Republic of the Marshall Islands
International Waters Ridge to Reef Project

By: Republic of the Marshall Islands
Environmental Protection Authority

Final Report
2016 - 2021

Prepared by: Kristina Reimers

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Preface

The Marshall Island recognizes with appreciation GEF's ongoing investments in the Pacific Island countries to implement and experiment with new management models and innovative technologies and methods to find practical on-the-ground solutions to water and sanitation issues. Indeed, there have been previous achievements and investments in these areas because of the GEF Pacific IWRM project.

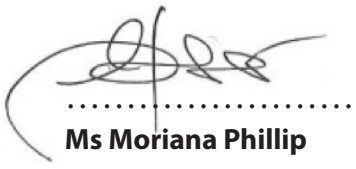
The experience and local capacity in integrated environmental and natural resource management generated through the IWRM project has been recognized as an appropriate entry point for the testing of innovative approaches and measures to integrate land, forest, water, and coastal management, including climate change adaptation in Pacific SIDS.

As the IWR2R project ended, the results and lessons learned provided the opportunity for integration and mainstreaming of ridge-to-reef and community-to-cabinet approaches in the Pacific region. More importantly, the experiences also provide an entry point for further trials, upscaling, and replication efforts in future R2R investments and ICM planning.

Like many other projects, there are shortfalls and challenges encountered in testing innovations through cross-sectoral and multiple sectors and ecosystems from the ridge to the reef. The COVID-19 pandemic is no doubt potentially impacted project implementation, recognizing other operational constraints such as capacity and capabilities in-country.

Notwithstanding, this final report attempts to present key findings and lessons of the IWR2R demonstration project. Generally, the project did not deliver on project outcomes and its stress reduction target. COVID-19, lack of capacity, commitment and support appear to be the dominant contributing factors. Regardless, the lessons learned, and experiences are useful in the design and consideration of future R2R investments.

Moreover, the IWR2R project has stimulated support at both community and national government levels for policy reform and the mainstreaming of integrated approaches as part of national sustainable development planning in the country.



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Ms Moriana Phillip
General Manager,
RMI Environment Protection Authority

Acronyms

FAO	UN Food and Agriculture Organization
GEF	Global Environmental Facility
GEM	Geoscience, Energy and Maritime Division
IW	International Waters
IWRM	Integrated Water Resource Management
M&E	Monitoring and Evaluation
MYCWP	Multi-Years Costed Workplan
R2R	Ridge to Reef
RPCU	Regional Programme Coordination Unit
SPC	Pacific Community
UNDP	United Nations Development Programme
UNE	United Nations Environment
WFP	Work and Financial Plan
RMI	Republic of the Marshall Islands
MALGov	Majuro Atoll Local Government
ICM	Integrated Coastal Management
CMAC	Coastal Management Advisory Council
IOM	Inter-Government Organization
MICS	Marshall Islands Conservation Society
EPA	Environmental Protection Authority
TEK	Traditional Ecological Knowledge
RapCa	Rapid Assessment of Priority Coastal Areas

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Basic Project Data

Project Title	GEF National IWR2R Marshall Islands Project
Project Site/ Location	Laura Village, Majuro Atoll, Marshall Islands
Project Objectives	Testing of 'Ridge to Reef' approaches through the integration of land, water, forest, and coastal management in the Republic of Marshall Islands (RMI)

Contract Information	Contract number:	MI-019-0397
	Original Project Duration:	April 1, 2016 – December 31, 2019
	Contract Extension (if applicable)	January 1, 2020 – June 30, 2021
	Contracting Party:	RMIEPA (RMI Environmental Protection Authority)
	Contracting Party Signatory:	EPA: Moriana PhillipSPC: Samasoni Sauni
	Contract Amount (SPC-R2R):	USD: 200,000.00
	Counterpart (Agency, Department):	USD: 18,324.48
	Counterpart of other partners (e.g., development partners, NGOs, CSO, Academic, etc.)	USD: 2,733.35

Executive Summary

This report provides an update of the R2R IW project implementation at the national and regional level. In the RMI, the project demonstration site is in Laura Village on Majuro atoll where it focuses on stress reduction on land-water use and coastal waters through solid waste management, which uses compost toilet and piggery litter technology, and locally managed areas.

Laura was identified as a high priority site because of its groundwater lens. Laura is the third largest population centre and the groundwater supplies 100,000L of water per day to the capital centre of Majuro. Through years of ineffective management, it now faces many threats to its quality and quantity. In Laura, there is increasing concern over the use of agricultural chemicals and seepage of poorly constructed or maintained septic systems and piggery waste entering the groundwater lens.

