



ADAPTATION FUND

AFB/PPRC.19/11
24 September 2016

Adaptation Fund Board
Project and Programme Review Committee
Nineteenth Meeting
Bonn, Germany, 4-5 October 2016

Agenda Item 7 f)

PROPOSAL FOR REPUBLIC OF MARSHALL ISLANDS

Background

1. The Operational Policies and Guidelines (OPG) for Parties to Access Resources from the Adaptation Fund (the Fund), adopted by the Adaptation Fund Board (the Board), state in paragraph 45 that regular adaptation project and programme proposals, i.e. those that request funding exceeding US\$ 1 million, would undergo either a one-step, or a two-step approval process. In case of the one-step process, the proponent would directly submit a fully-developed project proposal. In the two-step process, the proponent would first submit a brief project concept, which would be reviewed by the Project and Programme Review Committee (PPRC) and would have to receive the endorsement of the Board. In the second step, the fully-developed project/programme document would be reviewed by the PPRC, and would ultimately require the Board's approval.

2. The Templates approved by the Board (OPG, Annex 4) do not include a separate template for project and programme concepts but provide that these are to be submitted using the project and programme proposal template. The section on Adaptation Fund Project Review Criteria states:

For regular projects using the two-step approval process, only the first four criteria will be applied when reviewing the 1st step for regular project concept. In addition, the information provided in the 1st step approval process with respect to the review criteria for the regular project concept could be less detailed than the information in the request for approval template submitted at the 2nd step approval process. Furthermore, a final project document is required for regular projects for the 2nd step approval, in addition to the approval template.

3. The first four criteria mentioned above are:

1. Country Eligibility,
2. Project Eligibility,
3. Resource Availability, and
4. Eligibility of NIE/MIE.

4. The fifth criterion, applied when reviewing a fully-developed project document, is:

5. Implementation Arrangements.

5. It is worth noting that since the twenty-second Board meeting, the Environmental and Social (E&S) Policy of the Fund was approved and consequently compliance with the Policy has been included in the review criteria both for concept documents and fully-developed project documents. The proposals template was revised as well, to include sections requesting demonstration of compliance of the project/programme with the E&S Policy.

6. In its seventeenth meeting, the Board decided (Decision B.17/7) to approve "Instructions for preparing a request for project or programme funding from the Adaptation Fund", contained in the Annex to document AFB/PPRC.8/4, which further outlines applicable review criteria for both concepts and fully-developed proposals. The latest version of this document was launched in conjunction with the revision of the Operational Policies and Guidelines in November 2013.

7. Based on the Board Decision B.9/2, the first call for project and programme proposals was issued and an invitation letter to eligible Parties to submit project and programme proposals to the Fund was sent out on April 8, 2010.

8. According to the Board Decision B.12/10, a project or programme proposal needs to be received by the secretariat no less than nine weeks before a Board meeting, in order to be considered by the Board in that meeting.
9. The following project concept document titled “Climate Resilient Atolls for Food Security and Community Livelihoods in RMI” was submitted by the Secretariat of the Pacific Regional Environment Programme (SPREP), which is a Regional Implementing Entity of the Adaptation Fund.
10. This is second submission of the proposal. It was earlier submitted to the twenty-sixth meeting of the Board but was withdrawn. The current submission was received by the secretariat in time to be considered in the twenty-eighth Board meeting. The secretariat carried out a technical review of the project proposal, assigned it the diary number MHL/RIE/Agri/2015/1, and completed a review sheet.
11. In accordance with a request to the secretariat made by the Board in its 10th meeting, the secretariat shared this review sheet with SPREP, and offered it the opportunity of providing responses before the review sheet was sent to the PPRC.
12. The secretariat is submitting to the PPRC the summary and, pursuant to decision B.17/15, the final technical review of the project, both prepared by the secretariat, along with the final submission of the proposal in the following section. In accordance with decision B.25.15, the proposal is submitted with changes between the initial submission and the revised version highlighted.

Project Summary

Republic of Marshall Islands – Climate Resilient Atolls for Food Security and Community Livelihoods in RMI

Implementing Entity: *SPREP*

Project/Programme Execution Cost: USD 598,500

Total Project/Programme Cost: USD 6,898,500

Implementing Fee: USD 586,372.5

Financing Requested: USD 7,484,872.5

Project Background and Context:

Republic of Marshall Islands (RMI), an atoll island nation, is very vulnerable to the impacts of climate change. The project will support RMI communities to progress their agricultural production and food security development goals, in the context of a changing climate. To support RMI's progress towards its agriculture, food security and trade related goals the project aims to provide capacity and technical support, facilitate planning and coordination and, and provide much needed resources to implement targeted and practical adaptation and resilience activities. The overall goal of the project is to support the growth of healthier, more climate resilient atoll islands and livelihoods by supporting vulnerable RMI atoll communities to produce good quality and nutritious food, and agricultural products, despite climate related hazards and disasters.

Component 1: Climate Change Policy Development (USD 500,000)

RMI requires support to better understand, plan for and manage its agricultural sector in the context of climate change. The objective of this component is to build the resilience of the sector to the future impacts of climate change adequately. For RMI to achieve long-term and sustained climate resilient agriculture sector, the is project will build the capacity of the relevant agencies.

Component 2: Training, Awareness and Capacity (USD 2,300,000)

The project hopes to partner with the College of Marshal Islands (CMI) to train and develop students to have a complete and practical understanding of the climate related challenges for agricultural production in RMI. By building the technical capacity at this level the project will support the capacity of RMI to plan for and respond to ongoing climate resilient agricultural needs – it will support development of climate resilient agriculture sector leaders of tomorrow. Further, this component will assist farmers to form associations and work together to be able to produce products in reasonable quantities and in a consistent manner, in addition to knowledge management, extension of a demonstration farm, among other activities.

Component 3: Integrated climate resilient agricultural practices (USD 3,500,000)

The third component of this project will focus on supporting the planning, implementation and ongoing management of atoll island natural resources, which underpin food security, as the basis for implementation of concrete actions to support climate resilient food production in the selected atoll islands. It will see the project support further development of atoll conservation and management plans through the tried and tested, and climate aligned Riemaanlok process; as well as delivery of priority, and community determined actions and support to directly support the production of food in a climate resilient way. It will involve a three phase approach where

first atoll natural resource management plans are developed and or strengthened, secondly key natural resource management actions will be implemented, and thirdly, integrated climate resilience agriculture and food security activities delivered.



ADAPTATION FUND

ADAPTATION FUND BOARD SECRETARIAT TECHNICAL REVIEW OF PROJECT/PROGRAMME PROPOSAL

PROJECT/PROGRAMME CATEGORY: Regular-sized Project Concept

Country/Region: **Republic of Marshall Islands**
 Project Title: **Climate Resilient Atolls for Food Security and Community Livelihoods in RMI**
 AF Project ID: **MHL/RIE/Agri/2015/1**
 IE Project ID:
 Reviewer and contact person: **Daouda Ndiaye**
 IE Contact Person: **Espen Rosenberg, SPREP**

Requested Financing from Adaptation Fund (US Dollars): **\$7,484,872.5**
 Co-reviewer(s): **Mikko Ollikainen**

Review Criteria	Questions	Comments on 22/8/16	Comments on 6/9/16
Country Eligibility	1. Is the country party to the Kyoto Protocol?	Yes	
	2. Is the country a developing country particularly vulnerable to the adverse effects of climate change?	Yes, the Republic of the Marshall Islands is low-lying small island developing state in the Pacific and primarily impacted by sea level rise, temperature rise, warming oceans, and extreme weather events such as drought.	
Project Eligibility	1. Has the designated government authority for the Adaptation Fund endorsed the project/programme?	Yes	
	2. Does the project / programme support concrete adaptation actions to assist the country in addressing adaptive	Requires clarification. The concept outlines a comprehensive list of both climatic and non-climatic stressors that render RMI vulnerable. While all of the issues outlined are undeniably	

	<p>capacity to the adverse effects of climate change and build in climate resilience?</p>	<p>important, the proposal would benefit from a tighter focus on particular climate stressors and vulnerabilities in the introductory narrative, and clearly outlining how the proposed interventions (focus on policy, training, and both natural resource management and sustainable agriculture) address those stressors in the most effective manner.</p> <p>CR1: Please clarify/outline which climate change impacts the proposed project addresses and how the selected activities substantially and directly respond to those impacts.</p> <p>CR2: Please clarify why the training awareness and capacity component and the integrated climate resilient agricultural practices component are separate and not linked or built together. It appears as if the training and capacity building activities support resilient agricultural practices. If to remain separate, please clarify how the project will link the outcomes of one to the other. Particularly for areas of overlap such as 2.3 and 3.3.</p> <p>CR3: Please clarify the cost for activity 3.1, which appears to mostly leverage existing resources and information. Perhaps these resources can be utilized for 3.2 or 3.3 otherwise.</p> <p>CR4: Please clarify how the selected activities will be chosen for 3.2 and 3.3 and prioritized given the potential variation in cost across the</p>	<p>CR1: Mostly addressed, the fully-developed proposal will need to clearly integrate the measures outlined in the table into project activities.</p> <p>CR2: Addressed but additional detail will be required to fully delineate activities.</p> <p>CR3: Not addressed – response table references a maximum of \$200,000 however project document still states \$1,000,000.</p> <p>CR4: Not sufficiently addressed, the proposal does not adequately outline the scope and process (to finalize) activities that the project will support.</p>
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		interventions and potential number of possible sites.	
	3. Does the project / programme provide economic, social and environmental benefits, particularly to vulnerable communities, including gender considerations, while avoiding or mitigating negative impacts, in compliance with the Environmental and Social Policy of the Fund?	<p>Requires clarification. The project should clarify more clearly how the beneficiaries will be selected and engaged, particularly marginalized and vulnerable people. Further, given the uncertainty in the scope and nature of the on-the-ground components of the project (3.2 and 3.3), it is unclear how some of the benefits can be claimed or verified.</p> <p>CR5: Please clarify how the project itself will result in benefits – and how the project design and activities can meaningfully support these claims.</p> <p>CR6: Please clarify how the beneficiaries will be selected for the project in compliance with the Adaptation Fund's Environmental and Social Policy and in line with the Reimanlook 8 step process, and how marginalized or vulnerable groups will be targeted.</p>	<p>CR5: Not sufficiently addressed – the response is still vague relative to the ambition of the project.</p> <p>CR6: Addressed however the response from the table was not reflected in the revised concept document.</p>
	4. Is the project / programme cost effective?	<p>Requires clarification. None of the project interventions have been compared to alternative adaptation options. If the intended outcome is to build resilience to the impacts of climate change, there are many other options for achieving that objective. Please justify the proposed approach by reflecting the comparison with other adaptation options.</p> <p>CAR1: Please reformulate the section by comparing the proposed</p>	<p>CAR1: Not addressed, the section was not reformulated, nor was any</p>

		components with other options for achieving the intended outcomes.	additional justification given.
	5. Is the project / programme consistent with national or sub-national sustainable development strategies, national or sub-national development plans, poverty reduction strategies, national communications and adaptation programs of action and other relevant instruments?	Yes, the project appears to be generally aligned with the overall plans and strategies of the RMI.	
	6. Does the project / programme meet the relevant national technical standards, where applicable, in compliance with the Environmental and Social Policy of the Fund?	Requires clarification. CR7: Please clarify if the project will be subject to any environmental impact assessments and at what stage the project proponent will carry out these assessments. CR8: Please add any relevant regulations on land tenure and land rights as they relate to replanting and agricultural efforts.	CR7: Addressed. CR8: Addressed however the information provided in the response table was not reflected in the project document.
	7. Is there duplication of project / programme with other funding sources?	Requires clarification. CR9: Please clarify if the project will target atolls not covered by the FAO and ADB project or if there may overlap. If so, please justify. CR10: Please clarify whether any of the results of the programs listed can directly inform the design of activities in 3.2 and 3.3, particularly the GEF 5 project and the Pacific Atoll Agriculture Research project. If so, please expand on why the program will invest in additional research (components 1,2	CR9/10: Mostly addressed, but given the strong likelihood of direct overlap, a more formal process should be in place to avoid duplication and maximize efficiency when utilizing outputs of other projects. This information should clearly be outlined in the project document.

		and 3.1) that is crucial for the program.	
	8. Does the project / programme have a learning and knowledge management component to capture and feedback lessons?	Yes, however the proponent is requested to provide detailed information for this component at the fully-developed stage.	
	9. Has a consultative process taken place, and has it involved all key stakeholders, and vulnerable groups, including gender considerations?	Requires clarification. CR11: Please clarify how gender considerations were investigated as part of the initial consultations held. CR12: Please provide more information on the outcomes of the workshops/consultations that informed the current proposal.	CR11: Mostly addressed through plans at next stage. CR12: Addressed however should be reflected in the project document.
	10. Is the requested financing justified on the basis of full cost of adaptation reasoning?	Requires clarification. CAR2: Please formulate this section but comparing the baseline (no AF funding) to the intended impact of the project by component.	CAR2: Not addressed, nor was any additional justification provided.
	11. Is the project / program aligned with AF's results framework?	Yes, pending the resolution of other CRs.	
	12. Has the sustainability of the project/programme outcomes been taken into account when designing the project?	Mostly, however given the uncertainty in the scope and location of interventions in component 3, the sustainability of many of these interventions is unclear. CR13: Components 1 and 2 reflect an investment in capacity and training. Please comment on how the investment of resources in these activities will yield long-term benefits beyond the lifetime of the project, and	CR13: Not sufficiently addressed, nor was response reflected in the project document.

		how they will be sustained, including human resources (interns, extension officers, etc) paid for by the project. For Component 3, please clarify how the project will sustain community involvement in the absence of AF resources after the conclusion of the project.	
	13. Does the project / programme provide an overview of environmental and social impacts / risks identified?	<p>Yes, with the understanding that the full proposal will more fully outline potential impacts and a management plan.</p> <p>CR14: Please consider revising this section. The categorization C is not substantiated. There are a number of activities under component 3 that have not been selected yet, but present potential environmental and social risks. In addition, as the project sites have not been selected, it is premature to assert that no further assessment is required for compliance with the ESP. A number of principles could therefore be triggered along the process, including during the selection and prioritization of beneficiaries.</p>	CR14: Not sufficiently addressed or substantiated.
Resource Availability	1. Is the requested project / programme funding within the cap of the country?	Yes	
	2. Is the Implementing Entity Management Fee at or below 8.5 per cent of the total project/programme budget before the fee?	CR15: Please clarify this cost within budget as the costs are not outlined in the standard format in the AF project template.	CR15: Addressed and noted that the overall project budget had increased.
	3. Are the Project/Programme	Yes	

	Execution Costs at or below 9.5 per cent of the total project/programme budget?		
Eligibility of IE	4. Is the project/programme submitted through an eligible Implementing Entity that has been accredited by the Board?	Yes, it has been submitted by an accredited RIE, SPREP	
Implementation Arrangements	1. Is there adequate arrangement for project / programme management?	N/A	
	2. Are there measures for financial and project/programme risk management?	N/A	
	3. Are there measures in place for the management of for environmental and social risks, in line with the Environmental and Social Policy of the Fund? Proponents are encouraged to refer to the draft Guidance document for Implementing Entities on compliance with the Adaptation Fund Environmental and Social Policy, for details.	N/A For future reference, please note that many of the risks outlined on page 42 also fall within the ESP of the AF. Please plan to address these risks and particularly in terms of the selection of beneficiaries, selection of interventions, and involvement of marginalized communities.	
	4. Is a budget on the Implementing Entity Management Fee use included?	N/A	
	5. Is an explanation and a breakdown of the execution costs included?	N/A	

	6. Is a detailed budget including budget notes included?	N/A	
	7. Are arrangements for monitoring and evaluation clearly defined, including budgeted M&E plans and sex-disaggregated data, targets and indicators?	N/A	
	8. Does the M&E Framework include a break-down of how implementing entity IE fees will be utilized in the supervision of the M&E function?	N/A	
	9. Does the project/programme's results framework align with the AF's results framework? Does it include at least one core outcome indicator from the Fund's results framework?	N/A	
	10. Is a disbursement schedule with time-bound milestones included?	N/A	

Technical Summary	<p>The proposed project concept outlines a program to address several climate change impacts in the Republic of Marshall Islands. The project focuses in a combination of policy development, training, and on-the-ground activities to enhance the resilience of the economy and communities to acute climate change impacts.</p>
	<p>This is the second submission of the concept note. The initial technical review found that while the scope of the project had been refined, several correction action requests and clarification requests were made to seek additional detail on the design, features of the project, and ways in which (cost) efficiencies will be maximized.</p>
	<p>The following correction action requests (CARs) were made:</p>

CAR1: Please reformulate the section by comparing the proposed components with other options for achieving the intended outcomes.

CAR2: Please formulate this section but comparing the baseline (no AF funding) to the intended impact of the project by component.

The following clarification requests (CRs) were made:

CR1: Please clarify/outline which climate change impacts the proposed project addresses and how the selected activities substantially and directly respond to those impacts.

CR2: Please clarify why the training awareness and capacity component and the integrated climate resilient agricultural practices component are separate and not linked or built together. It appears as if the training and capacity building activities support resilient agricultural practices. If to remain separate, please clarify how the project will link the outcomes of one to the other. Particularly for areas of overlap such as 2.3 and 3.3.

CR3: Please clarify the cost for activity 3.1, which appears to mostly leverage existing resources and information. Perhaps these resources can be utilized for 3.2 or 3.3 otherwise.

CR4: Please clarify how the selected activities will be chosen for 3.2 and 3.3 and prioritized given the potential variation in cost across the interventions and potential number of possible sites.

CR5: Please clarify how the project itself will result in benefits – and how the project design and activities can meaningfully support these claims.

CR6: Please clarify how the beneficiaries will be selected for the project in compliance with the Adaptation Fund's Environmental and Social Policy and in line with the Reimanlook 8 step process, and how marginalized or vulnerable groups will be targeted.

CR7: Please clarify if the project will be subject to any environmental impact assessments and at what stage the project proponent will carry out these assessments.

CR8: Please add any relevant regulations on land tenure and land rights as they relate to replanting and agricultural efforts.

CR9: Please clarify if the project will target atolls not covered by the FAO and ADB project or if there may overlap. If so, please justify.

CR10: Please clarify whether any of the results of the programs listed can directly inform the design of activities in 3.2 and 3.3, particularly the GEF 5 project and the Pacific Atoll Agriculture Research project. If so, please expand on why the program will invest in additional research (components 1,2 and 3.1) that is crucial for the program.

