RMI EPA
Annual Report
January 2023 - December 2023

Acronyms

ADB.....Asian Development Bank
ACWA .....Addressing Climate Vulnerability in the Water Sector in the Marshall Islands
CDL .....Container Deposit Legislation
CLCD .....Coastal, Land, and Conservation Division
CMI.....College of the Marshall Islands
EA .....Environmental Assessment
EAD.....Education and Awareness Division
EIA .....Environmental Impact Assessment
EmPA .....Earthmoving Permit Application
EmP .....Earthmoving Permit
EMP .....Environmental Management Plan
EPA .....Environmental Protection Authority
FY23.....Fiscal Year 2023
FY24.....Fiscal Year 2024
GCF .....Green Climate Fund
GEF .....Global Environmental Facility
GEM.....(SPC) Geoscience Energy and Maritime
GM.....General Manager
GoRMI .....Government of the Republic of the Marshall Islands
IEPC .....International Environment Policy Coordination
JICA.....Japan International Cooperation Agency
J-PRISM ....Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries
LSA.....Life Skills Academy
MCAP.....Managing Coastal Aquifers Project
MCS .....Majuro Cooperative School
MICS .....Marshall Islands Conservation Society
MoU .....Memorandum of Understanding
MWSC.....Majuro Water & Sewer Company
NDS.....North Delap School
NOAA.....National Oceanic and Atmospheric Administration
NZ MFAT ...New Zealand Ministry of Foreign Affairs and Trade
PEA .....Preliminary Environmental Assessment
PIEC.....Pacific Islands Environment Conference
PMI.....Pacific Media Institute
PSS.....Public School System
RES.....Rita Elementary School
RMI.....Republic of the Marshall Islands
RRES .....Rairok Rainbow Elementary School
R2R .....Ridge to Reef Project
SPC.....The Pacific Community
SPREP .....Pacific Regional Environment Programme
SWPD.....Solid Waste and Pollutants Division
TCMI .....Trust Company of the Marshall Islands, Inc.
ToR.....Terms of Reference
UNDP.....United Nations Development Program
USEPA.....United States Environmental Protection Agency
WQD.....Water Quality Division

Foreword by the General Manager

Moriana Phillip

Our strategic plan sets the direction for the organization and is the framework for our programs and activities over the next three years from 2023-2025. The RMI EPA is the agency mandated with protecting our environment and people from negative environmental impacts of development, however, the challenge is great. In this context, EPA needs to sharply focus on the most pressing environmental challenges, and carefully direct resources to these efforts. This will require closer partnership and collaboration with development partners to ensure that projects are sensitive to the unique environment. It will require commitment, teamwork and additional funding support from the Government and donors.

MORIANA PHILLIP
General Manager

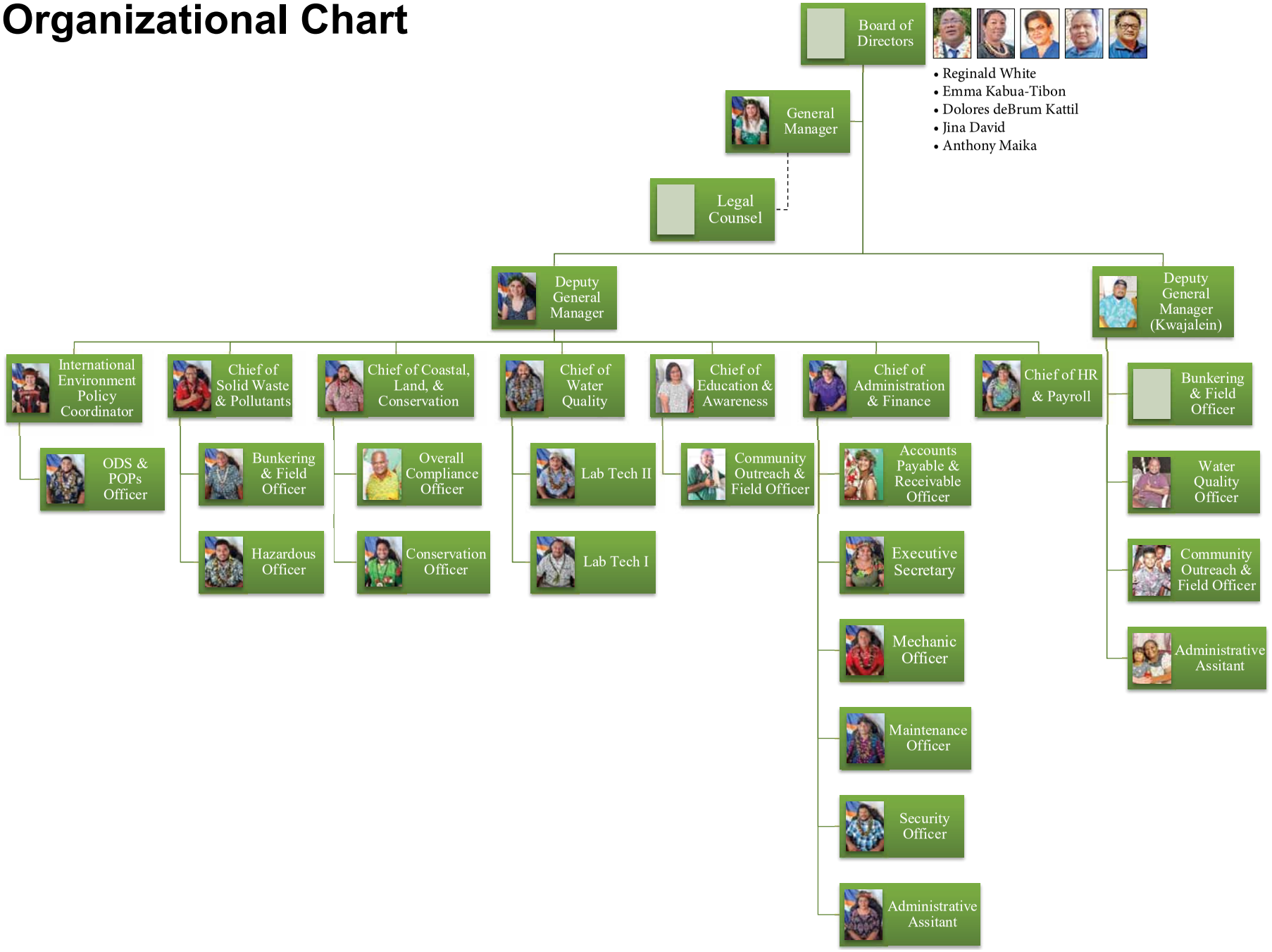
EPA's response to the Marshall Islands' serious environmental challenges will be to prevent the worst impacts on the environment and people, while building capability over time to address the issues more effectively and proactively. Our highest priority over the next 18 months will be to update the environmental regulations, permits and operating procedures to modernize the tools we have to work with and ensure they are relevant and able to be implemented.

Other pressing issues are to work with others to find a way to reduce marine pollution from vessels in Majuro lagoon, and developing a program to ensure the safety of household water supplies. We will work to support more sustainable and resilient coastal development through guidance, environmental impact assessments (EIAs) and permit conditions. At the same time, we will work with others to develop innovative responses to challenges such as plastic waste.

On outer islands the impacts are not as pressing compared to the urban centers, so our role will be to participate in activities led by others to assist those islands to develop resource management plans, in order to manage and protect their environment for the long term. There are several activities the EPA currently carries out that we have determined would be better dealt with by other agencies, so we will work over the next 12 months to hand over those responsibilities.

The staff at EPA are committed and passionate about protecting the environment and protecting the health of the people of the Marshall Islands. But it is a hard job. Individual priorities may come before community priorities, sometimes resulting in conflicts. It is the EPA's job to have courage and to stand strong in the face of this and to ensure the quality of the environment for all Marshallese. The EPA will respond to the challenges of working with communities through increased efforts to advise, consult and inform them of the benefits of good environmental management.

Organizational Chart



FY23 Annual Report

The RMI Environmental Protection Authority (RMI EPA) is a Statutory Authority, consisting of an independent Board, with broad functions and mandates as set out in the National Environmental Protection Act of 1984 and the Coast Conservation Act of 1998. RMI EPA is responsible directly to the President of the Marshall Islands, usually through the Minister in Assistance to the President and Environment. RMI EPA was first established in 1984 while the RMI was in its last years as a UN Trust Territory administered by the US and the scope of the office's activities was determined at that time.

RMI EPA is the key environmental compliance and enforcement Agency in the country. The main regulatory responsibilities include environmental permits, development approval, environmental impact assessment (EIA), and compliance and enforcement. The main enforcement tools available to RMI EPA are revocation of a permit, a cease and desist order, a civil penalty, or, if provided for under the statute, criminal enforcement. Apart from its regulatory and compliance functions, it has an advisory role to the President and the Cabinet, is involved in international liaison, has reporting functions, conducts surveys and research, collates information, and carries out community liaison as well as policy, planning, and management functions in the areas of land use and conservation of natural resources. Under the Coast Conservation Act, RMI EPA has a role in coastal management including surveys and research for biophysical inventory and conservation. The areas of focus for RMI EPA are marine pollution, coastal development control, freshwater and marine water quality, solid and liquid waste, and hazardous substances. The spatial dominance of coral reefs in the RMI requires a significant focus by RMI EPA on preventing and mitigating a myriad of environmental impacts on this high-value marine ecosystem.