Contamination is a major threat to critical groundwater supplies and coastal ecosystems. The Environmental Protection Agency (EPA) has increased its water quality testing and found a large percentage of household catchments in both rural and urban areas are contaminated. These findings are supported by a high and increasing prevalence of water-related diseases such as dysentery, diarrhea, worms and skin and eye conditions. Sources of contamination include unsanitary roof and guttering systems, animal and human waste and solid waste.

The RMI's IW R2R national demonstration project builds on IWRM efforts addressing the above water pollution and contamination issues through cross-sectoral planning and management initiatives, which include ongoing testing and trialing of innovative dried litter technology. The IWRM project was implemented in Laura and focused on promoting cost-effective meansof addressing waste pollution. This project constructed three (3) eco-san compost toilets and one (1) commercial piggery farm, with one Taiwan-funded commercial piggery farm used as a reference. The IWR2R project aimed to integrate targeted scientific investigation on coastal and land ecosystem processes, local knowledge, and strategic partnerships to strengthen the knowledge base for key evidence-based integrated coastal management planning and investment.

Progress of implementation suffered numerous challenges particularly influenced by COVID-19 that restricts movements of people thereby impacting fieldwork and visits to Laura. The project also suffered from operational challenges of high turn of project staff and inability to hire local consultants to undertake technical works. Consequently, the project failed to complete the ICM Plan and therefore unable to deliver on its stress-reduction coastal management measures and a target of 255 ha.

Notwithstanding, the project managed to progress several activities which aligned with testing DLT as a sustained community waste management system and carrying out a scientific investigation on coastal and land ecosystem processes. The project also carried out several activities on outreach-community awareness-raising, engagement, and empowerment. There were ongoing monitoring and collection of water quality data and conducting socio-economic surveys. The results of these efforts plus prior IWRM activities set up the building blocks and provide an opportunity for higher-level discussions and interventions in conservation and coastal protection measures covering approximately 153 ha, which falls short of the end of the project target.

The results from the IWR2R and IWRM projects are not conclusive and further testing of the technology may be more appropriate in the outer islands of the country. This also means there is no reason to upscale and construct more dry-litter units in Laura village since there is no support or interest. Accordingly, the Laura communities' lack of interest stemsfrom their social and cultural perceptions over the use and handling of the dry-litter compost toilets, which affects the social acceptability of the locals. There is a notable disgust of locals in Laura toward the idea of touching the compost when the chambers are full, and therefore, the idea of continuing to use the eco-sans toilet compost technology is abandoned and the dried litter technology remains unused.

Other than the focus on stress reduction targets or indicators, is the need to report on process indicators, particularly in line with GEF tracking tools. This is particularly relevant to better understanding the existing mechanisms for community to cabinet approach and coordination through this project in RMI. The RMI R2R Joint Project Steering Committee or Board plays a significant role as oversight thereby demonstrating a programmatic community to cabinet approach, which strengthens multi-stakeholder cooperation and collaboration between agencies and partners in natural resource governance and management.

RMI is one of the few participating countries that agreed to have one Committee or Board with members representing relevant agencies in the formal and informal sectors, to oversight both the R2R Star and IW projects in the country. The reason for this is to ensure an efficient way of using limited resources as well

as supporting the programmatic approach underpinning the R2R initiative. With instructions to follow the Reimaanlok process, minor changes have been made to theworkplan that would allow the undertaking of the RapCa using the Reimaanlokprocess.

The RMI IWR2R project generated several lessons learned important for future R2R investments and ICM planning. Stronger coordination and collaboration between project management and other stakeholders are urgently required to get the necessary commitments and to ensure the project's

outcomes and sustainability after the end of the project. After the slow start of the project, the breakout of the pandemic, among other challenges, makes the achievement of the project's objectives a great challenge.

Introduction

Situational Analysis, project issues, needs

After the completion of the GEF Pacific IWRM Project, the IW R2R recognizes that there may be other plausible reasons contributing to addressing municipal waste pollution. For instance, there is a mass out-migration of residents in Laura during this project period which, consequently, indirectly contributes to the reduction of nutrient offloads. There is also a notable disgust in touching the compost from eco-san toilets when chambers are full, due to the cultural stigma of a person touching human waste. These social perceptions over the useand handling of dry-litter eco-san compost toilets are impacting the social acceptability of the local population, therefore leading the project to revisit the LogFrame and the MYCWP[1].

The project suffered from numerous challenges ranging from COVID-19 and capacity in-country. It took a long time to hire local consultants and technical support from the RPCU-SPC and partners hampered by lockdowns and closed borders. Efforts to assist through virtual platforms did not work well and support from the host agency could have been better.

The project continued to focus on the continued water quality monitoring away from the point sources of dry-litter technology. The EPA water quality monitoring program in Laura has seven (7) sites located haphazardly from land to coastal and marine areas towards the lagoon and open ocean. While the monitoring continued land- use and water resources, the priority focus was to use that and integrate it with ICM planning and investments.The preparation for a Laura ICM plan was the key deliverable of the project with the goal of impacting anestimated area of 255ha.