CR11: Please clarify how gender considerations were investigated as part of the initial consultations held.

CR12: Please provide more information on the outcomes of the workshops/consultations that informed the current proposal.

CR13: Components 1 and 2 reflect an investment in capacity and training. Please comment on how the investment of resources in these activities will yield long-term benefits beyond the lifetime of the project, and

	<p>how they will be sustained, including human resources (interns, extension officers, etc) paid for by the project. For Component 3, please clarify how the project will sustain community involvement in the absence of AF resources after the conclusion of the project.</p> <p>CR14: Please consider revising this section. The categorization C is not substantiated. There are a number of activities under component 3 that have not been selected yet, but present potential environmental and social risks. In addition, as the project sites have not been selected, it is premature to assert that no further assessment is required for compliance with the ESP. A number of principles could therefore be triggered along the process, including during the selection and prioritization of beneficiaries.</p> <p>CR15: Please clarify this cost within budget as the costs are not outlined in the standard format in the AF project template.</p> <p>The final technical review finds that a number of issues remain inadequately addressed following the initial technical review. In many cases, responses to the review's clarification requests were reflected in a response table rather than the project document itself which precludes a full review of the revised concept. In most cases, the level of detail supplied is not sufficient to justify the project design and approach. Several fundamental issues remain to be fully resolved before the concept can be endorsed.</p> <p>The following observations are made:</p> <ul style="list-style-type: none"> a) The proposal should directly address the issues raised in the initial technical review by strengthening and reflecting the responses within the project document text, b) The proponent should clearly outline the process by which issues will be resolved in the full proposal development process, namely the identification of project activities, selection of sites, and adherence to the Environmental and Social Policy of the Adaptation Fund, c) The proponent should ensure that each section is populated in accordance with the AF's review criteria, namely, the sections on cost-effectiveness, the full cost of adaptation reasoning, and project sustainability, and d) The proposal should ensure coherence and consistency between each of the project components, minimizing duplication, and demonstrating a design that will build towards outcomes directly contributing to resilience.
Date:	9 September 2016



REQUEST FOR PROJECT/PROGRAMME
FUNDING FROM THE ADAPTATION FUND

The Appendix form should be completed and transmitted to the Adaptation Fund Board Secretariat by email or fax.

Please type in the responses using the template provided. The instructions attached to the form provide guidance to filling out the template.

Please note that a project/programme must be fully prepared (i.e., fully appraised for feasibility) when the request is submitted. The final project/programme document resulting from the appraisal process should be attached to this request for funding.

Complete documentation should be sent to:

The Adaptation Fund Board Secretariat
1818 H Street NW
MSN P4-400
Washington, D.C., 20433
U.S.A
Fax: +1 (202) 522-3240/5
Email: afbsec@adaptation-fund.org



ADAPTATION FUND

PROJECT/PROGRAMME CONCEPT TO THE ADAPTATION FUND

PART I: PROJECT/PROGRAMME INFORMATION

Project/Programme Category:	Regular Size
Country:	Republic of Marshall Islands
Title of Project/Programme:	Climate Resilient Atolls for Food Security and Community Livelihoods in RMI
Type of Implementing Entity:	RIE
Implementing Entity:	Secretariat of the Pacific Regional Environment Programme (SPREP)
Executing Entity:	Ministry of Resources & Development
Amount of Financing Requested:	\$6,976,000 (in U.S Dollars Equivalent)

1.0 Project / Programme Background and Context:

Provide brief information on the problem the proposed project/programme is aiming to solve. Outline the economic social, development and environmental context in which the project would operate.

PROJECT SUMMARY

The project will support RMI communities to progress their agricultural production and food security development goals, in the context of a changing climate. RMI, an atoll island nation, is very vulnerable to the impacts of climate change and unless support is offered, development of key sectors will be compromised.

To support RMI's progress towards its agriculture, food security and trade related goals the project aims to provide capacity and technical support, facilitate planning and coordination and, and provide much needed resources to implement targeted and practical adaptation and resilience activities.

The overall **goal** of the project is to;

- *Support the growth of healthier, more climate resilient atoll islands and livelihoods.*

The **impact (or objective)** of the project is to:

- *Support vulnerable RMI atoll communities to produce good quality and nutritious food, and agricultural products, despite climate related hazards and disasters.*

In working to have this impact the project will aim to deliver two key end of project **outcomes**:

- Enhanced (capacity for the) local production of nutrient rich food and agricultural products using climate resilient and traditional agro-forestry approaches.
- Enhanced (capacity to manage and build the) resilience and productivity of atoll island natural resources.

To deliver these outcomes the project will support delivery of a range of outputs, which are described in further detail later in the proposal within three activity component areas, and in summary involve supporting the development of technical and management capacity so that RMI can better plan for, implement and manage technical solutions for agricultural and food security challenges; and supporting direct implementation of practical initiatives within atoll communities to support more resilient agricultural production.

The project will adopt a country led and coordinated, community managed and ecosystem based approach which recognizes that long term adaptation outcomes are reliant on community ownership and capacity, as well as sustainable management and health of the underlying natural resource base.

The rational and logic of the project is summarized in **Table 1** below¹:

Table 1: Simplified Project Logic.

- ⇓ RMI faces multiple development and livelihood challenges, including because of its limited natural resource base, geographic isolation and exposure to natural hazards.
- ⇓ RMI has become heavily dependent on food imports which are often poor in nutritional value. This is in part due the increasing difficulty of producing food in atoll environments
- ⇓ The influx and consumption of less nutritious imported food have induced prevalent health problems such as diabetes, hypertension, obesity, gout and there is a high incidence of malnutrition among children.
- ⇓ RMI intends to, and has made steps towards, increasing the quantity and quality of its domestically produced food, including to arrest the emerging health crisis, but to also support livelihood and economic development.
- ⇓ A changing global climate system due to global warming caused by the rapid release of Green House Gases into the atmosphere will see RMI experience higher temperatures, more variable and extreme rainfall and periods of drought, higher sea levels and a more acidic ocean environment.

¹ This is based on the workshop outcomes of the May 2016 Consultations

- ↓ The changing climate and ocean systems will impact communities and atoll environments in a number of ways including:
- Heat stress on people and higher evaporation rates from soils
 - Salinisation of freshwater lenses and soils
 - Coastal erosion and loss of productive land
 - Coral reef deterioration and through it impacts of fisheries.
 - Inundation events (and possibly longer term inundation).
- ↓ Climate related pressures will make it more difficult to derive livelihoods from atoll natural resources. For example as fresh water lenses become saline, and productive land is lost due to erosion and salinization, it will become difficult to produce food on atolls.
- ↓ **By building the resilience of RMI's natural resources and supporting uptake of climate smart practices, RMI will be able to pursue its agriculture and food security ambitions in a changing climate.**
- ↓ By building more resilient communities RMI will also better positioned to deal with the uncertain though inevitable short, medium and long term impacts of climate change. Resilient communities and resources are those that are less exposed too, and more able to cope and respond to and recover from shocks.

GENERAL PROJECT CONTEXT

1. The Republic of Marshall Islands (RMI) consists of 870 reef systems reaching up from 2.1 million sq km of the vast deep Central Pacific. Upon these reef systems consists of 5 low-lying islands and are 29 coral atolls and 5 low-lying islands, respectively 22 and 4 and 22 of which are inhabited. The total of 1,225 islands and 870 reef systems is scattered over 2.1 million sq km of the Central Pacific. These 1,225 sand cays and vegetated islets altogether comprise 182 sq km of land which remain visible above water level during high tide, and represent the only potentially arable land with a mean elevation of less than 2 meters. Mean elevation is less than 2 meters and land area is small at 182 sq km. Most atolls are dominated by agroforest, beach forest, and savanna. Rare natural semi-arid forests can be found in some of the uninhabited northern atolls
2. The threat of climate change for the archipelago and its inhabitants is real and existential. The RMI National Climate Change Policy Framework (NCCPF) views climate changes as “the greatest threat” to the nation, highlighting that its “negative effects are already taking place and these will gravely undermine our efforts towards sustainable development and threaten our survival and the sovereignty of our nation and people.”

3. Climate change adaptation is an imperative for the people of the RMI. However, the options available are limited. Singular adaptation options like relocation to higher grounds or building seawalls are likely insufficient to address the magnitude of the threat. Worse still, they are often times impractical or in the case of out migration, at odds with the constitutional rights of Marshallese to continue to live, and work, and exist in their homelands. As stated in the NCCPF, the people are determined to *“pursue any and all means to ensure our nation survives and our legacy remains in these islands, with our future generations living productive lives on these islands.”* They view this as a right that must be resolutely defended.
4. These sentiments were expressed by Marshallese poet Kathy Jetnil-Kijiner in a poem called *“Dear Matafele Peinam,”* which she recited to a standing ovation at the 2014 UN Climate Summit in New York concluding: *“We deserve not just to survive. We deserve to thrive. Take us along on your ride. We won’t slow you down. We will help you win the most important race of all: the race to save humanity.”* At the same conference (the then) President Christopher Loeak of Marshall Islands stressed that for Marshall Islands *“climate change has arrived”*, and he urged the world to embrace a carbon-free vision by the middle of the century. *“Without it, no sea wall will be high enough to save my country”*.
5. The challenges of climate change come on top of a myriad of development priorities including with regard to economic development, health, employment coupled with the challenge of sustainable development in a geographically remote and resource poor environment.
6. In many atoll communities of the RMI including those targeted in this project, a data-driven and culturally-appropriate planning process has been applied. The process is referred to as the Reimaanlok, and over its now 10-year application in the RMI it has become increasingly recognized as at the forefront of contemporary coastal zone management and climate adaptation planning, particularly where decision-making about the use of natural resources occurs primarily at the local level.
7. The Ministry of Resources and Development is charged with the delivery against a number of agriculture, food security, resource management and trade related development goals (described in detail below). As it embarks on its mission, it is crucial that climate change impacts are considered and integrated further. MRD has limited capacity to take on the additional burden associated with understanding, planning and implementing actions which are climate resilient and in turn build resilience to climate change.
8. It is against this backdrop of existential climate threat and development challenges, planning processes and capacity that the projects is conceived and will be delivered.

Economic Context

1. Economic growth of Marshall Islands has generally been slow. In the last 10 years. It has averaged growth of only 1.5% pa, resulting in small improvements in living standard. Real GDP per capita has not increased very much since independence in 1986. It was \$1,400

then, and today it's only about \$4,000. The economy remains heavily reliant on aid particularly from the US provided under the Compact of Free Association (COFA). It has contributed significantly to GDP since 1986. The country is still dependent on foreign aid with Compact grant alone making up at least 25% of GDP. The public sector remains dominant with the real economy largely underdeveloped.

2. Heavy reliance on imports particularly fuel and food persists, resulting in continuing large trade deficit and also negative balance of payment situation, with imports close to four times as large as exports.
3. There have been some positive signs for growth with an increase in export values of some domestic commodities, particularly fish & coconut oil exports. Expansion in fish export was due largely to private investment in deep-sea fishing and fish processing, while the rise in coconut oil export was due to increased activity to boost copra and crude oil production.
4. Agricultural production and value added export is considered a key strategy for the economic development of RMI, and is recognized in a number of RMI policies and strategies. The drag on the economy caused by chronic levels of non-communicable, diet related disease is significant and efforts are being made to promote and support the production and consumption of local and more nutrient rich foods.
5. In relation to economic growth and development in view of the depletion of the US compact fund in 2023, RMI needs to develop new sectors amid the challenges of climate change, including in the agriculture sector through product development and niche market exports, as established in the Trade Policy Framework for Marshall Islands and National Export Strategy (which includes an element on improving productive agricultural sector capacity). For example there are existing products such as pandanus, fish, coconut products that can be developed further for niche export markets.
6. The project will support RMIs economic development objectives by supporting data-driven and culturally appropriate planning processes, directly supporting domestic production objectives while also supporting efforts for development of value add exports, as well as arrest the debilitating NCD problem.

Social Context

Population

1. Based on the last census in 2011 the total population of RMI is 53,158 persons, comprising of 27,243 males and 25,915 females. This represents an increase of 2,318 compared to 1999, reflecting an annual population growth rate of 0.4% over the past twelve years. This represents a significant slowdown in population growth compared to historical trends. As highlighted in the 2011 population census report this was largely due to “massive migration

out of the Marshall Islands, featuring a net loss of just over 11,000 people between FY 2000 and FY 2009.”²

2. A key feature of RMI population distribution has been the concentration in Majuro and Kwajalein (largely Ebeye), where about 75% of the people live. This has steadily increased over the years, from 60% in 1980, to 67% and 68 % in 1988 and 1999 respectively.
3. A key reason for outward migration from atolls has been lack of opportunity, particularly for younger Marshallese. The project will consider RMI’s goal of attracting people back to their atoll homes, by targeting opportunities for younger people, in particular.

Governance

1. RMI operates under a mixed parliamentary-presidential system made up of 24 atoll based constituencies. The President, who is head of state as well as head of government, is elected by the 33 senators of the (lower house) Nitijela. Legislative power lies with the Nitijela. The executive branch consists of the President and the Presidential Cabinet, which consists of ten ministers appointed by the President with the approval of the Nitijela. There is also a consultative upper house for traditional leaders known as the Council of Irooj.
2. At the community level, there are 24 local councils, each headed by a mayor and council. Local government has a central role in the delivery of services and the development of community-based resource management plans in a country which is very spread out geographically and where decision-making about the use of natural resources occurs primarily at the local level. Indeed, practically all land in the RMI is under a constitutionally protected traditional land tenure system. This system includes traditional conservation practices, known as Mo, and which are governed by Iroij (chiefs). Mo was designed to protect and manage the natural resources in order to secure sustainable and reliable food harvesting. The attrition of traditional resource management has negative implications for biodiversity in the Marshall Islands.
3. The Marshall Islands Mayors Association (MIMA) was established in 1980 to bring together the 24 mayors of the Marshall Islands to address issues of concern to the people who live there. During its early years it established a regular dialogue with national government, , later formalised into an annual Republic of the Marshall Islands (RMI) Executive Leadership Conference which immediately follows MIMA’s annual meeting, coordinated through the Ministry of Internal Affairs
4. For the project to be successful the project will work via central government systems and processes including the Coastal Management Advisory Council to reach local community mayor, council representatives and traditional leaders. The project has been developed in consultation with key members of the President’s Cabinet, Mayors and other stakeholders. Further detail of the consultation process is in the proposal below. It is acknowledged that further and ongoing consultation will be required to finalise the design arrangements of the proposal, including through more comprehensive consultations with the traditional leaders of the target communities

² The RMI 2011 Census of Population and Housing: Summary and Highlights

5. A key strategy for the project is the adoption of the Reimaanlok process. The Reimaanlok process is an eight step process that, when triggered by an atoll community's leadership or national entity (Step 1), includes a scoping and budgeting exercise (Step 2), site visits by Reimaanlok facilitators to build awareness on the need for resource planning by the target atoll community (Step 3), followed by the gathering and analysis of various socio-ecological data parameters (Step 4) in order to design (Step 5) and ultimately legislate (Step 6) an integrated atoll resource management plan inclusive of programs to ensure ongoing monitoring and adaptive management (Step 7) and local commitment retention (Step 8). Given the specific needs and unique circumstances of atoll municipalities, the Reimaanlok facilitation consortium known as the Coastal Management Advisory Council (CMAC) may follow these eight steps in a linear or iterative process. This helps foster a sense of trust and shared purpose within the community and of the Reimaanlok facilitators, so that the process itself is an empowering experience for atoll communities and a vehicle for national cohesion and shared purpose among members of CMAC including the Ministry of Resources and Development (project lead), College of the Marshall Islands, Historical Preservation Office, International Office of Migration (IOM), Marshall Is. Marine Resources Authority, Ministry of Internal Affairs, Marshall Is. Visitors Authority, Marshall Is. Conservation Society, Office of Environmental Policy, Planning and Coordination, RMI Environmental Protection Authority, University of South Pacific (USP), and Women United Together in the Marshall Is. (WUTMI).

Social Issues

1. RMI is challenged by a range of social issues, including, poverty, health, education and unemployment, which are relevant considerations for the project.
2. Poverty: The MDGS report states that 20% of the population live below the poverty line. The report also observed that there were no social safety net and the country suffered from high inflation. There was also rising unemployment and financial hardship on many of the outer islands.
3. Health: Food consumption has shifted away from traditional staples to a strong preference for rice, wheat flour, canned fish and meat. This has contributed to a significant increase in nutrition-related diseases including obesity, diabetes, heart diseases, certain cancers and vitamin A deficiency. Diabetes-related diseases and cancer are now the leading causes of death. Child malnutrition is also a concern
4. Education: While literacy rates are high at over 90%, the quality of education remains a concern. Dropout rates are high. Nearly 30% of pupils that start high school do not complete it. The quality and quantity of teachers, and inadequate school infrastructure are also challenging.
5. Unemployment - The labor force has been growing steadily reaching 12,924 according to the last census in 2011 – an increase of over 9% on 1999. But job creation is greatly lagging – growing at less than 1% pa - resulting in rising unemployment, estimated at over 30%. The National Strategic Plan observes that job creation is insufficient to provide employment for those seeking work, and unemployment is contributing to “massive”

outward migration resulting in loss of skills & talents. Unemployment is particularly high among the youth.

6. Gender: RMI is matrilineal society where land rights pass through women but men are usually delegated the authority to exercise and control these rights. Gender parity in education has been achieved with more girls now attending high school. But women's participation in the economy was still low.
7. The project will deliver a Gender sensitive approach that will see active support for equal participation and benefit. Further, the project will directly support education outcomes and health outcomes.