Our Role

The primary purpose of the Authority shall be to preserve and improve the quality of the environment. The Act (NEPA Act 1984) states the objectives of the Authority:

- To restore and maintain the quality of the environment;
- To use all practicable means including financial and technical assistance to foster and promote the general welfare of the people by creating conditions where mankind and nature can coexist in productive harmony;
- To improve and coordinate consistently with other essential considerations of national policy, governmental plans, functions, and other programs and resources, to prevent, as far as practicable, any degradation or impairment to the environment;
- To regulate individual and collective human activity in such a manner as will ensure people safe, healthful, productive, and aesthetically and culturally pleasing surroundings;
- To attain the widest possible range of beneficial uses of the environment without degradation or impairment thereof and other undesirable consequences to the health and safety of the people;
- To preserve important historical, cultural, and natural aspects of the nation's culture and heritage, maintaining at the same time a culture that supports multiplicity and choice; and
- To study the impact of human activity including population growth and redistribution, cultural change, exploitation of resources, and technological advances on the environment.

Policy Focus

RMI EPA's mandate and role have changed in the past 20 years and continue to evolve. In 1984, RMI EPA was the only body mandated to protect the environment in the RMI. However, since that time environmental and sustainability issues have become major issues concerning public and international policy. During the 1990's the RMI EPA engaged in global, regional, and local treaties and conventions. During the past year, the role of the RMI EPA regarding EIA, Water Quality Standards, and Coordination with the Ministry of Health & Human Services (MoHHS) regarding health issues related to water quality has come to the forefront of RMI EPA actions.

Goals of the RMI EPA

The functions and duties of the RMI EPA, mandated in the Act are (paraphrased):

- To administer the provisions of the Environment Protection Act;
- To recommend to the government national environmental policy and criteria for the protection of the environment;
- To investigate pollution;
- To carry out research and develop criteria for the protection and improvement of the environment;
- To publish information regarding environmental management;
- To collect information and establish record-keeping, monitoring, and reporting requirements;
- To undertake investigations into complaints relating to noncompliance with any provisions;
- To specify methods for sampling and testing;
- To provide information to the public regarding the protection and improvement of the environment;
- To maintain relationships with other countries and organizations for environmental protection and management;
- To advise the minister on any requirements for new legislation or amendments to legislation;
- To promote and carry out long-range planning in environmental protection and management;
- To classify land, air, and water according to present and future uses;
- To minimize the impact of solid waste disposal on the environment and the health of the RMI people; and
- To conserve, and ensure sustainable use and equitable benefits from the biodiversity of the RMI.

Our Vision

Our communities are protected from unacceptable environmental damage, pollution, and health hazards. Our communities take responsibility for protecting the environment and preventing the emergence of environmental health issues.

Our Mission/ Values - the four C's

Courage – we stand strong for our environment and the health of our families and communities as Marshall Islanders, sometimes in the face of opposition;

Collaboration – we work with others to achieve together what we cannot achieve alone;

Community – we are part of our community and work with them to develop a culture of environmental stewardship and compliance with the rules; and

Customer Service – we work as a team to provide better service to our people.

Our Core Functions

We enforce laws and regulations that protect the environment and the people of the RMI from pollution and environmental destruction. We do this by providing permits for activities with potential environmental impacts, carrying out environmental monitoring of activities, and issuing fines and legal proceedings for violations. We carry out a range of environmental assessments for all activities seeking permits, and conduct environmental compliance monitoring for both permitted and non-permitted (observed and reported) activity throughout the RMI.

We work with others to develop policies and programs to address environmental challenges. We work as a willing partner and in some cases a leader, to develop cross-agency collaboration and strategic programs to address the root causes of pollution and environmental threats.

We provide information, education, and support to the community to improve the environmental performance of businesses, industries, communities, and government. We seek to build relationships through trust and mutual learning and to continuously improve the way we engage.

RMI EPA Strategic Plan: Key Focus Areas

A. Effective Regulations and Enforcement	a. Develop and implement regulations and streamline the permit process b. Implement improved monitoring and enforcement c. Deliver targeted information on new regulations
B. Clean, Safe Marine Waters	a. Develop a plan to address marine pollution from vessels in Majuro Lagoon b. Reduce marine pollution from land-based sources
C. Safe Fresh Water Supplies	a. Develop a program to improve household water management b. Continue water testing and reporting of results c. Continue monitoring and enforcing water quality standards in commercial entities. d. Continue surveys to inventory and map groundwater resources in the RMI
D. Resilient Coastal Zones	a. Publish Coastal Outlook Report b. Encourage appropriate development through environmental advice, assessments, and permit conditions c. Support and facilitate the expansion and protection of protected areas from degradation
E. Reduced Risk from Waste and Pollution	a. Reduce hazardous wastes from going in landfills b. Reduce plastic wastes from going in landfills by expanding recycling schemes c. Develop a program to address abandoned vehicles and scrap metal d. Improve monitoring of hazardous substances e. Improve processes to conduct regular sanitary surveys at the landfill and at the water reservoirs
F. A Capable RMI EPA	a. Improve management and teamwork, develop a network of experts, and improve acilities, systems, and processes
G. Capable Communities	a. Conduct targeted information campaigns for priority areas b. Support outer island communities to manage their resources and environment c. Secure support from the Government to ensure that environmental issues are elevated in important national as well as global platforms to secure appropriate financial support

Management

Our strategic plan sets the direction for the organization and is the framework for our programs and activities over the next three years from 2023-2025. The RMI EPA is the agency mandated with protecting our environment and people from negative environmental impacts of development. However, the challenge is great. In this context, the EPA needs to sharply focus on the most pressing environmental challenges, and carefully direct resources to these efforts. This will require closer partnership and collaboration with development partners to ensure that projects are sensitive to the unique environment. It will require commitment, teamwork and discipline. EPA's response to the Marshall Islands' serious environmental challenges will be to prevent the worst impacts on the environment and people, while building capability over time to address the issues more effectively and proactively. Our highest priority over the next 18 months will be to update the environmental regulations, permits and operating procedures to modernize the tools we have to work with and ensure they are relevant and able to be implemented. Other pressing issues are to work with others to find a way to reduce marine pollution from vessels in Majuro lagoon, and developing a program to ensure the safety of household water supplies. We will work to support more sustainable and resilient coastal development through guidance, environmental impact assessments (EIAs), and review and update the 2008 Coastal Management Framework for the Republic of the Marshall Islands permit conditions. At the same time, we will work with others to develop innovative responses to challenges such as plastic and hazardous wastes.

Multiple consultation meetings have occurred between the Asian Development Bank (ADB) and RMI EPA. ADB will be rolling out several high-impact projects concerning the waste sector; solid waste management, new landfill design feasibility studies, rehabilitation of the existing landfill on Majuro, and a pilot incineration effort on Ebeye. RMI EPA will work closely with the group to ensure that local perspectives, laws, and regulations are considered and facilitate these crucial undertakings. Furthermore, the RMI EPA management team is working with ADB on two new positions that will allow for a more synthesized partnership. A couple of expected outputs of the two new National Environmental Safeguards Specialists will be (but not limited to) supporting ADB on screening and processing environmental requirements for development assistance projects to comply with the RMI safeguard system and processes. As well as to facilitate an integration framework of ADB safeguards requirements and RMI EPA environmental protocols that can be adapted for specific timelines and outputs for development projects.

RMI EPA Management and Coastal Chief Melvin Kilma with ADB coordinators and consultants.

Collaboration with US Federal Agencies and Regional Crop Agencies

GM Moriana Phillip met with Capt. Nicholas Simmons, commander of U.S. Coast Guard Forces Micronesia/ Sector Guam, LC Igisomar and L Vaccaro at the RMI EPA Majuro office to continue collaboration discussions.

GM Moriana Phillip pictured with CWO Shaun Corrigan at the Coast Guard Indo Pacific Regional Activity Centre.

In 2019, RMI was awarded a Grant from the Japanese Government to procure equipment needed for oil spill response. Due to Covid the delivery of equipment was delayed. In December 2023, the last equipment was delivered. The official Government to Government handover ceremony is planned for January 2024.

RMI EPA is actively engaging with Regional Agencies, namely SPREP, for technical capacity building. Additionally, RMI EPA is collaborating with two key US Federal Agencies; US Coast Guard and US EPA Region 9, for technical and capacity assistance. Back in 2018-2019 RMI EPA with the assistance of the US EPA, developed Standard Operating Procedures (SOPs) for the sampling of oil spills (including oil sheens) and sample shipment. RMI EPA continues discussion and communicated needs below as key strategic priorities of 2024 as highlighted in RMI EPA's Strategic Action Plan.

1. Development of new SOPs or modification of US Coast Guard SOPs for sampling oil from vessels; what is required and used widely to prevent illegal discharges of used oils/fuels during transhipment in port;

2. Training of RMI EPA personnel (and others from key agencies) on sampling oil spills and taking representative oil samples from vessels;

3. Review of sample packaging and shipment training performed in Majuro (including chain-of-custody paperwork) to ensure it will meet enforcement standards;

4. Assist in Legislative Review for marine pollution prevention; and

5. Assist in Legislative Review in order to better interface with the rest of the Region in implementing Regional Prevention Plans.6. Review and comment of a draft Terms of Reference on a Multi-agency response Taskforce

At the 36th Annual Environmental Conference in Palau in August of this year, 2023, RMI EPA General Manager (GM) Moriana Phillip called for more technical collaboration and support from the US EPA Region IV stressing that US EPA support is critical to managing the nation's growing environmental issues. Phillip emphasized the regulatory burden on the small organization as it regulates the US Military Base on Kwajalein Atoll, a highly industrial operation dealing with ballistic missiles. As a deliverable to this request, the US EPA has put together a technical team that will assist the RMI EPA. The GM also continues to engage in dialogue with the USAG-KA Environmental Standards working group to ensure cooperation and compliance.

