

Securing Kiribati's Natural Heritage: Protected areas for community, atoll, and island climate resilience (Securing Kiribati)

Part I: Project Information

GEF ID

10775

Project Type

FSP

Type of Trust Fund

MTF

CBIT/NGI

CBIT No

NGI No

Project Title

Securing Kiribati's Natural Heritage: Protected areas for community, atoll, and island climate resilience (Securing Kiribati)

Countries

Kiribati

Agency(ies)

IUCN

Other Executing Partner(s)

Ministry of Environment, Lands, and Agricultural Development

Executing Partner Type

Government

GEF Focal Area

Multi Focal Area

Taxonomy

Focal Areas, Biodiversity, Mangroves, Biomes, Coral Reefs, Species, Invasive Alien Species, Protected Areas and Landscapes, Terrestrial Protected Areas, Community Based Natural Resource Mngt, Coastal and Marine Protected Areas, Financial and Accounting, Conservation Trust Funds, Sustainable Development Goals, Climate Change, Climate Change Adaptation, Ecosystem-based Adaptation, Least Developed Countries, Small Island Developing States, Sea-level rise, Livelihoods, Stakeholders, Civil Society, Community Based Organization, Non-Governmental Organization, Communications, Behavior change, Education, Awareness Raising, Type of Engagement, Consultation, Participation, Gender Equality, Gender results areas, Access and control over natural resources, Gender Mainstreaming, Sex-disaggregated indicators, Women groups, Sea Grasses

Rio Markers**Climate Change Mitigation**

Climate Change Mitigation 0

Climate Change Adaptation

Climate Change Adaptation 2

Duration

60 In Months

Agency Fee(\$)

901,458.00

Submission Date

3/24/2021

A. Indicative Focal/Non-Focal Area Elements

| Programming Directions | Trust Fund | GEF Amount(\$) | Co-Fin Amount(\$) |
|------------------------|--------------------------------|----------------------|----------------------|
| BD-1-1 | GET | 814,650.00 | 986,000.00 |
| BD-2-6 | GET | 1,087,600.00 | 700,000.00 |
| BD-2-7 | GET | 3,616,591.00 | 8,111,563.00 |
| CCA-2 | LDCF | 4,497,354.00 | 10,000,000.00 |
| | Total Project Cost (\$) | 10,016,195.00 | 19,797,563.00 |

B. Indicative Project description summary

Project Objective

Project Objective: To improve the resilience of ecosystems and communities in Kiribati to the impacts of climate change through nature-based solutions and ecosystem-based adaptation that support biodiversity and sustainable livelihoods.

| Project Component | Financing Type | Project Outcomes | Project Outputs | Trust Fund | GEF Amount(\$) | Co-Fin Amount(\$) |
|---|----------------------|--|--|------------|----------------|-------------------|
| Component 1: Improved integrated environment and oceans governance | Technical Assistance | <p>Outcome 1.1: Ministries and departments implement improved policy frameworks for environment, oceans and natural resources management with ecosystem-based approaches to climate change integrated.</p> <p>Indicators:</p> <p>a) 3 national policies and regulations integrating ecosystem-based adaptation and biodiversity conservation developed or revised</p> <p>b) Adaptation and biodiversity policies and regulation actions implemented on 5 target islands and in appropriate non-target islands</p> <p>c) National Ocean Policy with climate change adaptation and biodiversity considerations developed</p> | <p>Output 1.1.1: Environment and Protected Area Policies and Regulations Integrating Ecosystem-based Adaptation to Climate Change Developed</p> <p>Output 1.1.2: Kiribati Integrated National Ocean Policy developed</p> | GET | 636,570.00 | 986,000.00 |

| | | | | | |
|-----------------------------|----------------------|-----------------------------|------------------------------|-------|------------|
| Component 1 (same as above) | Technical Assistance | Outcome 1.1 (same as above) | Output 1.1.1 (same as above) | LDC F | 180,000.00 |
|-----------------------------|----------------------|-----------------------------|------------------------------|-------|------------|

| | | | | | | |
|---|------------|---|--|-----|--------------|--------------|
| Component 2: Improved and healthy ecosystems that support biodiversity and are resilient to climate change impacts | Investment | <p>Outcome 2.1. Protected Areas Expanded and PA Management Improved</p> <p>Indicators:</p> <p>a. At least 5 new protected and conserved areas across the 5 target islands in the Gilbert group covering 10% of island marine/lagoon area and 5% of island area</p> <p>b. PIPA monitoring and enforcement improved through revised monitoring, control and surveillance plan and data collected on nature of incursions and illegal activity</p> <p>c. Eradication of invasive mammal species on Enderbury island verified through post-eradication survey</p> <p>d. Sustainable financing strategy for all Kiribati protected areas developed or revised and actions to implement the plan implemented.</p> <p>e. at least 100 community members, leaders, and protected area staff (50% women) trained and proficient in protected area management techniques.</p> | <p>Output 2.1.1. Expanded and improved island/atoll protected areas, MPAs, and natural resources management network across Gilbert Islands</p> <p>Output 2.1.2. Strengthened management and enforcement of Phoenix Islands Protected Area (PIPA).</p> <p>Output 2.1.2. Strengthened management and enforcement of Phoenix Islands Protected Area (PIPA). (IAD ERADICATION)</p> <p>Output 2.1.3. Sustainable financing mechanisms for Kiribati's protected area network created and harmonized.</p> <p>Output: 2.1.4: PA Managers and Community Leaders Protected Area management capacity developed and strengthened</p> | GET | 4,338,990.00 | 8,811,563.00 |
|---|------------|---|--|-----|--------------|--------------|

| | | | | | | |
|--|-------------------|---|---|------------------|---------------------|---------------------|
| <p>Component 3. Ecosystem-based approach for climate change adaptation and community resilience through nature-based solutions</p> | <p>Investment</p> | <p>Outcome 3.1. Improved resilience of outer island communities by practicing climate smart agriculture and aquaculture that protects, restores, and maintains healthy ecosystems.</p> | <p>Output 3.1.1. Island-level nature-based solutions-oriented sustainable land use plans developed and implemented.</p> <p>Output 3.1.2. Climate-smart agriculture and aquaculture livelihood options are identified and adopted.</p> | <p>LDC F</p> | <p>3,491,850.00</p> | <p>9,000,000.00</p> |
| | | <p>Indicators:</p> <p>A. 5 Ecosystem-based adaptation-oriented island land-use plans developed or revised</p> <p>B. At least 500 community members (50% women) trained in vulnerability assessment techniques and ecosystem-adaptation planning processes</p> <p>c. At least 20 innovative climate-smart agriculture initiatives developed across the 5 target islands (based on community vulnerability and needs assessments)</p> <p>d. At least 10 innovative climate-smart aquaculture initiatives developed (based on community vulnerability and needs assessments) across the 5 target islands</p> | | | | |

| | | | | | |
|---|-------------------------|--|---|-----|------------|
| Component 4. Awareness, knowledge management and lessons learning | Technical Assistance | <p>Outcome 4.1. Strengthened formal and informal climate change adaptation and environmental outreach and capacity building at the village, island, and national levels</p> <p>Indicators:</p> <p>A. Awareness of ecosystem-based adaptation to climate change and biodiversity conservation increased in primary and secondary school students.</p> <p>B. Awareness of ecosystem-based adaptation to climate change and biodiversity conservation increased among 50% of community members on target islands.</p> | <p>Output 4.1.1. Improved and strengthened formal and informal curricula to enhance climate change adaptation and environment awareness and capacity.</p> <p>Output 4.1.2. Improved awareness of ecosystem-based adaptation to climate change and environmental issues at village, island, and national levels.</p> <p>Output 4.1.3. Project-related best-practices and “lessons learned” assessed, published and disseminated</p> <p>Output 4.1.4. Project monitoring system established and midterm and final evaluations conducted</p> | GET | 280,479.00 |
|---|-------------------------|--|---|-----|------------|

| | | | | | | |
|--------------------------------------|----------------------|-----------------------------|------------------------------|-------|----------------------|----------------------|
| Component 4 (same as above) | Technical Assistance | Outcome 4.1 (same as above) | Output 4.1.1 (same as above) | LDC F | 611,344.00 | 1,000,000.00 |
| | | | Output 4.1.2 (same as above) | | | |
| | | | Output 4.1.3 (same as above) | | | |
| | | | Output 4.1.4 (same as above) | | | |
| Sub Total (\$) | | | | | 9,539,233.00 | 19,797,563.00 |
| Project Management Cost (PMC) | | | | | | |
| | | | | | GET | 262,802.00 |
| | | | | | LDCF | 214,160.00 |
| Sub Total(\$) | | | | | 476,962.00 | 0.00 |
| Total Project Cost(\$) | | | | | 10,016,195.00 | 19,797,563.00 |

C. Indicative sources of Co-financing for the Project by name and by type

| Sources of Co-financing | Name of Co-financier | Type of Co-financing | Investment Mobilized | Amount(\$) |
|------------------------------|---|----------------------|-------------------------------|----------------------|
| Donor Agency | IUCN (European Union BIOPAMA) | Grant | Investment mobilized | 1,211,563.00 |
| Donor Agency | IUCN (European Union Kiribati MSP) | Grant | Investment mobilized | 486,000.00 |
| Recipient Country Government | Ministry of Environment, Land, and Agricultural Development (ECD) | In-kind | Recurrent expenditures | 10,000,000.00 |
| Recipient Country Government | Ministry of Environment, Land, and Agricultural Development (ALD) | In-kind | Recurrent expenditures | 4,000,000.00 |
| Recipient Country Government | Ministry of Fisheries and Marine Resources Development | In-kind | Recurrent expenditures | 4,000,000.00 |
| Civil Society Organization | Island Conservation | Grant | Investment mobilized | 100,000.00 |
| | | | Total Project Cost(\$) | 19,797,563.00 |

Describe how any "Investment Mobilized" was identified

Describe how any "Investment Mobilized" was identified. Investment mobilized includes grants from IUCN-led projects to Kiribati, including from the EU BIOPAMA project that provides direct support to managing protected areas in Kiribati and that supports building capacity for protected area managers and the anticipated \$486,000 grant from the EU ACP MSP work that is due to commence in late 2021. Island Conservation will be working on invasive species eradication in neighboring areas and will offer support and co-financing for the project.

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

| Agency | Trust Fund | Country | Focal Area | Programming of Funds | Amount(\$) | Fee(\$) | Total(\$) |
|--------------------------------|------------|----------|----------------|----------------------|----------------------|-------------------|----------------------|
| IUCN | GET | Kiribati | Biodiversity | BD STAR Allocation | 5,518,841 | 496,696 | 6,015,537.00 |
| IUCN | LDCF | Kiribati | Climate Change | NA | 4,497,354 | 404,762 | 4,902,116.00 |
| Total GEF Resources(\$) | | | | | 10,016,195.00 | 901,458.00 | 10,917,653.00 |

E. Project Preparation Grant (PPG)

PPG Required **true**

PPG Amount (\$)

200,000

PPG Agency Fee (\$)

18,000

| Agency | Trust Fund | Country | Focal Area | Programming of Funds | Amount(\$) | Fee(\$) | Total(\$) |
|--------------------------------|------------|----------|----------------|----------------------|-------------------|------------------|-------------------|
| IUCN | GET | Kiribati | Biodiversity | BD STAR Allocation | 110,198 | 9,918 | 120,116.00 |
| IUCN | LDCF | Kiribati | Climate Change | NA | 89,802 | 8,082 | 97,884.00 |
| Total Project Costs(\$) | | | | | 200,000.00 | 18,000.00 | 218,000.00 |

Core Indicators

Indicator 1 Terrestrial protected areas created or under improved management for conservation and sustainable use

| Ha (Expected at PIF) | Ha (Expected at CEO Endorsement) | Ha (Achieved at MTR) | Ha (Achieved at TE) |
|----------------------|----------------------------------|----------------------|---------------------|
| 455.00 | 0.00 | 0.00 | 0.00 |

Indicator 1.1 Terrestrial Protected Areas Newly created

| Ha (Expected at PIF) | Ha (Expected at CEO Endorsement) | Total Ha (Achieved at MTR) | Total Ha (Achieved at TE) |
|----------------------|----------------------------------|----------------------------|---------------------------|
| 455.00 | 0.00 | 0.00 | 0.00 |

| Name of the Protected Area | WDPA ID | IUCN Category | Total Ha (Expected at PIF) | Total Ha (Expected at CEO Endorsement) | Total Ha (Achieved at MTR) | Total Ha (Achieved at TE) |
|----------------------------|---------|--|----------------------------|--|----------------------------|---|
| TBD | | Protected area with sustainable use of natural resources | 455.00 | | |  |

Indicator 1.2 Terrestrial Protected Areas Under improved Management effectiveness

| Ha (Expected at PIF) | Ha (Expected at CEO Endorsement) | Total Ha (Achieved at MTR) | Total Ha (Achieved at TE) |
|----------------------|----------------------------------|----------------------------|---------------------------|
| 0.00 | 0.00 | 0.00 | 0.00 |

| Name of the Protected Area | Wdpa ID | IUCN Category | Ha (Expected at PIF) | Ha (Expected at CEO Endorsement) | Total Ha (Achieved at MTR) | Total Ha (Achieved at TE) | METT score (Baseline at CEO Endorsement) | METT score (Achieved at MTR) | METT score (Achieved at TE) |
|----------------------------|---------|---------------|----------------------|----------------------------------|----------------------------|---------------------------|--|------------------------------|-----------------------------|
| | | | | | | | | | |

Indicator 2 Marine protected areas created or under improved management for conservation and sustainable use

| Ha (Expected at PIF) | Ha (Expected at CEO Endorsement) | Ha (Achieved at MTR) | Ha (Achieved at TE) |
|----------------------|----------------------------------|----------------------|---------------------|
| 39,758,700.00 | 0.00 | 0.00 | 0.00 |

Indicator 2.1 Marine Protected Areas Newly created

| Total Ha (Expected at PIF) | Total Ha (Expected at CEO Endorsement) | Total Ha (Achieved at MTR) | Total Ha (Achieved at TE) |
|----------------------------|--|----------------------------|---------------------------|
| 14,000.00 | 0.00 | 0.00 | 0.00 |

| Name of the Protected Area | WDPA ID | IUCN Category | Total Ha (Expected at PIF) | Total Ha (Expected at CEO Endorsement) | Total Ha (Achieved at MTR) | Total Ha (Achieved at TE) |
|----------------------------|---------|--|----------------------------|--|----------------------------|---|
| TBD | | Protected area with sustainable use of natural resources | 14,000.00 | | |  |

Indicator 2.2 Marine Protected Areas Under improved management effectiveness

| Total Ha (Expected at PIF) | Total Ha (Expected at CEO Endorsement) | Total Ha (Achieved at MTR) | Total Ha (Achieved at TE) |
|----------------------------|--|----------------------------|---------------------------|
| 39,744,700.00 | 0.00 | 0.00 | 0.00 |

| Name of the Protected Area | WDPA ID | IUCN Category | Total Ha (Expected at PIF) | Total Ha (Expected at CEO Endorsement) | Total Ha (Achieved at MTR) | Total Ha (Achieved at TE) | METT score (Baseline at CEO Endorsement) | METT score (Achieved at MTR) | METT score (Achieved at TE) |
|----------------------------|---------|---------------|----------------------------|--|----------------------------|---------------------------|--|------------------------------|-----------------------------|
|----------------------------|---------|---------------|----------------------------|--|----------------------------|---------------------------|--|------------------------------|-----------------------------|

| | | | | | |
|--------------------------------|--------|---------------|--|--|---|
| Phoenix Islands Protected Area | 309888 | 39,744,700.00 | | |  |
|--------------------------------|--------|---------------|--|--|---|

Indicator 4 Area of landscapes under improved practices (hectares; excluding protected areas)

| Ha (Expected at PIF) | Ha (Expected at CEO Endorsement) | Ha (Achieved at MTR) | Ha (Achieved at TE) |
|----------------------|----------------------------------|----------------------|---------------------|
| 8000.00 | 0.00 | 0.00 | 0.00 |

Indicator 4.1 Area of landscapes under improved management to benefit biodiversity (hectares, qualitative assessment, non-certified)

| Ha (Expected at PIF) | Ha (Expected at CEO Endorsement) | Ha (Achieved at MTR) | Ha (Achieved at TE) |
|----------------------|----------------------------------|----------------------|---------------------|
| 8,000.00 | | | |

Indicator 4.2 Area of landscapes that meets national or international third party certification that incorporates biodiversity considerations (hectares)

| Ha (Expected at PIF) | Ha (Expected at CEO Endorsement) | Ha (Achieved at MTR) | Ha (Achieved at TE) |
|----------------------|----------------------------------|----------------------|---------------------|
| | | | |

Type/Name of Third Party Certification

Indicator 4.3 Area of landscapes under sustainable land management in production systems

| Ha (Expected at PIF) | Ha (Expected at CEO Endorsement) | Ha (Achieved at MTR) | Ha (Achieved at TE) |
|----------------------|----------------------------------|----------------------|---------------------|
|----------------------|----------------------------------|----------------------|---------------------|

Indicator 4.4 Area of High Conservation Value Forest (HCVF) loss avoided

| Ha (Expected at PIF) | Ha (Expected at CEO Endorsement) | Ha (Achieved at MTR) | Ha (Achieved at TE) |
|----------------------|----------------------------------|----------------------|---------------------|
|----------------------|----------------------------------|----------------------|---------------------|

Documents (Please upload document(s) that justifies the HCVF)

Title

Submitted

Indicator 11 Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment

| | Number (Expected at PIF) | Number (Expected at CEO Endorsement) | Number (Achieved at MTR) | Number (Achieved at TE) |
|---------------|--------------------------|--------------------------------------|--------------------------|-------------------------|
| Female | 4,087 | | | |
| Male | 4,179 | | | |
| Total | 8266 | 0 | 0 | 0 |

Part II. Project Justification

1a. Project Description

Development context: The Republic of Kiribati spans more than 40 degrees of longitude across the central Pacific. Its 33 atolls and small islands sit atop seamounts in three chains (west to east; Gilbert Islands, Phoenix Islands, Line Islands) separated by thousands of kilometers of open ocean. The three archipelagos consist of extensive coral reef habitats along with seagrass beds, mangroves, and atoll forest ecosystems. The three groups form four separate coral ecoregions[1] and three more broadly defined marine ecoregions[2]. The islands host important populations of seabirds and threatened and endangered marine biodiversity, including critically endangered Hawksbill turtles.