Project Scope, components, and anticipated results

The project LogFrame has been revised to reflect the shift in focus towards preparing the ICM plan that will impact an area estimated at 255ha. The LogFrame is made up of three (3) components with ten (10) outcomes and sixteen (16) outputs that aim to achieve environmental stress reductiontargets of the R2R IW project. The detailed revised logframe is annexed to this report.

Key Components	Expected Outputs	Anticipated Outcomes
1. Sustained community adoption of appropriate on-site waste management systems to reduce contaminant impacts on environmental and public health at Laura Village	Impacts and lessons learned on the success (or not) of composttoilets reducing municipal waste in Laura analyzed and documented: Documents targeted scientific research into composting mechanisms, contaminant reductions, and optional operating conditions to enhancesystem efficiency	If not successful, use the Laura experiences to trial compost toilets in the outer islands. The community's perception of handling/using technology might change through improved awareness, knowledge and socially accepted.

[1] multi-years costed work plan

Key Components	Expected Outputs	Anticipated Outcomes
2. Integrated targeted scientific investigation on coastal and land ecosystem processes, local knowledge, and strategic partnerships to strengthen the knowledge base for key evidence-based ICM planning and investment	Traditional Economic Knowledge (TEK) surveys completed, results analyzed, report prepared and presentedto Laura's communities and partners Survey results are available forinput Land use maps of Lauracompleted and available	Improved community understanding of waste management issues and solutions through enhancedaccess and appropriate information Strengthened integration of traditional ecological knowledgewith scientific investigations
3. National and local management planning forintegrated land, water, and coastal management for sustainable livelihoods atLaura	ICM plan was completed and adopted by the Board for implementation, and its application covers an area of 25ha in Laura The consensus amongst the relevant agencies and funding bodies regarding pressuring coastal issues, impact on sustainable livelihoods and required management interventions at Laura	Connecting aspects of land use and coastal health to livelihoodsand public health featuring information on connection totraditional lifestyle

Project Organization and Management

The RMIEPA is the national implementing partner of this project. The RMIEPA operates as a government-funded authority with ties to the Ministry of Health and Environment. The RMIEPA's duties surround theareas of nature conservation, waste disposal, public sanitation, public and marine quality monitoring, and environmental education. The RMIEPA is administered by a chairman and four members of the Authoritywho function as a Board. One member from Majuro represents the private sector, while the others representgovernment agencies. The Board regularly meets with the RMIEPA management plans and reviews program activities, informing the Minister of Health Services of all major policy and planning decisions under consideration. Daily activities are managed by a General Manager. The IW R2R project is housed at the RMIEPA office.

A Joint Steering Committee was established for the GEF Pacific National R2R STAR project and the IW R2R national demonstration project. The Chairman of the JSC is the director of the Climate Change Directorate.

Project Stakeholders and Engagement

Stakeholder	Role
EPA (EnvironmentalProtection Authority	The primary agency for environmental protection; duties encompass the area of nature conservation, waste disposal, public sanitation, public and marine water quality monitoring, and environmental education. On-going water quality monitoring of Laura Village 7 coastal sites forpathogens and physical parameters Currently training newly hired staff to test over freshwater wells in Laura
CMAC (The Coastal Management AdvisoryCouncil)	The CMAC circle consists of a dedicated team that includes MIMRA (Marshall Islands Marine Resources Authority), EPA, MICS, and IOM, which are working together to gather information in order to compile and incorporate data and information into creating a resource management plansfor targeted areas by following the Reimaanlok process.
MICS (Marshall IslandsConservation Society)	Implementing partners of the CMAC that seeks to sustain biodiversity and livelihoods by building community resilience through strengthening natural resources. A team of surveyors was hired to collect Socio-Economic surveys in the Laura communities: Lobat, Iolab, and Lomar. 53 household surveys have been conducted.
IOM (Inter-Governmental Organizational)	An inter-governmental organization that consists of a dedicated team thatperforms dynamic work in the field of migration. IW R2R collaborated with a surveying team from IOM to test the newestversion of the Socio-Economic survey. 54 surveys were conducted.

