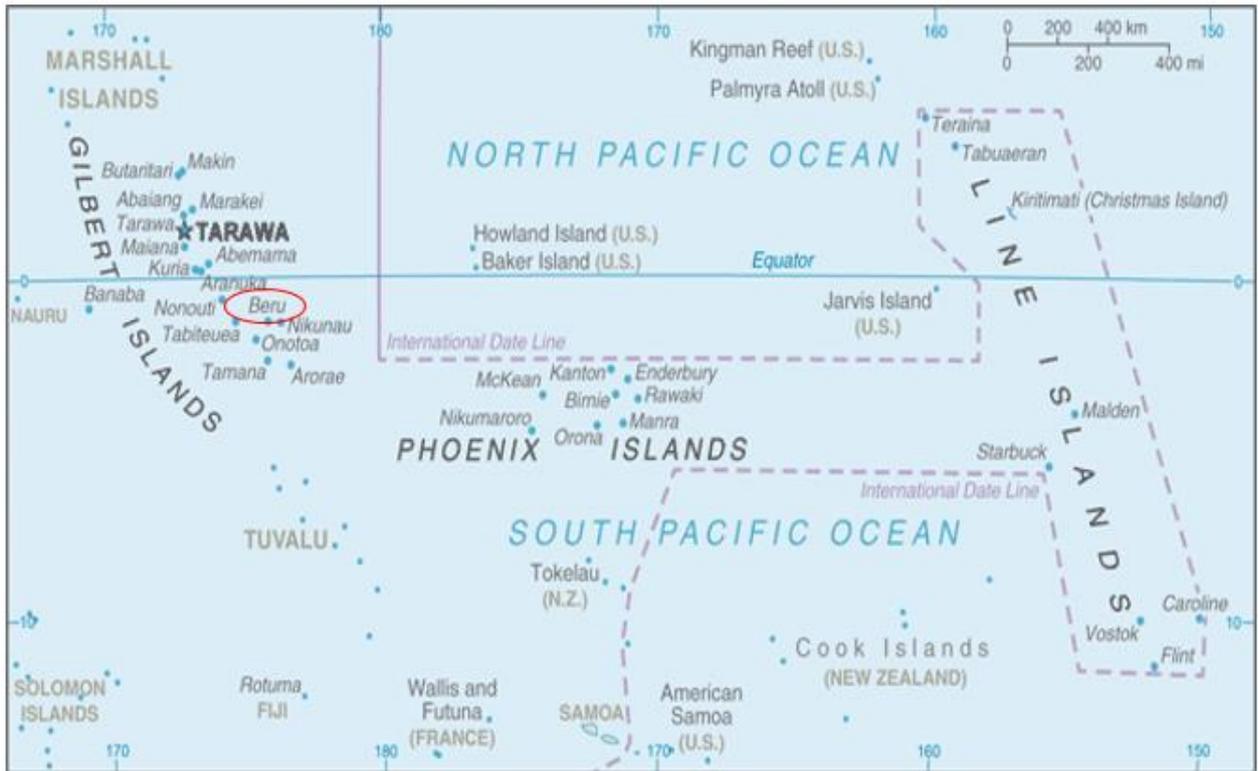
Kiribati is experiencing acute adverse impacts of climate change and related natural disasters. These impacts exacerbate the vulnerability of local communities' health, food security and in particular water security among others. Two consecutive national consultations in June and November 2019, involving 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 km<sup>2</sup> dispersed over 3.5 million km<sup>2</sup> of the Pacific Ocean and an Exclusive Economic Zone of 3,441,810 km<sup>2</sup>. 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**