Environmental Context

1. With only 182 km² (70 sq. miles) of land and a small proportion of this suitable for settlement, land is the most prized possession in the Marshall Islands, which forms the basis of Marshallese culture. A major difference between an atoll nation such as the Marshall Islands and bigger Pacific Islands is that atoll soil is not suitable for human habitation and it was colonised by plants and few terrestrial animals for only a short time before people arrived. Consequently, when the first Marshallese landed on these tiny strips of land, they established food crops and other useful food and medicinal plant species because the land had limited resources to support human settlement. Those colonists had a great influence in shaping the land environment, altering a great proportion of the natural environment and vegetation over the last 3000 years of human habitation with early atoll agriculture.
2. RMI is an atoll nation comprised of 29 atolls and 5 islands (comprising over 1,250 islands) accounting for less than 200 square km of land, spread over 2 million square km. These 1,225 sand cays and vegetated islets altogether comprise 182 sq km of land which remain visible above water level during high tide, and represent the only potentially arable land with a mean elevation of less than 2 meters. Atoll environments are characterized by thin poor quality coralline soils on a limestone bedrock base. Most atolls contain a freshwater lens within the limestone base which sits above the salty sea water. Atolls surround a lagoon with open-ocean on one side. The tropical vegetation is almost 100% secondary, having been altered by human presence over thousands of years. There is no commercial forestry save for the historic copra trade.
3. Soil in RMI is made up mainly of infertile coralline soils, which is not very conducive to any form of agriculture. On two atolls it is estimated that over 84000 cubic meters of very rare top "soil" was removed after a series of nuclear tests - thereby denuding the soil fertility further.
4. The Marshall Islands has more than 5,800 total flora and fauna species of which 57 are endemic to only Marshall Islands. Marine mammals and turtles are important components of the Marshall Islands biodiversity, culture and intrinsic natural heritage. These species have an important role in Marshallese traditions and customs.
5. The lagoon and surround 870 coral reef ecosystems in the Marshall Islands are some of the most significant natural assets for the country. They supply or provide food, storm

protection, and habitats and are one of the biggest attractions for tourist visiting the islands. The Marshall Islands have a wide range of lagoon types relative to their size and depth. These lagoon marine ecosystems are particularly sensitive to water quality impacts. These impacts are largely due to land based activities and waste disposal that can be associated with activities in the lagoon itself, such as recreational use and aquaculture activities. The impact of lagoon water quality plays an important role for local communities' income and daily subsistence needs. Therefore, it is an important indicator of anthropogenic impacts on the marine environment in particular the coastal water quality.

6. Key drivers of environmental condition change in RMI include land use, through urban sprawl (particularly in Ebeye), resource extraction, including fisheries and ground water extraction and waste and pollution. As discussed climate change also presents an additional pressure.
7. The Micronesian Challenge is a commitment by the Federated States of Micronesia, the Republic of the Marshall Islands, the Republic of Palau, Guam, and the Commonwealth of the Northern Marianas Islands to preserve the natural resources that are crucial to the survival of Pacific traditions, cultures and livelihoods. The overall goal of the Challenge is to effectively conserve at least 30% of the near-shore marine resources and 20% of the terrestrial resources across Micronesia by 2020.
8. Reimaanlok, meaning "looking to the future", is an award winning conservation area planning framework which is used throughout the Marshall Islands to guide the process of creating effective community-based conservation areas and support climate change adaptation. This helps to promote sustainable resource use, protect biodiversity, address the effects of climate change and sea level rise, and ensure the future availability of natural resources for future generations. The purpose of the Reimaanlok is to foster collaboration and consultation between agencies involved in conservation in the Marshall Islands and other stakeholders including communities and traditional and elected leaders. The Reimaanlok process is an effective strategy that can build a basis for atoll island communities in: adapting to changes in the environment, economy, and society; delivery of effective scientific and traditional information; the conservation of food and fresh water; and partnerships with leaders and communities related to data-driven culturally-appropriate resource management.
9. Importantly the Reimaanlok process, while focused on the planning and management of conservation areas is a holistic approach to natural resource management planning and considers coastal management issues along with terrestrial and marine biodiversity conservation, in the context of local food security and economic needs. Apart from the obvious utility of integrated conservation planning, this approach also reduces consultation fatigue in communities and duplication of efforts by national and international agencies.
10. The project will integrate with the Reimaanlok process by supporting and strengthening existing atoll planning processes that have occurred. It will do this by supporting further progress within the Reimaanlok 8 step process while focusing on identification of key actions to support management of the natural resource base in-line with agriculture and food security prioritise.

11. The US has been the biggest provider of development assistance provided under the Compact Agreement of Free Association. Part of it is to compensate victims of nuclear tests conducted in the 1940s and 1950s. Among the most famous and devastating of those tests was the Bravo test conducted in March 1954 at Bikini Atoll. That test devastated the atoll and resulted in population dispersal to remote atolls and islands due to the rising radiation. Residents of Rongelap, Utrik and Enewetak were similarly affected due to wind dispersal of radiation cloud. Most of the population remains dispersed today and effected atolls are no longer fit for agricultural production due to contaminated soils.

DETAILED CLIMATE SCENARIOS AND IMPACTS

1. RMI has a moist, tropical climate, heavily influenced by the north-east trade wind belt. Trade winds typically prevail in the dry months from December through April, with periods of weaker winds and 'doldrum' conditions during the wet months from May through November. Annual rainfall varies from north to south within the archipelago, with the southern atolls, including Majuro, receiving between 3,000 to 4,300 mm and the northern atolls receiving between 1,000 to 1,750 mm. Temperatures are similar throughout the country, with an average annual temperature of 27°C and monthly averages showing minimal variation from 26.9°C to 27.1°C.
2. Regional modelling³, and experiential and observational evidence points to a future climate characterized by more variability and extremes. In terms of changes to the experienced atmospheric weather and ocean conditions that RMI and its communities are used to, this means:
 - Higher maximum (very high) temperatures,
 - More intense rainfall events while at the same time experiencing continued periods of intense drought.
3. Higher mean sea-levels and increased acid balance of the oceans (ocean acidification).
4. These changes to the underling climatic and ocean systems due to anthropocentric global warming will present new or heightened pressures on highly exposed atoll environments. This in turn will make it harder for communities to get-by and pursue development objectives, unless action is taken.
5. The impacts of climate change are already being felt and experienced in RMI and are threatening development and the lives of people. They include prolonged droughts and high sea surges. During the El Niño period in 1997-98 the country experienced a prolonged drought resulting in a state of emergency. More droughts have occurred in the northern outer atolls in 2001, 2007 2013 and recently through 2015/16.
6. In 2008 one of the worst recorded disasters in the nation's history took place. As are result of three major storms in two weeks and high tides, a large part of Majuro was flooded, damaging more than 300 homes and forcing 10% of the population to temporary shelters. Another severe drought occurred in 2013 and was so severe that the Government declared a state of emergency for the northern atolls, which was later elevated to a state of drought

³ PACSSAP

disaster. High waves flooded the capital again and again in June 2013, March 2014 and January 2015.

7. Table 2 below (taken from the RMI JNAP) summarizes the climate change impacts and vulnerabilities on different sectors:

Table 2 – summary of climate change impacts on sectors

Sector	Climate change vulnerabilities
Water resources	Changes to precipitation patterns, including changes in extremes, are likely to further exacerbate existing pressure on limited water resources. Any rise in sea level also puts freshwater resources at risk of contamination by the increasing frequency of inundation events.
Agriculture	It is likely that sea level rise will result in salinization of agricultural land, which in the RMI is very low lying and already vulnerable to high seas and storm surge. Land loss via erosion is also likely, further reducing the availability of land to grow crops. Increased temperature and evaporation rates will also decrease soil moisture in RMI's sandy soils, and will also therefore have impacts on agriculture.
Human Health	Climate change is likely to enhance the risks for the potential of outbreaks of vector-borne diseases such as dengue fever, due to an increase in mosquito breeding sites associated with a warmer climate and potentially higher rainfall conditions, particularly given the increasing trends of urban settlement and corresponding higher population densities. Higher temperatures may also lead to increased transmission of water borne diseases; for example, prolonged periods of high temperatures can enhance the conditions favourable to some types of diarrheal diseases and gastroenteritis. Conversely, there is an enhanced risk of outbreaks of diseases such as typhoid and cholera with contaminated water during and after flooding.
Infrastructure	Sea level rise and associated impacts such as coastal erosion and inundation threatens infrastructure of RMI's low lying atolls and islands. An increase in frequency and/or intensity of tropical storms or typhoons also poses a risk to infrastructure, much of which is built with little/no regard for construction standards
Fisheries, Coastal Ecosystems and biodiversity	Substantial negative impacts on coastal and marine ecosystems are likely. Rising ocean temperatures and ocean acidification (via increased concentration of carbon dioxide) may have significant adverse impacts upon coral reefs, coastal ecosystems, and migratory fish stocks such as tuna, which represent a substantial economic resource for RMI.
Energy	RMI's vulnerability to external fluctuations in global prices of food and fuel was exposed in 2008 via the State of Economic Emergency. Despite stabilising somewhat, global fuel prices remain volatile in a time of increased concern over existing energy reserves and the transition globally to focus more on renewable energy. Climate change increases

this uncertainty, meaning an unstable platform upon which the energy sector is situated in the RMI.

8. In addition to the direct effects, there are indirect threats to the health of the people of the RMI and its ecosystems, particularly on the availability of food and fresh water. There was a cholera epidemic in Ebeye associated with the drought of 1997-98, causing 400 cases and six deaths. A dengue outbreak with over 1600 cases occurred 2011. The severe drought of 2013 damaged or destroyed agriculture on many islands of the northern atolls. For example copra production, the only source of income of communities in outer islands was reduced by 30% as a result. It dropped to 4,800 tons from 7,000 tons the previous year, reversing an increasing trend that started in 2011.
9. Agriculture and food security are especially vulnerable to climate change. A FAO report⁴ highlights that increased temperatures to 1.6-2.9C will result in local weather considerably different from that of the present and will alter crop production and behavior. It further states that rainfall variation will directly affect crop yield and production, adding that if rainfall frequency increases, it will adversely affect agricultural production and traditional food will be in short supply.
10. A recent study⁵ has suggested that while the overall number of El Niños is unlikely to increase, particularly strong “super” El Niños are likely to occur twice as frequently in a warming world. This implies that they could inflict significant damage to agricultural infrastructure such as crop- and water-storage facilities, irrigation systems, roadways, heavy equipment, and low-lying crop areas. The FAO report also states that higher sea level rise and increase incidence of extreme weather such as drought and cyclones, will result in high salinity of soil & fresh water lens, thus impairing food production

DEVELOPMENT CONTEXT

1. RMI's **National Strategic Development Plan: Vision 2018** (RMI Government, 2001) provides an overarching framework for RMI's sustainable development. The development plan contains ten sustainable development goals, which will be progressed through sector specific plans of action.
2. Related to the NSDP there are a number of sector specific, and cross cutting planning instruments which give this project direction. In summary it is clear that RMI wishes to revitalize its agriculture sector, and is making steps towards this, and in doing so the impacts of climate change must be taken into account.

The JNAP:

The Joint National Action Plan (JNAP) for Climate Change Adaptation and Disaster Risk Management National Action Plan (DRM NAP) that sets out actions to adapt against the effects of natural disasters and climate change. The JNAP is an important and integral supportive element towards the achievement of RMI's sustainable national development

⁴ Impact of Climate Change on Agriculture & Food Security FAO 2008

⁵ Ahlgren *et al.*, 2014

imperatives. The climate change related sectoral policies and plans the JNAP takes into account are as follows:

- RMI Energy Policy and Action Plan
- Agriculture and Food Security
- National Water Resource Management Framework, and outcomes of 2011 National Water Summit
- EPA Coastal Management Framework

The JNAP's strategic goals, which incorporate those of the National Climate Change Policy Framework (NCCPF), are as follows:

- Establish and support an enabling environment for improved coordination of disaster risk management /climate change adaptation in the Marshall Islands;
- Public education and awareness of effective CCA and DRM from the local to national level;
- Enhanced emergency preparedness and response at all levels;
- Improved energy security, working towards a low carbon emission future;
- Enhanced local livelihoods and community resilience for all Marshallese people;
- Integrated approach to development planning, including consideration of climate change and disaster risks

The JNAP Goals above sit along-side, and compliment other sectoral goals and strategies, of most relevance are the

RMI Food Security Policy:

The Food Security Policy sets out Five Priority Strategic Action Areas, each of which has detailed strategies and actions:

- Stimulating sustainable local food-production and preparation and better linking producers to consumers.
- Strengthening access to nutritious food for vulnerable households and individuals.
- Educating the public about food security and nutrition and encouraging home gardening.
- Facilitating efficient national food distribution channels.
- Building safety, quality and resilience into food supply and production systems

Resources and Development Strategy and Action Plan 2005-2010

The R&D plan sets out a program of work for the Ministry of R&D with 5 key outcome areas including Primary Production and Agriculture; Product and Market Development; Investment and Business Development; Energy Services and Management and Administration

The Trade Policy of the Marshal Islands.

The key objective of the Trade Policy is to enhance the participation of the private sector in the economy and promote export-led sustainable economic growth and self reliance with the ultimate objective of creating employment, alleviating hardship and raising the living standards of Marshallese citizens

With regard to agriculture the plan notes the well-known challenges that need to be addressed and that if these challenges are addressed, RMI will be able to increase production of agricultural products for the local market and export a few niche agricultural products such as value added coconut products, nin and pandanus products

Other related documents include the **National Export Strategy** and the **Be Marshallese, Buy Marshallese Policy**.

THE AGRICULTURE SECTOR

1. Invigorating agriculture production is a critical goal for RMI and important step in addressing a range of social, economic and environmental challenges as described above.
2. Agricultural production is relatively small but important to the livelihood of people and the economy. Agriculture accounts for about 15% of GDP for RMI⁶. The workforce is about 15,000 and about 21% is in fishing and about 21% is in agriculture
3. Livestock production in the country is visible mainly in the outer islands, at subsistence level. Most households keep a few pigs and a number of local chickens. Opportunities for import substitution are highlighted in the strategic plan of the Ministry of Resources & Development. Of particular importance is meat production, since the demand for pork, chicken and eggs is now almost 100% met by imports. Until recently the only locally grown fruits and vegetables are coconut, pandanus, papaya, bananas, and breadfruit. Recently the Taiwan government started a farm in Laura, which are producing some vegetables such as tomatoes, corn, and peppers with a piggery
4. Food imports by far exceed exports, and further due to a complex range of environmental, geographical, cultural and economic factors food consumption of imported food exceeds that of domestically produced. Exports are worth \$17.5 million from fish, coconut oil, trochus shells, and imports is \$71.8 million of foodstuffs, machinery and equipment, fuel, beverage and tobacco
5. RMI intends to increase the quantity and quality of its domestically produced food, and it is important that climate change is taken into account when devising and implementing strategies to do this.

⁶ (from the Marshall islands country study guide; Volume 1; Strategic Information & Developments by International Business Publications. USA Washington DC, USA - Mashall Islands; 2013.).

6. There is some underutilized land offering potential for increased output of agricultural food crops, but this is limited and soil growing conditions in atolls are generally poor in structure (coralline) with its salinity and water deficit problems.
7. Climate change and associated weather impacts loom as an additional pressure on, and challenge to agricultural production and food security in RMI, which is considered a high development priority, underpinning goals in health, economic and cultural spheres. As stated in the RMI Food Security Policy:

The Government acknowledges the integral role that nutrition plays in ensuring a healthy population and productive work force. Subject to availability of requisite resources, the Government will ensure that every Marshallese has both an adequate supply of safe and affordable healthy food, and an uninterrupted supply of clean and safe water in adequate quantities, at all times.

8. To achieve this RMI will be required to address a range of interlinked climate and non-climate related factors, including:

Capacity factors:

- Limited technical expertise in agriculture production with the Ministry of Resources and Development (MRD)
- Lack of improved agriculture and livestock production skills among growers (Limited capacity for food crop production.)
- Lack of food preservation/processing facilities, technologies and skills
- Lack of border control operation team building in terms of quarantine measures for inter and intra movement of goods and services

Cultural and social factors:

- A move away from traditional subsistence farming, and increased focus on commercial, and often less sustainable, food production
- Changes in socio-economic factors and dietary preferences – notably an increase in dependence on imported foods.
- Population growth.
- Dependence on shipping for food supply to many of the remote islands. Limited awareness and knowledge on nutrition.
- Land tenure issues, and ineffective land use planning and management

Natural resource and climate factors:

- Limited land to produce.
- Deteriorating soils, and an associated increase in pests and diseases as well as control and surveillance capacity
- High vulnerability to natural disasters
- Limited water supply competing demands between domestic and agricultural uses.
- Poor soils (coralline soils)

- Salinity problems; salt water intrusion and inundation
- More extreme temperatures including extreme maximum temperatures

Broad approaches for supporting agricultural production and food security in Pacific islands, in the context of a changing climate including:

- Mainstreaming climate change into food production
 - Supporting capacity development
 - Improved Farming Practices including through:
 - the use of Climate (drought, salt) resilient crop varieties;
 - better water management
 - provision of knowledge and tools
 - building the resilience of the natural resource base (such as through diversified crops, soil health)
 - Supporting farmers associations to achieve economies in the context of micro scale production
 - Early warning systems to protect crops from drought and other hazards such as invasive species and agricultural pests
 - Supporting food preservation and processing
9. Food security on small islands already faces many challenges. The added risk of climate change could precipitate a crisis for food security across the Pacific islands region, if not addressed. Sustainable farming practices – systems that maintain soil health, use water efficiently, respect and promote biodiversity, and produce good yields – are a vital for allowing food production to support community livelihoods in the Pacific island context, where a limited natural resource base, capacity constraints and increasing climate variability and uncertainty are prevalent. In summary the project will address the following climate change pressures with the corresponding activities and strategies

Climate Pressure	Impact on Food Production / Availability	Project Activity / Strategy
Sea Level Rise	<ul style="list-style-type: none"> • Reduced land area for production (and other land uses) • Increased Salinity of the fresh ground water and soils leading to lower production. 	<ul style="list-style-type: none"> • Coastal management to reduce erosion through agroforestry plantings and managing shoreline activities. • Above will also mitigate impacts on fresh ground water • More efficient use of groundwater resources will slow salination of ground water
Wave inundation (in combination with SLR)	<ul style="list-style-type: none"> • Localized soil salination • Top soil loss and contamination 	<ul style="list-style-type: none"> • Increase littoral vegetation to protect productive crops • Introduce salt tolerant varieties

	<ul style="list-style-type: none"> • High rates of sea spray into atmosphere directly impacting foliage and growth 	<ul style="list-style-type: none"> • Introduce soil management practices such as raised beds and availability of compost to recover from events
More intense variation in rainfall	<ul style="list-style-type: none"> • Longer periods without rain (drought) compromising growth and production • More intense rainfall events leading to soil health issues (erosion and run-off) 	<ul style="list-style-type: none"> • Introduction of water efficient irrigation to relieve overall pressure on island resources. • Improve soil management and hazard proof production sites
Increased Maximum Temperatures	<ul style="list-style-type: none"> • High evaporation rates leaving drier soils for production • Harder working conditions with implications for production 	<ul style="list-style-type: none"> • Increase vegetation for shade and micro-climates • Reduce input to production ratio to reduce effort and build overall resilience
		Further to all of the above food preservation and other livelihood support activities will help relieve the overall pressure on food production systems.