The island and marine ecosystems are essential for the livelihoods of Kiribati's estimated 120,000 people. Most of the populated islands are in the Gilbert Islands chain. Only three islands in the Line Islands (Kiritimati, Teeraina, Tabuaeran) and Kanton Island in the Phoenix Islands have permanent populations (in 2015, 10,500 and 20 respectively). In the Gilbert Islands, more than 60% of population lives on Tarawa Atoll where the capital is located. The remaining atoll populations range between 1,000 and 5,500 people. The largest source of GDP in Kiribati comes from Fishing License Fees from overseas tuna licenses (figure 1) and copra exports. The public sector dominates the economy with nearly 60% of iKiribati working for government.

The populations on 'outer islands' (other than those on South Tarawa) rely on a subsistence economy dependent on natural ecosystems for livelihoods, including marine resources and a small number of native and introduced plants, crops, and livestock on the islands. Securing these ecosystems is essential for the long-term resilience of the people and biodiversity of Kiribati in the face of climate change and other increasing human-induced stresses. The limited flora on the atolls are critical to wildlife on the atolls, as well as for the culture and survival of the i-Kiribati people[3].

Kiribati's smallness, remoteness, and the growing impacts of climate change make governance and development challenging. Tarawa has one of the world's highest population densities (2,500 pax/km²) while the outer islands average 130 pax/km². This dichotomy results in very different development needs in the two geographies. The remoteness of outer islands increases the challenge of delivering development and sustainability projects.

Climate change context: Kiribati is widely recognized as one of the world's most vulnerable countries to climate change impacts. Rising sea levels resulting in eroding coastlines and tidal and wave events that contaminate freshwater lenses, changes in agricultural production due to changes in temperature and rainfall, and climate-related impacts to coral reefs, compounded by an already vulnerable situation on small, isolated, and low islands, make Kiribati particularly vulnerable to climate change. Supporting ecosystem-based adaptation efforts is critical for the survival of outer island communities.

On an inter-annual basis, Kiribati’s climate is highly variable, driven by El Nino Southern Oscillation (ENSO) phenomena with droughts being common during La Nina events. The country is already feeling impacts of climate change, including salt-water inundation of low-lying islands and water-tables, coastal erosion, and coral bleaching related to increasing sea-surface temperatures. While Kiribati is generally not in the cyclone belt, it has been impacted by cyclones that strike countries to the south. In 2015 Tropical Cyclone Pam caused severe weather in Kiribati, including high swells that inundated coastal areas. These impacts are expected to increase in the future.

The Pacific-Australia Climate Change Science and Adaptation Planning Program (PCCSP) released a “Current and future climate of Kiribati” report in 2015. The report projects climate changes in Kiribati to include:

- *Temperatures will continue to increase* – average annual air and sea-surface temperatures are expected to increase by 0.5-1.2°C by 2030 under very high emission scenarios.
- More very hot days – more hot days and nights are expected with decreases in cool seasons.
- *Changing rainfall patterns* – Rainfall is expected to increase, particularly in the Gilbert Islands, with less frequent droughts.
- *More extreme rainfall days* – more intense and more extreme rainfall events are expected throughout Kiribati.
- *Wave climate will change* – waves in Kiribati are driven by northeast and southwest trade winds. These will change as wind patterns change and have subsequent impacts on coastlines.
- *Sea level will continue to rise* – Most areas in Kiribati do not exceed 3 to 4 meters above sea level. Sea levels in Kiribati have already risen since measurements were started in the 1950s and will continue to rise. Under all emissions scenarios this is expected to be between 7-17 cm by 2030 and up to 87 cm by 2090.
- *Ocean acidification will continue* – all reefs around Kiribati are expected to experience high acidities. The impacts on the reefs will be compounded by other pressures including coral bleaching (from increased sea surface temperatures and other stresses), storm damage, and fishing pressures.

The Kiribati Joint Implementation Plan for Climate Change and Disaster Risk Management (KJIP) summarizes key sensitivities and observed and potential impacts of climate change according to sectors (Table 1). The potential impacts are presented for all outer islands without differentiation between outer islands. Most assessments of climate impacts in Kiribati differentiate between South Tarawa (and its dense, urban population) and the outer islands as a group.

Table 1: Climate Sensitivities and potential impacts (KJIP)

| Sensitivity and impacts - environment | |
|--|---|
| Sensitivity | Observed and potential impacts |
| <ul style="list-style-type: none"> • Low-lying atolls with limited land-based natural resources and biodiversity. High dependency on and demand for coastal and marine resources. | <ul style="list-style-type: none"> • Increasing coastal inundation, erosion and loss of land. • Increasing loss of island biodiversity on land and at sea and |

| | |
|---|--|
| <ul style="list-style-type: none"> • Narrow and low-lying land, climate variability influencing ocean characteristics and components, thin underground freshwater lens. • Negative impact of poorly designed infrastructure on the environment due to lack of capacity, understanding natural processes and resources; e.g. seawalls causing erosion or causeways harming marine habitats. • Mining of beach sands and aggregates. • Pests and invasive species. • Low level of communication, education and public awareness and lack of priority given to conservation and management of biodiversity including habitats at all levels. • Low level of budget allocation and integration of climate change, disaster risk management, gender, environmental conservation and biodiversity management considerations in development strategies. • Limited capacity for integrated assessments of risks, including gaps in enforcement of environmental impact assessments, cost-benefit analyses and feasibility studies. | <p>a degradation of important habitats (such as mangroves, coral reefs).</p> <ul style="list-style-type: none"> • Increasing environmental degradation and vulnerability of marine and terrestrial ecosystems and habitats to the additional stressors caused by climate change and hazards. • Increasing outbreaks of invasive species, pests and diseases. • Increasing water-, food- and vector-borne diseases. • Potentially high environmental costs of development or private sector projects that have yet to fully consider environmental and possible disaster and climate change impacts. • Salinisation of groundwater lens and decline in size of groundwater lens. |
|---|--|

Sensitivity and impacts - fresh water and sanitation

| Sensitivity | Observed and potential impacts |
|--|---|
| <ul style="list-style-type: none"> • Availability of drinking water is inadequate. • Lack of information on or systematic monitoring of the microbiological quality of water supplies, especially on rural outer islands. • Industrial contamination, particularly leaking hydrocarbons from diesel power generators. • Lack of involvement of local landowners in management of water reserves. | <ul style="list-style-type: none"> • Continued and increasing contamination of groundwater. • Increasing water-borne illnesses and high infant mortality rates • Increasing socio-economic costs of water-borne illnesses (loss of family members, work absences and general lack of wellbeing). • Continuous and increasing tensions and conflicts between affected communities and the Government because of declaration of water reserves over privately owned land, leading |

| | |
|---|---|
| <ul style="list-style-type: none"> • Lack of regulations for protecting water sources in rural areas or outer islands. • Traditional practices of defecating on the beach cause algal bloom and ultimately can lead to health problems. | <p>g to costly ongoing disputes and vandalism of water infrastructure and groundwater monitoring boreholes.</p> <ul style="list-style-type: none"> • Frequent, long and severe droughts occurred regularly in the past (e.g. in South Tarawa, Banaba) causing severe shortages of fresh water and dramatic increases in salinity in domestic wells, death of some trees and dieback in others, and increasing demand for potable, reticulated water. Some islands were temporarily abandoned. It is still unclear, though, if and how the frequency and intensity of La Niña events will change. • Increasing risks that the sea will overtop parts of or even whole islands, causing salinization of some fresh groundwater. |
|---|---|

Sensitivity impacts - fisheries and food security

| Sensitivity | Observed and potential impacts |
|---|---|
| <ul style="list-style-type: none"> • High dependence on coastal fisheries for subsistence (main protein source). • Diminishing stocks of reef fish, especially for lagoon and coastal fisheries in South Tarawa, due to population pressure and associated socio-economic and environmental problems. • A lack of understanding of actual fisheries stock which will make it more difficult to set distant fishing fees for the future. • Coastal fisheries are largely unregulated, with existing management arrangements focusing on licensing revenue only and island councils tending to only discuss fisheries in the context of infrastructure concerns (e.g. lights, wharves). • Design and building of causeways and other coastal infrastructure often do not take into account their potential negative impact on marine ecosystems and coastal fish productivity. | <ul style="list-style-type: none"> • The productivity for coral reef fish and invertebrates is projected to decline by 20% by 2050 due to both the direct effects (e.g. increased sea-surface temperature) and indirect effects (changes to fish habitats) of climate change. Population growth is further reducing the potential supply of reef fish per person. • Higher water temperatures and rainfall and/or increased ocean acidification are expected to progressively reduce the efficiency of culturing seaweed, giant clams, pearl oysters and sea cucumbers. • Possibly increasing incidence of ciguatera fish poisoning, shellfish contamination and algal blooms. • Sea-level rise will progressively convert the large areas of intertidal lagoon habitat in Kiribati to subtidal areas, with uncertain effects on the shellfish population. • Mixed trends in aquaculture: Milkfish farming in earthen ponds is expected to be favoured by higher air temperatures and increased rainfall but the effects of sea-level rise are yet to be determined. |

| | |
|--|--|
| <ul style="list-style-type: none"> • While women dominate marketing and sales of fish and are engaged in shore-based harvesting and gleaning for marine resources, they are not granted the same status or public recognition as fishermen. • Periodic outbreaks of ciguatera, shellfish contamination and algal blooms. • Gaps in monitoring of ciguatera outbreaks, other outbreaks and coral reef bleaching and collaborative actions with the Ministry of Health and Medical Services (MHMS). | <ul style="list-style-type: none"> • Potential increase in social problems such as conflict between subsistence fisheries and commercial fishers over declining fish stocks • Loss of traditional fishing skills and knowledge if marine habitats change and also due to a change in lifestyle. • Potential discouragement of future national and overseas investors. |
|--|--|

Sensitivity and impacts - agriculture and food security

| Sensitivity | Observed and potential impacts |
|---|--|
| <ul style="list-style-type: none"> • Harsh agricultural conditions due to small and remote atoll islands with poor soil conditions, high salinity and limited groundwater supply. • Limited crop and genetic diversity. • Crop farming mostly for subsistence (trade and export limited to coconut products: oil and copra). • High dependency on imported basic food commodities and public outcries when shortages occur (especially rice, sugar and flour). • Low quality of imported food due to a lack of national food standards. • Loss of traditional agroforestry systems. • Limited choices of livestock species for production, poor housing conditions and high imports of livestock products. • Animal waste is polluting coastal land, contaminating underground water and transmitting diseases and parasites to humans. | <ul style="list-style-type: none"> • Increasing risks that the sea will overtop parts of or even whole islands, causing salinisation of some fresh groundwater, destruction of infrastructure and the death of crops and livestock. • Decline in production of food crops (already observed) due to increase in salinity, extreme weather events, spread of pests and diseases. • Reduced livestock productivity due to heat stress, increased disease susceptibility, lack of fresh water, water-borne diseases, decrease in production of feed, potential damage to livestock infrastructure, inundation. • Diseases will interact with climate hazards to manifest in different ways. Some current disease problems will be exacerbated due to stress and nutrition-related immune challenges. Shifts in vector populations will change disease prevalence in different areas. • Loss of traditional agriculture skills and knowledge. |

Like most islands in Kiribati (with the exception of Banaba) the islands proposed in Securing Kiribati are relatively small and low with maximum elevations of 2-3 meters above sea-level. The islands are prone to the observed and potential impacts listed above with very little variation between them. Erosion is expected to be worse on the seaward sides of islands due to increased wave and storm action. King-tides can top islands at the sea-ward side or lagoon-side and risk inundating crops, water-tables and villages. Sea-level rise is one of the most critical climate change effects expected to impact Kiribati. This will result in inundation and erosion of coastlines. Sea-level rise also causes salt-water intrusion and salinization of the atoll freshwater lenses that are critical to the survival of island communities and ecosystems. Rising air and sea temperatures result in stresses on marine organisms and ecosystems, including coral bleaching which can kill large areas of reef and has a greater impact on already-stressed reef systems.

Climate change impacts are the most significant threat to freshwater resources. The UNDP-GEF Integrated Water Resources Management Programme (2009-2014) completed much foundational work on freshwater management. While infrastructure improvements are still needed, there is a role for improved ecosystems and agricultural practices to better manage and protect fresh groundwater on outer islands. Climate change is also identified as a key issue and development challenge in the Kiribati Agriculture Strategy.

Climate change is expected to impact all communities on the outer islands of Kiribati as they live in small villages near the coastlines. There are few options to move away from the coast. The KJIP recognizes that vulnerable and marginalized people are most susceptible to climate change impacts. On outer islands these include women, youth, people with disabilities, the elderly, and minorities.

Biodiversity context: Kiribati has limited land area but boasts extensive marine ecosystems. In 2013 a national Key Biodiversity Area analysis^[4] was conducted for terrestrial, coastal and lagoon habitats. The analysis identified 22 KBAs across the Gilbert, Phoenix, and Line island archipelagos. All of the eight KBAs in the Phoenix Islands are part of the Phoenix Islands Protected Area and fully protected but some need continued interventions to address invasive species threats. Three of the seven KBAs in the Line Islands are already under some form of protection. The KBAs of the Phoenix and Line Islands are triggered by the presence of threatened or endangered marine species or birds. All of the Gilbert Islands' KBAs are triggered by the presence of threatened or endangered marine species only. None of the seven KBAs in the Gilbert Islands are protected. The analysis found significant gaps in information and data for the Gilbert and Line Islands and recommended co-management of KBAs between communities, Island Councils, and the Ministry of Environment, Lands, and Agriculture Developments.

Terrestrial biodiversity in Kiribati is relatively limited. The limited and poor soils, combined with the porous limestone rock of the islands results in limited freshwater availability and very few native plant or animal species. Native and traditional food crops include Pandanus (*Pandanus tectorius*), breadfruit (*Artocarpus mariannensis*, *A. altilis*, *A. mariannensis*), giant swamp taro (*Cyrtosperma merkusii*), native fig (*Ficus tinctoria*) and coconut (*Cocos nucifera*). Many of these staple crops are declining across the country. Kiribati has a globally important avifauna with at least 21 breeding species occurring throughout the islands. Most colonies are found in the Phoenix and Line Islands and include several species of IUCN Red List Endangered birds (Phoenix petrel, *Pterodroma alba*, Polynesian storm-petrel, *Nesofregetta fuliginosa*).

In contrast to the terrestrial biodiversity, Kiribati has a diverse and extensive complex of marine biodiversity with key coastal ecosystems of coral reefs, mangroves, and seagrasses well represented. Extensive marine surveys have been conducted in the Phoenix Islands and (to a more limited extent) some Line Islands. More surveys of marine habitats are required for many of the Gilbert Islands. More than 115 species of coral have been identified with species richness generally declining from west to east, mirroring regional patterns. Four species of mangroves can be found on many of Kiribati's atolls with an estimated expanse of 7.9 km², providing important habitat for many marine species and services to island communities. Five species of marine turtles Endangered green (*Chelonia mydas*), Critically Endangered hawksbill (*Eretmochyles imbricata*), Endangered loggerhead (*Caretta caretta*), Endangered olive ridley (*Lepidochelys olivacea*), and Critically Endangered leatherback (*Dermochelys coreacea*) are found in Kiribati's waters with breeding and nesting observed on several islands. Thirteen species of cetaceans have been documented. In 2016, Kiribati passed the Shark Sanctuary Regulations thus protecting all sharks in Kiribati from commercial fishing. The Phoenix Islands Protected Area (PIPA) is considered to host some of the more pristine coral reef ecosystems in the world and is a World Heritage Site.