Group photo with Pacific Island Environmental Directors at the 31st Annual Environmental Conference in Koror, Palau.

RMI EPA GM Moriana Phillip, DGM Beverly Johnson and IEPC Vivian Koroivulaono with US EPA Region IV Regional Administrator Martha Guzman and Circuit Rider Angela Sandoval.

Management Activities

USAKA Environmental Standards (UES):

Participation of the GM and a rep. of the RMI EPA Board of Directors at regular USAKA Environment Standard (UES) meetings. The GM has ongoing engagement with the US Federal Agencies (UES Appropriate Agencies) and the Commander on matters related to environmental regulatory oversight of the operation on the US Military Base.

The UES is an Agreement between the Government of the Republic of the Marshall Islands (RMI) and the U.S. Government authorized by the 1986 Compact of Free Association and mandated under Section 161(a)(1) of the Compact as Amended, 2004.

Compact requires a commonsense approach and incorporates substantive standards of both RMI and U.S. Environmental Law in one Document. The UES provides for public health and environmental protection tailored specifically to the RMI environment.

UES Applies to –

All U.S. Government activities at USAKA, and
All USAG-KA activities within the RMI

UES Does Not Apply to –

Other U.S. Government activities outside the islands and waters operated by USAG-KA and all activities outside the territorial waters of the RMI.

Kwajalein (USAKA) Projects affecting RMI people

1. Long Range Navigation Systems (LORAN) PCB Investigation

Ongoing discussions with US about funding for the old LORAN (long range navigation systems) investigation. The funding for the Ebeye and Kwajalein LORAN stations has been delayed due to emergency funding for Per- and Polyfluorinated Substances (PFAS) cleanup, funding is expected to be available in 2024 to sample the waters around each island for PCBs remaining after dismantling of the LORAN stations.

2. Lead Contamination of TRADEX radar building

Lead Contamination: Tetra Tech completed a lead survey at TRADEX and preliminary lead surveys at ALCOR, MMW, and ALTAIR from 19-24 September 2023. The air and wipe samples were submitted to the laboratory for analyses and once the results are received, a report will be generated with recommendations on managing and remediating the lead contamination. The lead contamination was discovered during a renovation project at TRADEX prompting a public health survey. The results of the blood sampling are pending. RMI EPA asked for the results to be made available to RMI as soon as possible. RMI inquired why the UES group was not notified and why a memo was sent directly to RMI Foreign Minister. According to USAKA, the UES agencies were not contacted because this is currently a public health issue not an environmental issue. There may be a future need to remediate any lead

contamination which will generate hazardous waste. Other hazardous wastes produced as part of this renovation project include PCB oils (from the transformers at 12-14 parts per million [ppm]).

3. Shipyard sandblasting facility heavy metals contamination of Kwajalein Lagoon

Several years ago (about 2003) the sandblasting facility was fitted with a canopy to prevent metal and pain dust from blowing into the Kwajalein harbor, which is significantly contaminated with heavy metals. The canopy failed and was removed about 2011. Since that time heavy metal and paint dust has continued to blow into the harbor. USAKA plans are to build a closed structure to prevent dust and runoff from entering the harbor. Timeline for construction is pending the appropriation of funds for the project.

4. New Medical Facility PCB Contamination

During early planning for the construction of the new medical facility a leaking transformer was discovered with PCB contamination of the concrete and perhaps soil below. USAKA is planning to remove the transformer and test the concrete and soil for PCBs. No contamination to groundwater or human contamination has been identified to date. Project is ongoing.

5. AFFF drinking water contamination

Aqueous film forming foam (AFFF) leakage was discovered in a storage building (FN8) which had penetrated into the soil. AFFF contains high concentrations of perfluorinated hydrocarbons (PFAS) termed as “forever chemicals” because they do not break down the environment. PFAS chemicals are toxic at very low concentrations and the US EPA has required removal of these chemicals to very low concentrations (parts per trillion) from contaminated soil. Soil has been excavated and sent for testing and will be followed up with additional testing and excavation as necessary to remove all AFFF.

6. Fish Contamination

Elevated presence of heavy metals was detected in fish in a public health command study in early 2012, 2013. USAKA has undertaken extensive clean-up of major sources, including the clean up of the historical Navy landfill by digging up the soil and shipping it back to the US mainland.

7. Epidemiology Study needed

RMI EPA continues to raise the urgent need for funding to begin an epidemiological investigation to better understand how elevated levels of Lea, PCBs and other toxic heavy metals found in the fish consumed by people is affecting the local population. RMI EPA highlighted this as a key and urgent need at different high level platforms, including at the Compact Negotiations.

Water Quality Division

The Water Quality Division (WQD) has focused on several priority activities over the past fiscal year that are to be continued in the coming Fiscal Year 2024 (FY24):

- Assist in improvement of water quality serviced for human consumption by implementing the Water Quality Regulations through continued monitoring and testing services on public water suppliers;
- Continue to provide water quality monitoring and testing services of coastal waters, especially areas used for fishing or swimming;
- Develop a program to improve household water management and sanitation;
- Continue monitoring and enforcing water quality standards for commercial entities (ice vendors, water dispensers, restaurants...)
- Conduct chlorination workshops for public water utilities and household communities;
- Continue monitoring of the Laura water lens on a monthly basis;
- Assist with monitoring of water quality in outer islands when possible and also during disaster events and participate in additional disaster response training as required;
- Maintain status of the laboratory and associated supplies to meet US EPA laboratory standards;
- Continue to improve coordination and reporting between the Majuro Water & Sewer Company (MWSC) and RMI EPA on monitoring and treatment of public water supplies;
- Maintain a regular reporting schedule for water sampling and testing both in Majuro and Ebeye; and
- Assist coordination of education and awareness in schools and the communities with the Education and Awareness Division (EAD).

Maintain Certification of the Water Quality Laboratory

The US Freely Associated States Laboratory Certification Program re-certified the RMI EPA Water Quality Laboratory to analyze drinking water under the Colilert® Method and marine and other surface water samples under the EnterolertTM Method. This re-certification is valid for 2 years effective immediately. During the certification audit, Majuro Laboratory Supervisor Tuvuki Ketedromo was certified as a Level III analyst; Paul Paul, Richardo Jarom, and Malolo Malolo (from Ebeye) were certified as Level II analysts; and new analysts Voneric Boktok and Handel Dribo (from Ebeye) were certified as Level I analysts. Certification is necessary to ensure that the RMI EPA lab produces scientifically valid and legally-defensible data and that the lab staff are qualified to analyze water samples for bacterial contamination.

Environmental labs receive certification when specific criteria are met. The lab must pass an on-site evaluation every two years and must have a certified analyst on

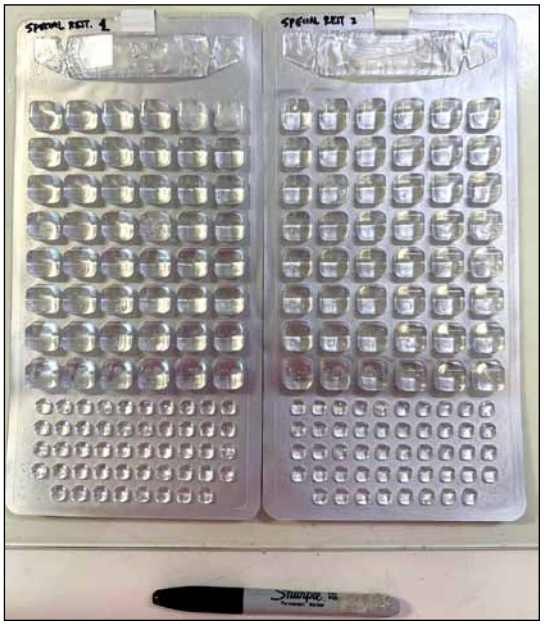
staff. Lab equipment must meet technical criteria for analytical detection capabilities. Calibration and other Quality Control records must be held on file to demonstrate that equipment is working properly. Lab personnel must meet technical performance criteria. Analyst certification levels (I, II, or III) are based on the ability to pass written exams, individual demonstrations of proficiency of increasing difficulty, and years of experience. Level III analysts have also demonstrated the capacity to perform laboratory supervisor duties. RMI EPA laboratory audit and certifications were provided by Ms. Edna L. Buchan (of Nimbus Environmental Services), who serves as the Certification Program Manager for the FAS Lab Certification Program. Ms. Buchan is a US EPA Laboratory Certification Officer, under contract with US EPA with funding provided by the US Department of the Interior. US Public Health Service CDR Elena Vaouli and Mr. Carl Goldstein of the US EPA Pacific Islands Office (Region 9, San Francisco) have been strong proponents of the FAS Lab Certification Program since the program launched in 2007.