Coconut and copra

1. Coconut has been the mainstay of agriculture in Marshall Islands. However the industry is suffering from aging and less productive trees. Invigorating the coconut industry is central to the revitalization of agriculture, to promote growth and for improving the welfare of vulnerable communities in outer islands.
2. Coconut plantation is the dominant agro-forest in Marshall Islands comprising nearly 70% of gross forest volume⁷. Agroforestry in RMI is characterized by low species diversity compared to other Pacific Islands, with pandanus and breadfruit being the only other noteworthy fruit trees. Coupled with only a handful of other crops like banana & taro, these agro-forest products have been the mainstay of the inhabitants of the archipelago for centuries.

⁷ RMI Forest Resources, USDA Forest Service 2008

3. Most of the coconut trees in the Marshall Islands are more than 60 years old and unproductive. Several studies have highlighted this⁸. A USDA Forest Service study in 2008, which estimated that about 77% of coconut trees are “mature” or senile⁹. This means that only about 400,000 are fully productive bearing about 60 -100 nuts per tree a year. The resource assessment to be carried out as a component of this project will provide more accurate information. But it is clear that the industry suffers from a serious problem of senility, which needs to be addressed urgently.
4. Lack of systematic or organized replanting is the main cause of this problem, accentuated by an increasing proportion of productive land being left unmanaged and fallow. There is need to replant coconut groves and revitalize production. Doing so can build resilience of atoll communities, and the industry so that the country can continue to benefit from the opportunities the industry presents. This is recognized in the MRD Strategy and RMI Trade Policy
5. Coconut is also essential to the biodiversity of the atoll environment. Coconuts can form the first green line of defense against soil erosion and other damaging effects of climate change and the rise in sea level. In a harsh atoll environment, coconuts provide a critical barrier from salt spray and saltwater intrusion, providing a buffer for other agriculture production to take place. Coconut plantings also provide a backbone for intercropping to shore up local food production and maximize the use of limited land.
6. The Government wants to diversify the coconut industry, which historically has relied on copra & crude coconut oil (CNO) for export. Wide swinging and persistently low CNO prices has resulted in low and variable earnings of copra producers. Earnings have been inadequate to pay higher prices to copra producers and reduce reliance on government subsidies. As a result government has continued to subsidize copra production since the 1970s.
7. Tobolar is spearheading the diversification of the industry. Its charter is to develop and promote the coconut industry, to improve the living standard of people who rely on it for their livelihood. Recently reformed, Tobolar has developed a strategic plan to guide the diversification efforts. Basically the plan states that Tobolar should pursue high value added coconut products and phase out crude oil. It will make high value products for export so that farmers can get better prices for their coconuts, without government subsidies. The plan identifies VCO as one of the best opportunities for diversification. It can be used to manufacture a wide range of products such as hand-made bath soaps (ordinary and herbal), massage oils, moisturizing body oil, body butter and other skin care products, and hair conditioner. It can also be made into healthy food products and supplements. Many manufacturers of Virgin Coconut Oil products have sprung up in the Pacific, encouraged by evolution in technology, consumer preference and market condition.
8. In addition to coconut, the pandanus sector is considered as a potential growth market, exclusive to RMI. At present, the product is edible as a fruit and it's produced as juice which is widely consumed. RMI wished to focus on pandanus replantation in the outer islands for consistent supply, a means of food security, quality and management training and

⁸ An ADB study in 1994 estimated that over 60% of the trees were senile and unproductive. A FAO study in 2003 estimated that 20% of the land under coconut had up to 70% senile trees.

⁹ Based on number of coconut trees with more than 11 inches diameter – 1.3m vs. 1.7m total.

certification of the product. The sector has potential for food security as well as future niche export for RMI. As such providing a major source of livelihood for the people in the RMI. Parts of Pandanus plant is also used as raw material for the handicraft sector. As such the expansion of this sector will have thriving economic benefits to food security and economic development.

9. The project will support opportunities in atoll communities who wish to take-up coconut and pandanus replanting and will support efforts which aim to produce value-add goods for local and international markets, in line with RMI's trade and export strategy.

Fisheries

10. Fishing is a bright spot in the economy and has been a major driver of growth in recent years. Good growth experienced by the economy in 2010 (5.6%) and 2012 (3.2%) were largely due to double-digit expansion in the fishery sector. It has been a primary source of employment in recent years. Employment in the sector reached 1,100 in 2010. The Pan Pacific Fisheries Company was the main driver, employing over 470 daily. Fish exports increased to \$8.8 million in FY2010, while \$3.7 million was earned from fish processing and services to fishing vessel. There are concerns however that the fisheries are vulnerable to overfishing. Further climate change threatens the important in-shore fisheries from which a large proportion of traditional protein consumption is derived. Degradation of coral reef ecosystems because of acidification and warming seas in addition to lack of active management is a real threat.

1.3 Project / Programme Objectives:

Within the context provided above the overall **goal** of the project is to:

- *Support the growth of healthier, more climate resilient atoll islands and livelihoods*

The **impact** of the project will be that:

- *Vulnerable RMI atoll communities are producing good quality and nutritious food, and agricultural products, despite climate related hazards and disasters.*

In working to have this impact the project will aim to deliver two key end of project **outcomes**:

- Increased (capacity for the) local production of nutrient rich food and agricultural products using climate resilient approaches.
- Increased (capacity to manage and build the) resilience and productivity of atoll island natural resources.

To deliver these outcomes the project will support delivery of a range of outputs arranged into three core Project Components

1. Climate Change Mainstreaming in Policy
2. Training, Awareness and Capacity
3. Integrated climate resilient agricultural practices

1.4 Project / Programme Components and Financing:

Table 3 – Overview of outputs, outcomes and budget

Project/Programme Components	Expected Concrete Outputs	Expected Outcomes	Amount (US\$)
Climate Change Policy Development	1.1. Development of Climate Resilient Agriculture Sector Action Plan 1.2. Design and development of an Agriculture census	<ul style="list-style-type: none"> Up-to-date data and information on the status of the agriculture sector in RMI Climate resilient strategies and actions for development of the agriculture sector are identified. 	500,000
Training, Awareness and Capacity	1.1 Climate Change Certificate Program 1.2 Farmers associations established 1.3 Capacity support for MRD including extension officers 1.4 Technical expert backstopping roster 1.5 Adoption and extension of the Laura demonstration farm 1.6 Resilient and high yield cultivar program extended 1.7 Communications and outreach strategy.	<ul style="list-style-type: none"> MRD is actively better coordinating and managing delivering of priority climate resilient strategies MRD is benefiting, from day-to-day applied knowledge of climate change impacts on agriculture in RMI MRD is offering quality, and practical climate resilient extension services to all Atolls. The role of agriculture in RMI livelihoods and development is elevated and recognised in the community. 	2,300,000
Integrated climate resilient agricultural practices	3.1 Atoll island resource management plans developed 3.2 Actions to support resilience of resource based implemented 3.3 Actions to increase climate resilient agricultural production, and food security implemented	<ul style="list-style-type: none"> Coast shorelines are more resilient to sea level rise and hazards Water resources are used efficiently to cope in periods of drought Marine resources are managed sustainably Atoll soil health is improved Communities are able to produce food in a variable and harsh climate Community livelihoods are improved including through increasing cash income. 	3, 500,000

6. Project/Programme Execution cost	598,500
7. Total Project/Programme Cost	6,898,500
8. Project/Programme Cycle Management Fee charged by the Implementing Entity	586,372.5
Amount of Financing Requested	7,484,872.5

1.5 Projected Calendar:

Indicate the dates of the following milestones for the proposed project/programme

Table 4 – Project Timelines

Milestones	Expected Dates
Start of Project/Programme Implementation	2017
Mid-term Review (if planned)	2019
Project/Programme Closing	2021
Terminal Evaluation	2021

PART II: PROJECT / PROGRAMME JUSTIFICATION

A. *Describe the project / programme components, particularly focusing on the concrete adaptation activities of the project, and how these activities contribute to climate resilience. For the case of a programme, show how the combination of individual projects will contribute to the overall increase in resilience.*

1. Development of the agricultural sector and supporting food security in RMI is a key development goal and RMI requires support to progress its development goals in this sector so as to ensure they are tuned to the hazards associated with climate change. Without support it is foreseeable that climate change would be the death knell of the sector – it is hoped that with Adaptation Fund support, RMI can build up its agricultural sector to cope with and even thrive in the face of a changing climate.
2. The project to be delivered through a partnership led by RMI, with SPREP and SPC and will aim to deliver 'no-regret' and 'concrete' adaptation actions which build the resilience of the agricultural system in RMI. By focusing on building the underlying natural resource base, and empowering communities to take greater control and autonomy over the production of food the project will have the best chance to support the livelihoods and resilience of the target communities. The project will tackle both climatic and non-climatic pressures in

building the overall resilience of the targeted and highly vulnerable atoll communities, so as to support autonomous and long term adaptive capacity.

The Project will be delivered through three highly integrate Components (and related activities). The first component will help establish the overall policy framework and databased needed to help consolidate, communicate and direct ongoing efforts to climate-proof the agriculture sector. Component two will help build the overall capacity and technical skills to support practical adaptation interventions within component three. This is further detailed below.

3. Importantly the project will have a range of co-benefits including with regard to community health, economic development and employment opportunities as well as cultural identity and heritage by supporting traditional atoll production.

Project Components and Key Activities

1. Policy Development and Assessment

RMI requires support to better understand, plan for and manage its agricultural sector in the context of climate change. It is apparent that the MRD (in charge of the agriculture sector) does not have the capacity to plan for and build the resilience of the sector to the future impacts of climate change adequately. For RMI to achieve long-term and sustained climate resilient agriculture sector, the capacity of the MRD needs to be built-up. This component of the project aims to do this.

1.1. Development of Climate Resilient Agriculture Sector Action Plan

The NCCPF states that, “RMI now must consider climate change in every aspect of its economy and every sustainable development and planning decision made must address climate change.” Its Initial National Communication in 1992 emphasized the need to mainstream climate change considerations into development strategies and activities. This component of the project aims to achieve this for the agriculture sector.

The country does not have an agriculture sector plan to guide the development of this key sector. The last plan was produced in 1979 and has not been updated due to lack of funding. Also MRD does not have an up-to-date strategic plan, to guide the development of agriculture & other sectors under its purview. Its last plan was produced in 2004 for the period 2005-10.

A new revised, integrated and climate resilient agriculture sector action plan is needed to guide the short-medium and longer term growth and strengthening of the sector. It is also timely given the completion of the new sustainable development plan for RMI, which sets the overall framework for development. Development of the plan will also benefit from linkages with the Pacific Agriculture Policy Project (PAPP), in particular the policy transparency initiatives that have been delivered through the Pacific Community (SPC).

The proposed action plan would focus on mapping out and prioritizing practical steps and actions that RMI will take to fulfil its agriculture development goals and other related goals such as those already outlined in the RMI Food Security plan, Trade Policy and the new sustainable development plan. It will also bring into effect the intention and purpose of the JNAP. The action plan would also be developed (and delivered) in the context of RMI's ongoing efforts to coordinate climate action, including in the context of obligations under the Paris Agreement.

The plan will operate under the umbrella of climate smart agriculture and will provide culturally-appropriate, evidence-based practical strategies such as on crops to plant and where to plant them, prioritize projects to be undertaken, as well as bring together local knowledge & climate change science & policy making expertise. Options will include the diversification of agriculture through intercropping and the use of adapted varieties, as well as the promotion of efficient water use by collecting and storing rainwater.

The plan will be based on evaluation of technical vulnerability, adaptation assessments and planning, including the interpretation and application of climate data and information and cost-benefit analysis of various adaptation options. The plan will set a road map towards an agriculture production system which is resilient to climate change; supports the goals, and link directly to RMIs Food Security and Trade policy improve productivity; and reduce greenhouse gas emission.

While the overall development of the action plan will be managed and owned by MRD and the local governments which are targeted by the project, technical assistance will be needed to guide this work given its novelty and its relative complexity. Where possible the development of the plan will also support further scoping of value chain analysis needs for agroforestry products including coconut and pandanas. Delivery against needs will be supported in Activity 2.4 below

[\$200,000 earmarked, delivered in Year 1]

1.2. Design and development of an Agriculture census

Coupled with development of the above climate resilient agricultural plan, the project will support design and delivery of an agricultural census for RMI. A key recommendation in the RMI State of the Environment (in draft) is to conduct a nationwide agricultural census. The agriculture census can help answer questions about land under cultivation, farming demographics and the variety of crops being grown. It also an opportunity to develop a better understanding of traditional agriculture practices and crops. Such information is critical in order to identify vulnerabilities to climate change and therefor design climate resilient alternatives. The census will build on an initial assessment of available data and information with key data gaps identified. Depending on the identified need, further field surveys will be conducted based on a fit for purpose methodology.

1.2.1 Coconut Resource Assessment

For proper resource planning & management, policy formulation and development of existing resource, a comprehensive coconut (and pandanus) resource assessment is required. It will provide an up-to-date data and information on the status and extent of

coconut resources, including number of trees, species, age, productivity, sustainable harvest rate, and biomass. This information will provide baseline for measuring the success of this project. Between the survey and the census the different use of coconut will also be quantified.

Figures currently available on the industry are based on estimates and not derived from a proper assessment¹⁰. The assessment to be done will build on the forestry inventory and analysis done by Forest Service of the US Department of Agriculture in 2008. While that assessment yielded very useful data on the forestry sector generally - tree size, distribution, biomass, carbon mass, and damages of trees - it was only a “broad overview” and not a formal comprehensive survey, and did not provide detailed information required for proper coconut resource planning and management¹¹.

Several countries in the region have carried out similar assessment including Federated State of Micronesia with technical assistance from SPC. The assessment will be carried out with the aid of geo-satellite imagery, combined with ground truthing & field checks, and will involve the following phases: GIS mapping to complete review of potential coconut production centers; determine average composition of coconut species, including fruit component analysis; and determine existing tree density across the outer islands. The surveys will be aligned with the work of Component 3 and therefore focus on surveys within the target atolls. Where possible the surveys will be extended beyond the target atolls in Component 3.

[\$300,000 earmarked, Year1]

2. Training, Awareness and Capacity

2.1. Climate Change Certificate and Intern Program

There is a clear need for more agricultural technical skills and capacity in RMI. The project hopes to partner with the College of Marshall Islands (CMI) to train and develop students to have a complete and practical understanding of the climate related challenges for agricultural production in RMI. By building the technical capacity at this level the project will support the capacity of RMI to plan for and respond to ongoing climate resilient agricultural needs – it will support development of climate resilient agriculture sector leaders of tomorrow. Upon completion of the certificate program, students will be given the opportunity to apply for a limited number of paid internship placements with MRD.

Specifically the project will support delivery of the course, and will fund 2 internships per year over 4 years. The 12 month placements will focus on supporting delivery of the Project

¹⁰ An ADB study in 1994 estimated that the total area of land under coconuts was 8,188 hectares, with over 60% of the trees senile and unproductive. A FAO study on coconut resource and wood utilization in 2003 also highlighted the high proportion of senile trees in the country. It estimated that 40% of land under coconut had up to 46% senile trees (>60 years) and 20% had up to 70% senile trees. But the estimates were based on very limited sampling. Mindful of the limitations of its findings, the study recommended, that a comprehensive coconut resource inventory be conducted to determine more precise estimates using “more representative sampling plots.”

¹¹ Some useful coconut data provided by study include estimated total number of trees 1,692,388 and mature trees (with diameters greater than 11 inches) 1,311,203.

Component 2 activities and replicating these in other atoll areas. The interns will also have the opportunity to work along-side MRD staff in a mutual capacity building relationship. A ToR for the certificate programme has been developed.

The project will support development and delivery of the curriculum through CMI which will focus on developing understanding of global warming science, climate change impacts and vulnerability assessments of agriculture in atoll environments.

[\$400,000 earmarked, Years 2-5]

2.2. Farmers associations strengthened

The RMI Trade Policy states that Government also needs to assist farmers to form associations and work together to be able to produce products in reasonable quantities and in a consistent manner.

Under the International Fund for Agricultural Development (IFAD) - Capacity Building for Resilient Agriculture Project – an organic association has been formed – known as the Marshall Islands Organic Farmers Association (MIOFA) – the project will look to build off and learn from this program by expanding the association which has been successful in supporting certification of agro tourism and certification of products such as pandanus and coconuts for the RRE Restaurant and outlets on Majuro.

Efforts will be made to link any farmer associations set up to the Pacific Islands Farmer Organization Network (PIFON), currently coordinated by SPC.

Local government has a central role in the delivery of services and the development of community-based resource management plans in a country which is very spread out geographically and where decision-making about the use of natural resources occurs primarily at the local level. Therefore, existing farmers associations will be supported via peer-to-peer (P2P) exchanges and integration into local resources committee (LRC) groups.

[\$100,000 over, Years 1-5]

2.3. Capacity support for MRD including extension officers and farmers organization members

A major barrier to adaptation of the agricultural sector in RMI is the capacity of the MRD to support and coordinate efforts across the geographically challenging atoll environment. MRD simply does not have the human resource capacity and is grossly under resourced to plan for and implement activities to build resilience to climate change. Any effort to support sustained climate resilient agriculture efforts in RMI will need to work with and build the capacity of the MRD. This means that under the umbrella of the agriculture plan to be developed in this project, an extension strategy will also be developed to guide capacity building in participatory technology development in resilient agriculture.

In addition to having MRD host the internship program where they will benefit from the up-to date climate skills of the graduated students (2.1 above), the project will support the

placement of additional officers in the MRD. Specifically the project will establish an extension officer team, who will support development of and implementation of the new climate resilient agricultural development plan for RMI (Output 1.1). The team will consist of one manager and one officer level position, as well as a two regional extension officers, supported for the duration of the program. The extension officers will spend significant time in the target atolls and help drive the overall atoll resource management, agricultural production and food security planning and implementation activities within Component 3. The extension officers, and the broader capacity development supported within this Component 2 will support successful implementation of the overall project and serve to build the base of knowledgeable and technical able MRD officers to provide ongoing support for food production in the outer atolls. . This represents a modest investment to ensure project impact.