Immediate threats to Kiribati's biodiversity and natural ecosystems are directly related to the size of the island's human population. Tarawa's terrestrial and marine habitats, with more than 50% of the country's population, face the most direct threats of overharvesting and pollution. However, despite much smaller populations, significant threats to island ecosystems and marine resources have been documented in the outer islands. These threats to natural ecosystems reduce the resilience and adaptive capacity of the ecosystems and the resident populations who rely on them. Threats on outer islands include habitat loss due to human population expansion, overexploitation through direct use of biodiversity resources, the impacts of invasive and introduced species. Threats to coastal and nearshore marine biodiversity in Kiribati include overexploitation through direct use of resources (fishing and collection for food), coastal mining to extract sand and aggregate, building causeways between islands, and pollution from land-based sources.

Introduced and invasive species are major threats to seabirds and seabird colonies in the Phoenix and Line Islands. Rats and cats are particular threats in the Phoenix Islands. Rats have been eliminated from three islands but remain on the last five. Of these, the highest priority is Enderbury Island, which had a rat eradication programme in 2011, which failed.

Component 2 of this project reflects many activities identified in the Kiribati NBSAP. The current NBSAP is due for revision and many of the identified activities were not conducted. Securing Kiribati will help to achieve:

- Eradication of invasive species on the PIPA infested islands.
- Establish at least one marine protected area and expand protected areas program to other islands in Kiribati by 2020
- Establish at least 3 community based management plans for coastal resources (Fisheries and Mangroves) by 2018
- Develop and implement at least one or two PA management plan by 2020
- Turtle nesting beach enhancement by 2018

- By 2017, national guidelines and policies for the development and management of ecotourism activities will be developed and ready for implementation and use
- Identification, assessment and mapping of ecotourism resources by 2017

Land degradation context: Kiribati's islands, with the exception of Banaba (Ocean Island), are low-lying coral atolls with a relatively thin layer of coral sand overlying hard coral substrates. The islands are fringed by coral reefs on the seaward edges and typically enclose a shallow lagoon. The sandy soils and coral limestone substrates do not retain moisture and result in relatively limited vegetative diversity and agricultural production. The indigenous flora and vegetation of Kiribati is among the least diverse and poorest on earth (MELAD 2006). In the Gilbert Islands and some locations in other inhabited islands, this flora has been severely modified or removed. Generally, terrestrial vegetation in Kiribati is limited to coastal strand vegetation, mangroves and coastal marsh vegetation (limited), inland forest, and pinnacle vegetation on limestone escarpments (MELAD, 2006)[5]. Almost all islands report coastal erosion as a concern.

The five outer islands in this project (Makin, Marakei, Kuria, Aranuka, South Tabiteuea) span the Gilbert Islands from north to south and straddle the equator. This impacts their precipitation regimes and vegetative land cover. Makin and Marakei are north of the equator with the rest at the south of the chain. The Kiribati Adaptation Project II produced a series of reports that detail the geography, resource use, and socio-economics of Kiribati's islands[6]

Makin is the smallest of the inhabited Gilbert Islands and consists of 5 islets. Previously it had a small lagoon that has since become very shallow due to the construction of a causeway. Due to its position north of the equator, it gets relatively abundant rainfall and has fertile soils. Most of the population (1,990 in 2015) live on the main islet. There is little land use planning on Makin. Land tenure on Makin includes communally owned areas outside inhabited areas as well as privately owned family areas. The islets are dominated by 'wild bush' and swamp taro. Coconut is the dominant tree species. Traditional tenure of reef areas previously limited fishing but that has stopped and reef areas are free for anyone to fish. Some swamp taro areas are experiencing salt water inundation and inhabitants report overuse of marine resources.

Marakei is a 14 km² island with a 295 km² lagoon that had a population of 2,799 in 2015. Like Makin it is north of the equator and receives regular rain and has a large freshwater lens. There are large stretches of undeveloped land between the 8 villages on the island. Marakei has limited land resources featuring some coconut, pandanus and land crabs along with local gardens of swamp taro. Four species of mangrove have been documented to proliferate. The lagoon does not support many fish or invertebrate species due to the low levels of water transfer that is restricted by the narrow channels through the reef. Reef fish populations are in good condition, partly due to the presence of ciguatera toxins in local fish.

Kuria is comprised of 2 small islets but with less than 1000 people, it is one of the least densely populated of the inhabited Gilbert Islands. It has no lagoon but does have two brackish water ponds. Being almost on the equator, Kuria has less rain than the northern islands. Poor soils limit the number of crops and trees. The only source of freshwater is the freshwater lens. Marine resources are abundant but ciguatera toxins limit the number of fish that can be consumed.

Aranuka comprised of 2 islands with the western one separated from Kuria by less than 15 km. As with Kuria, Aranuka has poor soils and freshwater resources which constrain agricultural production. Families maintain gardens spread across the island. With its large lagoon and reef area, Aranuka has good access to marine resources.

Tabiteuea South is part of the larger Tabiteuea reef complex which stretches almost 70 km and includes Tabiteuea North. Tabiteuea South consists of eight islets, mostly connected by causeways. As a more southerly island, the rainfalls and soils are poorer than other islands included in Securing Kiribati and this is reflected in the vegetation and crops that can be cultivated. In contrast to the limited land resources, Tabiteuea South has an extensive lagoon and most households depend on marine resources for subsistence.

Barriers: Kiribati's ability to face the challenges of environmental degradation, loss of biodiversity, and climate change faces several important barriers. Several fundamental barriers underlie all development efforts in Kiribati. These include its highly dispersed population, remoteness to major markets, lack of arable land, a narrow economic base, and the dual problems of sparse outer island communities and heavy overcrowding in the capital[7]. While many of these are inherent to Kiribati's geography, there are other barriers that can be overcome and help to alleviate the impact of the above. These include:

- Kiribati has **limited experience and capacity in integrating sustainable land management** on islands with protected ecosystems on land and in the marine environment and relating these to livelihood needs and climate change impacts. There is little experience in linking ecosystem integrity and biodiversity to climate change adaptation. According to the NBSAP "capacity constraints emanating from limited financial and human resources, limited technical capacity, limited scientific based data, and poor monitoring and evaluation of the progress of the NBSAP have undermined the country's effort to protect and conserve biodiversity effectively. As a nation with very limited resources, Kiribati cannot afford to sit back and allow the serious degradation to continue."

Securing Kiribati will address integration of biodiversity conservation, land use planning, climate change adaptation, and resource management capacity on outer islands and with government through all components of the project by working with communities to develop land and marine resource use management plans, protected areas, and improved, climate-smart agriculture practices.

- Several national policies, plans, and strategies, including the Kiribati Vision 20, note the **lack of integration of traditional knowledge** in approaches to disaster reduction, environmental management and responses to climate variability by local communities. Kiribati intends to build sustainability by harnessing traditional knowledge and skills.

Securing Kiribati will promote the integration of traditional knowledge and skills with management of biodiversity and climate change adaptation in all aspects of Components 2 and 3 while establishing protected and conserved areas and while promoting options for climate-safe agriculture.

- **Limited experience in community-based conservation of ecosystems and biodiversity.** The Phoenix Islands Protected Area and protected areas on Kiritimati Island are all on state-owned lands. These protected areas are flagships of Kiribati's protected area system and must be maintained but have little connection to the majority of iKiribati people. With most land and resources on the outer islands of the Gilbert Islands group owned by local communities, the employment of community-based conservation measures is essential for protecting Gilbertese biodiversity and adapting to climate change.

Through Component 2, Securing Kiribati will build capacity and experience in community-based protected areas and natural resources management on land and in the sea. It will also build capacity for the Ministry of Environment, Lands and Agriculture Development to engage with communities on community-based conservation initiatives.

- **Limited recognition of the role of ecosystem-based adaptation and nature-based solutions with hard engineering solutions** such as erosion control and responses to sea-level rise to increase the useful life of public infrastructure. There is a need to build awareness of the role of nature in helping to adapt to climate change impacts and to demonstrate options.

Securing Kiribati will help to build awareness of the role of Nature-based Solutions and demonstrate options on the five outer islands through establishment of protected areas and associate ecosystem restoration and through climate-smart agriculture techniques.

- Where successful practices have been trialed, often **trials have not been scaled-up or replicated** due to lack of resources or lesson sharing.

Securing Kiribati will seek to build upon the models developed by various development partners (including GEF projects with FAO and UNDP, IFAD, and others) and previous projects (noted in baseline project section below) and provide communities with the knowledge and opportunities to expand these model approaches.

- **Providing services to outer islands** is expensive and time-consuming with only few boats and ferries available between islands. When transport options fail island communities can be isolated for long periods. As such, outer islands need to be able to rely on their local resources for daily needs and subsistence. By supporting the protection and restoration of marine and island ecosystems and practicing climate-smart agriculture practices, Securing Kiribati will help outer island communities become more self-reliant through improved ecosystems and improved agricultural processes.

- **Limited information on the health of coastal and island ecosystems** and lack of a monitoring system to determine the status of island and marine ecosystems including coral reefs and mangroves as basis for monitoring impacts of climate change. Given the increasing surface temperatures and the reliance of local communities on marine resources for their daily survival these data are essential.

Securing Kiribati will help develop baseline data for 5 outer islands through activities documenting the status of biodiversity, ecosystems, and socio-economic status while developing protected areas under Component 2.

Outer island populations depend on biodiversity for food security and livelihoods. Without active management of these resources on small islands they are declining. Invasive species are impacting local biodiversity and crops. Marine resources are depleting due to overfishing.

Securing Kiribati will focus on understanding critical biodiversity values on the outer islands. It will assess threats to key species and will take action to protect these values both as individual species and with the protected area framework.

1a-2) the baseline scenario and any associated baseline projects,

Governance context: Kiribati became an independent country in 1979. It has adopted a hybrid American-British parliamentary system with an elected 42-member *Maneaba ni Maugatabu* (House of Parliament) and an elected president assisted by a 12-member cabinet. There are 20 island councils and 3 urban councils. Some island councils have developed strategic and operational plans.

Kiribati's "Vision 20" (KV20) is the long-term development blueprint for the country from 2016-2036[8]. It is the first long-term national development plan for Kiribati. It is based on four pillars of (1) wealth, (2) peace and security, (3) infrastructure, and (4) governance. It recognizes that sustainability of natural resources must be the fabric of the vision to ensure that the development aspirations today do not compromise the availability of resources for future generations.

The vision recognizes Kiribati's vulnerability to climate change and the need to mainstream mitigation and adaptation into programmes. It states that "environment conservation adaptation... measures will reduce risks and ensure that the development programmes... create sustainable development for all." The wealth pillar focuses on human, natural, and cultural capital. Fisheries and tourism are expected to form the foundation of the economy with increased revenue from fisheries and marine resources. The vision expects to safeguard and revive traditional skills and knowledge.

The vision also expressly recognizes the importance of gender, youth, vulnerable groups, disability, equity and partnerships. It aims to mainstream equity across all sectors.

The Kiribati Joint Implementation Plan (KJIP) for Climate Change and Disaster Risk Management 2014-2023 was developed to strengthen implementation, financing, and monitoring among the Office of the President, Ministry of Finance and Economic Development, line ministries and civil society and development partners. The plan has a goal to “increase resilience through sustainable climate change adaptation and disaster risk reduction using a whole of country approach.” It is implemented through 12 major strategies that include, *inter alia*, “4. Increasing water and food security with integrated and sector-specific approaches and promoting healthy and resilient ecosystems,” “6. Promoting sound and reliable infrastructure development and land management,” and “7. Delivering appropriate education, training and awareness programs.”

The draft Kiribati Integrated Environment Policy (KIEP) and Strategic Environment Plan (SEP) 2021-2036 will be completed in early 2021. It has a vision that the People of Kiribati continue to live in and benefit from a safe and healthy environment that is resilient to local and national impacts and to the impacts of global change, including climate change, and which supports livelihoods, human health, sustainable development and heritage. The KIEP and SEP have eight thematic areas of implementation^[9], which will be coordinated through a new KIEP Implementation Oversight Committee (KIOC).

The 2016-2020 National Biodiversity Strategies and Action Plan contributed directly to the KIEP and its vision. Revision of the NBSAP is a key activity in the draft 2021-2036 KIEP. The previous NBSAP has nine priorities that include:

- 1) Protected and conservation areas
- 2) Ecosystem management
- 3) Species conservation and sustainable use
- 4) Communication and education
- 5) Capacity building
- 6) Invasive alien species/biosecurity
- 7) Traditional knowledge and practices
- 8) Environmental governance
- 9) Research and information

The NBSAP recognizes that local communities are vital for the implementation of the NBSAP. It is based on principles that include, *inter alia*, integrating biodiversity conservation with food security, respect for traditional knowledge, and integration of biodiversity with economic development aspirations.

The Kiribati Agriculture Strategy (KAS 2020-2030) is intended to guide increased agricultural production and income while reducing poverty and ensuring food security and nutrition. The KAS recognizes the importance of environmental sustainability and the links between a healthy ecosystem and agricultural production.

Previous and ongoing projects form foundations for some of the work of the Securing Kiribati project. These include:

GEF5 UNDP Enhancing national food security in the context of global climate change

The project objective is to build the adaptive capacity of vulnerable Kiribati communities to ensure food security under conditions of climate change. Results and lessons from the GEF5 UNDP project will be important for Securing Kiribati and will be integrated into the ProDoc during the PPG phase.

The project assisted Kiribati to address institutional capacity building needs primarily on the national level. It helped to set in place an improved regulatory environment, strengthened institutional planning and policy frameworks, and generation of data required to support informed decision-making.

It also assisted Kiribati to address climate change vulnerabilities by implementing and demonstrating community-based adaptation measures. It worked on a select number of atolls (Nonouti, Abemama, Maiana) to set in place models for land and lagoon resources management predicated on informed planning and management processes for community-based fisheries management and climate change awareness. The project supported the generation, adoption, and implementation of model council by-laws designed to be ecosystem inclusive and enhance ecosystem integrity.

GEF6 UNDP Enhancing Whole of Islands Approach to Strengthen Community Resilience to Climate and Disaster Risks in Kiribati

The recently approved GEF6 UNDP project will address the exacerbation of climate change on coastal infrastructure, water security and food security by increasing community resilience to the impacts of climate change, climate variability and disasters and building capacities at island and national levels. Its policy component will focus on building a “Whole of Island” approach, which will benefit Securing Kiribati. At island levels it will focus on integrated vulnerability assessments and council development plans for a number of islands in the Gilbert Island group (Makin, North Tarawa, Kuria, Onotoa, Kiritimati) and address water, food security, and infrastructure adaptation measures. Securing Kiribati will coordinate with the Whole of Island project for lessons learned, processes developed and complementarity of approaches, noting that Makin and Kuria Islands are the sole islands of overlap between the two projects.

Securing Kiribati will work closely with the Whole of Islands project to integrate work plans and lessons to achieve efficiencies wherever possible. IUCN and UNDP have already begun discussions on coordination and these will continue through the PPG and implementation phases.

GEF5 FAO R2R and Resilient Islands, Resilient Communities

The regional International Waters Ridge to Reef project and its child project have several components in Kiribati. The IW Ridge to Reef project focuses on waste management in the urban areas of South Tarawa to build 1) Local capacity for sustainable piggery waste management using dry-litter technology (DLT) stimulated through effective community engagement and training thereby contributing to reducing nutrient offload and contamination in Bouta & Bonriki water reserves, underground water lenses and adjacent coastal/marine ecosystems; 2) Demonstration of innovative approaches to pig waste management through trialing and testing of Dry Litter Technology (DLT) composting systems; and 3) Information management and community awareness increased in support of sustainable animal waste management.

The related child project has the objective to improve biodiversity conservation and landscape level management to enhance socio-ecological resilience to climate variability and change. It has worked to build 1) an enabling environment for R2R conservation and sustainable use, 2) implementation of R2R conservation and sustainable use strategies, and 3) lessons learning and sharing. With outcomes including an enabling environment improved for ecosystem-based sustainable use and conservation of island resources and a national management system for ecosystem-based sustainable use and conservation of island resources established to deliver SFM, LD, and BD benefits (23,496 hectares covered by integrated natural resource management-land and marine-practices in wider landscape). Outcomes are expected on the Gilbert Island group islands of Butaritari, North Tarawa and North Tabiteuea.

GEF4 UNEP PAS: Phoenix Islands Protected Area Project

The Phoenix Islands Protected Area Project was completed in 2018. Its goal to "build capacity in Kiribati to more effectively manage a large protected area in the form of PIPA and create a sustainable financing system for such large sites that could be used as a model for application elsewhere" was partially met. The project was intended to help PIPA establish operational offices, a management plan, and to operationalize its financing vehicle. The project made significant gains in operationalizing PIPA. However, the terminal evaluation made several recommendations, including on further enhancing the sustainable financing of PIPA and Kiribati's protected area network. These recommendations are included in Securing Kiribati.