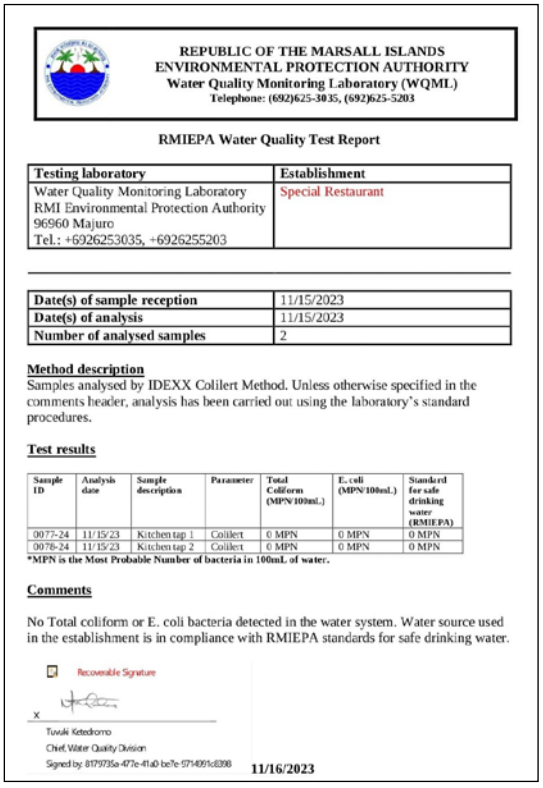
Certificates were presented to the RMI EPA Laboratory and individual analysts at an awards ceremony held at the RMI EPA office on 17 February 2023. Ms. Buchan recognized the accomplishments of the RMI EPA lab in being re-certified for both drinking water and marine water. *"I want to congratulate General Manager Moriana Phillip and her staff who are very deserving of this recertification. I am extremely pleased to find that the RMI EPA has continued to uphold a high level of laboratory practice standards since our last audit in 2018, despite the difficulties presented by the Covid pandemic."* General Manager Moriana Phillip noted, *"I am very pleased with this re-certification of the Lab and I am also extremely proud of my staff for this accomplishment – some of the best scores according to the Auditor! Jerammon".*

As per the RMI EPA strategic plan, a priority activity of the WQD efforts will be to develop a program that improves household management of water quality. Most household water tanks will need to be emptied and cleaned out entirely, before being re-filled and then maintained through first flush devices, filters, and regular treatment with chlorine bleach. Activities to date have mostly focused on adding chlorine bleach. It is inadequate however, since there is retention of contaminated sediment at the tank bottom. There are

several ways in which households are advised to keep their water sources clean. Households that find the chlorine bleach method complicated, are advised to boil water before using. It is difficult to eliminate water contamination due to a variety of sources in existing household structures. With the help of US EPA sanitation survey training in December 2023, the Authority believes this program will commence by March of 2024.

The EPA WQD is not only targeting improvement and monitoring of household water quality but also top priority, larger-scale water sources such as the MWSC-TPA system and the MOHHS water lines. Through consistent testing and monitoring, RMI EPA has nonetheless found significant improvement. Moreover, in recent years RMI EPA has expanded groundwater testing during drought events as part of the RMI's disaster response. The water lens at Laura is particularly important to ensure a resilient water supply to the population center of Majuro. As part of the goal to monitor groundwater quality at Laura and to support communities in other atolls in their monitoring efforts, RMI EPA is collaborating on the Managing Coastal Aquifers Project (MCAP) project implemented by the Pacific Community (SPC) in partnership with the United Nations Development Programme (UNDP) and the Global Environment Facility (GEF). MCAP aims to provide access to clean and safe drinking water by increasing awareness, development, and management of groundwater as a water source. Also, in response to both 12 drought events and climate vulnerability, RMI EPA is collaborating on the Addressing Climate Vulnerability in the Water Sector (ACWA) project with UNDP through the Green Climate Fund (GCF). ACWA aims to support the RMI in adapting to increased climate risks to drinking water supply such as more frequent and prolonged droughts.





REPUBLIC OF THE MARSALL ISLANDS
ENVIRONMENTAL PROTECTION AUTHORITY
Water Quality Monitoring Laboratory (WQML)
Telephone: (692)625-3035, (692)625-5203

RMIEPA Water Quality Test Report

Testing laboratory	Establishment
Water Quality Monitoring Laboratory RMI Environmental Protection Authority 96960 Majuro Tel.: +6926253035, +6926255203	Special Restaurant

Date(s) of sample reception	11/15/2023
Date(s) of analysis	11/15/2023
Number of analysed samples	2

Method description
Samples analysed by IDEXX Colilert Method. Unless otherwise specified in the comments header, analysis has been carried out using the laboratory's standard procedures.

Test results

Sample ID	Analysis date	Sample description	Parameter	Total Coliform (MPN/100mL)	E. coli (MPN/100mL)	Standard for safe drinking water (RMIEPA)
0077-24	11/15/23	Kitchen tap 1	Colilert	0 MPN	0 MPN	0 MPN
0078-24	11/15/23	Kitchen tap 2	Colilert	0 MPN	0 MPN	0 MPN

*MPN is the Most Probable Number of bacteria in 100mL of water.

Comments

No Total coliform or E. coli bacteria detected in the water system. Water source used in the establishment is in compliance with RMIEPA standards for safe drinking water.

Recoverable Signature
X
Tuvaki Ketedromro
Chief, Water Quality Division
Signed by: 8179735a-477e-41a0-be7e-5714091c8398
11/16/2023

RMIEPA-Pacific Community (SPC) Partnership in the water sector

The RMI EPA has been working towards its water sector policy goals such as reducing instances of water-related illness, working towards achieving better access to safe water resources for all RMI citizens, and ensuring water resources are managed for future generations. To support RMI EPA on these policy goals, SPC's Geoscience Energy and Maritime (GEM) Division has been working closely with RMI EPA over many years providing technical support, training, and awareness to RMI's water sector during drought and also working alongside RMI EPA on programs to build a better understanding of RMI's water resources.

MCAP is a Global Environment Facility (GEF) - round 6, funded project, implemented by SPC in partnership with the UN Development Programme, RMI, Palau, and Tuvalu. The objective is to improve management and understanding of key fresh groundwater lenses throughout RMI, focusing on Majuro, Wotje, Aelonlaplap, and Jaluit Atolls. Each of these atolls has a varied level of information about where and how much fresh groundwater is present due to various targeted studies previously undertaken at some sites (e.g., Wotje in 2017 and Laura and Delap areas has had various work undertaken over the past 30 years). Since groundwater is a hidden or buried resource, it often requires specialized skills and techniques to build further understanding and this is one key area for SPC's technical expertise and training support partnership with EPA and other key RMI stakeholders.

The Water Scarcity Project is funded through a partnership between SPC and the New Zealand Ministry of Foreign Affairs and Trade (NZ MFAT), with MFAT supporting RMI and other Pacific atoll nations on drought assistance/preparedness programs for the past 8 years (initially in response to the 2016 drought). The project commenced in 2021 intending to deliver technical support and infrastructure designed to address drinking water scarcity issues in schools across Majuro.

Water Scarcity Project

Priority activities undertaken in 2023 under this project included:

1. Procurement and construction of 6 School Drinking Water Stations.

2. Training and awareness on water resource use and management.

Majuro School Drinking Water Stations

The construction of 6 drinking water stations is currently underway at the 6 participating schools: Assumption School (AES/AHS), Rita Elementary School (RES), Majuro Cooperative School (MCS), North Delap School (NDS), Long Island Elementary School (LES), and Rairok Rainbow Elementary School (RRES). This is a pilot project to test the design and operation of these stations with the potential for what could be scaled up to other schools in RMI.

Each water station aims to provide approximately half a gallon of clean drinking water to all students. This is achieved by installing a rainwater filtration system including:

- **Leaf and first flush diverters** – remove all leaves from entering the tanks as well as collect 70-80%

of sediment and dust from the incoming water to the storage tanks in the first 20-30 gallons of rainwater that flows into the gutters.

- **3-stage filter** – removes small dust particles from the water held in storage tanks plus some impurities not diverted by the first flush system.
- **Ultraviolet lamp** - disinfects the water by killing off any harmful bacteria and pathogens that may be present after filtration.

Joemar Developments Ltd. was awarded the construction contract following the competitive bidding process. Construction started on September 28, 2023, and is expected to be completed in early 2024. Some progress construction photos are shown below.

North Delap School drinking water station building.

Construction of one of the water station buildings at Majuro Cooperative School.

Training & Awareness Activities World Water Day 2023

World Water Day 2023

In honor of World Water Day 2023, the project held a competition between schools with this year's theme: Accelerating Change. Student competitors were tasked to either write an essay, draw a picture, or create a Tiktok video of what the theme means to them regarding how important it is to have safe and secure water sources. Students from all schools in Majuro were invited to participate in the competition and creatively express what the theme "Accelerating Change" is.

The prize winners of the World Water Day 2023 contest.

World Water Day 2023

Every year, World Water Day falls on 22nd March, and each year a theme or focus is given to raise awareness about certain water related issues. This year's theme of Accelerating Change is meant to raise awareness on how we can reach the goal for everyone (globally) to have safely managed water and sanitation by the year 2030 (Sustainable Development Goal 6). Each of us in the community can make a difference by changing the way we use, consume, and manage water in our lives. For example, all of us have seen how important water is for achieving good hygiene as highlighted by our efforts to prepare for and deal with the spread of COVID-19.

In honor of World Water Day 2023, there was a competition between schools with this year's theme: Accelerating Change. Student competitors were tasked to either write an essay, draw a picture, or create a Tiktok video of what the theme means to them in regards of how important it is to have a safe and secure water sources.

Students from schools across Majuro took part in the competition and creatively expressed what the theme "Accelerating Change" meant to them. Listed below are the 3 winners:

1st place: Assumption School **Ailynn Kijenmij** - Essay
2nd place: RRES **Kirita Benjamin + Jvian Lamin** - Tiktok video
3rd place: Assumption School **Anika Dela Llana** - Hand-drawn picture

The top 3 winners pictured here received their water bottles along with their prized checks. All entries in the competition received a free refillable water bottle for participating. Congratulations to the winners and many thanks to all those that have participated!

The Hummingbird

World Water Day this year focuses on accelerating change to solve the water and sanitation crisis. "Be the change you want to see in the world" is the theme conveyed in this old story of the Hummingbird.