[\$500,000 earmarked over 5 years]

2.4. Technical and administrative support evaluation and expert backstopping roster

The project will support access to and delivery from a roster of international and national technical experts available to be deployed to support the project upon request (and approval). The purpose is to provide RMI, MRD with a flexible, fit for purpose technical backstopping resource to support RMI with specific technical needs. One possible (example) area of need will be support for assessing productivity/sustainability and value chain indices for food production/agroforestry options (identified in Component 3)

A roster is being established through the EU / SPC – PAPP, and this AF project will support operational of the roster with a focus on supporting technical assistance to address technical climate change and agriculture challenges faced by RMI. The technical experts will be deployed upon request from MRD in alignment with the ToRs and the experts will provide targeted training and services to support specific needs of the MRD.

In addition the project will support SPC to provide ongoing, dedicated technical and administrative support to the project, in the form of 0.5 FTE technical project adviser. Resources from within this activity will also be used to support the steering committee to convene at least once annually. Again this represents a modest investment to provide flexible and ongoing technical backstopping for MRD.

[\$700,000 earmarked over 5 years]

2.5. Extension of the Laura demonstration farm

The Laura demonstration farm in Majuro has been operating for over 30 years and serves as a resource for many local producers. The project will support the mainstreaming of climate resilient practices into the demonstration farm. The Laura site is over 30km from the centre of Majuro and there is a need to establish a MRD demonstration site closer to Majuro, as an extension of the Laura site. This will be developed at the MRD offices where there is dedicated space for a small demonstration site and nursery. The demonstration sites will be used to support participatory technology development (PTD) for atoll agriculture, research

and trials, including undertaken by students within the College of Marshal Islands climate resilient agriculture programme. The demonstration farms will also be used to support RMI aspiring green waste diversion and composting goals being progressed through the SPREP/EU Pac Waste programme.

[\$200,000 earmarked]

2.6. Climate resilient cultivar

Having access to improved crop diversity including climate resilient crop varieties and cultivars is of vital importance to sustaining food security in the face of climate change. The Regional Plant Genetic Resources Genebank, CePaCT under SPC in an upcoming FAO/MRD collaboration that aims to mobilize these resources to RMI to establish nursery and field collections of crop reserves both in Laura and Majuro in collaboration with the Agriculture Division of MRD.

This AF project will compliment these projects by supporting evaluations, trainings and awareness. Evaluations will focus on determining the adaptability to the crop varieties to the RMI environment/climate and also their adoption by the local communities. Particular focus on identifying drought tolerant varieties will be highlighted in this work. Evaluating starchy staples like sweet potato, taro and cassava as well as nutritious green vegetables (both indigenous and introduced). Efforts will also be taken to evaluate the most adaptable varieties of fruit trees like breadfruit, papaya, citrus, and pandanus. Selected communities will partner up with MRD in evaluating these crop varieties.

To ensure optimum survival of plantlets provided by SPC, trainings on proper transfer techniques and management practices for the tissue culture plantlets that SPC will provide will be carried out. These will be organized with the MRD and expect to include both agriculture officers as well as local communities who will be assisting with the monitoring and management of these crop varieties after planting. This will continue to build the capacity and instill the interest in local communities particularly the young generations of growing crops for their own use for sustainability purposes.

Awareness materials to reflect the results obtained under this program will be created to help create more visibility for the project and its outcomes.

[\$200,000 earmarked for the 5 years]

2.7. Knowledge management, communications and outreach

Key to the success of the project and long term climate resilience agriculture in RMI is the generation, preservation and dissemination of data, information and knowledge. Further, there is a key need to communicate effectively the opportunities and benefits of adopting climate resilience practices, and the agricultural production sector more generally. The project will support development of a knowledge management, and communications and outreach strategy, to be managed by MRD, in order to build awareness and interest in climate resilient agricultural development in the sector.

The work will build on the existing knowledge management and outreach done through the National Policy Banks (already delivered in other PICs) which is supporting national agricultural websites for science information and services (SIS). A similar database for research and extension is also currently being built (through the Pacific Islands Rural Advisory Services) and this project will support its application in RMI and facilitate information sharing across Pacific island countries.

In addition to the climate resilient cultivar awareness activity mentioned above, the project will also support the Ministry of health to develop and deliver workshops and communications products to promote community awareness about the importance of eating local fresh foods to combat the spread of NCDs.

The project will produce awareness material (DVD, manual and brochures),

[\$200,000 earmarked of the 5 years]

3. Implementation of climate resilient atoll resource management and agricultural practices

The third component of this project will focus on supporting the planning, implementation and ongoing management of atoll island natural resources, which underpin food security, as the basis for implementation of concrete actions to support climate resilient food production in the selected atoll islands. It will see the project support further development of atoll conservation and management plans through the tried and tested, and climate aligned Reimaanlok process; as well as delivery of priority, and community determined actions and support to directly support the production of food in a climate resilient way. It will involve a three phase approach where first atoll natural resource management plans are developed and or strengthened, secondly key natural resource management actions will be implemented, and thirdly, integrated climate resilience agriculture and food security activities delivered.

3.1. Development and Strengthening of Atoll Resilience Management Plans

Before specific adaptation actions can be implemented it is important that first key vulnerabilities are identified and that the community has ownership over the planned approaches. To this end the project will support a minimum of 5 atolls to develop integrated plans for the management of atoll island resources.

The plans will adopt a 'whole of island' approach, delivered within the well-established and tested the Reimaanlok framework and drawing on the benefits and agricultural targeted SPC LRD Community Based Vulnerability Analyses approach, to support communities to manage their critical island resources in a sustainable way, while building resilience to the impact of climate change. The approach will ensure a participatory land use planning approach, assessing the constraints and potentials of the natural resources, development plans of the stakeholders and aspirations of the communities. This is an important first step

before any major and specific climate resilient agricultural production investment options are selected.

The activity will support the selected atolls to progress within the Reimaanlok 8 step process with a focus on identifying key atoll resource vulnerabilities, and priorities.

The Reimaanlok process, while focused on the planning and management of conservation areas, is a holistic approach to natural resource management planning and considers coastal management issues along with terrestrial and marine biodiversity conservation, in the context of local food security and economic needs.

The plans will utilize the agricultural census (and coconut resource assessment) process (and outputs) detailed in Activity 1.1 and 1.2, respectively, as well as other existing plans and vulnerability studies, including:

- Atoll Management Plans at various stages in the Reimaanlok process, including those which have completed Household Surveys and Local Early Action Plans in Step 3, and island height and flood risk assessments in Step 4.
- The Atoll Vulnerability Assessments Undertaken for 2 atolls (Ailuk, Namdrik) and 4 sites (Lau, Jenrok, Majkin, Woja) in 2009 through the USP-EU GCCA (Global Climate Change Alliance Project). With the exception of possibly Ailuk's more detailed assessment, these consultative vulnerability assessments provide a broad overview of the current status of a variety of areas including governance and socioeconomic resources, disaster risk management, water resources and security, health and sanitation, energy resources and information communication technology, food resources and security, and natural resources.
- Women United Together Marshall Islands (WUTMI) Atoll Plans. These plans identify broad atoll island priorities.

The plans will serve as the basis for then identifying specific actions to manage the natural resources which are the bedrock of agricultural production (including water, soil, biodiversity); as well as appropriate strategies for development of the agriculture sector to support food security and livelihood development (see 3.2 and 3.3 below).

[\$1,000,000 in total for the selected atolls]

3.2. Implementation of priority management actions to support resilience of natural resources

Based on the integrated atoll plans (3.1), which will identify priority management actions to be implemented the project will support implementation and ongoing management of actions which build the productivity and resilience of the natural resource base and ecosystem services. Importantly, the management actions will have been identified and prioritised by the community, who, collectively will decide on activities for investment. The level of investment (financial) will depend on the final number of target atolls and the number of activities that each atoll community is able to identify, plan for and budget. Specifically the project will support actions such as:

- Coastal shoreline management to support resilience to rising sea levels and storm surge
- Marine management actions which build the resilience of coastal ecosystems, which are under stress from sea temperature and ocean acidification
- Water management plans and actions which support water efficiency, increase water storage and sustainable management of ground water resources
- Terrestrial land management actions to help sustainably manage and derive value from the land, including through for example agroforestry.
- Coastal rehabilitation and introducing management measures to enable the site to continue to be used. This could be done with planting coastal tree species, tree crops suitable for atoll soils. An important first step for this coastal rehabilitation work is to carry out an assessment on tree or tree crops that adapt well on atoll soils and to promote the planting of these species on coastal or degraded lands

[\$1,000,000 earmarked for at least 5 atolls]

3.3.Implementation of priority actions to directly support agricultural production and food security.

Upon development, and in parallel with management of the of the atoll plans the project will support the targeted atoll communities to learn, adopt and apply actions to support climate smart and resilient agricultural production and food security. The selection and delivery of activities will learn from a small number of initiatives which have delivered similar activities, including the GEF small grants project: *Replanting Scheme and Youth Leadership training project in Wodmej, Wotje Atolls*. It is anticipated that actions to be funded will include;

- Application of soil improvement technologies and practices that are attuned to climate change
- Apply water saving irrigation techniques.
- Delivery and planting of nutritious and marketable crops evaluated as adaptable to harsh atoll conditions.
- Apply intercropping techniques, including with a focus on coconut plantings to support the aging stock.
- Establish remote local nurseries (as extensions to the Majuro based nurseries) to ensure sustainable supply of improved planting materials
- Employ composting, raised beds and other climate resilient techniques (including by leveraging expertise of the Pacific Organic and Ethical Trade Community (POETCom))
- Plant climate resilient local crop varieties as crop reserves for immediate post disaster response
- Support small scale livestock rearing, utilising best practices and promotion of indigenous livestock production system through marketing and income generation initiatives.
- Production of crops, and support for access to markets through linking with recommendations of value chain analysis.
- Development of agro / food processing food and preservation techniques and resources which could increase shelf life and marketability of crops.
- Establish agroforestry plantations (see below)

The actions will be implemented directly with local atoll communities in coordination with local government, and in alignment with their atoll plans. The approach will develop the capacity of local governments to provide agricultural extension service to farmers on their atolls to implement the plans. The activities will be supported with technical assistance to local governments and communities to provide advice and teach local farmers to use new methods and technologies to increase crop and animal production and manage them in a sustainable way. It will also support technical advice and support for communities to value-add to their agricultural production including through for example development of virgin coconut oil production.

A key adaptation measure recommended by FAO is the “promotion of agro-forestry & other tree planting initiatives,” focusing on coconut plantation which is the dominant agro-forestry in RMI. Coconut replanting is critical not only for climate change adaptation but also to address key development challenges facing the country, as it contends with climate change. There is a lack of systematic or organized replanting accentuated by an increasing proportion of productive land being left unmanaged and fallow. This activity will provide the opportunity for the targeted atolls to undertake coconut/ agroforestry plantings, in the context of the climate resilient agriculture development, census and coconut resource assessment. Cultivars will be selected carefully to ensure climate change resilient seedlings are used.

To ensure community ownership and sustainability of outcomes the financial support for delivery of activities will be dependent on the community developing and endorsing through relevant local authorities detailed activity plans.

[\$1,500,000 deliver priority actions to support agricultural production in line with the adaptation plans]

B. Describe how the project / programme provides economic, social and environmental benefits, with particular reference to the most vulnerable communities, and vulnerable groups within communities, including gender considerations. Describe how the project / programme will avoid or mitigate negative impacts, in compliance with the Environmental and Social Policy of the Adaptation Fund.

The project will result in a range of benefits, both directly and indirectly.

Economic Benefits

The project will result in the development of the agriculture sector, which has been somewhat neglected due to historical reliance on the public sector and aid. As observed earlier, grants under COFA, the main source of development assistance for RMI, will come to an end after 2023, heightening the need to develop the real economy.

The project will result in direct benefits for vulnerable communities, including through:

- Greater self-sufficiency and food security, with less reliance of imports.
- Increase in production of cash crops, in particular coconut.

- Development of food / agricultural products for local (and potentially) international markets, for example through niche products such as virgin coconut oil
- Employment opportunities arising from training and certificate program.
- Economic benefits associated with better nutrition.

Social Benefits

Communities in outer islands are the primary intended beneficiaries of this project. It is designed to improve their livelihood and strengthen their resilience to climate change impacts, especially vulnerable groups like youth, women and children. Key social benefits from the project include:

- Better access to nutritious and locally produced food.
- Population retention through development of opportunities to derive livelihoods from agriculture and food production.
- Social capital through training, education and other capacity building.
- More confident and resilient communities through engagement and food security.

Environmental Benefits

The environmental benefits from the project will be significant and will include:

- Coastal zone stability and reduced erosion
- Improved atoll soil productivity and health
- Improved management of ground water resources
- Improved management of marine resources
- Carbon sequestration (not accounted) through agroforestry plantings.

C. Describe or provide an analysis of the cost-effectiveness of the proposed project / programme.

1. While no methodological cost benefit analysis of the proposed interventions has been conducted the cost-effectiveness of the proposed project is based on:
 - The sustainability of outcomes is supported through a systematic and capacity building approach outlined in Activity Components 1 and 2. The multiplier effects of a more educated and functional policy sector should not be underestimated either.
 - The cost-effectiveness and sustainability of outcomes achieved by working directly with vulnerable communities and empowering them to plan for, priorities and implement actions which build resilience in their own communities. There is no better alternative approach than community led resilience building.
 - Given the geographic remoteness and absence of resources, the adaptation options available to RMI are limited. Building resilience into the natural resource base and food production system is a fundamentally sound way to avoid the costs associated with natural resource degradation and loss of livelihood. The proposed activities represent a very logical and integrated set of no-regret activities that will build the resilience of communities.

- The multiplier effects of supporting the increased consumption of more nutritious food is also significant including through the avoidance on NDCs in future generations
- The project also serves as the basis of economic development through possible long term local and international export opportunities.

D. Describe how the project / programme is consistent with national or sub-national sustainable development strategies, including, where appropriate, national or sub-national development plans, poverty reduction strategies, national communications, or national adaptation programs of action, or other relevant instruments, where they exist.

1. The project responds to the strategic goals of the **National Climate Change Policy Framework**, which emphasizes food security, energy security and conservation, biodiversity and ecosystem management, human resources development, education and awareness, health, urban planning and infrastructure development. The NCCPF vision is “Building the Resilience of the People of the Marshall Islands to Climate Change.” This project is about building the resilience of the agriculture sector to climate change as advocated in the Policy.
2. The NCCPF is also determined to “safeguard the country’s natural assets or “vital organs”, and ensure that future generations of Marshallese rightfully enjoy Aelon Kein (Our Islands) and have the opportunity to achieve national development and wealth. This project is also designed to achieve this objective. Specifically the project will strengthen the resilience of livelihood communities and vulnerable groups including the youths - a key outcome of the strategies adopted by the NCCPF.
3. The **Joint National Action Plan (JNAP) for Climate Change Adaptation and Disaster Risk Management National Action Plan (DRM NAP)** that sets out actions to adapt against the effects of natural disasters and climate change. The JNAP is an important and integral supportive element towards the achievement of RMI’s sustainable national development imperatives. The climate change related sectoral policies and plans the JNAP takes into account are as follows:
 - RMI Energy Policy and Action Plan
 - Agriculture and Food Security
 - National Water Resource Management Framework, and outcomes of 2011 National Water Summit
 - EPA Coastal Management Framework
4. The JNAP’s strategic goals, which incorporate those of the National Climate Change Policy Framework (NCCPF), are as follows:
 - Establish and support an enabling environment for improved coordination of disaster risk management /climate change adaptation in the Marshall Islands;
 - Public education and awareness of effective CCA and DRM from the local to national level;

- Enhanced emergency preparedness and response at all levels;
- Improved energy security, working towards a low carbon emission future;
- Enhanced local livelihoods and community resilience for all Marshallese people;
- Integrated approach to development planning, including consideration of climate change and disaster risks

The JNAP Goals above sit along-side, and compliment other sectoral goals and strategies, of most relevance are the

5. The project is directly aligned with and aims to support the climate resilience implementation of the **RMI Food Security Policy**. The Policy sets out Five Priority Strategic Action Areas, each of which has detailed strategies and actions:
 - Stimulating sustainable local food-production and preparation and better linking producers to consumers.
 - Strengthening access to nutritious food for vulnerable households and individuals.
 - Educating the public about food security and nutrition and encouraging home gardening.
 - Facilitating efficient national food distribution channels.
 - Building safety, quality and resilience into food supply and production systems

The Food Security Policy also advocates the revitalization and modernization of the coconut industry stating that “a thriving coconut industry remains vital for rural livelihoods, the economy and food security in RMI, particularly in outer islands where few other economic opportunities avail.”

6. RMI does not have a dedicated Agricultural Policy and this project proposes to amend that by supporting the development of a climate resilient agriculture policy and action plan. In the meantime the work of MRD is directed by the **Resources and Development Strategy and Action Plan 2005-2010**, which sets out broad activity priorities for the Ministry within 5 key outcome areas including Primary Production and Agriculture; Product and Market Development; Investment and Business Development; Energy Services and Management and Administration. The activities proposed align very well with the objectives of the R&D plan.
7. The project will assist in the implementation of **RMIs’ Trade Policy Framework and the National Export Strategy**, which aims to enhance the participation of the private sector in the economy and promote export-led sustainable economic growth and self-reliance with the ultimate objective of creating employment, alleviating hardship and raising the living standards of Marshallese citizens.
8. The project could also enhance energy security by enhancing the uptake of renewable energy and biofuels – key objective of the **National Energy Policy and Action Plan**. Coconut oil is the most important feedstock for biofuel in RMI.

9. The proposal will also align closely with the National Water Recourses Management Framework.

E. Describe how the project / programme meets relevant national technical standards, where applicable, such as standards for environmental assessment, building codes, etc., and complies with the Environmental and Social Policy of the Adaptation Fund.