IFAD Outer Islands Food and Water Project (Phase 1 and 2)

The aim of the Project is "people living in outer islands communities have healthy and sustainable livelihoods". The indicators linked to the Project aim are 'improved food security, child health and nutrition status.' The Outer Island Food and Water Project (OIFWP) came into force in September 2014. Targeting the four outer islands of Abemama, Beru, North Tabiteuea and Nonouti, OIFWP promotes improved household food security and nutrition as well as clean water through rainwater harvesting and community planning and action activities. OIFWP aims to reach the entire population with a specific focus on women and young people. Phase 1 of the project ended in 2020 and IFAD is starting a second phase that will extend to more islands.

Securing Kiribati will target to coordinate closely with IFAD and the OIFWP through the Agriculture and Lands Division of MELAD.

European Union - Pacific EU Marine Programme (PEUMP)

The Pacific-European Union (EU) Marine Partnership (PEUMP) programme promotes sustainable management and sound ocean governance through a holistic and multi-sectoral approach contributing to social, economic and environmental development in the Pacific, as well as biodiversity protection and promoting the sustainable use of fisheries and other marine resources. It is engaging in 24 countries and has several specific activities in Kiribati. These include aspects of oceanic and sustainable tuna fisheries, coastal fisheries, IUU fishing, sustainable utilization of coastal and marine biodiversity, and capacity building. Securing Kiribati will engage with PEUMP, through the Pacific Community on its work with marine and coastal biodiversity and coastal fisheries management in Kiribati.

Australia

Australia supports marine resource management, agricultural development and climate change adaptation in Kiribati through several channels including direct bilateral aid from DFAT and AusAid, as well as ACIAR. These include AusAid projects to improve access to safe and clean drinking water, shoreline protection in Tarawa, and building capacity in the Ministry of Finance and Economic development to access and utilize climate financing. The Kiribati Education Improvement Program works to improve school infrastructure against sea-level rise and to build formal education about climate change. Australia supported the Kiribati Adaptation Project Phase 3 to build seawalls around South Tarawa. ACAIR has supported the Ministry of Fisheries and Marine Resources Development to improve sea cucumber and sea weed culture in Kiribati. ACIAR has also supported Kiribati (and Tuvalu) to improve agriculture production and has shown possible positive results around re-introducing native species. Securing Kiribati has engaged with the Australian High Commission in Tarawa and will seek further coordination and cooperation during the PPG phase.

New Zealand

Since 2019 New Zealand has scaled up its investment and cooperation with Kiribati. New Zealand's development cooperation with Kiribati aims to have a healthy, educated and resilient I-Kiribati population in a well-governed country that provides acceptable future choices for its population. Kiribati faces serious development constraints that come with its size and remote location, but New Zealand is working closely with the government and people of Kiribati to overcome these challenges. Much of New Zealand's recent and upcoming investment focuses on the priority needs of South Tarawa, with almost 50% of Kiribati's population. Other projects include improved management of Kiribati's sovereign wealth fund, and improved transparency of fisheries revenue and assistance to increase value adding of the fisheries industry, including sea cucumber culture.

World Bank – Kiribati Adaptation Project (Phases 1, 2, and 3)

The Kiribati Adaptation Project (KAP) was a 3-phase project that started in 2003 to support adaptation to climate change in Kiribati. It has been supported by the GEF, World Bank, UNDP, Japan, Australia and others. The World Bank's Phase III support for KAP ended in 2019. Phase III focused on drinking water and sanitation to Tarawa and outer islands as well as prevention of shoreline erosion through seawall construction and mangrove replanting. Objectives to develop mangrove management plans were not completed. Mangroves were planted at several outer island locations. The KAP has been a flagship climate change project in Kiribati for many years. Capacity developed and lessons learned will be employed in Securing Kiribati during the PPG phase.

European Union BIOPAMA

The Biodiversity and Protected Areas Management (BIOPAMA) Programme assists African, Caribbean, and Pacific countries to address their priorities for effective conservation and sustainable use of natural resources by providing tools, services and financial support. In the Pacific, BIOPAMA is managed by IUCN in partnership with SPREP. Kiribati has received a medium-sized grant to improve management of protected areas on Kiritimati Island in the Line Island Group and a small technical grant to assist with acquisition of key equipment. BIOPAMA will continue to work with countries in the Pacific, including Kiribati, on capacity building for protected area management.

PIPA Trust

The PIPA Trust was established, through an act of Parliament, in 2009. The Trust was established in the USA with 3 permanent board members (Government of Kiribati, Conservation International, and New England Aquarium) and the ability to name up to nine board members with a requirement that the majority always be non-governmental. The Trust is mandated to contribute to the financial sustainability of the Phoenix Islands Protected Area and to assist with financing the management and enforcement of the protected area. Initial contributions to the endowment included USD 2.5 million each from the Government of Kiribati and Conservation International. A grant of USD 5 million was awarded to the PIPA Trust by Oceans 5 and the Waitt Foundation. This grant will end in 2020. The target endowment of USD 13.5 million remains part of the PIPA Trust's work plan for 2020-2025. Securing Kiribati will work with PIPA Trust, the government of Kiribati and others to build on the lessons of the PIPA Trust and to expand the sustainable financing foundation of protected areas across Kiribati.

European Union Marine Spatial Planning (anticipated)

Through SPREP, IUCN is expecting to receive support to assist with a national Marine Spatial Planning process for Kiribati. This began in 2014 with the IKI/GIZ led MACBIO project. MACBIO completed a national marine ecosystem services valuation for Kiribati as part of the process for marine spatial planning development. IUCN will work with the Kiribati and SPREP to develop a full MSP in 2021 and 2022.

Other than the BIOPAMA and PIPA Trust grants, Kiribati has received very little assistance with protected area planning and management in recent years. The support for climate change adaptation has tended to focus on South Tarawa and on hard engineering solutions and building rain-water retention systems. Agricultural projects have focused on improving yields and food security. Securing Kiribati will be one of the few projects in Kiribati to integrate biodiversity conservation with ecosystem-based adaptation to climate change.

1a-3) the proposed alternative scenario with a brief description of expected outcomes and components of the project;

Project approach:

Securing Kiribati recognizes that Kiribati's future depends on its capacity to adapt to a changing climate. Natural ecosystems and nature-based solutions form the basis of much of Kiribati's cultural foundations and Kiribati have lived for millennia with their unique natural environment. The majority of people on the outer islands continue to rely on natural resources^[10] for income and daily subsistence. Climate change adaptation in Kiribati requires some hard

infrastructure interventions for freshwater and sanitation and shoreline protection. However, especially on outer islands, restoring and managing natural ecosystems on the coral reefs, lagoons, and islands is essential for the iKiribati to adapt to climate change. A strong protected and conserved area system in Kiribati will help ensure that ecosystems continue to function and that iKiribati communities can adapt to climate change.

Protected and conserved areas in Kiribati can take the form of formal, government-led protected areas (particularly on sparsely inhabited islands of the Phoenix and Line Island archipelagos) or as community-based protected and conserved areas in the Gilbert Islands. The project will mainstream natural resource management and integrate it into climate change adaptation, particularly through protected and conserved areas, in both formal protected areas or community-based conservation areas. This will build on synergies between the GEF Trust Fund and the Least Developed Country Fund by combining the biodiversity aspects of ecosystem protection with ecosystem-based climate change adaptation strategies.

Biodiversity and natural resources on land are prone to over-exploitation due to their scarcity, aridity on many islands, poor soil, and threats to safe ground water. The clearing of natural vegetation or deforestation for human settlement and plantations (e.g., coconut) throughout Kiribati has resulted in increased exposure to direct and strong sunlight, desiccating effects of salt sprays, damage from high spring tides, and land destabilization[11]. Invasive and introduced species, including rats, cats, and ants, have threatened or destroyed seabird and turtle populations on many of the inhabited Gilbert Islands. Many of the Phoenix Islands are now uninhabited but previous residents or visitors introduced rats to the islands and they now threaten globally important populations of seabirds and turtles. Threats to the island water tables are expanding as non-traditional crops are introduced that require more ground water. As sea level rises and storminess increases coastal erosion is a major threat to the islands. Restoring mangroves and native coastal vegetation can be combined with engineered solutions to coastal protection where appropriate. Securing Kiribati will help to overcome these barriers and challenges by improving management of PIPA and expanding protected and conserved areas into the Gilbert Islands chain. It will create and implement island-based plans for ecosystem management plans and nature-based solutions to achieve ecosystem-based adaptation to climate change.

Many communities on Kiribati's outer islands rely on marine resources for daily subsistence. These include fish and invertebrates from lagoons and fringing coral reefs. A lack of regular transport options, ice-making facilities and cold-chain capacity means that markets in Tarawa and internationally are beyond the reach of most fisheries unless they are dried or highly processed. Tuna is one of Kiribati's main income generation sources but is limited to offshore fishing operations. Many fish and invertebrates are overfished in Tarawa but still healthy in other parts of the Gilbert Islands. The presence of ciguatera toxins on some islands means that it is risky to consume large, predatory fish. Beche-de-mer (sea cucumbers, Holothuria) and pearl oysters are depleted in most parts of the Gilbert Islands. Securing Kiribati will work with island communities, MELAD, and Ministry of Fisheries to develop community-based protected areas on the reefs and lagoons of the 5 target islands. The role of MPAs in maintaining fish stocks is well documented. The project will identify and work with the Ministry of Fisheries and local communities to develop marine products that can be marketed beyond the islands and Tarawa. The possibility of stocking protected reef flats and lagoons with sea cucumbers from the Ministry of Fisheries' hatchery on Tarawa will be explored. These stocked sea cucumbers can be beneficial to the reef as they play a critical role in reef ecology. Once processed and dried they can become valuable sources of income for outer island communities. Production of seaweed as a source of agriculture fertilizer will also be explored.

There is a lack of integration of traditional knowledge and practices for natural resource management and climate change adaptation. Securing Kiribati will include cultural mapping to weave cultural expression into all aspects of the project and natural resource management. This will include identifying and documenting cultural practices and knowledge that relates to the natural environment and natural resource use and management through genealogies, dances, songs, chants, sacred places,

The proposed alternative scenarios with a brief description of expected outcomes and components is outlined below. It will be further refined in the PPG phase of the project.

Securing Kiribati will work to ensure improved management of natural resources on islands and adaptation to climate change through nature-based solutions by expanding and strengthening Kiribati's protected and conserved area network (formal and community-based) for protection of biodiversity, enhancing island ecosystem integrity, and community livelihoods. It will improve integrated ocean governance, expand and improve protected and conserved areas, and apply principles of nature-based solutions to climate change adaptation. Securing Kiribati will also expand environmental education throughout Kiribati's education system from primary to tertiary and technical education while also integrating Kiribati's unique culture into all aspects of the project.

Component 1: Improved integrated environment and oceans governance

Component 1 will improve integrated ocean governance in Kiribati through the establishment of a national ocean policy that will fill gaps in national ocean governance, and call for integrated dialogue across sectoral ministries on ocean issues and form the basis to develop an ocean governance legislation and its supporting institutional set-up. It will help to ensure that ecosystem-based approaches to climate change are integrated into all ocean management activities in Kiribati. Component 1 will also deliver a marine protected area policy that outlines the roles of formal, government-led marine conservation and community-based approaches to managing marine resources, including locally managed marine areas and use of traditional ecological knowledge and practices.

Component 1 will also review all environmental legislation in Kiribati to identify and address gaps in accordance with regional guidelines that contribute to enhancing biodiversity conservation, management, and sustainable utilization; halting land degradation on the atoll environments; and enhancing resilience and transformation soft adaptation at the national and island levels.

Component 1 reflects several activities from the Kiribati NBSAP, including; a) develop Coastal Management Plan and Policy by 2017, and b) undertake the evaluation and review of biodiversity related policies implementation by 2019.

Component 1 will be implemented through the specific Outcomes and Outputs detailed below.

Outcome 1.1: Ministries and departments implement improved policy frameworks for environment, oceans and natural resources management with ecosystem-based approaches to climate change integrated.

Kiribati has one of the world's largest Exclusive Economic Zones at 3,441,810 km². This includes large swathes of its territory in the Phoenix and Line Islands that contain sparsely inhabited, or uninhabited, islands. While the capacity of the central government to reach its remote sea areas is limited, there is a need to coordinate management and governance of Kiribati's ocean space, including expansion, management, and enforcement of protected areas and climate change adaptation. Improved policies and implementation of policies will benefit all of Kiribati's population, including those on project island and non-project islands.

Output 1.1.1: Environment and Protected Area Policies and Regulations Integrating Ecosystem-based Adaptation to Climate Change Developed

As identified in the draft KIEP 2021-2036, there is a need to undertake a comprehensive review of the full suite of environmental protection, nature conservation and natural resource management laws and refresh and update them into a more integrated, streamlined and simplified set of modern laws that are consistent with all relevant MEAs, incorporate best principles of Ecological Sustainable Development (ESD), including the ecosystem-based approach to climate change adaptation, precautionary principle, polluter pays and user-pays and carrying capacity limits principles. Kiribati is currently revising its Environment Act. This process has highlighted a need to develop protected areas policies and related environment regulations. The revision of policies and regulations will include the need to collect key data on climate change adaptation and incorporate this monitoring into implementation of all of Kiribati's development plans. Kiribati has begun to implement programs to protect, resurrect, promote, strengthen and expand local-level, community-based and traditional and customary environmental governance frameworks, especially on the outer islands. Customary practices will be incorporated into national policies and implemented through Components 2 and 3.

Output 1.1.2: Kiribati Integrated National Ocean Policy developed

A National Ocean Policy will build on a marine spatial plan and help to coordinate ocean management, including for biodiversity conservation, natural resource management, and climate change adaptation, across multiple ministries and jurisdictions. The ocean is Kiribati's greatest natural asset and the vehicle for most climate change impacts. A National Ocean Policy that harmonizes activities across Kiribati's marine space, especially in the Gilbert Islands chain, will increase efficiencies for planning coastal and marine activities, monitoring of marine resources, and enforcement. The National Ocean Policy will break down silos between ministries. This will benefit all of the communities across Kiribati. The National Ocean Policy will help Kiribati to respond to climate change impacts of sea-level rise, coral bleaching, and ocean acidification by ensuring that all ministries are coordinated on their approach to ocean management, ecosystem-based adaptation, and biodiversity conservation. It will help to achieve Result 1.1 of the KJIP and the draft 2021-2036 KIEP's Technical Area 6 (Ocean Health and Sustainable Blue Economy) Objective SBE1 (National Integrated Ocean Governance Policy).

Component 2: Improved and healthy ecosystems that support biodiversity and are resilient to climate change impacts.

Securing Kiribati will focus on expanding coverage of protected and conserved areas in the Gilbert Islands and supporting management efforts in the Phoenix Islands Protected Area (PIPA). Kiribati's marine resources, atoll ecosystems, and islands are integral to its cultural heritage and traditional practices. A 2013 study identified 22 Key Biodiversity Areas in Kiribati. Of these 8 are within PIPA, 7 are in the Line Islands, and 7 are in the Gilbert Islands. Only one of the Gilbert Islands' KBAs has been declared as a protected area. Since the changes in KBA criteria in 2016, there is also a need to reassess the Gilbert Islands for KBA status. By expanding protected area coverage in the Gilbert Islands, Securing Kiribati will help protect and restore ecosystems and thus contribute to climate change adaptation through an ecosystem-based approach to climate change adaptation.

During Kiribati's 2020 GEF7 National Dialogue, several communities identified declines in marine resources and related food security as an issue. Component 2.1 will help address this through improved island and marine resources management.

Component 2 will also directly build on Outputs of the GEF5 Ridge to Reef project, including Outcome 1.1 (National Protected Area system expanded to include priority KBAs) and Outcome 1.2 (Strengthened capacity of PA managers and communities to sustain PA management).

Outcome 2.1: Protected Areas Expanded and PA Management Improved

Kiribati's commitment to protected areas is evident through the declaration and on-going management of PIPA, several protected areas on Kiritimati Island, and the Southern Line Islands. As one of the largest MPAs in the world, PIPA is a World Heritage Site and preserves some of the healthiest coral reefs in the world. There is some evidence that the protected reefs in PIPA are adapting better to acidification than others in the Pacific[12]. However, there are very few protected areas in the Gilbert Islands which support the vast majority of the population of Kiribati. Protecting the coral reefs, lagoons, and island ecosystems will be essential for biodiversity conservation and assisting outer-island communities with adaptation to climate change. Securing Kiribati will build capacity among government agencies and local communities to better protect and manage their natural resources through ecosystem-based adaptation and nature-based solutions.

Output 2.1.1: Expanded and improved Island Protected Area/MPA and natural resources management network across Gilbert Islands (Makin, Marakei, Kuria, Aranuka, Tabiteuea South).