"One day in the forest, a fire broke out. All the animals ran for their lives. They stood at the edge of the blaze, looking at the flames in terror and sadness... Up above their heads, a hummingbird was flying back and forth to the fire, over and over again. The bigger animals asked the hummingbird what she was doing. "I am flying to the lake to get water to help put out the fire." The animals laughed at her and said, "You can't put out this fire!"

The hummingbird replied, "I'm doing what I can."

The hummingbird is helping solve the problem, one drop at a time. She is being the change she wants to see in the world. Instead of inspiring the other animals to join, who stand by watching their home burn, the hummingbird makes an exhaustive effort to fight against the fire alone.

First Place Winner: Ailynn Kijenmij -Essay

"The story can relate to the Marshall Islands as we can learn from it how the hummingbird will never give up and keep going on struggling till they are free. For example, our important issue is climate change and it is a serious issue that our RMI leaders are fighting. It would take a long term, but we can't stop fighting. It is our responsibility, especially the young generation of today and tomorrow to protect our environment, sea and the air from climate change."

Second place winners: Kirita Benjamin and Jvian Lamin

These two adorable Tiktokers created a Tiktok video on how to manage your water. Video is available in RMI EPA's Facebook page

Third Place Winner: Anika Dela Llana

Anika expressed the image of a world where water is available for everyone by creating a colorful picture where all sources water can be found and how everyone can manage and take better care of it.

Life Skills Academy (LSA) Health Club training on drinking water safety and water quality

An initiative between the LSA Principal and EPA was setup to expose LSA students to practical skills on managing water safety and water quality. The first of many sessions were undertaken recently where the students learned more about the background of the EPA's work and responsibilities for the community around drinking water safety. Later, they were shown how to perform some simple water quality tests for E. coli that the EPA and Water Scarcity Project is planning to trial with schools and community water committees as part of water safety awareness and monitoring campaigns. Further sessions will be conducted in 2024.

Above, RMI EPA water quality lab technician, Paul Paul (center), demonstrates the Aquagenx E.coli test kits to the LSA Health Club students.

Above, LSA Health Club students practicing how to use of the Aquagenx E.coli test kits for water quality sampling.

International media on RMI water management

Australian Broadcasting Corporation (ABC) journalist, Belinda Smith, visited the RMI to interview Marshallese scientists to showcase the people and the work that is being done in the region. Tuvuki Ketedromo (RMI EPA Chief of Water Quality) and Lee Jacklick (RMI Weather Service Office Deputy Director) were featured in the new podcast series, Pacific Scientific, released this year. The podcast episode is titled "The Fight for Freshwater in the Marshall Islands". The Water Scarcity Project team worked behind the scenes facilitating the work and aiding in the collection of recordings and content for the podcast. This is part of ABC's strategy to produce and release more content about the Pacific.

ABC journalist Belinda Smith (right), interviewing Tuvuki Ketedromo, EPA Chief of Water Quality (center), and Shaun Kies-Ryan, SPC Water Resources Specialist (left).

Regional Steering Committee for Water Scarcity Project (July 25-28, 2023)

The Water Scarcity Project Steering Committee Meeting was held in Nadi, Fiji, for all 8 participating countries (including RMI, Tonga, Cook Islands, Tuvalu, Tokelau, Kiribati, Nauru, and Niue), SPC as implementation partner, and the donor NZ MFAT. This was the first time in the Water Scarcity Project history (since commencing in 2021) that the country representatives were brought together to discuss project progress and opportunities to the end of the project. Outside the steering committee meeting, numerous water sector specialists participated in a knowledge exchange workshop with the participating country representatives. From RMI the meeting and workshop were attended by the Deputy General Manager (Beverly Johnson), Chief of Finance (Haggar Willson), Water Scarcity Project Coordinator (Kristina Reimers), and SPC's RMI-based Water Resources Specialist (Shaun Kies-Ryan).

Two key outcomes were achieved from the steering committee meeting:

1. The agreement by all countries to apply for project extension activities to June 2024 to allow countries to complete the implementation of budgeted activities.

2. The agreement to apply for additional grant funding support up until June 2024 to support drought preparedness in light of El Nino forecasts for late 2023 through to early 2024.

The RMIEPA has applied to undertake the following activities in 2024:

1. Support NDMO in repairing emergency RO units from 10 Atolls in preparation for any drought emergency;

2. Support the NDMO in providing refresher training for outer island disaster committee representatives on drought preparedness and emergency RO unit operation and maintenance;

3. Undertake and assessment of water and sanitation facilities in all Majuro schools.

Discussion on monitoring and evaluation frameworks for the RMI Water Scarcity Project between Shaun Kies-Ryan RMI Water Scarcity Project Manager (left), Heggar Willson RMI EPA Chief of Finance (center), and Dibya Datta SPC Monitoring and Evaluation Officer (right).

Group photo of the Regional Steering Committee Meeting and Workshop participants.

Managing Coastal Aquifers Project

MCA Project is targeting its work on 4 Atolls in RMI including; Majuro, Wotje, Jaluit, and Aelonlaplap. The Project activities and achievements undertaken this year have ultimately contributed towards a series of core project areas or components that were designed in consultation with relevant RMI stakeholders at the start of the project. These core components are defined as:

- **Component 1:** Support knowledge development and use of island (fresh) groundwater for enhanced water security.
- **Component 2:** Make investments in human capital and tools to strengthen the capacity and monitoring of climate and water resources.
- **Component 3:** Support the sustainable management and protection of island (fresh) groundwater in the context of climate change.

The MCAP's key achievements for 2023 have been grouped by Atoll to demonstrate the body of work that is being undertaken for each location.

Majuro

Several activities are being undertaken across Majuro Atoll which focus on addressing management and information gaps for the 2 main freshwater lenses used in Laura and Delap. The key achievements in 2023 have contributed to all 3 components of the project.

Groundwater and Coastal Impacts from Climate Change

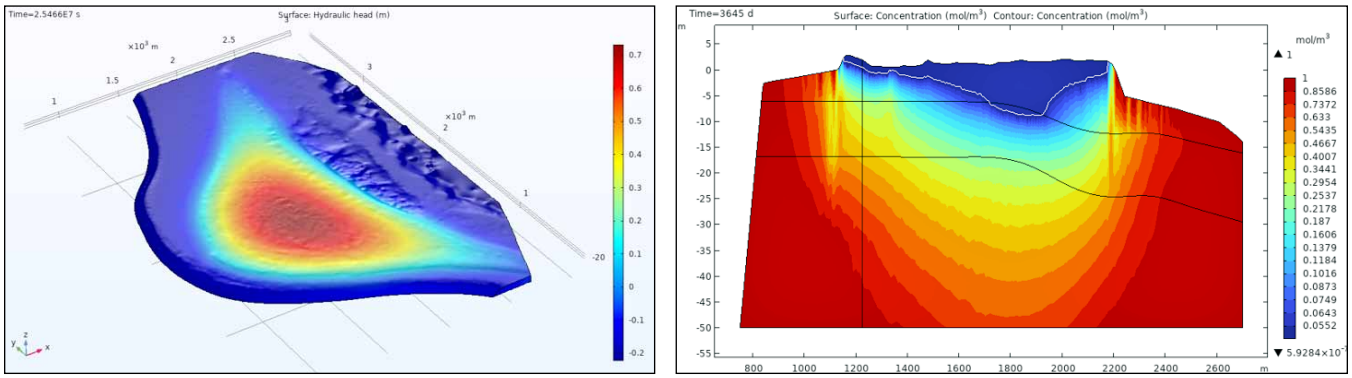
The three-dimensional (3-D) printed replica model of Laura that was handed over to the RMI Government in October this year (see photo), includes groundwater datasets developed from the MCAP in addition to datasets developed through other projects and SPC's ongoing collaboration effort with RMI Government agencies over the past 30 years. This communication and advocacy tool for the RMI Government was selected to be taken to the COP28 UN Climate Change Conference in UAE in December this year. The MCA Project is aiming to further utilize this model as an education tool for EPA, other government agencies, and non-governmental organizations to help communicate the science behind these models.

Formal handover of 3D Model of Laura to RMI's Deputy Chief Secretary, Mr Catalino Kijiner. Also present were the Acting Secretary of Public Works, RMI Climate Envoy, and the Acting Secretary of Foreign Affairs.

Groundwater Simulation Model – for improved groundwater management

In 2023 the MCAP team commissioned AMPHOS 21 consultants to build and calibrate a 3-D computer simulation model of the Laura groundwater lens. The objective of this model is to test a range of groundwater supply/pumping, climate, and coastal inundation scenarios (some of these scenarios are displayed in the 3-D replica model of Laura, as explained in the above section) to understand how Laura's groundwater lens may respond to the stresses of increased pumping, drought, sea level rise, and coastal inundation. The predictions and estimates from these models allow us to generate a range of solutions and adaptive management strategies with EPA, MWSC, and NDMO to guide future infrastructure requirements, pumping limits or land use changes required to protect the fresh groundwater lens.

The work is ongoing and will be completed in early 2024 with further work to be done with RMI stakeholders on the dissemination of this information and development of the adaptive management strategies.



3-D groundwater computer model construction visuals showing groundwater level and land topography (left); and, groundwater lens thickness (dark blue) through the widest part of Laura (right).