Project Results and Achievements

Component/ Outcomes/ Outputs	Indicate the appropriate name of thecomponent, the desired outputs, and activities	Indicate the Status of implementation (choose from the following: -Completed or not completedjustifythe reason
Component 1	**Sustained community adoption of appropriate on-site waste management systems to reduce contaminant impacts on environmental and public health at Laura village**	
Outcome 1.1	Evidence-based application of onsite waste management systems socially acceptable to use bythe local population in Laura	**Not completed.** There was no support and interestfrom the community in the technology despite efforts made bystakeholders. Change of priorities and social perceptions on handlingthe litter eco-san compost toilet had a huge impact on the social acceptability by the local population; they did not want to touch the compost from chambers. 3-compost toilets have been abandoned by the community.
Output 1.1.1	Successful use of the IWRM 3 eco-san composttoilet with optimal design and operation ensuring water safety, and use of human compost in Laura Village	**Not completed.** Same as above.
Output 1.1.2	Successful use of the IWRM pig waste management dry litter technology constructed and piloted from a Taiwan-funded project contributing to environmental stress reduction in Laura demo site	**Not completed.** The technology worked for a while but was soon abandoned for two reasons according to the Jeirok councilman, Jina David: thepeople no longer wanted to use the method; it was a lot of work when they could trade their greenwaste for the Taiwan pig farm for their compost instead. Anotherreason was the notable mass migration from Laura Village to another, leaving some of the dry litter technology abandoned.
Output 1.1.3	If appropriate, future trialing & up-scaling R2Rinvestments on dry-litter technology in the outer islands	**Not completed.** Although the mayors of respectiveouter islands have voiced their agreement about the technology being more appropriate to the outer islands, none have voiced their interest in utilizing them at their own atolls despite having a certain understanding of how they work as explained in the Joint Steering Committee meetings.
Output 1.1.4	Case study on the effective application of dry littertowards stress reduction in coastal areas (habitats,fish)	**Part-completed** Same as above. Water quality testing and monitoring continued over time in selected stations covering land and marine sea areas adjacent to coastline.
Outcome 1.2	Improved community understanding of waste management issues and solutions through enhanced access to effective and appropriate information	**Part- completed** Outputs have not been completed.(See below)
Output 1.2.1	Advocacy & information access enhanced through "virtual" Learning Center establishment and other media outlets	**Part-completed.** A leasing arrangement/contractwas never made; difficult to schedule a meeting with several landowners. Advocacy and information access available through other EPA and other media outlets

Output 1.2.2	Regular review reporting of the Centre and impacts of materials to increase awareness & understanding of the R2R approach	**Part-completed.** SEM survey reports have not beencirculated which would have been used as a supporting document forlisted activities, which included (1.2.2.2: the preferred methods ofawareness for increasing awareness and understanding.)
Output 1.2.3	Knowledge products, dissemination, and communications	**Part-completed.** Supported the development of project webpage through training and content development for information and knowledge sharing and facilitation of policy processes. Including participatory M&E training and product development. Refer Annex 6. The Project also experiencedenthusiastic partnership with implementing partners who werealso the Reimaanlok facilitators but through contractual agreements.
Outcome 1.4	Causal links between land use and coastal healthand sustainable livelihoods and public health are established and understood through integrating current and historical data	**Completed.** See below.
Output 1.4.1	Sub-contract agreements with relevant agenciesand partners (e.g., Fisheries, Health, MCS) developed or reviewed/signed	**Completed.** Though we were receiving supportfrom CMAC, there were no established MOUs on projectcommitments. A short-term service contract wasmade between the IW R2R and theEPA for the MICS services tocollect survey data from 5 communities in Laura Village.
Output 1.4.2	Sub-contractors conduct work to collect primarydata and information, linking land use, coastal health, and improved livelihoods	**Completed.** Micronesia Conservation Society carried out the socio-economy surveys in Laura. EPA and Project staff collected water samples and testing in several coastal lands and marine areas of Laura.

Component 2	**Integrated targeted scientific investigation on coastal and land ecosystemprocesses, local knowledge, and strategic partnerships to strengthen the knowledge base for key evidence-based ICM planning and investment**	
Outcome 2.1	Enhanced knowledge of waste managementand community understanding of linkages between land use, coastal health, and status of coastal habitats in Laura	**Not completed.** MIMRA could not find data on activities that have been implemented in 2016 after transferring to a new MIMRA building with new equipment, but the data have been misplaced and have yet to be found.
Output 2.1.1	Coastal Health Monitoring Programestablished	**Not completed.** Same as above.

The remedial measures were to introduce EPA's Arc-GIS tool to do land cover to map out current programs and initiatives relating to coastal health and identify gaps and opportunities but were unfortunately delayed due to the slow process of budgeting and hiring from the Jo-Jikim.