Securing Kiribati will establish protected areas on each of the 5 focal Outer Islands in marine and island habitats. This will cover 5% of the island area (considering the small sizes of the islands) and 10% of the Outer Islands' lagoon and coastal marine areas.

It will engage traditional practices to protect ecosystems around islands in the Gilberts chain that are Key Biodiversity Areas (Makin, Kuria, Tabiteuea South) and islands that have shown proactive traditional leadership and approaches to marine resources management (Marakei, Aranuka). The establishment of protected areas on these islands will build on existing efforts to develop Integrated Environment & Natural Resources Co-management Plans that already exist on several islands and to replicate this process where needed. Protected areas will improve biodiversity conservation on these islands and improve socio-economic and food security through strengthened community based management of marine and island resources. Combined with the policy and coordination outputs in Component 1, this output will allow Kiribati to report on an expanded area of island and marine protected and conserved areas under its CBD obligations as well as improved management of existing formal and informal protected areas.

Protected areas will be designated based on consultations with local communities, including the Island Councils, traditional leadership, women, youth, and other vulnerable people on each island. This process will be informed by biodiversity, ecosystem, and socio-economic surveys of each island and marine habitat area to confirm the presence and status of keystone and endangered species on each island.

Techniques including participatory mapping and community-based natural resource management planning will be employed. Community-members will be trained in natural resource and protected area management techniques and processes.

Marine protected areas will be developed with the Ministry of Fisheries and Marine Resources Development's Coastal Fisheries Division. Island protected areas will be developed with the Agriculture and Lands Division of the Ministry of Environment, Lands, and Agriculture Development. The protected areas developed under this output will play a key role in the island development plans proposed in Output 3.1.1 and the climate-smart agriculture and aquaculture activities proposed in Output 3.1.2.

A community liaison officer will be designated for each island to have a presence on the island and to ensure that activities are ongoing. This will be coordinated with other projects, including the GEF6 Whole of Islands project and the IFAD Outer Islands Food and Water Project.

Output 2.1.2: Strengthened management and enforcement of Phoenix Islands Protected Area (PIPA).

The Phoenix Islands Protected Area (PIPA) is a World Heritage Site but due to its size and remoteness is challenging to manage. The 2015-2020 Management Plan needs to be updated, but priorities of sustainable financing, invasive species eradication, and enforcement remain. Sustainable financing of PIPA will be addressed in Output 2.1.3. Securing Kiribati will improve the functioning of the PIPA Trust and/or develop a national sovereign fund to broaden the base for sustainable financing of protected and conserved areas in Kiribati.

Monitoring, Control and Enforcement

One of the biggest challenges of managing PIPA is the distances between islands. Under the current (expired) management plan, the PIPA Management office has a Monitoring, Control and Surveillance (MCS) plan that is predicated on intercepting illegal activities with a patrol boat that is suitable for the high seas. Before such a purchase can be considered, there is a need to better understand the nature of illegal activity in PIPA and to have a plan for harbouring and maintaining such a resource. A vessel suitable for patrolling such a large area or responding to incursions will require significant funding for purchase and maintenance. Since the establishment of PIPA there have been significant advances in remote sensing and drone technology that may fill some of the roles of a patrol boat.

Securing Kiribati will support the PIPA Management Office to understand and document the nature of incursions and illegal activity in PIPA. Data will be collected with updated and innovative technology solutions, including remote sensing and drones. With this information, the PIPA MCS plan will be revised and if necessary, a business case for additional enforcement resources will be made.

Invasive alien species

PIPA is critically important as an Important Bird Area for numerous species of seabirds. Because most of the islands are uninhabited, the main threat to these seabird colonies comes from invasive alien species. Invasive mammals have been successfully eradicated from 3 of PIPA's eight islands. The eradication of rats from Enderbury Island is the next top priority for PIPA. Enderbury is important for the seabird colony but also for the health of marine ecosystems that benefit from invasive species eradication on tropical islands[13] (Graham et al. 2018).

A 1960 survey estimated that it Enderbury hosted more than 40,000 individual seabirds from 15 species. Of these, Red-tailed tropicbirds (*Phaethon rubricauda*) and Lesser frigatebirds (*Fregata ariel*) populations are globally significant (more than 1% of global populations) which classifies it as an Important Bird Area and a Key Biodiversity Area (Birdlife International. Unpublished report). Obura et al (2011)[14] documented endangered Green turtle (*Chelonia mydas*) breeding at Enderbury, including in-water mating and nesting. Holmes et al. (2019)[15] list Enderbury as a globally important island for eradicating invasive mammals to benefit the globally endangered Phoenix Petrel (*Pterodroma alba*).

Of PIPA's 8 islands, invasive species have been eradicated successfully from 3 (Rawaki, McKean, Birnie). An attempt to eradicate rats from Enderbury in 2011 was unsuccessful. Griffiths et al. (2019)[16] examined lessons from successes and failures of rat eradications on tropical islands. This subsequent eradication will benefit from more than a decade of experience from Birdlife International, Island Conservation, SPREP (through the GEF6 PRISMSS project), and New Zealand's Department of Conservation. The use of drones to apply bait will help reduce costs and increase the coverage of bait application. Plans for the eradication operation will be peer reviewed through the Pacific Invasives Partnership and the Island Eradication Advisory Group. Securing Kiribati will also review and revise PIPA biosecurity plans and processes to help ensure that invasive mammals are not able to re-colonise islands with successful eradications.

Output 2.1.3: Sustainable financing mechanisms for Kiribati's protected area network created and harmonized.

Kiribati helped to pioneer the concept of large scale MPAs in the late 1990s with the designation of the Phoenix Islands Protected Area (PIPA). The PIPA Trust was established shortly after, through an act of Parliament, to set up an innovative financing mechanism for PIPA. The PIPA Trust received initial endowment grants of \$5,000,000 and a grant from several US foundations of \$5,000,000 but has struggled to reach its endowment targets of \$20,000,000. There is a need to revisit the PIPA Trust to attract funding to ensure that PIPA continues to function and provide benefits to the people of Kiribati. Securing Kiribati will work with the recently appointed PIPA Trust Executive Director to revise and implement a fundraising strategy.

There is also a need to broaden the financing base of all protected areas in Kiribati. Several protected areas have been established on Kiritimati Island and in the Southern Line Islands. These protected areas will need a different financing model to PIPA as they have different contexts (Kiritimati is Kiribati's second most populous island, the Southern Line Islands are uninhabited). An umbrella plan for financing all of Kiribati's protected areas through a mix of income sources will be developed. The plan will account for the different types of protected areas (community-based, large-scale MPA, etc) that Kiribati will have within its network.

Securing Kiribati will work with partners to evaluate the PIPA Trust model and to seek modifications that will help to ensure that PIPA is financially secure. The Asian Development Bank and the UN Global Coral Reef Fund are possible partners that can bring innovative and new thinking to the protected and conserved area financing issues in Kiribati. Kiribati's limited economy does not have provide many opportunities for bankable investment projects, but the ones that are available will be identified by Securing Kiribati and developed, along with more traditional financing models, into a broad platform of financial sustainability for Kiribati's protected area network. These could include further engagement with the fishing industry, emerging blue carbon models, or seeking further support from the Kiribati government.

Output: 2.1.4: PA Managers and Community Leaders Protected Area management capacity developed and strengthened

Securing Kiribati will assess protected and conserved area management training needs and develop training materials and courses appropriate for the recognized needs. Training for protected and conserved area managers and community leaders will be conducted for strengthening human resources capacity. It will also establish a community of practice for protected and conserved area managers, including formal protected areas (PIPA, Kiritimati Island, Southern Line Islands) and community-based managers and stewards for sharing of best practices, lessons learned, and other information and support. The network will be based with, and supported by, the Department of Environment and Conservation, MELAD but will include stakeholders from other ministries, PIPA, locally managed conservation areas and others.

Component 3: Ecosystem-based approach for climate change adaptation and community resilience through nature-based solutions.

The Government of Kiribati is committed, as evidenced by several key government strategic documents, including the KIEP and the Joint Implementation Plan for Climate Change and Disaster Risk Management, to addressing climate change adaptation through community-based protected areas and protecting species at national and island levels (Strategy 4. Result 4.1). The KJIP has a priority strategy of increasing water and food security through promoting healthy and resilient ecosystems. The draft Kiribati Integrated Environment Policy (2021-2036) includes climate change adaptation as the highest priority for Kiribati to be included in all sectors.

Component 3 of Securing Kiribati complements Components 1 and 2 by working with communities at target islands and their newly-established protected and conserved areas by helping them to adapt to climate change impacts on their islands and atolls through development of whole-of-island and village approaches to climate change adaptation planning and activities. While the protected and conserved areas will form the foundation of island ecosystem-based adaptation by protecting natural ecosystems, this component will work to provide nature-based solutions for ecosystem-based adaptation to climate change. As noted by Mcleod et al. (2019), "it is critically important for global climate policy and national governments to recognize and support community efforts to build resilient communities and ecosystems through ecosystem-based adaptation strategies that are rooted in traditional knowledge and reinforced and supported by climate science, traditional leadership structures and sustainable climate solutions." [17]

Many of the issues identified in Kiribati's 2020 GEF National Dialogue are addressed in Component 3. Identified activities including mangrove planting, improved agricultural practices, land-use planning, and improved water access are related to climate impacts and will be addressed through Component 3.

Component 3 will also address many activities identified in the Kiribati NBSAP, including:

- Reduce the use of unsustainable fishing practices
- Reduce the overharvesting practices of terrestrial resources
- Restoration and rehabilitation of marine and terrestrial habitats
- 60% of local growers/farmers practiced organic agriculture in Kiribati
- Develop and increase adoption of sustainable atoll soil management technologies
- Restoration of at least 2 over-harvested plants and trees species in at least 2 islands

With activities in Output 2.1.1 above, Component 3 will help communities on outer islands adapt to climate change impacts listed in Table 1 with specific attention to:

- coastal inundation, erosion and loss of land through improved land-use and agricultural practices
- salinization of groundwater lens and declines in size of groundwater lens through improve agricultural practices and agroforestry

- frequent, long, and severe droughts mitigated through improved management of groundwater lenses.
- The productivity for coral reef fish and invertebrates is projected to decline by 20% by 2050 due to both the direct effects (e.g. increased sea-surface temperature) and indirect effects (changes to fish habitats) of climate change will be addressed through improved ecosystem functioning of marine habitats by introduction of sea cucumbers to protected habitats
- Loss of traditional fishing skills will be addressed through promotion of traditional knowledge and management practices
- Decline in production of food crops will be addressed through climate smart agriculture techniques and practices
- Loss of traditional agriculture skills to be addressed through promotion of traditional knowledge and management practices
- Economic losses for artisanal fishers due to declines in coastal fisheries

Outcome 3.1: Improved resilience of outer island communities by practicing climate-smart agriculture and aquaculture that protects, restores, and maintains healthy ecosystems.

The communities on target islands will incorporate ecosystem-based adaptation and nature-based solutions that mainstream biodiversity and integrate all sectors on Outer Islands into existing island development and management plans or develop new plans. The plans will be operationalized through activities that restore or manage natural ecosystems to better adapt to impacts of climate change. These will also capitalize on i-Kiribati traditional knowledge and practices through knowledge mapping and documentation techniques to then be employed across the component.

Output 3.1.1: Island-level nature-based solutions-oriented sustainable land use plans developed and implemented

The 5 target islands will incorporate ecosystem-based adaptation and nature-based solutions into existing island development plans or develop new ones where necessary. The plans will document and incorporate traditional knowledge and practices to bolster climate-change adaptation and sustainability into island development plans. They will guide future infrastructure development to be climate-smart and to incorporate nature-based solutions. These plans will guide the sustainable use of natural resources on these islands including the conservation areas and sustainable, climate-smart agriculture and aquaculture. Other activities identified under the island plans will be implemented to increase adaptation capacity of the ecosystems and communities. These may include mangrove management or restoration to address coastal erosion from sea-level rise and increased storminess, management or restoration of seagrass beds, identification and planting of native vegetation, and/or hybrid grey/green infrastructure solutions.

Output 3.1.2: Ecosystem-based adaptation and climate-smart agriculture and aquaculture livelihood options are identified and adopted

Communities on outer islands rely on marine resources and a few staple crops for daily subsistence and livelihoods. There is limited documentation of ecosystem-based adaptation successes for atoll countries in academic literature (McLeod et al 2019). Climate-smart agricultural and aquaculture practices and other ecosystem-based adaptation activities, identified through Output 3.1.1 will be introduced on target islands to help communities adapt to impacts of climate change listed above.

These activities on land may include reducing the impact of invasive species that are exacerbating the impacts of climate change by improving crop production. The promotion of organic farming techniques will help to reduce reliance on imported chemicals, restore traditional techniques and improve the resilience of communities. Traditional crops and process will be explored for each island and re-introduced. Agroforestry will review the tree coverage on islands and develop plans to help improve groundwater lenses by restoring or improving ground cover to reduce evaporation. Crops and other groundcover near coastlines will be assessed and more salt tolerant plants will be planted to help reduce the rates of erosion on islands. These activities also support water resources management by monitoring water tables on the islands and examining how restored ecosystems and agricultural practices can help maintain water tables that are threatened by climate change impacts and changing agricultural practices.

As climate change impacts marine environments through reduced productivity of coral reefs due to impacts of bleaching and acidification, communities will need to adapt their sea food consumption patterns and production. They will need to identify alternative sources of income. There are limited opportunities to profit from near-shore marine resources as cold-chains for fish are limited and thus not feasible to be exported to Tarawa or abroad. Culturing products that can be dried, like seaweed or sea cucumbers can be a climate-smart livelihoods for outer island communities. Securing Kiribati will work with the Coastal Fisheries Division to help introduce seaweed and/or sea cucumber to outer island communities. Both of these activities have minimal impacts on marine habitats or are beneficial to habitats. Seaweed farming in Kiribati has been piloted on other islands and can be the basis of a good fertilizer for island crops and organic farming. Sea cucumbers have been depleted from most reef areas in Kiribati but play an important role in cleaning sediment and cycling nutrients in seagrass beds. Cultured sea cucumbers can help provide critical income for island communities and increase the value of healthy and protected reefs for communities.

Component 4: Awareness, knowledge management and lessons learning

Increasing understanding of climate change, adaptation approaches, and sustainable island and ocean management is vital for the people and future of Kiribati. Kiribati is one of the world's most vulnerable countries to the impacts of climate change and the need for further understanding and resulting changes to behavior, for nature-based solutions is clear. The KJIP and KIEP both support the need for increased awareness and training to adapt to climate change.

Component 4 will help to mainstream biodiversity throughout Kiribati and use communications to drive specific behaviour change. It will focus on outreach, communications, education, and public awareness to enhance sustainability and security of the people, their health and income, their environment, and their heritage. Identified activities that will cut across Components 1, 2, and 3 will specifically improve local capacities and local knowledge, information/data, and

understanding to support Kiribati protected and conserved areas initiatives for people, their environment, and their cultural and natural heritage at national, island, and village levels. Activities may include:

- Increase awareness and advocacy to change behaviour and enhance protection and adaptation measures
- Improve preparatory measures and responses, to link food and nutrition security with ecosystem health and nature-based solutions
- Review of the national school curricula for integration of climate change adaptation, biodiversity, traditional ecological knowledge and critical ecosystems with recommendations for inclusion into the national curricula.

The KJIP and KIEP also support the need to include traditional knowledge and practices in adapting to climate change. These aspects will be integral to Component 4 but also integrated throughout the project.

Outcome 4.1. Strengthened formal and informal climate change adaptation and environmental outreach and capacity building at the village, island, and national levels

Training and education programmes will focus on:

- Increasing awareness of climate change risks and adaptive measures that can be taken from an ecosystem-based approach and through nature-based solutions.
- Links between climate change adaptation and food and nutrition security with measures to enhance health security.

Output 4.1.1. Improved and strengthened formal and informal curricula to enhance climate change adaptation and environment awareness and capacity.

The project will review and evaluate the Primary Schools, Junior Secondary Schools (JSS), Senior Secondary Schools (SSS) and Kiribati Teachers College (KTC) curricula to understand the needs for enhancing biodiversity, ecosystem functioning, and climate change adaptation in schools and colleges in Kiribati and design curricula to be adopted by the Ministry of Education and relevant education programmes.

Output 4.1.2. Improved awareness of ecosystem-based adaptation to climate change and environmental issues at village, island, and national levels.

Awareness programmes will be built on an initial assessment of climate change adaptation and environmental awareness on the target islands with a communications and awareness plan to be implemented and measured during the course of the project.

Output 4.1.3. Project-related best-practices and "lessons learned" assessed, published and disseminated

Securing Kiribati will specifically assess and document project lessons and share them. Sharing will be conducted in Kiribati through appropriate channels with stakeholders of the project and communities from other islands. IUCN will facilitate sharing through existing online portals, through webinars and conferences.