Drilling rig procurement for RMI EPA

A portable drilling rig was procured and sourced from the Promotion of Appropriate Technology Co. Ltd. (PAT) in Thailand. The drilling rig arrived on the island in October and is intended for drilling monitoring bores in Laura, Delap, and Wotje. The drilling rig is designed to be portable whether transported in small pick-ups or on landing craft to remote outer islands. The project will first utilize the rig to train RMI EPA, MWSC, and Ministry of Public Works staff in its operation and construction of groundwater monitoring bores. Drilling new monitoring bores in Laura, Delap, and Wotje aims to confirm freshwater lens thickness results for areas that haven't been drilled. Most importantly, these monitoring bores act as long-permanent windows into the groundwater lens for long-term monitoring of salinity changes.

RMI EPA's Jose Dela Cruz Jr.(right) receiving instruction on how to operate the PAT 301 Drill Rig.

Proposed new groundwater monitoring bore locations for the Laura Lens.

Delap Groundwater Lens Survey

The Delap groundwater lens has been in use for many decades. The US Army Corps constructed 3 pumping galleries in the 1970s (at NTA and Mormon Church locations) for the Majuro water supply. Although these wells are still in use today by MWSC, there is further investigation to be done to re-assess the current freshwater lens thickness and sustainable pumping amount of the Delap fresh groundwater.

MCAP has commenced groundwater surveys of the Delap area utilizing geophysical techniques to study the lens thickness. This work will continue into 2024 when results will be released.

RMI EPA Water Quality Lab Technician, Paul Paul, undertaking an Electromagnetic geophysical survey with the EM-34 equipment.

RMI EPA staff, Paul Paul, Joseph Kalles, and Voneric Botok, collecting water level and salinity measurements of MWSC-operated pumping wells in Delap.

Wotje Atoll Pumping Gallery for Drought Relief

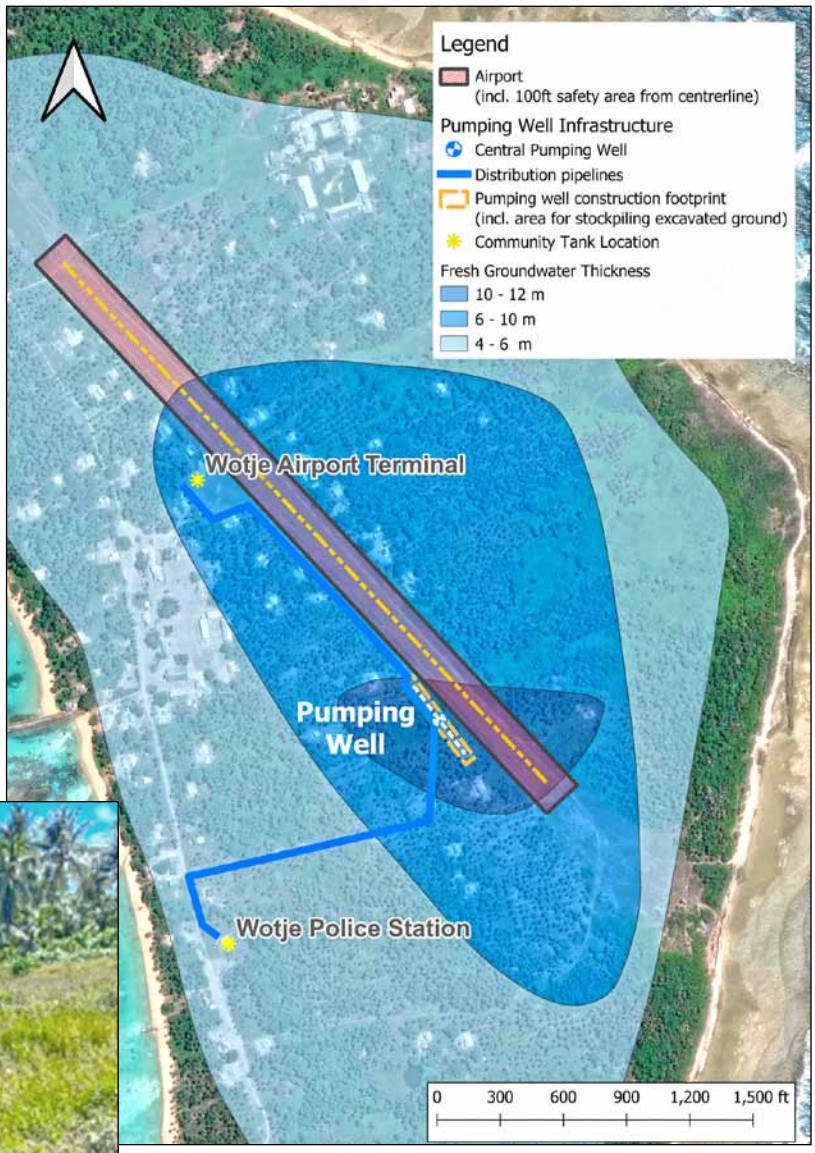
Lessons learned from previous RMI drought responses are that communities could have alternate water supplies before official drought declarations are made by the national government. A priority activity in this project is the construction of a horizontal pumping well for Wotje, Wotje to be utilized as an emergency water supply in times of drought. In June this year, the MCAP team confirmed the thickest part of the freshwater lens was approximately 30ft (supports results from surveys done by EPA and SPC in 2017). In times of drought, the thickest part of the lens is likely to remain fresh, allowing the pumping well to pump/skim water from the very top of the groundwater. The well is designed to supply up to 10,000 gallons per day for distribution to the community, when tanks are close to empty or dry, hence reducing reliance on emergency supplies from the national government.

The pumping well design is now complete and has been released to the local government and the community for input on suitable locations for water distribution centers (storage tanks) across the island. The map below presents the location of the pumping well and the preferred location for storage tanks

that will be used for water ration distribution to the community. This design ensures the lens can benefit outer island communities, and contribute to their resiliency while not over-pumping the groundwater in times of drought. This design has the potential to be developed for other outer islands, where good freshwater lens thickness is identified through technical surveys.

MCAP is currently exploring this for Aelonlaplap and Jaluit atolls. Progress on this work is summarised in the section below.

In preparation for the construction of the Wotje pumping well, the project team recently undertook an Unexploded Ordinance (UXO) scan of the proposed construction site to ensure the area is cleared for construction and all safety measures are taken before construction. This was completed by SPC and RMI EPA staff with guidance from the Cultural Heritage Preservation Office (CHPO).



Map showing the location of pumping wells and storage tanks for distribution in times of drought response.

SPC's Senior Hydrogeologist, Amini Loco, is screening the soil using UXO machine to detect possible mines across the proposed construction site adjacent to the runway.

Aelonlaplap and Jaluit Atoll – Preliminary Groundwater Surveys

Many of RMI's outer atolls do not have an up-to-date understanding of their fresh groundwater resources. Typically best potential for fresh groundwater lens formation is on the larger sand islands of atolls. The focus for MCAP is to undertake technical surveys of priority locations (as guided by a selection process with stakeholders that considered population, community services, climate, and disaster risk). These technical surveys are intended to provide local and national governments with knowledge of their natural water resources that would inform better drought preparedness, land and water resource management, and land zoning.

The MCA Project team has to date surveyed fresh groundwater resources in the communities of:

· **Jaluit Atoll:** Jaluit and Jabor - survey completed mid-2022.

· **Aelonlaplap Atoll:** Woja, Aerok, Jabwan and Bouj - completed late-2022 & 2023.

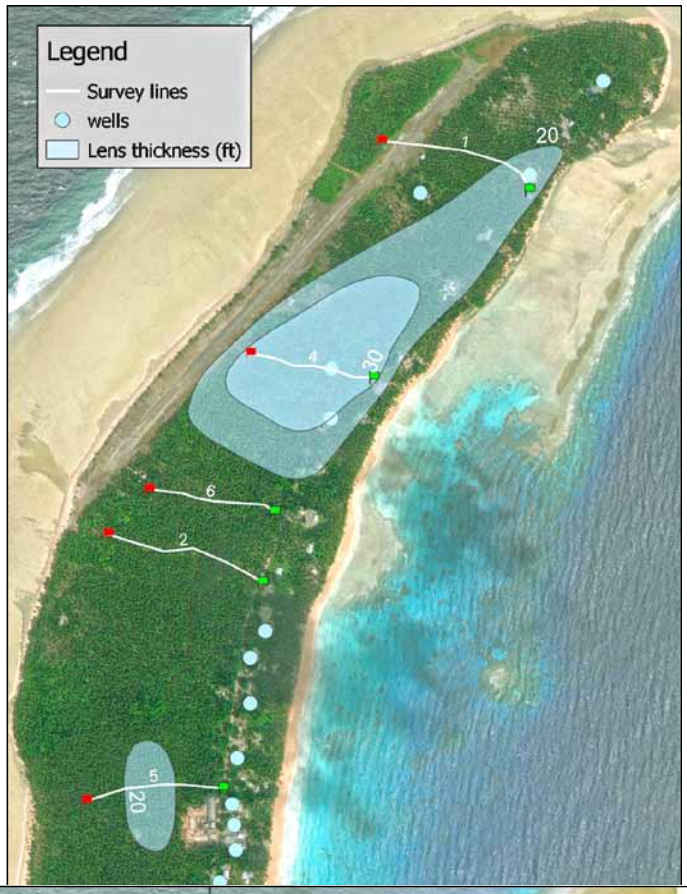
These surveys involved both technical surveying techniques as well as community engagement techniques to capture data on the physical environment and traditional management and historical impacts on water resources (following the methods outlined in the Reimaanlok Process for mapping natural resources).

The technical survey utilized geophysical equipment (known as electrical resistivity) to collect two-dimensional (2-D) images of the freshwater lens thickness at various points across the islands. These technical survey techniques used in RMI have been employed by SPC to successfully map freshwater lenses in other Pacific atolls and small island nations, such as Kiribati, Kiritimati (Christmas Island), Palau, and Tuvalu.