Outcome 2.3	Strengthened integration of traditionalknowledge with scientific investigations	**Not completed.** Outputs were not delivered. Seebelow.
Output 2.3.1	Traditional Ecological Knowledge documented and compiled for input in a scientific investigation	**Part-completed.** A survey has been completed, but the analysis not completed. The data is stored in the SurveyMonkey app owned by the EPA. The EPA will continue to write the report, and once completed, the report will be circulated with partners.
Output 2.3.2	Populate the TEK database with surveyresults, perform analysis and reporting	**Not completed.** Same as Output 2.3.1
Outcome 2.4	Enhanced access to information regarding land use, and status of coastal habitat and fisheries in Laura village	**Not completed.** Outputs have not been delivered. See below.
Output 2.4.1	Laura village land-use maps were developed andmade available	**Not completed.** Collaboration with UUSC andEPA started their implementation during thesummer of 2021, when the project was ending on June 30th, 2021.
Output 2.4.2	Make available maps during diagnostic analysis workshop and related awareness and communication exercises	**Not completed.** Same as Output 2.4.1.

With the MOA between the EPA/SPC+RPCU signed, the EPA has agreed to introduce the Arc-GIS tool to do land cover to map out current programs and initiatives relating to coastal health and identify gaps and opportunities. This plan originally started with the collaboration between the UUSC (Unitarian Universalist Service Committee) and EPA and Jo-Jikum. Unfortunately, planning and preparations have been a slow process, with the preparations of budgeting to pay local service from Laura residents from Jo-Jikum. The activities finally started late in the summer of 2021, when the project was unfortunately closing.

Component 3	**National and local management planning for integrated land, water, andcoastal management for sustainable livelihoods at Laura**	
Outcome 3.1	Management strategies developed to sustaincoastal livelihoods at Laura through inter-agency cooperation	**Not completed.** Outputs are incomplete.
Output 3.1.1	Laura Village Coastal Network (Laura Lens Committee) diagnostic analysis and management plan operational	**Not completed.** The Laura Lens Committee was established but only two members left. The reason is because of achange in priorities; many of the members are obligated to focus on their jobs, while the rest have migrated overseas for either job opportunities or healthcare.
Output 3.1.2	Develop an ICM plan and related management strategies and regulations, if required, for sustained coastal livelihoods	**Not completed.** There was difficulty in finding a localconsultant that would agree with the terms of payment. Bythe time we found one, the The project deadline was already ending.
Output 3.1.3	If appropriate, prepare and implement the ICM implementation plan including the prospects of developing regulations in supportof strengthening catchment protection measures of at least 255 hectares of area in Laura.	**Not completed.** Same as Output 3.1.2

Financial Summary

SPC-R2R Financial Contribution

Amount	Total Amount Spent	Utilization Rate[1](in Percentage)
$200,000 USD	$168,748 USD	84%

Materialized Co-financing

Name of Co-financer	Type of Co-financing[2]	Amount[3](USD)
RMI-EPA	In-Kind	$18,324.48
MICS	In-Kind	$2,733.35

Implementation Progress Ratings

A brief and concise assessment of the results and achievements of the project from the perspective of the recipient. The assessment should endeavour to respond to the following assessment areas:

1. **Inputs**: To what extent have the planned inputs been supplied?
   - At most, funds have been sufficiently delivered for the preparation of procuring items and services
   - Partnership with implementing partners who are Reimmanlok facilitators have been established through contractual agreement (MICS) and developed MOUs (EPA)

2. **Outputs**: To what extent have the planned outputs been produced?
   - Implementing planned outputs remained unsatisfactory, due to the extreme delay in participating in activities with other partners.
     - Slow system performance: other agencies were busy with respective prerogatives, and were currently catching up to said prerogatives due to pausing the preparation for the global pandemic
     - Covid-19 National Crisis: For about two months in the early Spring of 2020, MALGov had announced the possible arrival of the virus as a National Crisis. Almost every government department and office had halted their current projects to spread awareness to the public on how to prepare should the virus breach the borders.
     - Inadequate transmission from previous project manager to new: There was little to no consultation from the previous manager that had abruptly left the project to the new one and left with little data shared for proper transmission.

[1] Amount spent divided by amount budgeted/planned multiply by 100.
[2] Grant or In-kind
[3] Total cash and monetized in-kind contributions.

3. **Objectives**: To what extent have the outputs contributed to achieving the project objectives?
    - Most of the outputs were not delivered, and so the objectives remain unsatisfactory.

4. **Sustainability** of the project results: To what extent will the intended results of the activity be sustainable?
    - Following the Reimaanlok framework, which employs community-based tools and approaches to articulate local objectives that translate to national, regional, and international goals.
        - The IW R2R project supported the process of the Reimaanlok framework by establishing a common goal of collecting local and traditional knowledge and use of resources to obtain information about resource health and status by using the SEM household survey that was designed by the CMAC.
        - SEM household surveys conducted in 104 households in Laura:
            - The survey visits the focus of documentation and collection of local knowledge and use of resources in order to design and legislate a resource management and conservation plan to ensure monitoring and adaptive management. The collection of information is important for understanding the degree of dependence of the local community on the natural resources for subsistence and income generation.