1. The project is in accordance and within the ambit of requirements outlined in the 2013 Environment and Social Policy of the Adaptation Fund. It will not only complement the current endeavor of Government to enhance food and nutrient security in the islands and the empowering of the general populace through capacity building, it will also support urgent attempts to address the undeniable impacts of and risks posed by climate change.
2. All projects committed for international funding support are also domestically appraised and approved by the various national authorities listed hereunder:
 - Republic of the Marshall Islands Environment Protection Agency (RMIEPA);
 - Office of the Environmental Planning and Policy Coordination (OEPPC);
 - Marshall Islands Marine Resources Authority (MIMRA);
 - Ministry of Resource and Development (MRD);
 - Majuro Water and Sewerage Company (MWSC);
 - Office of Disaster Management (ODM);
 - Economic, Policy, Planning and Statistic Office (EPPSO); and,
 - RMI National MDG Task Force
3. The final project design will screened for compliance with all national, social and environmental safeguards and standards, such as:
 - Environmental Protection Act, 1984;
 - Environmental Planning and Policy Coordination Act, 2003;
 - Marshall Islands Marine Resources Authority (MIMRA) Act, 1997;
 - Cooperative Forestry Assistance Act (CFAA);
 - Coast Conservation Act, 1988;
 - Planning and Zoning Act, 1987; and,
 - Public Health and Sanitation Act, 1966.
 - Tobolar Copra Processing Authority Act, 1992

F. Describe if there is duplication of project / programme with other funding sources, if any.

The project is being designed with clear consideration of existing projects to avoid duplication and enhance synergies. There are a few past, present and emerging projects relevant to the project. These are summarized below with an analysis of how the project will learn from, build on or integrate with them. The partnership approach, and establishment of a project steering committee will also help avoid duplication and support integration.

1. *ADB JFPR 9151: Regional: Social Protection of the Vulnerable in the Pacific (Cook Islands, Marshall Islands, and Tonga).*

The key feature of this programme for RMI was a cash-for-work coconut tree replanting project to stimulate employment, promote food security, and mitigate climate change in 5 atolls (Arno, Ebon, Namdrik, Mili and Alinglaplap). The evaluation of the project indicates mixed results in terms of satisfaction with the cash-for-payment component, and overall positive results for the actual planting of the trees, for which communities could see the long term benefit including in terms of local agriculture and land degradation. Importantly there were divergent views base on gender (women generally did not rate the benefits as high as the male respondents). This project will build on the lessons of the ADB JFPR project and will not duplicate the coconut plantings on the 5 target islands above. For example the project will look to complement the existing coconut plantings with other suitable-agroforestry approaches. The project will also avoid complex cash-for work approaches and favor a community owned and led approach through the provision of resources, tools and technical support to complement community management.

2. *Enhancing food and nutrition security in the Republic of the Marshall Islands through an integrated approach to address constraints to food production as identified by the government of the Marshall Islands (TCP/MAS/3502)*

The project with FAO is a 2 year project. The objective of the current project is to strengthen food security in the Republic of the Marshall Islands. It will target vulnerable communities in the densely populated islands of Majuro and the remotely located island of Ebon. The project requests FAO technical assistance and necessary support to strengthen the capacity of farmers (esp. women and vulnerable groups) to decrease their vulnerability through diversified income from integrated farming system (agricultural production and livestock farming). Furthermore, it will support the private sector, household and communities to process, prepare and market nutritious and safe local food products.

The implementation of this project is just started recently and is still on-going project. With the support of the FAO, there are training that have already been done for the RMI local farmers, extension agents, quarantine officers and other agencies. Those training include: Extension Integrated Crop and Livestock training; Farmer/ Extension Crop Production Training and farmers Survey Meeting; Plant Production and Biosecurity Training.

The proposed project will replicate components of this project, while also benefiting from lessons learned. FAO will be on the project steering committee to ensure flow of information from this project.

3. *Pacific Atoll Agriculture Research and Development for Kiribati, Marshall Islands and Tuvalu.*

This project is being delivered by SPC with FAO to strengthen atoll research and development in the three target countries. Activities focus on soil health technologies to support production of root crops on atolls. The research and trial approaches will be integrated into this project, including by establishing demonstration approaches, as well as applying the proven approaches on the targeted atolls.

4. Replanting Scheme and Youth Leadership training project in Wodmej, Wotje Atoll

This GEF funded small grants project aims to replant acres of old growth food plants; constructed a local nursery for native plant seeds and seedlings and the potential to earn an income by selling seedlings to nearby atolls, train unemployed youth with work-ready skills and educated students at both elementary and high school level on environmental issues affecting atolls. This project will restore and stabilize land through the replanting of native trees. Moreover, the land will be sustainably managed through organic agriculture and propagation of native plants protecting the islands biodiversity. Organic practices in agriculture will also preserve the local environment by decreasing contamination of land and sea.

The proposed project will adopt, upscale and replicate some of the successful approaches of the project, as it comes to an end shortly.

5. The Regional Plant Genetic Resources Genebank, CePaCT project delivered by under SPC in an upcoming collaboration that aims to mobilize these resources to RMI to establish nursery and field collections of crop reserves both in Laura and Majuro in collaboration with the Agriculture Division of MRD.

6. GEF 5 R2R developed by UNDP Reimaanlok – Looking to the Future: Strengthening natural resource management in atoll communities in the Republic of Marshall Islands employing integrated approaches

To sustain atoll biodiversity and livelihoods by building community and ecosystem resilience to threats and degrading influences through integrated management of terrestrial and coastal resources

7. The Micronesia Challenge and Reimaanlok National Conservation Area Plan

Is designed to enhance community resilience and use traditional knowledge and ecosystem strategies to conserve vulnerable coastal/land resources. It is geared to effectively conserve at least 30% of the near-shore marine and 20% of the terrestrial resources across Micronesia by 2020. It plans to achieve a target endowment of \$58 million to meet the overall costs of achieving the Micronesia challenge goals. Specific to the RMI, a target endowment of \$13 million that issues a 5% annual return on investment has been determined, to be managed through the RMI Protected Area Network. Recent projects from GEF-5 and GEF-6 support the advancement of this national initiative with regional scope.

G. If applicable, describe the learning and knowledge management component to capture and disseminate lessons learned.

Please refer to Component 2 of the proposal as it outlines how key data, knowledge and information will be managed to support ongoing efforts to build climate resilient agriculture.

H. Describe the consultative process, including the list of stakeholders consulted, undertaken during project preparation, with particular reference to vulnerable groups,

including gender considerations, in compliance with the Environmental and Social Policy of the Adaptation Fund.

This project concept has been informed via three key consultation processes to date.

The first set where carried out in 2015, mainly with the Ministry of Resources and Development, via an FAO supported consultant. The consultations resulted in the identification for upscaling of coconut plantings in RMI, building on the JFPR / ADB coconut-replanting project (mentioned above). It was based on these limited consultations that an initial project concept was submitted to the Adaptation Fund in 2015.

In the week of 15 May 2015 SPREP and SPC undertook a 4 day mission to RMI to discuss re-development of the project (based on the aforementioned concept) with a broader representation of key stakeholders. The week long consultations included briefings with cabinet ministers, and ministry representatives. A 2 day workshop with officers from various government ministries, representatives from the College of Marshall Islands, the Marshall Islands Conservation Society, and local government mayors was also undertaken. The workshop aimed to collect information on priorities; design key components of the project including through design of the project logic (on which this project concept is based)

Thirdly, the proposed outputs and outcomes of the project were presented to the local Mayors Association Conference during the week of 11 July 2015. Mayors re-iterated their interest in support for coconut and other staple food planting.

NOTE: It is anticipated that a final set of more targeted consultations will be undertaken for the further design of the proposal prior to final submission. This would include with the local representatives of the target communities, key partners and RMI government representatives.

I. Provide justification for funding requested, focusing on the full cost of adaptation reasoning.

The project is fully self-sufficient and does not rely on the co-investment or the outcomes of other projects. Note: The full project proposal will provide an analysis of additionality from baseline scenarios for each component of the project. It is expected to show that a business as usual approach will lead to the continued decline of the sector as the climate makes production more difficult.

AF resources will be used to expand on, and complement existing baseline programmes and projects, and will be aligned with development priorities of the country and its communities.

J. Describe how the sustainability of the project/programme outcomes has been taken into account when designing the project / programme.

Among other things, this project will also lead to the empowerment and up-skilling of rural farmers in RMI and helps increase agricultural production and productivity. Furthermore, MRD is committed to providing support service throughout and beyond the project timeline.

Strengthened capacity and skills of the MRD staffs will ensure a sustainable technical support to farmers. Training of local trainers and communities in nursery management, improved farming practices and the establishment of nurseries and demonstration sites that are domestically managed by the local communities, will ensure sustainable supply of improved planting materials and locally available technical support for the long term maintainability and effectiveness of the project.

K. Provide an overview of the environmental and social impacts and risks identified as being relevant to the project / programme.

The project is envisaged to be a low, to no environmental and social risk (Category C) project. It is anticipated that the atoll planning processes outlined in Component 3 will integrate the Environmental and Social risk Principles (as below) into the planning and implementation processes. This will ensure that the specific interventions chosen reflect the principles, even if only in minor ways, where necessary/ they might apply. To re-iterate this means that upon commencement the specific ES risk may not be fully defined. To manage this SPREP as implementing entity and MRD as executing entity will provide ongoing oversight and monitoring of the selection of atoll specific activities and ensure the planning processes incorporates the relevant environmental and social principles. In turn mitigation/avoidance and other strategies will be adopted. The cost of any ES activities will be incorporated into the overall activity cost. This, along with the overall monitoring and evaluation plan is the main strategy to monitor and where necessary management environmental and social risk. This ESS screening will be undertaken again as part of the full proposal process, where there may be further detail to inform the process.

Table 5: Checklist of Environmental and Social Principles as set by the Adaptation Fund ("X") denotes that no further assessment required for compliance

Check List of Environmental and Social Principals	No further Assessment required for Compliance	Potential impacts and risks-further assessment and management required for compliance
Compliance with the Law	TBC	The project is in compliance with all applicable RMI and International Law.
Access and Equity	TBC	Any new climate change adaptation and mitigation project needs to ensure, through EIA process that it does not impede access to basic health service, clean water and sanitation, energy, education, housing, safe and decent working conditions and land rights.
Marginalized and Vulnerable Groups	TBC	The project is designed to uplift the lot of the marginalized and vulnerable groups including women & youth and communities in outer islands. By targeting women, children, girls, the elderly and disabled people would be also assisted. The selection of the target atolls during the next stage of the design will also take into account as a criteria, the relative vulnerability of the atolls, with a view to ensure that the most vulnerable communities are included
Human Rights	TBC	The propose interventions respect and where applicable, promote international human rights.
Gender Equity and Women's Empowerment	TBC	Through the project equal opportunity will be given for the participation of women and men. The project will aim to secure at least 50/50 representation in the CMI certificate and internship program. Planning and delivery of activities in component three will integrate a gender sensitive

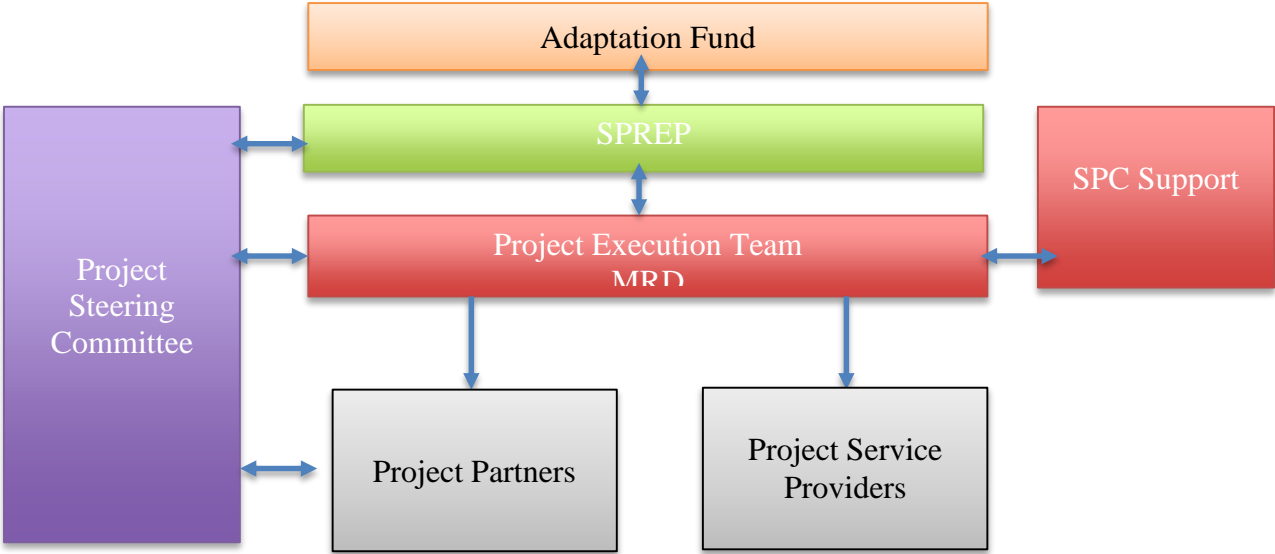
		approach directed by the Gender Sensitive Climate Change Toolkit developed by SPREP and other partners.
Core Labor Rights	TBC	Core labour rights will continue to be respected and adhere to and certainly will be applied where appropriate as identified by ILO. All recruitment processes will be through RMI national recruitment process / or SPREPs accredited human resources system
Indigenous People	TBC	The intervention is intended to assist indigenous people and all international instruments enacted will be respected and complied with.
Involuntary Resettlement	TBC	There is highly likely no need for any type of resettlement associated with the project, and certainly no involuntary resettlement.
Protection of Natural Habitats	TBC	Habitat protection is at the forefront of the project.
Conservation and Biological Diversity	TBC	The program is designed and anticipated to avoid any significant reduction or loss of biological diversity. Biosecurity practices will be strengthened through the project, with best practices approaches being applied in project delivery, in part supported by the Biosecurity Unit within MRD.
Climate Change	TBC	The intervention is designed to assist RMI mitigate and adapt to the threats of climate change. In the course of implementing the project RMI will ensure there is no significant increase in greenhouse gas emissions or other drivers of climate change.
Pollution Prevention and Resource Efficiency	TBC	The project will be designed to ensure that it meets applicable international standards for maximizing material resource use, minimizes the production of wastes, and the release of pollutants. The project will actively promote the better management of green waste, including through diversion to composting systems.
Public Health	TBC	There is no direct link to public health risks. The project shall be designed to ensure it avoids significant negative impacts to public health. The project will also actively support the uptake of better consumption habits.
Physical and Cultural Heritage	TBC	The project will be designed in such a way that it will not harm or desecrate physical and cultural heritage. Through design and delivery of actions by the community and localized cultural values will be accommodated.
Lands and Soil Conservation	TBC	The project is intended to preserve and conserve lands and soil from the impact of climate change. The intervention will be conducted in a way that it will not exacerbate the problem but helps to overcome the problem.

PART III: IMPLEMENTATION ARRANGEMENTS

A. Describe the arrangements for project / programme implementation.

The implementing agency for the project will be SPREP. SPREP will oversee design, commencement, implementation and closure of the project to ensure overall delivery and effectiveness. SPREP will also be responsible for flowing funds from the AF through to the Project Execution Team, using SPREPs financial management system and in accordance with a comprehensive disbursement schedule and project activities plan. SPREP will also oversee monitoring and evaluation aspects of the project. A Executing Partner Agreement will be established between SPREP and MRD (on behalf of the Government of RMI)

The project activities will be delivered by the Project Execution Team headed up by the Project Manager, with a Project Officer and a Project Administration Assistant. The Project Execution Team will be hosted, and managed by the Ministry of Resources and Development in RMI. The Project Execution Team will benefit from ongoing technical and administrative backstopping of SPC who will dedicate 0.5 FTE to the project, through the SPC North Pacific Office based in FSM. This will allow for Project Execution team to leverage technical



administration support through the expertise of the SPC Land and Resources Division (LRD).

The PET will use project funds to ensure Project Activities are delivered including through a selection of pre-approved Project Partners and where necessary through procurement of relevant ‘Service Providers’. Note: all Project Partners will be identified and services to be delivered by them detailed in the full proposal (examples include direct funding for the College of Marshall Islands, SPC, FAO, local governments etc.) Project Partners will provide in-kind contributions to the proposal, and will also sit on the Project Steering Committee.

The PET will also be responsible for convening a Project Steering Committee (PSC). The PSC will provide guidance on the delivery of the project and monitor progress of the project. It will also ensure alignment and leveraging of benefits from other activities and projects. The membership of the PMC will consist of key partners and stakeholders both in the government and private sector, which will include the MRD, WUTMI, College of Marshall Islands Land Grant, and Farmers Association, as well as SPREP. The schematic below summarizes the implementation arrangements

B. Describe the measures for financial and project / programme risk management.

Table 5.

No	Type	Description	Comments/Mitigation Measures	Rating
1	Implementation and Execution Failure	Execution of a project of this size comes with risk of mis-management and under delivery	The proposed implementation model is designed to ensure the requisite technical and administrative capacity is available. With SPC providing dedicated support the MRD project team will be supported and kept on track.	Medium
2	Environmental	Extreme natural disasters affect the implementation of climate change adaptation measures on the ground.	Droughts and high sea surges are becoming frequent, intense and prolonged. If a large natural disaster hits the country, some of the government functions will be diverted to emergency response measures. While the project cannot directly control the occurrence of droughts & sea surges, the project work plan is set to provide sufficient time buffer to catch up with potential delay.	Medium
3	Social	Adaptation measures increase inequity.	The project will ensure that the adaptation measures are gender sensitive and that they do not limit the participation of women and the disabled.	Low
4.	Financial	Finances are mis-managed	SPREP will develop a strict disbursement schedule linked to activity delivery. At key points monitoring will be conducted to ensure proper delivery.	Low/Medium
5	Social/Community	Community interest in the project is low.	The community will lead design and delivery at that scale. Any projects that will help enhance food and nutrient security will be greatly accepted by the community. Specific interventions will be chosen and managed by the community. Prior to finalization of the full proposal consultations with the target communities are anticipated. The project will also focus on supporting cultural and behavioural change around the consumption of locally produced food.	Low
6	Institutional-Coordination and Capacity Building	Weak coordination within and between communities and national government and other stakeholder institutions	The project will support and facilitate activities to ensure improved institutional coordination, capacity building and awareness-raising at the national and municipality levels. Where possible formal agreements will be developed and used to define roles and responsibilities, including through the Steering Committee. Training will be provided to stakeholders on the implementation of the project as well as on conflict resolution. Activities will be designed and implemented in a win-win manner, beneficial to all as far as possible. The sustainable development of the landscape will be emphasized with arguments that are supported with long-term economic forecasts.	Medium
7	Institutional-Infrastructure/Transportation	Reliability of government owned ships to outer islands is not very good.	This consideration will be built into budget preparation so that provision is made for chartering private boats as contingency.	High

In addition to those identified in Table 5, the main risks for the implementation of the project are:

- a) Conflict between stakeholder groups/land owners with different political agendas results in an inability of sectors to cooperate at the level needed to achieve results;
- b) Pressing domestic economic and social issues such as poverty and human health issues imply that regional climate change and sea level rise impacts on coastal communities receive sub-optimal attention and investment;
- c) There is insufficient numbers of regionally based experts to fulfill implementation needs of the project including building individual capacities in the region;
- d) Participating communities will not be able to agree on the mechanisms necessary to achieve sustainability; and,
- e) Important local level stakeholders (communities, planners, coconut industry stakeholders) will see ecosystem based management efforts as being detrimental or unaffordable given their interests.