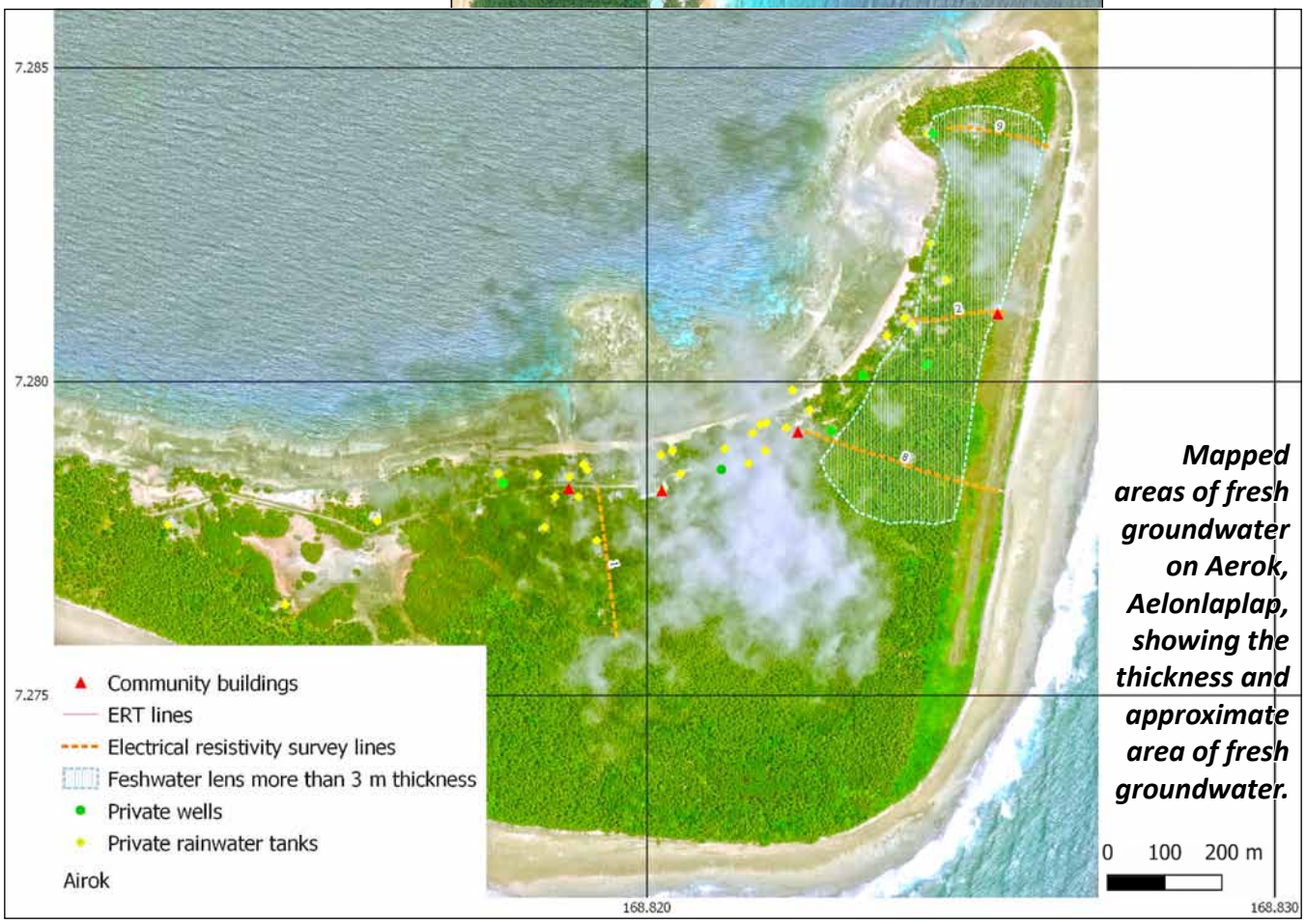
The MCA Project released its report this year showing findings of the technical groundwater investigation work undertaken in mid-2022. The picture below shows the mapped areas of fresh groundwater lenses on the main populated parts of Jaluit.

Fresh groundwater lens thickness and approximate area for two main Jaluit Atoll communities, Jabor (top) and Jaluit (bottom).

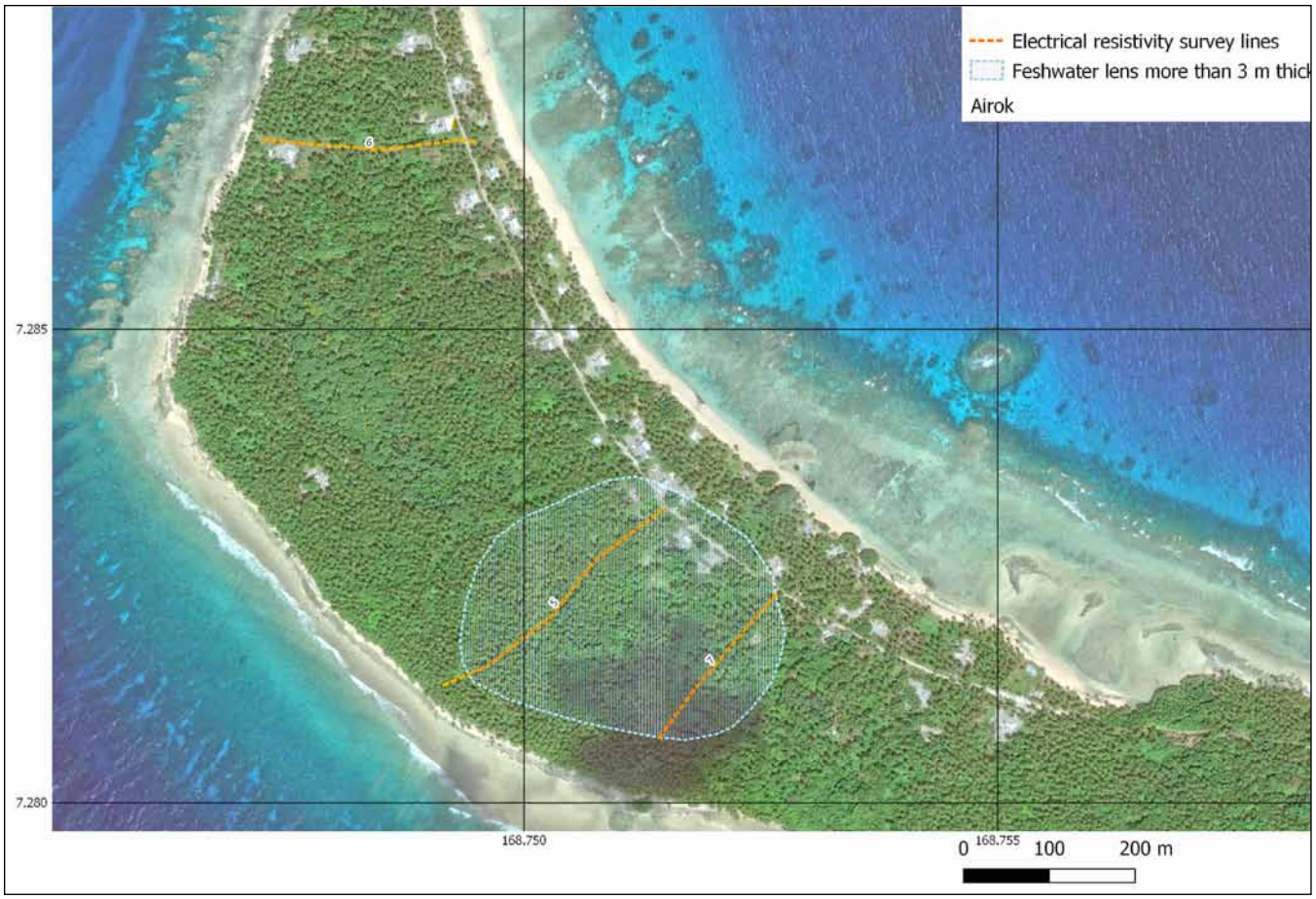
For Aelonlaplap, work continues to complete the survey for Jeh. In October the team completed 9 electrical resistivity profiles across Aerok, Jabwan, and Bouj as part of the technical groundwater survey. The mapped areas of the thickest fresh groundwater were presented to the community after the survey. The results for Aelonlaplap Atoll (including Woja, Aerok, and Bouj) are presented in a series of maps below. Unfortunately, the Jabwan community does not have good resources of fresh groundwater (due to the presence of tidal mangrove swamp areas across half the width of the island).



Mapped areas of fresh groundwater on northern Woja, Aelonlaplap, showing the thickness and approximate area of fresh groundwater.



Mapped areas of fresh groundwater on Aerok, Aelonlaplap, showing the thickness and approximate area of fresh groundwater.



Mapped areas of fresh groundwater on Bouj, Aelonlaplap, showing the thickness and approximate area of fresh groundwater.

The team laying out the electrical resistivity cables and hammering in electrode rods across Woja airport runway.

One of the Aerok-Jabwan women's groups working together to map community water resources and other key features of the island.

RMI EPA's Paul Paul (right) discussing groundwater survey plans with the Aerok community.

The next steps for both the Water Scarcity Project and Managing Coastal Aquifers Project in 2024 are summarized as follows:

Water Scarcity Project

- Completion of the installation of plumbing, pumps, and filters on the school drinking water stations – expected completion in early 2024.
- Training with PSS and private school maintenance staff on operation and maintenance.
- Awareness with students and the community
- Refresher training on emergency RO plant operation & maintenance with of all RMI Atoll Disaster Committee/Water Committee focal points.
- Servicing of 10 Emergency RO plants – joint maintenance program with other initiatives to service all available Emergency RO plants in RMI.