5. **Risks/Assumptions/Conditions:** To what extent were the previously identified conditions, assumptions and accompanying risks addressed?

Context	Specify the identified Conditions, Assumptions and Risks	Provide your assessment in this column
Conditions	Government and non-government's willingness to support the project	Government and non-government departments have shown interest, but for the most part, the timing has been extremely delayed
Assumptions	Improved awareness, knowledge, understanding and social acceptability would lead to increased interest	No interest in the dry-litter technology in the community; deemed socially unacceptable. But willing to look at alternatives (taro patch revitalization project)
Risks	Resources and implementing partners' availability to undertake and complete the target end of the project	Partners are obligated to their own projects, therefore there are limited capacity of implementers available for progress

An assessment of the overall risk for the project is scaled as Modest Risk (M), with a probability of up to 26% - 50%that assumptions may fail to hold or materialize, and/or the project may face only modest risk.

6. **Overall Implementation Progress Rating**
    - Overall Implementation progress rating for this reporting period is Unsatisfactory (U): Implementation of most components is not in substantial compliance with the original/formally revised plan. In 2019 there were strategic changes to focus only on priority deliverables that are more practical, which include changing the stress reduction target from 544.20 ha to 244 ha.

Project Contributions to the Regional IW R2R Program Outputs and Outcomes

This Chapter provides snapshots of the national project contributions to the Regional Ridge to Reef program components such as:

1. National demonstration to support R2R ICM/IWRM approaches for island resilience and sustainability. Specifically, an account of the status of:

   1.1 Successful pilot projects testing innovative solutions involving ICM, IWRM and CCA (linked to theSTAR via the larger Pacific R2R network).

   - Three (3) DLT compost toilets and one (1) DLT piggery constructed and implemented during the IWRM project were used by the IWR2R project as demonstration and trial. During this time, the project supported the monitoring of specific indicators to ascertain contamination levels of groundwater and surface waters.
   - The project also supported the work of the Laura Lens Committee and several awareness-raising programmes and community/school meetings. However, there were operational challenges encountered that resulted in the Committee being dysfunctional and other planned activities delayed or cancelled. It was difficult to hire local consultants on the island and the ICM Plan was not completed.
   - In the end, the project was not able to deliver on the stress reduction target.

   1.2 National Diagnostic analysis for ICM conducted for prioritizing and scaling up key ICM/IWRM reforms and investments.

   - The diagnostic analysis to conduct an ICM plan had been heavily delayed due to the struggle of finding a reliable and willing consultant. The process of hiring a consultant was not continued as the project deadline has ended, therefore the status of the conduct of diagnostic analysis remains unsatisfactory.

   1.3 Multi-stakeholder leader roundtable networks established for strengthened 'community to cabinet' ICM/IWRM.

   - In the Community, the traditional leaders and the landowners are the most influential, engaging them in the decision-making processes for the project. Their participation has also been effective in encouraging interest from other community members/representatives.
   - The Joint R2R Project Committee or Board is a good example of multi-stakeholder leader networks and a demonstration of a programmatic approach to natural resource governance. The Board members represent a range of relevant agencies in the formal and informal sectors, including civil societies and Offices of Mayors.

2. Island-based investments in human capital and knowledge to strengthen national and local capacities for R2R ICM/IWRM approaches, incorporating climate change adaptation.

   2.1 National and local capacity for ICM and IWRM implementation built to enable best practices inintegrating land, water, forest and coastal management and climate change adaptation.

   - 2 national experts enrolled and graduated in the postgraduate Certificate course in Ridge to Reef Sustainable Development at James Cook University.
   - The IWRM and IWR2R university courses continue to be available and delivered by selected universities.
     - Exchange of technical expertise, technology transfer, training, and demonstration work through strengthened cooperation, which in turn enhances the participation of targeted communities and local authorities in planning and implementing adaptation actions and measures.

- National and local capacity for R2R ICM/IWRM approaches incorporating climate change adaptation continue to increase from outreach and awareness-raising programmes, formal curricula in primary and secondary schools, as well as the Micronesian Colleague (MIC)

2.2 Incentive structures for retention of local R2R expertise and inter-governmental dialogue on humanresource needs for ICM/IWRM initiated.

- National staff and stakeholders trained in Gender Mainstreaming and gender analysis for the national pilot project

3. Mainstreaming of R2R ICM/IWRM approaches into national development planning

3.2 National and regional strategic action frameworks for ICM/IWRM endorsed nationally and regionally

- A start-up committee for the IWRM Demonstration Project was first established in 2009 with members limited to traditional leaders, major landowners, and Council officials from the Local Government. Following the establishment of the Project Management Unit In 2010, efforts were made to revitalize and expand the membership of this group. Initially, traditional leaders and Laura residents were invited to consultations to re-introduce project goals, and objectives, and to ensure all key traditional leaders were adequately represented in these discussions.
    - Revitalization of participation through face-to-face consultations with key traditional leaders of Laura. These consultations resulted in an expanded membership list to include representation of community leaders not in the original membership list
    - Establishment of an Advisory Sub-Committee to act as the Working Group of the Committee.
    - Elaboration of Committee Terms of Reference to guide the work of the Committee.