C. *Describe the measures for environmental and social risk management, in line with the Environmental and Social Policy of the Adaptation Fund.*

A per the Part II Section K part of this proposal, the environment and social risk of the project has been screened against the Adaptation Fund Environmental and Social Risk Principles. Based on the current activities and principles, the screening processes concluded that it is currently a Category C project with very low to no ES risk. Therefore no specific environmental and social risk assessment is required, nor anticipated prior to submission of the full proposal. However it should be noted that a screening process will be repeated as part of the full proposal design process, as new activity detail may emerge to inform the processes. In addition the project will adopt an environmental and social risk sensitive approach which will include:

- Updating the screening against the Environmental and Social Principles at Steering Committee Meetings.
- The integration of the principles into the atoll island resource planning process (within the Reimaanlok Framework). This will ensure that specific resource management and agriculture resilience activities identified and implemented are screened for ES risk, and managed accordingly. This said, it is not anticipated that there will emerge any significant risk.
- The third overall strategy to monitor and manage ES risk will be through implementation of the monitoring and evaluation plan. Monitoring visits, for example will look for and report on any emerging ES Risk. Similarly the Mid-Term Evaluation will also look to identify any emerging risk.

D. Describe the monitoring and evaluation arrangements and provide a budgeted M&E plan.

The Project Execution Team, will be responsible for providing **‘day to day’ and periodic progress reporting** on activities and detailed financial expenditure. The PET will also be responsible for collecting data and information of impact, where ever possible, using the defined outcome/impact indicators as guide. PET will be supported by the Service Providers and Partners, who in the undertaking of services will also be required to collect data and information on progress and impact.

The Project Steering Committee will provide guidance on the project and steer the PET (and Partners) in the coordination and delivery of activities. Project Steering Committee Meetings will also review PET activity progress reports as well as provide its own summary of progress and risk management issues

Annual Progress Report: An Annual Progress Report (APR) shall be prepared by the PET, shared with the Project Steering Committee and submitted to SPREP as IE for forwarding to the AF. The APR will use monitored data and information (as above) and be prepared to provide progress against activities, goals, objective and targets; lesson learned; risk management and detailed financial disbursements.

Mid-term of the Project Cycle: The project will undergo an independent Mid-Term Evaluation (MTE) at the mid-point of project implementation. The MTE will determine progress being made toward the achievement of outcomes and will identify course correction if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decision and actions; and will present initial lessons learned about project design, implementation and management. The findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project’s term.

Periodic Monitoring through Site Visits: SPREP will conduct visits to project sites based on the agreed schedule in the project’s Annual Work Plan to assess, at first hand, projects progress.

Project Closure: An independent **Final Evaluation** will take place 1 month prior to the final project board meeting. The final evaluation will focus on the delivery of the project’s results as initially planned and as corrected after the mid-term evaluation, if such correction takes place. The final evaluation will look at the achievement of global environmental benefits/goals.

The M&E plan as outline is as follows:

Table 6.

Type of Activity	M&E	Responsible Parties	Budget	Time Frame
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Ongoing monitoring of activity progress, impact etc.	PET/ Service Providers	No more than 5% of each activity expense integrated into costings. (total: \$255,000)	Ongoing
Spot Checks	SPREP / SPC	\$50,000 to be drawn from the Project Implementation Fee	Ongoing
ARR	PET SPREP	Integrated into the work plan of the PET. No specific cost	Annually
Steering Committee Meetings	SPREP/Partners/PET/RMI	\$10,000 (cost embedded in 2.4)	\$10k Annually
Mid-Term Evaluation	Project Coordinator/Manager and Team SPREP External Consultants (i.e. evaluation team)	\$50,000 (cost embedded in 2.14)	At the mid-point of the project implementation
Final Evaluation	Project Team SPREP External Consultants	\$50,000 (cost embedded within 2.4)	At least 1 month before the end of the project
Periodic Status/progress reports	PET	Integrated into the work plan of the PET. No specific cost	Quarterly
Financial Audit	SPREP	\$10,000 (cost to be covered in implementation fee)	Annual
TOTAL INDICATIVE COST		US \$425,000 (integrated within overall budget)	

E. Include a results framework for the project proposal, including milestones, targets and indicators.

Table 7.

Expected Results	Indicator	Baseline	Target	Source of Verification	Assumptions
End of Project Outcome 1 Increased (capacity for the) local production of nutrient rich food and agricultural products using climate resilient approaches.	1.1 Increased production (or potential production) of food and agricultural products (that are and support resilience to climate change)	TBC through agricultural census and atoll planning process	By the end of the project there is evidence that the target communities are producing food which is supplementing imports and being used for exports. All target community production methods have been designed / strengthened to be and build climate resilience.	Mid-term and end of term evaluation to focus on assessing this	Communities are motivated to produce food for consumption and export. That seasonal variability in production can be taken into account in measuring.
End of project Outcome 2 Increased (capacity to manage and build the) resilience and productivity of atoll island natural resources.	2.1 Number of atolls that have further developed atoll management plans 2.2 Number of atolls actively implementing actions which support soil,	A quantitative and qualitative baseline will be established through the atoll adaptation planning processes using existing and new data and information	Each target atoll can demonstrate that it is managing key atoll resources to build resilience to climate change and support sustainable community development	Mid-term and end of term evaluation to focus on assessing this, based on baseline on community plans and other available data and information	Communities are motivated to manage and build resilience to climate change in their atoll resources There are key areas where management

	coastal, marine and water condition and health				actions can be made to build resilience.
Project Component 1	Policy Development				
Development of Climate Resilient Agriculture Sector Action Plan	<p>The development of the Climate Resilient Agriculture Sector Plan</p> <p>Implementation of key plan activities.</p>	<p>Relevant climate change and agriculture national policy instruments, coordination mechanisms and institutions do not address climate risks in an adequate manner.</p> <p>RMI have no formal mechanism for addressing the impacts of climate change on agriculture in a pro-active, integrated and strategic manner.</p>	By the end of the project, policies, framework and for climate proofing agriculture will be in place and operational.	<p>Implementation of Plan Activities by MRD</p> <p>Project implementation, technical and training workshop reports.</p> <p>.</p> <p>.</p>	<p>That the plan will identify actions and priorities which can be adopted and implemented by MRD</p> <p>That the plan will identify actions for follow up through the subsequent project interventions.</p>
Design and development of an Agriculture census	<p>Existing available information is collated and analysis</p> <p>Census methodology Developed</p> <p>Census undertaken and data collates</p>	Currently there is no transparency on existing agricultural data, and no baseline census	To establish a baseline agriculture data set based on existing and new information using a robust and accepted methodology	<p>Activity monitoring</p> <p>Use of census data subsequent project, and MRD activities</p>	<p>Census data will usefully inform agricultural policy and planning decisions.</p> <p>Existing data alone will not provide an adequate picture</p>
Project Component 2	Training, Awareness and Capacity				
Climate Change Certificate and Intern Program	<p>Annual rate of uptake and completion</p> <p>Placement of graduates in MRD</p>	There is currently limited focus on climate change and agriculture in CMI, and no graduates leaving with enhanced knowledge and understanding of climate change	<p>At least 10 certificates completed each year</p> <p>At least 2 1 year interns at MRD each year following completion</p>	<p>CMI</p> <p>MRD</p>	There is sufficient interest in the certificate program and the internship program
Farmers associations strengthened	<p>Enhanced understanding in farmers associations of climate vulnerability and options.</p> <p>Evidence of enhanced use of climate resilient practiced by FAs</p>	Current farmers associates exist but lack resources and coordination to adopt climate resilient approaches and increase knowledge	TBC	MRD	TBC
Capacity support for MRD including extension officers	Extension officers are providing support to target outer atolls				

Technical expert backstopping roster	Number of technical experts deployed to deliver climate resilient agriculture advice / support	Currently, MRD as limited access to quick response climate agriculture backstopping.	At least one technical expert is deployed each year	MRD	There will be enough clarity on technical requirements to justify request for expert
Adoption and extension of the Laura demonstration farm	Evidence of climate resilient agriculture practices being demonstrated at Laura (and Majuro Farm) New demonstration Farm in Majuro established	The Laura farm in RMI does not currently have a clear focus on climate resilient practices	TBC	MRD	The demonstration farms will serve as practical skills transfer resource for RMI
Resilient and high yield cultivar program strengthened	Number of crops evaluated as climate resilient for RMIs specific context	Cultivars are not currently trialled and monitored for suitability	TBC	MRD / SPC	That evaluation of cultivars will enhance the selection and use of cultivars on atolls
Communications and outreach strategy.	TBC	TBC	TBC	TBC	
Project Component 3	Integrated climate resilient agricultural practices				
Atoll island resource management plans developed	At least 5 atolls who progress within the Reimanlook 8 step process. At least 5 atolls identify priority climate resilient actions for delivery	A number of atolls are progressing on the Reimaanlok process. This project will support further progress None of the selected islands have priority agriculture action plans, tied to the Reimaanlok process	At least 5 atolls who progress within the Reimanlook 8 step process. At least 5 atolls identify priority climate resilient actions for delivery	MRD	Development of plans will serve as the basis for community owned and managed action
Actions to support resilience of resource based implemented	Number of communities adopting resource management actions for resilience.	Baselines to be established in planning phase	All target atoll communities have adopted management practices for at least one key atoll resource (e.g. water)	Community surveys / evaluations MRD / SPREP	That the planning processes can identify key areas for enhanced atoll resource management improvement
Actions to increase climate resilient agricultural production, and food security implemented	Climate resilient agriculture practices and actions adopted	TBC through planning process	All target communities have taken practical steps which increase production of food and food products using climate resilient approaches, and which build community resilience.	Community surveys / evaluations / MRD / SPREP	That communities are wanting to adopt new approaches

F. Demonstrate how the project/programme aligns with the Results Framework of the Adaptation Fund.

Table 8.

Project Objective(s)¹²	Project Objective Indicator(s)	Fund Outcome	Fund Outcome Indicator	Grant Amount (USD)
<p><i>Goal:</i> Support the growth of healthier, more climate resilient atoll islands and livelihoods.</p> <p><i>Objective:</i> Vulnerable RMI atoll communities are producing good quality and nutritious food, and agricultural products, despite climate related hazards and disasters.</p>	<p><i>The increase in the production of food and agricultural products using climate resilient approaches</i></p> <p><i>Management of ecosystem services and natural assets maintained or improved under climate change and variability-induced stress</i></p>	<p><i>Outcome 3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level</i></p> <p><i>Outcome 6: Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas</i></p> <p><i>Outcome 5: Increased ecosystem resilience in response to climate change and variability-induced stress</i></p>	<p><i>3.1. Percentage of targeted population aware of predicted adverse impacts of climate change, and of appropriate responses</i></p> <p><i>3.2. Modification in behavior of targeted population</i></p> <p><i>5. Ecosystem services and natural assets maintained or improved under climate change and variability-induced stress</i></p> <p><i>6.1 Percentage of households and communities having more secure (increased) access to livelihood assets</i></p> <p><i>6.2. Percentage of targeted population with sustained climate-resilient livelihoods</i></p>	
Project Outcome(s)	Project Outcome Indicator(s)	Fund Output	Fund Output Indicator	Grant Amount (USD)
Enhanced (capacity to manage and build the) resilience and productivity of atoll island natural resources		Output 4. Vulnerable physical, natural, and social assets strengthened in response to climate change impacts, including variability	4.1.2. No. of physical assets strengthened or constructed to withstand conditions resulting from climate variability and change (by asset types)	
Enhanced (capacity for the) local production of nutrient rich food and agricultural products using climate resilient and traditional agro-forestry approaches.		Output 3: Targeted population groups participating in adaptation and risk reduction awareness activities Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability	3.1.1 No. and type of risk reduction actions or strategies introduced at local level 7.2. No. or targeted development strategies with incorporated climate change priorities enforced	

¹² The AF utilized OECD/DAC terminology for its results framework. Project proponents may use different terminology but the overall principle should still apply

		Output 7: Improved integration of climate-resilience strategies into country development plans		

- G. Include a detailed budget with budget notes, a budget on the Implementing Entity management fee use, and an explanation and a breakdown of the execution costs.**

The detailed budget with budget notes including the explanation and breakdown of the execution costs will be specifically articulated and highlighted in the final project document. Table 9 only depicts a general breakdown of cost of implementing the project.

Table 9.

DETAILED PROJECT BUDGET		
No.	Outputs	Cost Estimate USD
Sub Total: Component 1:		2500,000
1.1	Development of Climate Resilient Agriculture Sector Action Plan	200,000
1.2	Design and development of an Agriculture census	300,000
Sub-Total: Component 2		2,300,000
Component 2: Capacity Development for Climate Information and Climate Proofing Agriculture sector		
2.1	Climate Change Certificate and Intern Program	400,000
2.2	Farmers associations established	100,000
2.3	Capacity support for MRD including extension officers	500,000
2.4	Technical expert backstopping roster	700,000
2.5	Adoption and extension of the Laura demonstration farm	200,000
2.6	Resilient and high yield cultivar program extended	200,000
2.7	Communications and outreach strategy.	200 000
Sub-Total: or Component 3		3,500,000
3.1	Atoll island resource management plans developed / strengthened	1,000,000
3.2	Actions to support resilience of resource based implemented	1,000,000
3.3	Actions to increase climate resilient agricultural production, and food security implemented	1,500,000
Project Execution Costs)		598,500
Project Execution Team Staff (3 PET staff) Salaries (inclusive of accommodation, IT and other overheads)		550,000
Equipment, Supplies & Miscellaneous		48,500
Total Project / Programme Cost		6,898,500
Project / Programme Cycle Management Fee charged by the Implementing		586, 373

AMOUNT OF FINANCING REQUESTED	\$ 7,484,872.5
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A Tentative Programme for RMI Executing Agency Staff Costs are presented below:

Table 10

	Year 1	Year 2	Year 3	Year 4	Year 5	Total USD
Project Manager Salary	65,000	65,000	65,000	65,000	65,000	325,000
Project Assistant Salary	30,000	30,000	30,000	30,000	30,000	150,000
Finance and Communications Officer	15,000	15,000	15,000	15,000	15,000	75,000
TOTAL	110,000	110,000	110,000	110,000	110,000	550,000

H. Include a disbursement schedule with time-bound milestones.

TBC upon full proposal.

Table 11

	Upon Agreement signature	One after Project Start	Year 2nd	Year 3rd	Year 4th	Total
Schedule Date						
Project Funds						
Total						

PART IV: ENDORSEMENT BY GOVERNMENT AND CERTIFICATION BY THE IMPLEMENTING ENTITY

A. Record of endorsement on behalf of the government¹³ *Provide the name and position of the government official and indicate date of endorsement. If this is a regional project/programme, list the endorsing officials all the participating countries. The endorsement letter(s) should be attached as an annex to the project/programme proposal. Please attach the endorsement letter(s) with this template; add as many participating governments if a regional project/programme:*

<i>Bruce Kijiner, Secretary of Foreign Affairs, National Designated Authority</i>	<i>Please refer to attached endorsement letter.</i>
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B. Implementing Entity certification *Provide the name and signature of the Implementing Entity Coordinator and the date of signature. Provide also the project/programme contact person's name, telephone number and email address*

I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans such as the National Climate Change Policy Framework (2011) and subject to the approval by the Adaptation Fund Board, <u>commit to implementing the project/programme in compliance with the Environmental and Social Policy of the Adaptation Fund</u> and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project/programme.	
Simon Wilson, Climate Finance Adviser SPREP Implementing Entity Coordinator	
Date: August 1, 2016	Tel. and email: +685 21929; simonw@sprep.org
Project Contact Person: Simon Wilson	

⁶ Each Party shall designate and communicate to the secretariat the authority that will endorse on behalf of the national government the projects and programmes proposed by the implementing entities.

Tel. And Email: +685 21929 simonw@sprep.org



REPUBLIC OF THE MARSHALL ISLANDS
MINISTRY OF FOREIGN AFFAIRS
P.O. BOX 1349
MAJURO, MARSHALL ISLANDS 96960

Letter of Endorsement by Government

8 August 2016

To: The Adaptation Fund Board
c/o Adaptation Fund Board Secretariat
Email: Secretariat@Adaptation-Fund.org
Fax: 202 522 3240/5

Subject: Endorsement for Project Concept Proposal: Climate Resilient Atoll for Food Security and Community Livelihoods in the RMI

In my capacity as designated authority for the Adaptation Fund in the Republic of the Marshall Islands, I confirm that the above national project/programme proposal is in accordance with the government's national priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in the Republic of the Marshall Islands.

Accordingly, I am pleased to endorse the above project/programme proposal with support from the Adaptation Fund. If approved, the project/programme will be implemented by SPREP and executed by RMI Ministry of Resources and Development.

Sincerely,

A handwritten signature in black ink, appearing to read "Doreen deBrum".

Doreen deBrum
Assistant Secretary
Ministry of Foreign Affairs

Cc: Mr. Bruce Kijiner, Secretary of Ministry of Foreign Affairs
Ms. Rebecca Lorennij, Secretary of Ministry of Resources and Development
Mr. Lowell Alik, Director of Office of Environmental Policy and Planning and Coordination

TECHNICAL ASSISTANCE FOR RMI

Mission Report

Scoping and desing of a climate resilient agriculture / food security project for the Republic of the Marshal Islands

Simon Wilson, SPREP Adviser May 2015

Summary

The Republic of Marshal Islands, through the Ministry of Resources and Development require support to better understand and identify priorities related to the climate vulnerability of the agricultural sector, and to develop a set of priority, integrated activities to build resilience to these. By doing so RMI hopes to strengthen the food security and through it, the livelihoods of its communities, in the context of a changing climate and the associated challenges.