1a-4) alignment with GEF focal area and/or Impact Program strategies

Specific alignment elements include:

Kiribati ratified the UN Framework Convention on Climate Change (UNFCCC) in September 2016 and the Kyoto Protocol in September 2000. Its National Adaptation Plan of Action was submitted in 2007. The Kiribati Joint Implementation Plan for Climate Change is the main guiding policy for climate change in Kiribati. Securing Kiribati is aligned to this plan.

Kiribati ratified the United Nations Convention to Combat Desertification (UNCCD) in August 1998. The Kiribati National Action Plan to Combat Land Degradation and Mitigate the Effect of Drought (KNAP-CLD) (2017-2022) was submitted in 2017.

Kiribati acceded to the United Nations Convention on Biological Diversity (UNCBD) in November 1994. The most recent NBSAP (2016-2020) details national action plans and strategies to address the UNCBD. Securing Kiribati is closely aligned to the NBSAP.

Threats to biodiversity in Kiribati come from degradation of the small amount of land available, alien invasive species, and degradation of coastal tropical marine ecosystems including coral reefs, mangroves and seagrasses. The Phoenix Islands Protected Area is an important key biodiversity area for its vast, largely intact coral reefs, and island ecosystems that house major populations of threatened seabirds. KBAs that have been identified on the Gilbert Islands require verification based on revision of KBA criteria.

Adaptation to climate change is the single most important issue for development in Kiribati. Securing Kiribati blends biodiversity and ecosystem protection and sustainable management with Kiribati's climate change adaptation needs through strengthening ecosystem resilience and sustainable land use and coastal ecosystem use in climate-smart manners. This is consistent with LDCF objectives 2 (Mainstream climate change adaptation and resilience for system impact) and 3 (Foster enabling conditions for effective and integrated climate change adaptation). This also integrates the LDCF with the GET Trust Fund to build integration between biodiversity conservation and climate change adaptation in Kiribati.

The project is aligned (refer to Table A in Part I) with the corresponding outcomes, outputs, and activities as indicated in Table B: Indicative Project Description Summary and in section iA-3: proposed alternative scenario.

BD1-1 - Mainstream biodiversity across sectors as well as landscapes and seascapes through biodiversity mainstreaming in priority sectors

BD2-6 - Address direct drivers to protect habitats and species through the Prevention, Control and Management of Invasive Alien Species

BD2-7 - Address direct drivers to protect habitats and species and improve financial sustainability, effective management, and ecosystem coverage of the global protected area estate

CCA-2 Mainstream climate change adaptation and resilience for systemic impact

1a-5) incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and co-financing

Kiribati is classified as a least developed country with a limited export base comprised mostly of tuna fishing license revenue and copra exports. It has the lowest GDP in the Pacific region. Sale of tuna fishing licenses has generated increasing foreign income in recent years, but this is a finite resource with limited room for growth. The national sovereign wealth fund, the Revenue Equalization Reserve Fund, was endowed with revenue from phosphate mining on the outer island of Banaba in the 1950s. The public sector is the largest employer and Kiribati has limited private sector engagement. Most outer islands have no private sector presence. Kiribati is highly dependent on donor support.

Kiribati has had very little support for biodiversity conservation or protected areas. Two American foundations (Oceans 5 and Waitt Foundation) have supported PIPA for the past 5 years and BIOPAMA is providing some additional support. However, these have lacked the needed policy frameworks and coordination to be sustainable across Kiribati and into the future. The protected area components of the project will support the achievement of the revised KIEP and be supported by officers and extension staff from the MELAD ECD. It will also build on the support given to PIPA from the Waitt Foundation and Oceans 5.

The LDCF CCA components of the project will focus on integrated island planning, and climate smart agriculture and aquaculture. These are integrated with the Kiribati Agriculture Strategy and the Kiribati National Fisheries Policy. As these components are aligned with the strategies of these plans, Securing Kiribati will provide additional support to implement aspects of these project. It will build on the results of the long-term Kiribati Adaptation Project and other adaptation projects listed in the baseline scenario above.

Without the support of the GEFTF and LDCF the activities and outcomes of this project will not happen. The baseline scenarios described above do not integrate biodiversity conservation, ecosystem integrity and climate change adaptation.

1a-6) global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF);

Securing Kiribati will result in global environmental benefits from biodiversity conservation, land degradation, and climate change adaptation.

Biodiversity benefits - Global environmental benefits resulting from GEF investment in biodiversity will contribute to the conservation of threatened species on remote atolls and islands as well as expanding and improving protection of some of the most intact and remote coral reefs in the world. Kiribati's terrestrial biodiversity is quite impoverished, but it does host significant traditional agro-forest ecosystems that are vital to the food security and sustainable, subsistence livelihoods of iKiribati people as well as globally significant roosting, feeding and nesting sites for a wide variety of migratory bird and seabird species, particularly in the Phoenix and Line Islands. These include the world's largest remaining populations of the Phoenix Petrel and White-throated Storm Petrel. The status of terrestrial biodiversity in Kiribati is poorly documented.

Marine biodiversity in Kiribati are diverse and globally significant. The KBAs identified from Kiribati are predominantly based on marine species, including populations of critically endangered hawksbill turtles. Declaration of the PIPA means that 12% of Kiribati's marine waters are protected, exceeding the Aichi Target 11, which is 10% by 2020. However, there remain major challenges to the effective management of the PIPA and significant challenges relating to marine biodiversity protection, conservation and management throughout the rest of Kiribati.

Land degradation benefits - Kiribati has very little land and is one of the most land-constrained countries in the world and land degradation is a major issue. Almost all land in the Gilbert Islands is under private ownership in small hereditary holdings. Lack of land use planning is resulting in land degradation. Conversion of atoll forests to coconut plantations has changed ecosystems with drier habitats. Land-use plans on the outer islands will identify land degradation issues and seek solutions to restore key ecosystems. The Kiribati government has plans to dredge lagoons and reclaim land in several atolls which could result in additional land degradation issues. Coastal erosion from sea level rise and poor construction of seawalls also results in land degradation. Securing Kiribati will develop sustainable land use plans for 5 outer islands in the Gilbert Islands group and provide lessons for other outer islands.

Adaptation benefits – With very little land and low islands, Kiribati is one of the most vulnerable countries in the world to climate change. Of Kiribati's 33 islands, all 16 in the Gilbert Islands group are inhabited. These are mostly low-lying atolls (with the exception of the outlying Banaba which is a raised coral island). These atolls have poor, alkaline soils, thin and fragile freshwater lenses, and are subject to prolonged droughts during ENSO events. Climate change is expected to result in higher sea levels and stronger storms and waves which will inundate land with salt water and contaminating freshwater resources. Rainfall patterns are expected to change with possibly greater rainfall in the northern Gilbert Islands and less rain fall in the southern islands. Periods of drought are expected to increase in frequency and duration. The marine ecosystems that surround each atoll (coral reefs, mangroves, seagrasses) will be impacted by increased sea surface temperatures (resulting in coral bleaching) and ocean acidification (resulting in organisms with weaker exoskeletons).

Securing Kiribati will strengthen awareness and capacity in nature-based solutions while demonstrating approaches to implementing ecosystem-based adaptation through improved agricultural and aquaculture systems integrated, through land-use management plans, with improved ecosystem management and conservation.

1a-7) innovation, sustainability and potential for scaling up

Innovation

Securing Kiribati will introduce innovative tools for ecosystem-based approaches to climate change in Kiribati through protection and restoration of key ecosystems and climate-smart agriculture and aquaculture in Components 2 and 3. Integration of ecosystem and community resilience, using traditional knowledge and practices, is new in Kiribati. Securing Kiribati will provide innovative tools to Outer Islands communities that can be shared beyond the project.

The project will include climate change adaptation into island planning processes. This will include biodiversity, ecosystem and community resilience aspects that have not been integrated before in Kiribati. Improving agriculture techniques and restoring traditional practices to adapt to climate impacts (drought, salinization, etc) will integrate with biodiversity conservation and ecosystem restoration. Agroforestry techniques will help restore breadfruit and other island forest crops with ecosystem restoration for biodiversity and climate change adaptation. Working with communities to integrate marine culture of seaweed and sea cucumbers will help build resilience through improved community incomes, better marine ecosystem health,

In the Phoenix Islands Protected Area the project will partner with SPREP and regional NGOs for invasive species eradication using newly developed techniques for applying rat bait with drones. This can increase the coverage of bait and be more cost effective than helicopter or land-based deployment. The project will also work with the PIPA Management Office to explore the use of drone and satellite technology to document incursions into PIPA and illegal activity.

Promotion and use of traditional knowledge is a key innovation of the project. The loss of traditional knowledge in Kiribati is highlighted in most government policies and plans. Securing Kiribati will integrate traditional knowledge into protected area design and management, land-use planning, agriculture and aquaculture.

Importantly, while Securing Kiribati will build on the coping abilities and traditions of the iKiribati people to adapt to climate variability, it will also acknowledge and identify that some traditional practices may no longer be sustainable. It will also acknowledge and identify changes that may not be analogous to those of the past and that may need to be addressed through innovative approaches. It will be necessary to explore the integration of hard-engineering solutions with eco-solutions. Protecting and restoring coastal vegetation can help reduce the needs for, and the cost of, seawalls.

Sustainability

Sustainability will be ensured through working to support Kiribati's national policies and plans (KV30, KIEP, KJIP, Kiribati National Fisheries Policy, Kiribati National Agriculture Strategy) and in cooperation with government, partners, and other projects to achieve these plans at national levels. At Outer Island levels capacity for Island Councils, traditional leadership, community members, women and youth will be built to help ensure sustainability. Technical capacity for government staff and community members will include ecosystem monitoring, biodiversity documentation, protected areas design and management, climate-smart agriculture and aquaculture techniques, and documentation of traditional knowledge and techniques.

Scaling Up

Securing Kiribati is fully integrated into the strategic plans of the Ministry of Environment and Ministry of Fisheries. Capacity built among these two ministries will allow for lessons to be shared across islands to other communities.

The project activities on the Outer Islands will be designed to be replicated on other Outer Islands in the Gilbert Group. Opportunities for sharing lessons with neighbouring atoll countries will be explored through IUCN state-member engagement and related GEF projects in the region. The project will include peer-to-peer exchanges between project islands and non-project islands.

The PIPA is part of the global network of large-scale MPA managers. Lessons learned from this project will be shared with managers of other large-scale MPA managers through publication of scientific papers and engagement in virtual and face-to-face meetings.

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- [10] Kiribati. 2016. Kiribati National Biodiversity Strategies and Action Plan (2016-2020)
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- [13] Graham et al 2018 Seabirds enhance coral reef productivity function in absence of rats. *Nature*. V 599.
- [14] Obura et al. 2011. Sea turtles of the Phoenix Islands, 2000 – 2002. *Atoll Research Bulletin*. No. 589.
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- [17] Mcleod, E., M. Bruton-Adams, J. Forster, C Franco, G Gaines, B Gorong, R James, G Posing-Kulwaum, M Tara, E Terk. 2019. Lessons from the Pacific Islands – Adapting to Climate Change by Supporting Social and Ecological Resilience. *Frontiers in Marine Science*. Vol. 6.

1b. Project Map and Coordinates

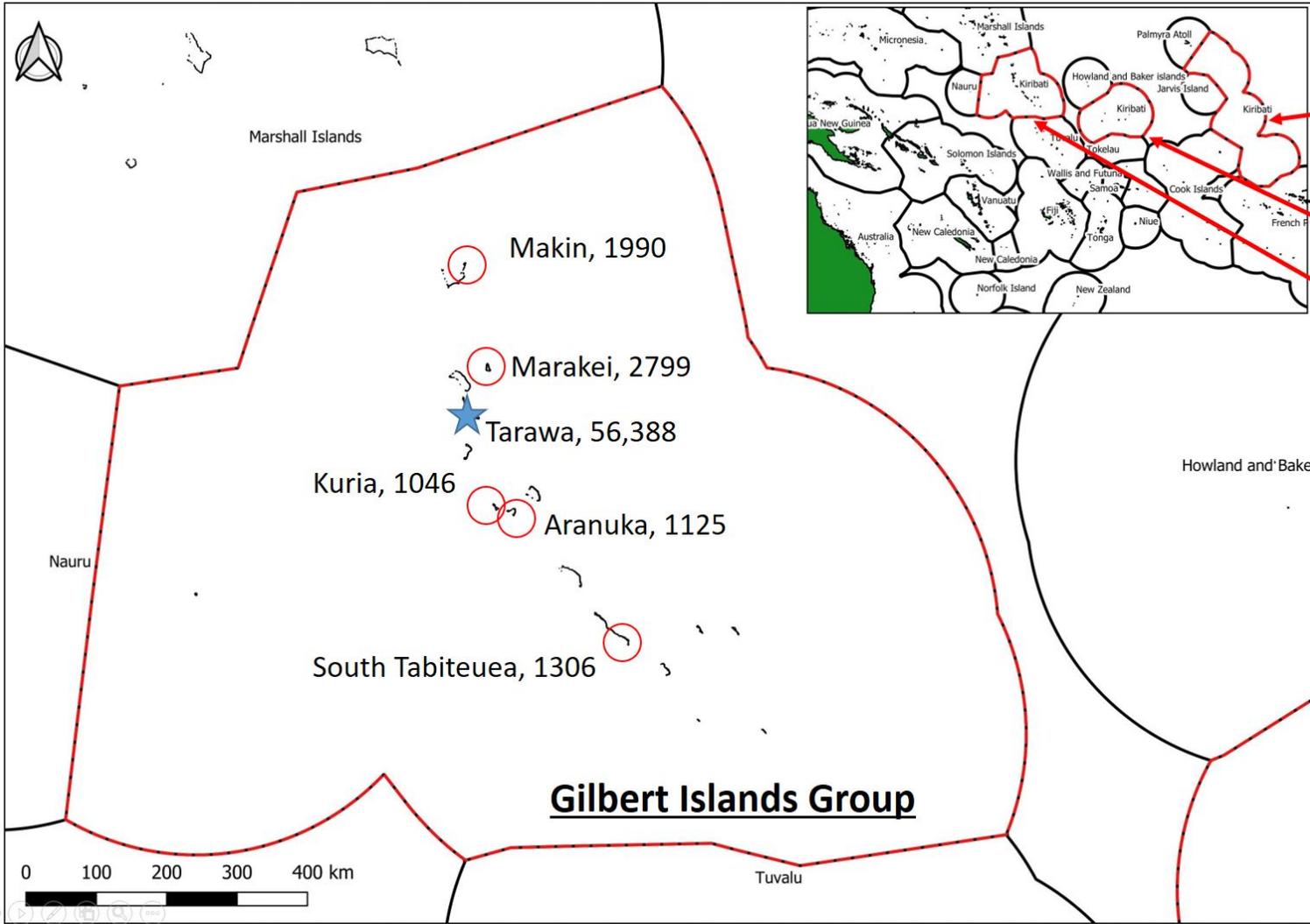
Please provide geo-referenced information and map where the project interventions will take place.

The project activities will focus on the Phoenix Islands Protected Area (PIPA) and on 5 islands in the Gilbert Islands group, including Makin, Marakei, Kuria, Aranuka, and Tabiteuea South. These islands were selected for their Key Biodiversity Area attributes (PIPA, Makin, Kuria, Tabiteuea South) and for the existing interest from Island Councils to manage resources (Marakei and Aranuka) as evidenced by their existing island management plans or draft management plans.

The 5 focal Outer Islands are home to 8,266 people (2015 census). This represents 23% of all Outer Island residents in the Gilbert Island chain (Table 2).

Table 2: Kiribat population by region

| | |
|--|----------------|
| Kiribati population | 110,136 |
| Line Islands population | 10,483 |
| Phoenix Islands population | 20 |
| Banaba population | 268 |
| Gilbert Islands population | 99,365 |
| | |
| Gilbert Islands | |
| Tarawa | 63,017 |
| Outer Islands (all) | 36,348 |
| | |
| Securing Kiribati (5 islands) | 8,266 |
| Kuria | 1046 |
| Aranuka | 1125 |
| S Tabiteuea | 1306 |
| Makin | 1990 |
| Marakei | 2799 |
| Percent of Kiribati total population in Securing Kiribati: | 8% |
| Percent of Outer Island population in Securing Kiribati: | 23% |



Line Islands

Phoenix Islands

Gilbert Islands

2. Stakeholders

Select the stakeholders that have participated in consultations during the project identification phase:

Indigenous Peoples and Local Communities Yes

Civil Society Organizations Yes

Private Sector Entities

If none of the above, please explain why:

Covid-19 has restricted travel between Kiribati and the rest of the region and limited national travel budgets. Consultations have been based on the input provided during consultations for the development of the draft Kiribati Integrated Environment Policy (2021-2036) and the GEF-7 National Dialogue conducted in February 2020. The GEF-7 National Dialogue was organised by the Environment and Conservation Division of the Ministry of Environment, Lands, and Agriculture Development. Representatives of outer island communities including island councils, CSOs, and private sector participated in the National Dialogue.