3.3 Coordinate approaches for R2R integrated land, water, forests and coastal management and climatechange adaptation

- A Joint Steering Committee was established for the GEF Pacific National R2R STAR project and the IW R2R national demonstration project. The Chairman of the JSC is the director of the Climate Change Directorate.
- The JSC allows the stakeholders to understand the updates, progress, and roles of both STAR and IW R2R projects and how they connect. Engagement strategies are shared to apply a common methodology through the application of the Reimaanlok process.

Project contributions to the GEF Focal Areas, SDGs including Special Themes

This Chapter provides snapshots of the contribution of the national demonstration project contributions to the GEF Focal Areas such as International Waters, Biodiversity Conservation, Land Degradation, Sustainable Forest Management, and Climate Change Adaptation. Provide response only to the appropriate GEF Focal area/s where your project contributes to. Delete those that are not applicable or relevant.

GEF Focal Areas

1. International Waters

The Laura water lens is a critical resource in that it supplies a significant portion of freshwater for the Majuro population, and yet it faces multiple threats and has not been managed very effectively or sustainably over the years. It is crucial to take steps in introducing more sustainable use of water lenses, which was the main objective of RMI's GEF supported IWRM National Demonstration Project. The RMIEPA focused on a monthly water quality monitoring in 7 coastal sites located in the Laura Village for pathogens and physical parameters, away from the point sources, both dry-litter eco-san toilets and pigpens, and also on-site septic systems with thepriority to use the data and integrate with ICM planning and investments, in which would have been the keydeliverable of the project. The EPA has currently identified over 241 household wells and 7 boreholes in Laura,in which most are being used, while the rest are abandoned. The wells and boreholes are now being tested for pathogens and salinity. Data will be stored and analyzed by EPA's water lab technicians even after the project is over. The data will be used and shared with partners involved with the CMAC.

2. Climate Change Adaptation

The project contributes to addressing the environmental threats, linking them to coastal management and climate change adaptation and resilience. While the project technology was not accepted in the Laura community, it would be more suitable and needed in the outer islands of the Marshall Islands.

Sustainable Development Goals (SDGs)

SDG	Project contributions
SDG 1 – No poverty	No
SDG 2 – Zero hunger	No
SDG 3 – Good health and well-being	No
SDG 4 – Quality education	No
SDG 5 – Gender equality	Yes Enhance the use of enabling technology, in particular information and communication technology, to promote the empowerment of women

SDG 6 – Clean water and sanitation	Yes By 2030, improve water quality by reducing pollution, eliminatingdumping, minimizing the release of hazardous chemicals and materials, halving the proportion of untreated wastewater, and substantially increasing recycling and safe reuse globally By 2030, implement integrated water resources management atall levels, including through transboundary cooperation asappropriate. Support and strengthen the participation of local communities in improving water and sanitation management
SDG 12 – Responsible productionand consumption	Yes
	Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning
SDG 13 – Climate change	Yes
SDG 14 – Life below water	Yes By 2025, prevent and significantly reduce marine pollution of all kinds, from land-based activities, including marine debris and nutrient pollution
SDG 15 – Life on land	No
SDG 17 – Partnerships for the goals	Yes Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnership.

Special Themes

3. Gender Mainstreaming

The IWR2R project demonstrates support for gender social inclusion and to ensure some level of balance participation of women, men, youths, persons with disabilities, and other vulnerable and church groups and communities. The table below provides sex aggregated data from range of training, workshops and meetings supported, co-lead or lead by IWR2R project.

Date	Trainings/Workshops/Meetings	Number of Participants	Gender
Oct/11/2017	Developing an agenda for a jointintercept workshop	3	Females: 0 Males: 3
Nov/12/2017	Meeting with members of MIOFA	3	Females: 0 Males: 3
Mar/27/2019	RMI STAR and Regional ProjectBoard Meeting	17	Females: 8 Males: 9
Aug/23/2019	Reimaanlok Socio-Economic Surveyreview	7	Females: 5 Males: 2
Sept/20/2019	Meeting with MICS	4	Females: 2 Males: 2
Sept/26/2019	Meeting with Majuro Mayors	11	Females: 4 Males: 7
Oct/17/2019	RMI IW R2R Skype Meeting	2	Female: 1 Male: 1
Oct/22-28/2019	Revisiting National LogFrame andMYCWP	3	Females: 1 Males: 2
Oct/30/2019	4th RMI Ridge to Reef STAR and Regional IW Project Board Meeting	24	Females: 14 Males: 10
Nov/14/2019	Meeting with Jeirok Councilman	3	Females: 2 Males: 1
Feb/12/2020	Land Study Workshop	21	Females: 16 Males: 14