RMI, through the Secretary of Foreign Affairs (and Adaptation Fund Authority), requested SPREPs assistance in this regard¹ and have asked that the exercise build on the concept proposal that was developed for the Adaptation Fund in 2015.

A country mission was undertaken by SPREP and SPC from 9 - 12 of May. It aimed to collect data and information, consult with key stakeholders and build awareness and ownership for the project, and support re-scoping and re-design of the project. **The purpose of this document is to provide a brief summary of key findings from the country mission.** Data and information, such as information on other projects, has been captured within the actual project concept template.

Information data and findings will be used to revise and update the existing Adaptation Fund Proposal draft.

While the mission helped progress an understanding of the climate change vulnerabilities that RMI wishes to address through an Adaptation Fund Project; a solid and integrated set of activities that could be funded and other contextual factors to take into account in the design of a project, key questions / issues, fundamental to the design of the project remain. These include

- *Atoll specific climate impacts and agriculture vulnerability. While broad climate changes are well known, further understanding of how other climate impacts (such as sea level rise, temperature increase etc.) are manifesting for the specific and targeted atolls would be valuable.*
- *Further information regarding the current state, and vulnerability of the atoll environments, and their food production systems to climate change would strengthen the proposal further..*
- *Community interest and ownership. While it is assumed (and indeed it has been communicated by atoll representatives (Mayors)) that communities in atolls will be interested in a project to support resilience building of the natural resource base, and enhanced food production, this is yet to be 'ground-truthed' with individuals within the community.*
- *Site selection. Linked to the above, there is a need to establish clear framework for delivering the project, in particular for selecting the target beneficiaries.*

¹ See letter of 11 April 2016

- *Execution arrangements. While it is agreed that the project will be implemented through the MRD, there are further details regarding the governance arrangements which need to be investigated. In particular integration with the Reimaanlok process needs to be determined, including in consultation with the Coastal Management Advisory Council (CMAC) Integration with RMI government processes and implementation. Arrangements between Ministry of Resources and Development, Minister of Finances and Ministry of Internal Affairs (and other project partners) need clarification.*

KEY COUNTRY MISSION OUTCOMES:

- The mission provided an opportunity to raise awareness about the potential impacts of climate change on the agricultural sector. It was apparent in the workshop that while there was a broad understanding of climate change, the specific links to agricultural production were not clear in some instances.
- It was apparent that drought and sea level rise are perceived as the most threatening climate / weather related pressures for RMI. Periods of drought were seen as being responsible for the failure of some crops in some communities.
- While there exists a variety of assessments / plans at the atoll level, and perceptions and experienced climate change is consistent with the modelling, there are very few detailed studies into the specific climate change impacts/risks at the atoll level.
- The workshop was able to establish that long term and sustainable agricultural production on RMI atolls is largely dependent on the underpinning natural resource base (soil, microclimatic conditions, and water table management), as well as non-climatic factors (capacity, availability of resources, perceived value in agricultural production (i.e. inclination of communities to bother trying to produce food, given challenges).
- The mission provided an opportunity to raise awareness on possible options to apply 'best practice' climate resilience agriculture in RMI. A presentation by the SPC representative was informative.
- The 'Taiwanese' demonstration project in Laura has been providing extension support and demonstration approaches, successfully for over 20 years. SPC also works with the Taiwanese project by providing cultivars. The project is in transition to the Min of R&D, though the Taiwanese continue to actively manage the site.
- There has been a number of other projects which have / are attempting to introduce 'best practice' approaches in RMI. The GEF-Small Grants Programme funded project 'Replanting Scheme and Youth Leadership' training project in Wodmej, Wotje Atoll was of interest and could serve as a model of best practice and provide lessons learned to inform this proposal

Recommendations

- That the project adopt an integrated island management approach which will see implementation of 'no-regret' interventions to improve the health and condition of the island resource base (soil, coastal management, water tables). Doing so will provide the basis of long term island resource health and the basis for agricultural production. In addition the project should provide the opportunity for communities to benefit from technical and resource support for agricultural production and other food security support (such as food preservation)
- That a second design phase be undertaken to further detail the proposed activities. This could include:
 - a) Undertaking follow-up bilateral consultations with each of the relevant agencies/ organisations including CMI; MICS; OEPPC; MRD; MIMRA Finance; relevant

emergency clusters (e.g WASH); WUTMI; CMAC as well as FAO and other relevant project teams

- b) Develop a criteria/process for determining the target atolls/communities.
- c) Undertaking a atoll 'ground-truthing' exercise with relevant communities. This would require commissioning relevant agriculture/natural resource management / climate change expertise.
- d) Addressing adaptation fund specific requirements, including analysis of possible gender and environmental and social impacts (and opportunities); cost/benefit analysis (or similar) to justify the chosen approaches / strategies.

Consultations Programme:

Saturday 7 th	Simon arrives in County Briefing with Rebecca Lorennij, Secretary Min of Resources and Development
Sunday 8 th	Free
Monday 9 th	<ul style="list-style-type: none">o Meeting with Mr. Bruce Kijner, Secretary Min of Foreign Affairso Meeting with Mr. Alfred, Alfred Jr. Minister for Resources and Developmento Meeting with The Honorable Mattlan Zackhras, Minister in Assistance and Secretary for OEPPC Mr Lowell Aliko Afternoon meetings with various MRD staff
Tuesday	See workshop programme
Wednesday	See workshop programme
Wednesday Afternoon	Debrief with Mr. Alfred, Alfred Jr. Minister for Resources and Development Debrief with
Thursday	Debrief with Secretary Rebecca Lorennij & Warwick Harris (Acting Secretary OEPPC)

WORKSHOP AGENDA

Developing a Climate Resilient Agriculture (and Food Security) Project in RMI

(For funding through the Adaptation Fund)

10 - 11 May 2016, ICC Conference Room, Majuro

Background

The Republic of Marshall Islands, through the Ministry of Resources and Development require support to better understand and identify priorities related to the climate vulnerability of the agricultural sector, and to develop a set of priority, integrated activities to build resilience in its efforts to increase agricultural production. The scoping and design exercise is intended to serve as a precursor to identifying and attracting donor support to support RMI to build a climate resilient agriculture sector.

By doing so RMI hopes to strengthen the food security and through it, the livelihoods of its communities, in the context of climate change (and the hazards associated with it, such as sea level rise, drought etc).

RMI, through the Secretary of Foreign Affairs (and Adaptation Fund Authority), requested SPREPs assistance² in developing a project in this regard. The project is to incorporate and refine elements within an existing Adaptation Fund proposal prepared in 2015.

The Adaptation Fund (and other climate funds) have fairly strict criteria for funding, requiring that all project proposals are very well thought out with, with a robust design based on good information and evidence. First and foremost, AF projects need to clearly address climate change issues, and built resilience to the associated hazards. This means an AF project can help build and strengthen RMI's efforts to increase agricultural production achieve food security.

SPREP is an accredited agency to the Adaptation Fund, as well as the Green Climate Fund. This means that SPREP can help Pacific Island Countries access these funds to address climate priorities. SPREP will be directed by the needs and priorities of RMI at all times. In turn this means it is primarily up to RMI to decide on priorities for funding.

Workshop objectives

The specific objectives of the workshop are to:

- ✓ Refine, re-scope (where necessary), and further develop objectives and activities to be funded by the AF project.
- ✓ Draw on the knowledge, and expertise of stakeholders (you, the participants) to do the above. Identifying available information, assessments studies etc is key
- ✓ Walk away with a shared understanding of what a future project funded through the Adaptation Fund will look like.
- ✓ Identify next steps and responsibilities

To help do this SPREP and SPC have supported Mr. Simon Wilson – SPREP Climate Finance Adviser, and Poasa Nauluvula to come to RMI and work with you!

Key Questions

- What are RMIs objectives when it comes to Agriculture Production and Food Security?
- What are the climate change hazards that will impact on agriculture and food security in RMI

² See letter of 11 April 2016

- What actions can we take to avoid, mitigate, build resilience to these impacts?
- What is already being done that we could build on / strengthen (don't reinvent the wheel)
- What type of activities do we want the AF project to fund?

DAY 1

Tuesday 10 May 2016		Activity	Facilitator / Activity
Morning	8:45 – 9:00	Registration & coffee	Rebecca
	9:00 - 9:15	<ul style="list-style-type: none"> • Welcome • Prayer • Opening remarks 	TBC Hon. Min Alfred Alfred Jn.
	9.15 – 9:30	<ul style="list-style-type: none"> • Overview of Workshop and introductions • A bit about the Adaptation Fund 	Simon
	9:30 – 10:00	1. Review of agriculture (Ag) and food security (FS) <u>situation, problem, trends and priorities</u> in RMI	Group Work/discussion Refer Table 1
	10:00 – 10:30	2. Clarifying the <u>climate related pressures and vulnerabilities</u> that will impact on Ag and FS situation and priorities.	Group Work/discussion Refer Table 2
	10:30 – 11:00	Morning tea break	
	11:00 - 11:30	Presentation on climate related pressures, lessons learned and best practices.	Poasa
	11:30 – 12:30	3. Reviewing (and updating) previous and ongoing activities, projects and programs	Group Work: Refer Table 3
	12:30 – 1:30	Lunch	
Afternoon	1:30 – 1:45	Review Problem Statement and Objective(s)	Group Discussion
	1:45 – 2:30	4. Needs analysis - given the situation, priorities, climate pressures, existing work and agreed objectives – what does RMI want the Project to do?	Group Work/ discussion Refer Table 4.

	2:30 – 3:30	Overview AF Project Concept and issues	Simon / Rebecca
	3.30 – 3:45	Afternoon Tea Break	15 mins
	3:45- 5:00	5) Revisiting and updating the Adaptation Fund Proposal: <ul style="list-style-type: none"> Objectives EOPOs Activities 	Group Discussion Refer Table 5.

DAY 2

Wednesday 11 May 2016		Activity	Facilitator / Activity
Morning	8:45 - 9:00	Register for Day 2	Rebecca
	9.00 – 9.15	Day 1 recap	Simon
	9:15- 10.00	Considering the revised project design	Group Discussion Project Logic
	10:00 – 10:30	Stakeholder mapping Who is involved in the project who are the beneficiaries (site selection)	Simon / Rebecca Group Discussion
	10:30 – 10:45	Morning tea break	
	10:45 - 12:30	1. Identifying Information Gaps and Assessments OR 2. Key Risks, Assumptions (incl. ESIM) OR 3. Implementation Arrangements OR 4. Monitoring and Measuring Success OR 5. Budgets Estimate	Simon Break-out Group Work
	12:30 – 1:00	WRAP UP AND CLOSE	
	1:00 – 2:00	Lunch and Meeting close	

The following worksheets were used by workshop participants to help capture information, perspectives and ideas regarding the project. A summary of this information is captured in the template below, and otherwise reflected in the updated proposal.

1) Describing the current situation

TABLE 1	
What characterises the state of agricultural production (and food security) in RMI? What are some of the barriers making it hard for RMI to produce more?	Key baseline information/assessments/surveys/ etc is available to support these claims?
<ul style="list-style-type: none"> • Low (and decreasing) domestic agricultural production • Just a few food crops (breadfruit, pandanus, bananas & taro), some livestock (pigs & chicken). • Just on one cash crop – coconut • Coconut resources declining (senile trees) • Poor quality agricultural products (pest and disease) • Limited water resources* • High food imports (and increasing) • Poor nutrition (and related health issues) • Dependency on shipping routes and distribution of cultivars from Majuro 	What gaps in the data / information do we need to understand these issues better?

What existing objectives do we have for agriculture (and food security) RMI	Where are these objectives described?
<p>Policy</p> <ul style="list-style-type: none"> Develop policy and plans for the effective development of agriculture in the Marshall Islands <p>Production:</p> <ul style="list-style-type: none"> Local food production increased and producers better linked to consumers Coconut “Tree of Life” Development Ensure adequate production of raw materials for handicrafts, medicine, coconut products and other non-food production <p>Access and Quality:</p> <ul style="list-style-type: none"> Strengthened access to nutritious food for vulnerable households and individuals More efficient national food distribution channels Enhanced safety, quality and resilience in food supply and production systems “Farmers Markets” on Majuro and Ebeye Prevent the introduction and further spread of injurious pests and diseases into and within the Marshall Islands Safeguard agriculture, livestock and the Marshalls’ natural biodiversity <p>Awareness and capacity:</p> <ul style="list-style-type: none"> Better informed and knowledgeable public about food security and nutrition and increased home gardening Better trained / aware local producers 	<ul style="list-style-type: none"> RMI Food Security Policy (2013) Republic of the Marshall Islands Ministry of Resources and Development Strategy and Action Plan 2005-2010 RMI’s National Strategic Development Plan: Vision 2018 (RMI Government, 2001) Joint National Action Plan (JNAP) for Climate Change Adaptation and Disaster Risk Management National Action Plan National Climate Change Policy Framework (NCCPF), 2011

2) Describing the climate related barriers, pressures and constraints

TABLE 2	
What, and how are <u>climate change hazards</u> making it hard to produce food in RMI? Please comment on any observed, recorded experiences. Who is most affected by these impacts?	Are there any assessments, studies etc we can use to back up these claims?

- Sea level rise / storm surge will result in salinization of agricultural land.
- High seas and storm surge can result in land loss via erosion is also likely, further reducing the availability of land to grow crops.
- Increased temperature and evaporation rates will also decrease soil moisture in RMI's sandy soils.
- More variable rainfall (e.g. extended periods of no rain / extreme rainfall) means less ground water, and less rain water harvesting.

Understanding what is already happening

TABLE 3

What projects, programs, initiatives etc have previously happened/ are happening /are going to happen that need to be considered before we think about what our project will do? This is to avoid duplication, use resources efficiently etc.

4) Revisiting the Adaptation Fund Project

Note: the following questions were posed to the group and discussed. Based on input received a revised project logic was developed this is depicted below. The project logic has subsequently been used to inform the concept proposal.

- Does the project have clear objectives?

- Are there clear (SMART) EOPOs?
- Do activities link to and ultimately support building resilience to climate change?
- Do the activities link together logically? Do they integrate with existing projects?
- What activities should we keep, change or discard?
- Are there additional activities we should include?
- Where will the activities happen? Who are the beneficiaries?
- What sort of risk is involved – what are the possible negative impacts on the community and the environment?
- What is the role for women in this?
- What information / data do we have to establish baseline, do we need additional information?
- What sort of budget is required?

What is the feasibility of the activities?

Key Assumptions:

1. MRD, LGP and College are here to stay (have long term budgets)
2. RMI has continued access to the most appropriate cultivars (via SPC)
3. That the technical assessments are able to identify priorities and appropriate solutions, supported by local communities
4. There is sufficient land
5. The quarantine service will maintain quality controls
6. Women will be encouraged to adopt and manage production and preservation activities
7. Communities will have the enthusiasm to produce (and) consume local food.
8. The project will work in-step with the Micronesia challenge and
9. Transportation options remain viable.

Co-benefits:

1. Increased supply of cash crops: copra / coconut for processing (crude oil, VCO, biofuel)
2. Income generation through food export (including to Majuro & k)
3. Support for micronesia challenge, including through establishing buffer zones to conservation areas/improved catchment management

Vision

Vulnerable communities in RMI are producing, and have access to adequate, good quality, and nutritious food, consistently, despite intensifying climate hazards, and disasters, to support good health and livelihood opportunity.

EOP's

Communities in X number of atoll islands are producing nutrient rich food, and products for their own consumption, storage, and where possible for domestic markets and even export.

The natural resource base in X number of atoll islands is more resilient, and supporting sustainable agricultural production.

Intermediate Outcomes

Target communities have knowledge of climate resilient agriculture techniques

Target communities are implementing 'best practice' climate resilient techniques.

Target communities are preserving food (products), including for export and food bank, for use in 'times of fresh food shortages'

Island soils are improved

Coastal erosion is mitigated

Key Strategies

Knowledge, Capacity and Training.
Build capacity and coordination between MRD, Land Grant Program and College of Marshall Islands to provide technical support and training to community producers:

1. CC Certificate Program
2. Extension Services and training
3. Knowledge (and project) database and repository
4. Technical Expert backstopping roster
5. Nursery installations / upgrades

Best practice agricultural management and production practices
Design, introduce and monitor appropriate, traditional and innovative climate resilient agricultural production techniques:

- Provision / introduction of:
1. Resilient / high yield cultivars (SPC scale up)
 2. Irrigation and water efficiency
 3. Composting.
 4. Raised beds / container gardening etc
 3. Ground and Rain water management.

Food preservation and market access
Strengthen /support traditional and introduce new food preservation and production techniques, including for food security in times of shortages:

- Provision / introduction of:
1. Preservation techniques and equipment
 2. Weather early warning and response plans
 3. Outer island food export scheme

Natural Resource Resilience
Mitigate coastal zone erosion, salt water intrusion and improve island ecosystem function through agroforestry approaches

- Introduction (where appropriate of)
1. Inter-cropping, including in coastal zones
 2. Mangrove restoration

Foundational activities

Climate Proofing Agriculture Policies and Plan

1. Review and update RMI Ag / Food Security policies and plans, incorporating climate change.
2. Drafting or amendment of appropriate policies & legislation, if necessary

Community Adaptation Plans on Action

1. Undertake technical vulnerability assessments to identify climate resilient agricultural production priorities.
2. Review and update existing Community Development Plans to incorporate climate resilient food production and food security

It will become more challenging to produce food on atoll islands, as it gets hotter, there is more variable rainfall, including longer periods of no rain (drought) sea level rises and wave energy erodes coastlines.

The natural resource base on atoll islands needs strengthening in order to support sustainable food production and healthy communities.

Monitoring Success Indicators

baseline assessments
no targets
3 visits per year per atoll
nursery survival
transplanting management of crops
payments upon delivery of targets
buy nuts community (criteria for selection of seeds nuts)

increase in food produced from baseline year to project end, and beyond (production potential)

Quantity of food preserved and stored

%increase in cash-crop / value added exports to domestic markets

% of vulnerable coastline benefiting from natural erosion control measures

Evaluated increase in ecosystem health and function within the target communities (area that is benefiting from inter cropping)

Number of communities practicing (and description of) improved climate resilient agriculture production and preservation practices.

Number of planned activities completed

Workshop Participants

Name	Organisation	Email
Radika Kumar	Ministry of RND	radikakumar@gmail.com
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DRAFT