Potential stakeholders to the project will include:

| Stakeholder | Stakeholder Interest and Role in Project | Means of Engagement |
|---|--|---|
| Ministry of Environment, Land, and Agricultural Development – Environment and Conservation Division | MELAD ECD will be the main Executing Agency and house the Project Management Unit. ECD is responsible for implementing the Environment Act and establishing and managing protected areas in Kiribati, including PIPA. Responsible counterpart in government for parts of Component 1 and all of Component 2. | Direct engagement with IUCN regional office in Suva. |
| Ministry of Environment, Land, and Agricultural Development – Agriculture and Land Division | MELAD ALD will be the main partner agency for implementing the agriculture aspects of Component 3 to plan and develop climate-smart agriculture in the 5 Outer Islands. | Direct engagement with IUCN and the project Steering Committee. |
| Ministry of Environment, Land, and Agricultural Development – Livestock Division | MELAD Livestock Division is responsible for livestock in the Outer Islands including pigs and other animals. The Livestock Division will be engaged when determining natural resource management plans for the outer islands and how to manage livestock and livestock waste. | Engagement through the PMU. |

| | | |
|--|---|--|
| Ministry of Fisheries and Marine Resource Development – Coastal Fisheries Division | MFMRD CFD is responsible for coastal fisheries and aquaculture in Kiribati. CFD will be the lead agency for marine protected area aspects of Component 2 as well as aquaculture aspects of Component 3. CFD's sea cucumber hatchery in Tarawa and sea weed programmes will be instrumental for Component 3. | Engagement through the PMU and project Steering Committee. |
| Office of the President – Climate Change Division | The Office of the President coordinates all climate change initiatives through the Kiribati National Experts Group (KNEG). Securing Kiribati will make regular reports to the KNEG and engage with the Climate Change Division on coordination with other projects outside of MELAD. | Engagement through the project Steering Committee |
| Ministry of Finance | The sustainable financing component of the project has consulted with the Ministry of Finance. Possible partnership with development banks (World Bank, ADB) will be coordinated through the Ministry of Finance. | Direct access through the Ministry of Finance Secretary. |
| IFAD – Outer Islands Food and Water Project | IFAD has one of the longest running rural development projects on Kiribati's Outer Islands. Securing Kiribati has been presented to IFAD regional coordination. Further engagement to ensure coordination will be conducted during the PPG phase. | Consultations at regional levels in Suva, Fiji and during community consultations. Coordination on implementation islands that may coincide. |
| UNDP – GEF6 Whole of Islands Project | The UNDP GEF6 Whole of Islands project will need seamless integration at the Ministerial level and on islands where there may be shared interests to ensure duplication of efforts is avoided and that the projects are well synchronised. | Engagement through the PMU and project Steering Committee in Kiribati and through Regional GEF task managers. |
| SPC - The Pacific Community | SPC has a history of agricultural and aquaculture projects in Kiribati. SPC may provide key technical support to the project through supporting projects or direct contracting by Securing Kiribati. | Project contracting or SPC officers in Kiribati or regionally, facilitated by the SPC-IUCN MOU. |
| Australian Centre for International Agricultural Research (ACIAR) | ACIAR brokers and funds research partnerships between Australian scientists and their counterparts in developing countries. Past and ongoing projects include Covid-19 food impacts on Pacific communities, seaweed culture, and community-based agriculture projects. | Engagement through the Australian High Commission in Tarawa. |
| SPREP | As the regional environment agency SPREP has ongoing | Engagement through PMU and IU |

| | | |
|--|--|--|
| | <p>projects in Kiribati and in development, including waste management and water security on outer islands. SPREP is the executing agency for the GEF6 PRISMSS project on invasive species. SPREP also hosts the Pacific Island Protected Area Portal which will host data from the project.</p> | CN. |
| | | |
| The PIPA Trust | <p>The PIPA Trust is an independent NGO established in the USA and through Kiribati government legislation to support financing of PIPA. Securing Kiribati will work with the PIPA Trust Executive Director on fund-raising strategies and activities as well as with the PIPA Trust Board of Directors on PIPA strategic directions.</p> | Engagement through MELAD via PMU. |
| Kiribati Community Initiative Association | <p>The Kiribati Community Initiative Association is a group of community NGOs and civil society organisations. The KCIA will be important for coordinating community-based approaches and sharing lessons beyond the project.</p> | Engagement through the PMU. |
| Kiribati Climate Action Network | <p>Kiribati Climate Action Network (KiriCAN) is an independent climate change NGO focused on awareness-raising, adaptation, and climate change negotiation. KiriCAN will be important for coordinating climate messaging, adaptation techniques, traditional knowledge, and sharing lessons beyond the project.</p> | Engagement through the PMU. |
| Island Councils (5 Outer Islands) | <p>All Outer Islands have an elected Island Council. Local governments are empowered to raise local revenue through by-laws. Local government services include fire protection, early years schooling, social welfare services, primary healthcare, environmental and public sanitation, transport, town planning, local infrastructure, water supply and economic regulation. The Island Council will be a key stakeholder for developing resource management plans, island development and adaptation plans and supporting activities.</p> | Engagement through MELAD, the PMU and local liaison officers on each island. |
| Unimwane, or Council of Elders (5 Outer Islands) | <p>The traditional leadership roles still play a critical role in outer island communities and social structures. These c</p> | Engagement through MELAD, the PMU and local liaison officers on |

| | | |
|---------------------------|--|--|
| | <p>councils hold power to community support and resources. The dynamics of each island will be critical to the success of the project.</p> | each island. |
| Live and Learn - Kiribati | <p>Live and Learn is an Australian NGO network that works with communities throughout Asia and the Pacific to design, implement and learn from community-based development projects. The projects are specific to each community and cover a number of thematic program areas. Live and Learn maintains an office in Kiribati and is starting a project on Outer Islands to build capacity for nature-based solutions.</p> | Engagement through the PMU and local liaison officers. |

In addition, provide indicative information on how stakeholders, including civil society and indigenous peoples, will be engaged in the project preparation, and their respective roles and means of engagement

PPG funds will be used to conduct detailed stakeholder consultations, stakeholder analyses, and gender analyses during the detailed design of the Project Document. More than 95% of iKiribati are indigenous people and will be included in stakeholder consultations. The PPG phase will include workshops with communities and island councils from the 5 islands to be led by MELAD ECD with involvement from relative ministries. These community consultations will also take a GESI approach to ensure participation from women and vulnerable people.

3. Gender Equality and Women's Empowerment

Briefly include below any gender dimensions relevant to the project, and any plans to address gender in project design (e.g. gender analysis).

Kiribati's Joint Implementation Plan (KJIP) on Climate Change and Disaster Risk Management acknowledges that "effects of climate change ... are felt first and most acutely by vulnerable and marginalized people, including women, children, youth, people with disabilities, minorities, the elderly and the urban poor."

The Kiribati National Policy on Gender Equality and Women's Development (2019 – 2022) has a vision that all Kiribati men and women reach their full potential and will accomplish this through 5 priority areas that include 1) mainstreaming gender approaches, 2) improve economic empowerment of women, 3) stronger, informed families, 4) improved women's participation in politics and leadership, and 5) eliminating sexual and gender-based violence.

Customary land in Kiribati accounts for 37% of land ownership with the remaining land owned by the Government of Kiribati. Most of the 37% is found in the Gilbert Islands group. Outer Islands have a dual governance systems. Traditional governance authority on Outer Islands was held by the *Unimwane* – a council of elder men. These very rarely included women. The *Unimwane* system persists unofficially but continues to exert strong influence. Official island governance authority rests with the elected Island Council. The participation of women on elected Island Councils has grown in recent years. Support for Securing Kiribati will need to be provided by the official Island Council and the *Unimwane* of each island.

Outer island communities are dependent on the natural resources. Households in the outer islands rely on fishing carried out by men, as well as collecting reef food and weaving done by women, and copra, which is cut by both women and men. Men conduct plantation and land preparation for breadfruit and coconut trees, whilst women tend to garden vegetables, fruit crops and small livestock. Fish that are caught by men are usually for family consumption rather than selling, as they would need to travel to the other islands to sell what is left. Islands such as Kuria, Aranuka and Tabiteuea South mostly fish close to shore due to the lack of, and cost of, fishing equipment which would enable them to go out further and catch more fish.

A key area that will be addressed when working with those living on the outer islands is traditions, cultures and existing power dynamics that can influence the implementation of the project. The outer islands use the *maneaba* system, dominated by males who make the decisions for the villages. There are also unwanted social problems to consider, that can occur when development takes place. By expanding women's economic opportunities climate-smart agriculture and aquaculture, the project will be able to provide women, youth and vulnerable groups the opportunity for employment as well as make decisions for themselves.

Securing Kiribati will support Outer Island communities to implement Strategy 12 (Enhancing the Participation and Resilience of Vulnerable Groups) of the KJIP. This will include

- facilitating the participation of women (and youth) in natural resource management initiatives and building management capacity
- developing women and youth capacity through train-the-trainer initiatives on climate-smart agriculture and aquaculture
- facilitating meaningful engagement of women and youth in natural resource management planning processes
- establishing culturally-appropriate women and youth mechanisms for managing protected areas established by the project and meaningful representation in management committees
- conducting livelihood projects aimed at improving the sustainable livelihoods of all community members with a focus on women and youth
- ensuring that communications materials and methods are suitable for women and youth

During the PPG phase, the project will have a women and youth consultation strategy to ensure that the views and inputs from outer island women and youth are represented in the final project design. Community consultations on the outer islands will have women facilitators to engage appropriately. The project will develop a gender engagement plan that will engage women on the outer islands to participate in land use planning and natural resource management decisions while helping to improve their empowerment in economic activities through training on climate-smart agriculture and aquaculture in a culturally sensitive manner.

Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment? Yes

closing gender gaps in access to and control over natural resources; Yes

improving women's participation and decision-making; and/or Yes

generating socio-economic benefits or services for women. Yes

Will the project's results framework or logical framework include gender-sensitive indicators?

Yes

4. Private sector engagement

Will there be private sector engagement in the project?

No

Please briefly explain the rationale behind your answer.

Private sector engagement will likely be limited in the project. There is very little private sector activity on Kiribati's remote outer islands and in PIPA. Private sector may be engaged as agricultural and marine aquaculture products are developed or improved to develop value chains for export of the products. The culture of sea cucumbers on reef flats and lagoons of the outer islands can produce high-value dried sea cucumbers that can be exported more easily to markets in east Asia than fresh seafood products. This can be a source of income to support community-based MPAs on the outer islands, particularly if the sea cucumbers are cultured within the protected area boundaries as a common resource. These activities will need to engage with exporters in Tarawa to find buyers in Asia for such products. SPC will be engaged to advise on sea cucumber grow-out and marketing.

Through the Kiribati Vision 2030, Kiribati has an intention of developing tourism potential as a pillar of the economy. As protected areas are designed and developed, tourism can play an important role in their financial sustainability but also apply pressures to the natural resources. Tourism considerations will be built into protected area management plans, but it is unlikely to become a major part of the project as Kiribati's tourism industry requires significant infrastructure before it can become a viable part of the economy, particularly on outer islands. Securing Kiribati will help provide a foundation of possible sustainable tourism by promoting improved ecosystem management which will be one of the key attracting factors for tourism in the future. Part of the work with PIPA on sustainable financing will examine the role of tourism for helping to finance PIPA's activities.

Kiribati's largest source of income is from its tuna fisheries and sale of fishing licenses. As part of the Parties of the Nauru Agreement (PNA), Kiribati participates in a scheme to sell fishing day rights across the region. The question of the role of fisheries income (and loss of income) from the designation of PIPA as a no-take area has been hotly debated within Kiribati. The project will explore, among other possible sources, the role of commercial fishing in the financing of protecting of Kiribati's marine resources.

5. Risks to Achieving Project Objectives

Indicate risks, including climate change, potential social and environmental risks that might prevent the Project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the Project design (table format acceptable)

| Risk | Rating | Mitigation |
|---|--------|---|
| Limited capacity in government agencies to implement the project and sustain project outcomes | M | Capacity building is integrated in all project components. This will include capacity building of government partners and communities in all aspects of the project and post-project activities. Ownership of the project by the partners will be ensured by letting them take the lead with assistance from the project team. Technical assistance will be carefully used to build rather than substitute for capacity. A coordinated approach by the implementing partner with other agencies involved to leverage on training opportunities and resources available. |
| Lack of examples and data to design adaptation measures | L | Lessons from previous adaptation projects will be assessed during PPG and during project implementation. |
| Weak coordination and communication amongst project partners may impede implementation | M | The project will build on existing coordination mechanisms in the Kiribati government to ensure coordination of project components particularly through the MELAD ECD, MELAD Agriculture and Land Division, Ministry of Fisheries and Office of the President. |
| Participation by communities may be low | M | Community engagement, through Island Councils, and other means, will be essential for the project success. Kiribati's outer islands have relatively small populations. Having dedicated community liaison staff within the project will ease this. Participatory approaches with emphasis on traditional culture will ease community engagement. |
| Gender and youth issues on outer islands may slow progress | L | The project will take a GESI approach to activities and continuously engage women and youth on the islands. A thorough GESI plan will be developed during the PPG phase. |
| Community owned island land may not be available for protected areas | M | There are no protected areas in the Gilbert Island group. The islands are mostly under traditional community ownership and any protected areas will need full support from communities. The project will take a flexible approach to the definition of protected areas to ensure that they are protecting habitat and ecosystems. |
| Climate change risks | M | One of the main climate change risks to projects in the Pacific is often increase |

| | | |
|-----------------------|---|--|
| | | <p>d and strong tropical cyclones that impede progress when recovery efforts take precedence. Kiribati is less impacted by storms than other parts of the Pacific to the south. While climate change is the most pressing issue in Kiribati, the slow nature of change makes climate change events unlikely to impact the project. The project is designed to build adaptation capacity of communities and ecosystems.</p> |
| Political instability | L | <p>Kiribati has a history of political stability. Changes in Pacific-level geopolitics may bring interest from other development partners that will need to fall within Kiribati's climate and environmental governance frameworks. As this is a climate change related project, the Office of the President will be fully engaged in the project.</p> |
| COVID-19 | L | <p>Kiribati closed all borders early during the global pandemic in 2020. This kept the country free from Covid-19 through March 2021 and domestic travel is not officially restricted but has become more expensive. Kiribati has been allocated 48,000 doses of vaccines through the first phase of the Covax programme. It is not clear when the remainder of the population will have access to vaccinations. It is anticipated that international travel to Tarawa will resume in 2022 and to the outer islands after that. Developing a full ProDoc may require a hybrid approach with consultants in Kiribati and internationally and will rely on virtual meetings. It is anticipated that travel will ease once the full project will begin in 2023.</p> |

6. Coordination

Outline the institutional structure of the project including monitoring and evaluation coordination at the project level. Describe possible coordination with other relevant GEF-financed projects and other initiatives.

Securing Kiribati will be implemented through a National Execution Modality with the Environment and Conservation Division (ECD) of the Ministry of Environment, Land, and Agriculture Development as the Executing Entity. A Project Management Unit (PMU) will sit within ECD to oversee the execution of the project. The PMU will consist of a National Project Coordinator and a Chief Technical Advisor who will, respectively, provide coordination and technical oversight of the project. They will be supported by a Finance and Administration Officer and Field Coordinators based on each of the main project islands. The PMU will also liaise closely with the PIPA Implementation Office and the PIPA Trust for aspects of Component 2 that relate to the PIPA.

The PMU will coordinate engagement with the Agriculture and Land Division (ALD) of MELAD and the Coastal Fisheries Division (CFD) of the Ministry of Fisheries and Marine Resources Development (MFMRD). These two divisions will be responsible for the key outputs under Component 3 for climate-smart agriculture and climate-smart aquaculture. The Office of the President, responsible for climate change, the Ministry of Finance and Economic Development, the Ministry of Line and Phoenix Islands, and the Ministry for Commerce and Industry will all be involved in the project planning and activities and management. Specific roles will be developed through the PPG phase.

To ensure coordination with other projects in Kiribati that relate to Securing Kiribati, the PMU (through ECD) will report regularly through the KIEP Implementation Oversight Committee (KIOC) as well as the Kiribati National Expert Group on Climate Change and Disaster Risk Management (KNEG). The KNEG coordinates all climate change activities in Kiribati and will provide a platform for coordination of climate change adaptation activities. A project steering committee will be comprised of relevant ministries, project partners (to be identified during the PPG phase, e.g. Asian Development Bank, UNDP Global Fund for Coral Reefs, IFAD, SPC, SPREP, etc.) and IUCN.

Monitoring and evaluation will be developed during the PPG phase. Specific aspects that have been considered in the PIF include the integration of awareness and communication in the project through Component 4.