Feb/27-28/2020	CMAC Retreat 2020	16	Females: 10 Males: 6
Oct/6-23/2020	Fifth Regional Steering CommitteeMeeting (Virtual)	52	Females: 31 Males: 21
Nov/9/2020	R2R Capacity Needs Interview	2	Females: 2 Male: 1
Nov/23/2020	R2R Capacity Needs Assessment(Between IW & SPC)	2	Female: 1 Male: 1
Jan/6/2021	ICM Consultant Discussion	3	Females: 2 Male: 1
Feb/4/2021	RMI IW R2R Zoom Meeting	4	Female: 1 Male: 3
Mar/11/2021	RMIEPA & IW R2R Zoom Meeting	7	Females: 4 Males: 3
June/7/2021	Interview for ICM Consultant	3	Females: 3 Males: 0
June/9/2021	RMI R2R Project Steering Committee Meeting	14	Females: 5 Males: 9
June/17/2021	RMI IWR2R Results and LessonsLearned	4	Females: 4 Male: 0

Lessons Learned (Innovations and Catalytic Impacts)

Innovative aspects

The project experienced numerous complications, such as incomplete project outputs, limited technical expertise/ support, change in administration and infrequent meetings with stakeholders, which all have delayed the project immensely.

The lesson learned in implementing a programmatic approach is that the Regional and National projects need to be better aligned to correspond with the mainstreaming of the ridge-to-reef and community to cabinet approaches and to enhance coordination and communication vertically and horizontally across the implementation process. The role of the project management needs to be strengthened with more frequent meetings, adequate advance provision of documentation, and the establishment of follow-up mechanisms which are practical and used. It is essential for project management and other stakeholders to maintain stronger coordination and collaboration to ensure the project's sustainability. Although implementation has been accelerated in 2019 with new management, the breakout of the COVID-19 pandemic presents a great challenge and delays the achievement of the project's target.

Catalytic impacts

The impacts of collecting household surveys designed by the CMAC led to the assessment of potential sites vulnerable to saltwater intrusion and/or pollution. Spending time talking with the community improved some understanding of community concerns and the impacts that past events have had on the water lens, among other natural resources. The information would be supported by the surveys, identifying the areas of land likely to be flooded by waves which may result in a saltwater intrusion in the groundwater lens. Along with the water samples collected by EPA, the initial data and information will provide a baseline for management and help to identify the gaps and needs for future studies.

Evidence and scientific-based approaches that inform policy decisions and behavioural change reinforce the lesson of "seeing is believing." For instance, seeing the increasing levels of contamination based on tempo-spatial water quality data influence the community's understanding of the root causes of the municipal waste problem in Laura. This may not directly impact on Laura community's decision to adopt the DLT innovation, but at least the locals recognize the continuing need to explore innovative technologies to address contamination of water and prevent disease outbreaks in the future.

Annexes

Annexes	Title of the document
Annex 1	RMI Project Logframe (revised) RMI Project MYCWP (revised)[1]
Annex 2	Joint Project Steering Committee and Highlights of Meetings[2]
Annex 3	National RMI Programme Document https://www.pacific-r2r.org/sites/default/files/2020-03/Marshall%20Islands.pdf
Annex 4	National Demo Project Progress Reports[3]
	RMI IWR2R Project Most Significant Change (MSC) story https://www.pacific-r2r.org/sites/default/files/2020-03/MSC_Poster_Layout_RMI_IW.pdf RMI STAR R2R Project MSC story https://www.pacific-r2r.org/sites/default/files/2020-03/MSC_Poster_Layout_RMI_STAR.pdf
Annex 5	Brief Updates of the IW R2R Project Implementation in the Laura Demonstration Site https://www.pacific-r2r.org/sites/default/files/2020-07/Brief%20Updates%20of%20the%20International%20Water%20%28IW%29%20R2R%20Project%20Implementation%20%20in%20the%20Laura%20Demonstration%20Site.pdf
Annex 6	RMI IWR2R Project webpage https://www.pacific-r2r.org/index.php/partners/member-countries/rmi

2 Report can be requested with consent and approval from RMIEP Head on morianaphillip.rmiepa@gmail.com
3 Meeting records can be requested from RMIEPA Head, on morianaphillip.rmiepa@gmail.com
4 Reports can be requested with consent and approval from RMIEP Head on morianaphillip.rmiepa@gmail.com