<b>State</b>	<b>Total population 2015 census</b>	<b>Number of households 2015 census</b>
<b>Direct beneficiaries</b>		
Beru	2,051	458
Total	2,051	458
<b>Indirect beneficiaries</b>		
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 27<sup>th</sup> 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
<b>Procurement challenges</b>		
Procurement delays	High	<ul style="list-style-type: none"> <li>• Programme in sufficient time for procurement procedures</li> <li>• Investigate option to have SPC do procurement of large items.</li> </ul>
<b>Extreme events</b>		
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"> <li>• Ensure planning of activities contains sufficient buffering for minimum one severe and disruptive weather event.</li> <li>• Despite the above mitigating measure, a severe drought or cyclone will likely delay full and timely delivery of all activities.</li> </ul>
COVID-19 pandemic may result in significant delays to the delivery of activities	High	<ul style="list-style-type: none"> <li>• Reschedule activities and work plans</li> </ul>
<b>Challenges with Implementation in outer islands</b>		
Logistical challenges of implementing activities in outer islands become overwhelming	Moderate	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Consider chartering vessels to deliver all the equipment at the start of implementation so that shipping delays do not impede delivery of activities</li> </ul>

<b>National capacity and challenges to full stakeholder involvement</b>		
Countries have insufficient capacity to fully implement the project activities	Moderate	<ul style="list-style-type: none"> <li>• Obtain assistance from island councils and local government to identify persons who will be committed to the project.</li> <li>• Obtain assistance from Ministry of Internal Affairs.</li> <li>• Ensure full commitment of local government.</li> </ul>
<b>Assumptions</b> <ul style="list-style-type: none"> <li>• 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</li> <li>• Global economic conditions and national governance do not prevent economic growth.</li> <li>• Global support for the Paris Agreement and Sendai Framework is maintained.</li> <li>• Continual high-level national government commitment to prioritising climate change and disaster risk management in the national development agendas.</li> <li>• Social and political stability is maintained.</li> <li>• Continuous collaboration amongst development partners occurs and is documented to ensure coherence, complementarity and efficiency amongst climate change and disaster risk management interventions.</li> </ul>		

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

	<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"> <li>• Reports from previous water security projects, KIRIWATSAN Disaster Fund projects</li> <li>• Reports of community meetings</li> <li>• Media reports</li> <li>• Newspaper and other media reports.</li> <li>• Progress reports</li> </ul>	<p>prioritise water security</p> <ul style="list-style-type: none"> <li>• Communities willing to contribute to the planning process.</li> </ul>
<p><b>KRA 1:</b> 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"> <li>• Meeting reports</li> <li>• Reports on consultation</li> <li>• Impact assessments</li> <li>• Water assessment technical reports</li> <li>• Water technician reports</li> <li>• MISE reports on installation and maintenance of existing RO plants</li> <li>• MISE annual reports</li> <li>• Kiribati Disaster Fund Reports</li> <li>• Census data</li> </ul>	<ul style="list-style-type: none"> <li>• Qualified water expert/team available to conduct water assessments.</li> </ul>

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

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

## Annex 2 Project Activities and Indicative Budget

Activity	Item Cost Euros	KRA total Euros
<b>KRA 1: Identify the water security measures for enhancement in Beru</b>		
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		
<b>KRA 1 Total</b>	<b>40,000</b>	<b>40,000</b>
<b>KRA 2: Design and install water security measures in Beru</b>		
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		
<b>KRA 2 Total</b>	<b>225,000</b>	<b>225,000</b>
<b>KRA 3: Build national capacity in desalination</b>		
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	
<b>KRA 3 Total</b>	<b>150,000</b>	<b>150,000</b>
<b>KRA 4: Recruitment and employment of a National Coordinator based in MISE</b>		
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	
<b>KRA 4 total</b>	<b>65,000</b>	<b>65,000</b>
<b>Total KRA 1-4</b>	<b>480,000</b>	
<b>Contingencies</b>	20,000	
<b>Grand total</b>	<b>500,000</b>	<b>500,000</b>

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
<b>KRA 1: Identify the water security measures to be enhanced in Beru</b>						
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						
<b>KRA 2: Design and install water security measures in Beru</b>						
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.						
<b>KRA 3: Build national capacity in desalination</b>						
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						
<b>KRA 4: Recruitment and employment of a National Coordinator based in MISE</b>						
4.1 Employment of a National Coordinator to be based at MISE for 2.5 years						
4.2 Support for National Coordinator						