Several GEF projects are mentioned in the "Project Description" section of this PIF. These GEF projects include the FAO GEF-5 National STAR R2R project, the UNDP GEF5 LDCF "Enhancing National Food Security in the Context of Global Climate Change," the UNDP GEF6 "Enhancing Whole of Islands Approach to Strengthen Community Resilience to Climate and Disaster Risks in Kiribati," and the UNEP "PAS: Phoenix Islands Protected Area (PIPA)." Many of these projects involve the same government offices as Securing Kiribati. In particular, coordination with the GEF6 "Whole of Islands" project will be critical for the success of both projects. This will be achieved through inclusion of the Whole of Islands project management as an observer of the Securing Kiribati Steering Committee. Other GEF projects will be invited as observers as needed.

7. Consistency with National Priorities

Is the Project consistent with the National Strategies and plans or reports and assessments under relevant conventions?

Yes

If yes, which ones and how: NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc

| Plan | Consistency |
|--|---|
| Kiribati 20-Year Vision 2016-2036 (KV20) | <p>The KV20 is an ambitious, long term development planning framework and the first of its kind for Kiribati. Its overall objective is to bolster national efforts in transforming the lives of an I-Kiribati and economy into a resilient, wealthy, healthy and secure nation. It is based on 4 pillars of (1) wealth, (2) peace and security, (3) infrastructure for development, and (4) governance. These are underpinned by two cross cutting issues of (1) gender, youth, vulnerable groups, equity, and (2) environment, climate change and sustainable development.</p> <p>The KV20 expressly commits the government to “continue to implement and build on existing policy measures towards building adaptive and mitigation capacity, particularly of the most vulnerable people.” KV20 prioritises development of fisheries and tourism but recognises the threat of climate change to these two industries.</p> <p>Securing Kiribati will contribute to specific activities in the KV20 implementation matrix through:</p> <p>Pillar 1 (Wealth) – Natural Capital</p> <ul style="list-style-type: none"> • Maximising returns from sustainable fisheries and marine resources – Component 3 through aquaculture and • Sustainable management and protection of marine and natural resources in Component 2 • Improving land use and planning for sustainable development in Components 2 and 3 <p>Pillar 1 (Wealth) – Cultural Capital</p> <ul style="list-style-type: none"> • To safeguard, revive and promote tangible and intangible cultural and historical heritages through Components 2 and 3. <p>Pillar 3 (Governance)</p> <ul style="list-style-type: none"> • Strengthen national and local / traditional / cultural governance policy and legislative framework through Component 1, 2, and 3. |
| Kiribati Joint Impleme | Securing Kiribati will contribute to the KJIP’s strategic areas of: |

| | |
|--|--|
| <p>ntation Plan for Climate Change and Disaster Risk Management (KJIP) 2014-2023</p> | <p>Strategy 4. Increasing water and food security with integrated and sector-specific approaches and promoting healthy and resilient ecosystems. Result 4.1. Develop community-based protected areas and protect species at outer island level. Result 4.2. Design, test, implement and evaluate agriculture production systems to establish food-secure communities in the face of climate changes and disaster risks at community levels.</p> <p>Strategy 7. Delivering appropriate education, training, and awareness programmes. Result 7.1. Students and professionals have capacities to take action on adaptation, and risk reduction and coping strategies before, during and after disasters and emission mitigation, including, incorporate climate change, DRM, and other related areas such as agriculture, livestock, environment, fisheries, water and health into KTC's preservice primary, junior secondary, and senior secondary teacher training programme.</p> <p>11. Maintaining the sovereignty and unique identity of Kiribati. Result 11.1 The rights of Kiribati over its existing EEZ and the resources within it are protected forever for the people of Kiribati.</p> <p>12. Enhancing the participation and resilience of vulnerable groups. Result 12.1. Facilitate the participation of children and young people in climate change adaptation and disaster risk management initiatives and conduct youth empowerment. Promote the equal participation of women and men in climate change and DRM initiatives.</p> |
| <p>National Adaptation Program of Action</p> | <p>The latest NAPA is from 2007 and included a list of priority activities and project profiles. These include water resource adaptation, coastal zone management, agricultural food crop development, and coral reef restoration.</p> |
| <p>Kiribati Climate Change Policy</p> | <p>Securing Kiribati will contribute to several national priorities including:</p> <ul style="list-style-type: none"> 6.1. Coastal protection and infrastructure. Objective 4. 6.2. Food security. Objective 3. 6.3. Water security. Objective 4. 6.5. Environmental sustainability and resilience. Objective 1. 6.9. Capacity building and education. Objectives 1 and 2. |

TA 1: Environmental Governance

EG2 - National EG Regime Update:

- By end 2024, Kiribati has undertaken a comprehensive review of the full suite of environmental protection, nature conservation and natural resource management laws and refreshed and updated them into a more integrated, streamlined and simplified set of modern laws that are consistent with all relevant MEAs, incorporate best principles of Ecological Sustainable Development (ESD), including the ecosystem-based approach, precautionary principle, polluter pays and users pays and carrying capacity limits principles, as well as CIA and SEA:

- EG2.1: Comprehensive review with recommendations completed by end 2021.

- EG2.2: New suite of integrated, linked and coordinated environmental laws that meet the criteria in the FYG-EG2 are drafted, reviewed and agreed by GoK by end 2023.

- EG2.3: New suite of environmental laws passed by parliament by end 2024.

EG5 - EG Awareness:

- By end 2024, all businesses and the community are fully aware of their environmental regulatory obligations under Kiribati environmental protection, nature conservation and natural resource management laws:

EG7 - Traditional / Customary EG Frameworks:

- By end 2024, Kiribati has begun to implement programs to protect, resurrect, promote, strengthen and expand local-level, community-based and traditional and customary EG frameworks, especially on the outer islands:

- EG7.1: National study and inventory of traditional EG practices and frameworks completed by end 2021.

- EG7.2: National program to protect, resurrect, promote, strengthen and expand traditional EG frameworks developed and approved by end 2022.

- EG7.3: Implementation of national program underway by mid-2023.

TA 2: Climate Change

CC3 - Vulnerability Assessments (VAs):

- By end 2024, systematic, science-based, best-practice climate change VAs have been completed for all islands and all socioeconomic sectors in the country, with recommendations for Adaptation Action Plans for each island and each sector, based on their VAs.

- CC3.2: VAs completed for all other inhabited islands by end of 2022.

CC4 - Adaptation Action Plans (AAPs):

- By end 2024, all islands and all socioeconomic sectors in Kiribati have begun to implement their Adaptation Action Plans, as recommended by the VAs, with preference for measures that are based on 'building with nature', soft/green engineering and community involvement and ownership.
- CC4.2: AAPs completed and implementation commenced for all other inhabited islands by end of 2023.

TA 3: Biodiversity

BD1 - CBD & NBSAPs:

- By end 2024, the NBSAP 2020-24 has been fully implemented, the next four-year NBSAP has been developed, with no gap from the previous NBSAP, the next NBSAP explicitly includes a provision to address the threat to biodiversity from unsustainable agricultural practices including the use of slash and burn, and use of chemical pesticides.

BD2 - National Integrated BD Assessment & Monitoring Program (BDAMP):

- By end 2024, Kiribati has developed and begun to implement a comprehensive, integrated, nationally coordinated, long-term and ongoing terrestrial and marine biodiversity assessment and monitoring program, which links to TA 8 and which supports regular national State of the Environment (SOE) reporting.

BD3 - National Ecologically Representative Protected Area Network (PAN) Plan:

- By end 2024, Kiribati has developed and begun to implement a National Ecologically Representative Protected Area Network (PAN) Plan, which amongst other aspects:
 - BD3.1: Elements, key sites and structure of PAN Plan, which address the criteria under FYG-BD3, developed and agreed by BD stakeholders by end of 2021.
 - BD3.2: Full PAN developed and approved by end of June 2023.
 - BD3.3: Implementation of the PAN Plan commenced by mid-2024.

BD4 - Building National Biodiversity Management Capacity:

- By end 2024, Kiribati has developed and begun to implement a National Biodiversity Management Capacity Plan, which significantly strengthen on-site management, research, monitoring, compliance and enforcement capacity in the PIPA and the protected area system generally in Kiribati.

BD5 - Invasive Species Management:

- By end 2024, the NISSAP 2020-24 has been fully implemented, and the next four-year NISS AP has been developed, ready for implementation – with no gap from the previous NISSAP.

TA 4 Waste Management and Pollution Prevention

TA 5: Non-living resources

NNR1 - Groundwater Protection Plan:

- By end 2024, a National Plan has been developed to ensure that the freshwater resources, including groundwater lenses, that are needed to supply potable water needs are fully protected from pollution and contamination and sustainably managed for the long-term, within an integrated water resources management framework, ready for implementation in subsequent years.
- NNR1.1: Assessment of the freshwater resources threats and protection needs are completed and approved, for each island, by end of 2022.
- NNR1.2: Freshwater Resource Protection Plan has been developed for each island, ready to commence implementation, by end of 2024.

NNR2 - National Ecological Water-needs Assessment & Management Plan:

- By end 2024, a national assessment of the freshwater resources and flows that are needed to protect and sustain all of the key freshwater-dependent ecosystems, habitats and species of Kiribati has been completed, for each island, and an Ecological Water Needs Management Plan has been developed for each island, within an integrated water resources management framework, ready to commence implementation in the next four-year period.
- NNR2.1: Assessment of the freshwater resources and flows that are needed to protect and sustain all the key freshwater-dependent ecosystems, habitats and species of Kiribati has been completed and approved, for each island, by end of 2022.
- NNR2.2: Ecological Water Needs Management Plan has been developed for each island, ready to commence implementation, by end of 2024.

NNR3 - Island Sustainable Land-use and Urban Management Plans:

- By end 2024, Sustainable Land-use Plans have been completed for each inhabited island, integrating land-use needs for human habitation/urban development, commerce, industry and infrastructure, agriculture (including traditional subsistence), ecosystem-services and nature conservation, supported by spatial planning, ready to commence implementation in the next four

-year period.

- NNR3.2: Sustainable Land-use (SLU) Plans addressing the criteria under FYG NNR2 have been completed and approved for each of the remaining inhabited islands by end of 2024.

TA6: Ocean Health and Sustainable Blue Economy

SBE1 - National Integrated Ocean Governance Policy:

- By end 2024, a National Integrated Ocean Governance Policy, which coordinates all relevant government ministries and agencies, and all ocean-related sectors, has been developed and adopted, ready to commence implementation in the next four-year period.

- SBE1.1: National Integrated Ocean Governance Policy, which addresses the criteria under FYG SBE1, has been completed and approved by end of 2022.

TA7: Environmental Education, Communication and Awareness

EECA1 – Knowledge, Attitudes and Practice Survey:

By end 2024, baseline data on the levels of environmental awareness of all environmental issues are successfully monitored overtime through Knowledge, Attitudes and Practice Surveys, to see changes on the levels of environmental awareness of all sectors and to be able to identify gaps and needs on number of national awareness programs.

EECA1.1: KAP survey successfully designed and used by end 2022.

EECA3 – Integration of environmental issues into the national education curriculum:

By end 2024, all primary and secondary school students are fully aware of environmental issues and be able to perform best environmental management practices at their schools, communities and homes.

EECA3.1: Increased level of awareness and understanding of all students on environmental issues by end 2023.

Kiribati Agriculture Strategy (KAS) 2020-2030

This project will help to implement the Kiribati Agriculture Strategy (KAS 2020-2030) by contributing to several objectives. As mentioned in the KAS Objective 4, “it is imperative for agricultural development to focus on integrating environmental protection and sustainability through appropriate measures...such as protection against coastal erosion, adoption of new sustainable agricultural practices...effective use of traditional agricultural knowledge” and capacity building. Specifically, it can contribute to:

Objective 1: Sustainable atoll crop production – the project will assist communities to diversify crops (Output 1.1), agroforestry (Output 1.3), water management (Output 1.4);

Objective 4: Climate change mitigation and adaptation enhanced – the project will assist identifying, managing, and minimizing climate change impacts and risks (Output 4.1),

Objective 7: Capacity building for government officials and stakeholders

Kiribati National Fisheries Policy 2013-2025

This project will help to implement the Kiribati National Fisheries Policy (2013-2025) by contributing to several objectives. The project will help to introduce or strengthen environment and fisheries sustainability and climate change resilience in discussions with Island Councils, villages, and island development plans. The community-based marine protected areas will help to protect coral reefs, seagrass and mangroves which will strengthen marine ecosystems, sustainability and coastal/in-shore fisheries management. The introduction of low-impact and high value marine aquaculture can also strengthen the management of coral reef and lagoon habitats while providing needed sustainable income to outer island communities. The project will specifically contribute to National Fisheries Policy objectives of:

1. Support economic growth and employment opportunities through sustainable fisheries, aquaculture, and marine resources development.
2. Protect and secure food security and sustainable livelihoods for I-Kiribati.
3. Ensure long-term conservation of fisheries and marine ecosystems.
4. Strengthen good governance with a particular focus on building the capacity of MFMRD to implement and support fisheries management, development, and monitoring, control and surveillance.
5. Build climate change resilience for fisheries and marine resources in Kiribati.

This will include contributing to several Strategic Actions, including:

- Strategic Action 3: Implement Community-based Fisheries Management
- Strategic Action 6: Undertake a socio-economic analysis of subsistence, artisanal and commercial fisheries in lagoons and inshore waters.
- Strategic Action 7: Development of Fisheries Management Plans for key commercial species.
- Strategic Action 19: Identify, assess, develop and implement an effective and practical framework to support outer-island fisheries development initiatives (subsistence, artisanal, commercial, value-added production, fish centres, etc.) to empower local communities and promote self-reliance at the community level to address food security, s

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|---|--|
| | <p>ustainable livelihoods, employment opportunities and income generation initiatives.</p> <ul style="list-style-type: none"> · Strategic Action 23: Identify and protect important coastal habitats. |
| <p>National Biodiversity Strategies and Action Plan 2016-2020</p> | <p>Securing Kiribati will contribute to several aspects of the 2016-2020 NBSAP, noting that a revised NBSAP is expected in 2021. These aspects include:</p> <ul style="list-style-type: none"> · Reduce the overharvesting practices of terrestrial resources by 2018 · Restoration and rehabilitation of marine and terrestrial habitats by 2020 · 60% of local growers/farmers practiced organic agriculture in Kiribati by 2020 · Develop and increase adoption of sustainable atoll soil management technologies by 2020 · Restoration of at least 2 overharvested plants and trees species in at least 2 islands by 2018 |

8. Knowledge Management

Outline the knowledge management approach for the Project, including, if any, plans for the Project to learn from other relevant Projects and initiatives, to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.

Knowledge management and sharing of lessons is critical for the success of Securing Kiribati. This will include knowledge developed around the biodiversity of the Gilbert Islands, lessons of climate change and agriculture on small atolls and integrating protection of marine habitats with climate-smart aquaculture techniques. Processes for developing protected and conserved areas, along with manuals and process guidelines will be published and shared among key stakeholders. These will be documented in English and Kiribati, where appropriate and deposited with key government agencies (including the KNEG and KIOC). A key aspect of Securing Kiribati will mapping, documenting, and employing traditional knowledge on climate change adaptation and natural resources management in Kiribati. These lessons will be printed and published in appropriate languages to share with communities and other stakeholders. Lessons on the management and financing of PIPA will be published internationally for learning lessons for other large MPAs in the Pacific and elsewhere.

9. Environmental and Social Safeguard (ESS) Risks

Provide information on the identified environmental and social risks and potential impacts associated with the project/program based on your organization's ESS systems and procedures

Overall Project/Program Risk Classification*

PIF

CEO Endorsement/Approval MTR

TE

Medium/Moderate

Measures to address identified risks and impacts

Provide preliminary information on the types and levels of risk classifications/ratings of any identified environmental and social risks and potential impacts associated with the project (considering the GEF ESS Minimum Standards) and describe measures to address these risks during the project design.

The significance of all risks is rated as low. An access restrictions process framework will be developed. An IP framework, incorporating vulnerable peoples will be developed during the PPG phase. A gender assessment and action plan will be developed. An ESMP will be developed to avoid risks of invasive species and pest management. The main risk from the project will be associated with potential access restrictions on the 5 Gilbert Islands that will develop community-based conservation areas. This risk will be minimal because of the small number of inhabitants on these islands and the traditional ownership of land and natural resources that will require the process to be bottom up and built on traditional practices.

During the PPG phase, once the activities are established in more detail, the full ESMS Screening will be conducting to ascertain the risk levels and determine and develop required safeguard instruments.

Supporting Documents

Upload available ESS supporting documents.

| Title | Submitted |
|---|-----------|
| SecKir esms preliminary screening 20032021 final.docx | |

Part III: Approval/Endorsement By GEF Operational Focal Point(S) And GEF Agency(ies)

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S): (Please attach the Operational Focal Point endorsement letter with this template).

| Name | Position | Ministry | Date |
|--------------------------|---|---|-------------|
| Nenenteiti Teariki Ruatu | Director, Environment and Conservation Division | Ministry of Environment, Lands, and Agriculture Development | 4/22/2021 |

ANNEX A: Project Map and Geographic Coordinates

Please provide geo-referenced information and map where the project intervention takes place