Managing Coastal Aquifers Project

- Training and operation of the portable small drilling rig to construct monitoring network points in the Laura and Wotje groundwater lenses.
- Completion of 3-D computer simulation model of Laura groundwater lens and presentation of scenario results to key stakeholders in the RMI water sector – including a workshop on management and adaptation solutions for groundwater resources.
- Finalize all approvals for Wotje pumping gallery and complete procurement of construction contract for the pumping gallery construction (construction to commence in 2024).
- Commence community-based monitoring in Wotje and Jaluit to improve knowledge and understanding of groundwater in the community.
- Complete geophysical imaging survey of fresh groundwater lens and cultural surveys on Jeh, Aelonlaplap.

Addressing Climate Vulnerability in the Water Sector (ACWA)

The ACWA project is a seven-year project funded by the Green Climate Fund (GCF) to support the Government of the Republic of the Marshall Islands (GoRMI) in adapting to increasing climate risks, particularly more frequent and extreme droughts, which impact the country's water supply. This goal will be addressed through:

1. **Water Security** — Improving household and community rainwater harvesting and storage structures in 86 communities on 24 outer islands and atolls;
2. **Water Resilience** — Securing groundwater resources from contamination;
3. **Water Governance** — Strengthening the technical capacities of national and sub-national institutions and key stakeholders by developing drought contingency plans.

The United Nations Development Programme (UNDP) Direct Implementation Modality (DIM), with RMIEPA as the lead executing agency, is implementing this project. The Green Climate Fund will fund USD 18.63 million, while GoRMI co-finances USD 6.12 million.

The ACWA Project completed the Technical Design Surveys (TDS) on all 24 atolls and has begun community TDS disclosures on all 24 atolls. Each survey focuses on assessing current rainwater harvesting systems and groundwater wells to identify the need for improvement. The TDS disclosures are to provide all gathered data to each community and their leadership and inform the water gap analysis.

The 24 atolls are in four groups based on location:

Group 1: Arno, Majuro, Mili.
Group 2: Ebon, Jaluit, Kili, Namdrik, Aelonlaplap, Jabat.
Group 3: Ailuk, Aur, Likiep, Maloelap, Mejit, Utrok, Wotje.
Group 4: Enewetak, Lae, Lib, Kwajalein, Wotho, Namu, Ujae and Rongelap.

Some procured materials have arrived and were delivered, commencing the Flatpack Modular Tank (FMT) installations in several communities. See following photos of some of the completed installations.

GOOGLE MAP IMAGERY

KWAJALEIN ATOLL

Aerial photos of Enubuj and Carlos, Kwajalein Atoll.

CARLOS

ENUBUJ

Flatpack Modular Tank Installation at Enubuj and Carlos in Kwajalein Atoll

Photos from Enubuj and Carlos, Kwajalein Atoll.

The next steps for ACWA Project in 2024 are summarized as follows:

- Complete community TDS disclosures on remaining atolls (group 1-3).
- Complete the upgrade of Rain Water Harvesting Systems and installation of modular water tanks on group 4 atolls.
- Complete the rehabilitation of ground water wells on group 4 atolls.
- Conduct community outreach training on water safety management and climate change adaptation.
- Finalize the National Drought and Safety Plan and National Water Safety Plan.
- Support development of Community Drought Contingency Plan through establishment of

Coastal Land and Conservation Division

The Coastal Land and Conservation Division (CLCD) has focused on several priority activities over the past fiscal year that are to be continued in the coming Fiscal Year 2024 (FY24):

- Ensure continued compliance with the Earthmoving Regulations (1994) and monitoring all development projects through the environmental assessment process;
- Coordinate with traditional leaders and communities to restore existing traditional conservation sites and with relevant government and non-government agencies to develop proposals for identified future conservation sites;
- Respond to complaints regarding environmental incidents;
- Assist in biological, ecological, and socioeconomic monitoring of coral reefs and other related marine and terrestrial environment;
- Represent RMI EPA in regional and international workshops relating to conservation and marine resource-related fields; and
- Raise public awareness on conservation efforts and the overall permit process.

A crucial and successful development within the division was the standardization and communication of the streamlined Earthmoving Permit Process that consists of 6 steps:

1. Initial communication

Applicant contacts RMI EPA CLCD to enquire about Environmental Assessment (EA) and the permitting process. A project is deemed ready for the RMI EPA process if it has one or more defined sites, with the ability to produce sketches or drawings of the proposed activities, both for the earthmoving/construction phase as well as for post-development operations. If a project is in the conceptual phase or otherwise without sufficient detail available to submit an Earthmoving Permit Application (EmPA), RMI EPA can still engage in discussions but will not make any decisions regarding approvals or permitting, and tentative support for the project is subject to scrutiny in the formal process. RMI EPA staff cannot review and comment significantly on feasibility studies or other project documentation until the formal process is started via the submission of an EmPA (step 3) with payment of the associated fee.

2. Minor or Major Project Decision

After reviewing this file, the applicant responds with a description of the proposed project (1 paragraph minimum and 1 page maximum length, with no attachments). This description should focus on the environmental footprint (dimensions, general location) of the project, and the source (type, volume, general location) of aggregate proposed if there is any excavation or dredging. -RMI EPA CLCD responds with a decision on whether the proposed project is a Minor or Major Project within 3 working days and provides the applicant with the appropriate EmPA (Minor or Major). With few exceptions, residential projects are Minor, and Government (National and Local) and commercial/industrial projects are Major. For example, a water/sewer connection or a limited renovation add-on with no other work on a commercial or Government site is a Minor project. In general, Minor projects have low or negligible environmental impact and do not require significant oversight, while Major projects may involve greater risk and follow-up monitoring. For example, all projects affecting the marine environment are deemed Major projects.

3. Earthmoving Permit Application

Applicant completes and submits the appropriate EmPA (electronic or paper), including payment of

the associated fee. While RMI EPA CLCD will accept any supporting information, it is advised that the applicant does not produce or submit a formal environmental assessment or management information at this stage, since the criteria for such further documentation is an output of the PEA and/or permitting conditions and would therefore likely need to be revised or re-done. -An applicant may elect to submit an EmPA only for one phase of the project if sufficient detail for later phases is not available. The project cost indicated should then only include the cost of that phase, for fee determination purposes. A subsequent EmPA would then need to be submitted for any phases not covered by the original EmPA. Note that if the applicant does not ask for a phased permitting process, and if information is lacking in EmPA, it will trigger a request for more information (and a delay) before processing. An example of a phased permitting project is dredging and reclamation for the first EmPA, and construction and post-development operation in a second EmPA. Another example is a project involving more than 1 weto (land parcel from lagoon to oceanside) for either construction or aggregate sourcing. RMI EPA CLCD responds to a Minor EmPA within 1 week and to a Major EmPA within 1 month. The response may be the Earthmoving Permit (EmP) and that a PEA was not needed, an EmP is being prepared under a completed PEA, a PEA is ongoing, and/or a request for further information before any additional assessment is carried out. Even though a PEA may not be needed, the CLCD may conduct a site visit before preparing the EmP. Note that the RMI EPA General Manager (GM) has oversight on all EA project decisions (Major) recommended by the CLCD.

4. Preliminary Environmental Assessment and Associated Surveys

RMI EPA CLCD waits for the requested further information, conducts the Preliminary Environmental Assessment (PEA) in-house, or prepares the EmP for sign-off by the GM. Minor projects rarely need a PEA, while Major projects almost always require a PEA. The PEA is a checklist of assessment areas mirroring the categories in the EmPA. A PEA may or may not include a site visit. The site visit may or may not include snorkeling reconnaissance nearshore. Outcomes of the PEA can include recommendations for the EmP to be issued, a request for more information from the applicant, a requirement for either a terrestrial or marine flora and fauna survey (often on scuba), a requirement for informal public consultation, a deferral for the project to go to Environmental Impact Assessment (EIA) and the formal public consultation involved, or a decision that the project may not go ahead. RMI EPA CLCD will notify the applicant of scheduling site visits for the PEA or for the associated flora and fauna surveys, which in contrast to the site and snorkeling reconnaissance, are technically not part of the PEA but are integral to the evaluation process. Terrestrial flora and fauna surveys are done in-house, while marine surveys may or may not be done in-house. If the marine survey cannot be done in-house, RMI EPA CLCD will prepare a Terms of Reference (ToR) and recommend capable assessors for the applicant to engage to meet this requirement. Survey outputs will be evaluated as a follow-up to the PEA, with outcomes ranging from a request for more information from the applicant, the EmP being prepared, a deferral for the project to go to EIA, or a decision that the project may not go ahead. RMI EPA CLCD does not provide the PEA to the applicant since it is an internal process. But they will provide any flora and fauna surveys conducted. A typical output of the PEA is countering the applicant with modified boundaries in the case of dredging or reclamation, rather than rejecting the project outright. If the marine survey is done in-house or if the PEA snorkeling reconnaissance provides sufficient information, these modified boundaries will be provided to the applicant upon completion of the PEA and/or marine survey. If the marine survey is submitted by the applicant, RMI EPA CLCD requires 2 weeks to review. If a project may not go ahead as proposed (e.g. inadequate mitigation/lack of agreement via modified boundaries or changes to other development conditions), the applicant may elect to re-submit a different proposal in a new EmPA.

5. Earthmoving Permit Conditions

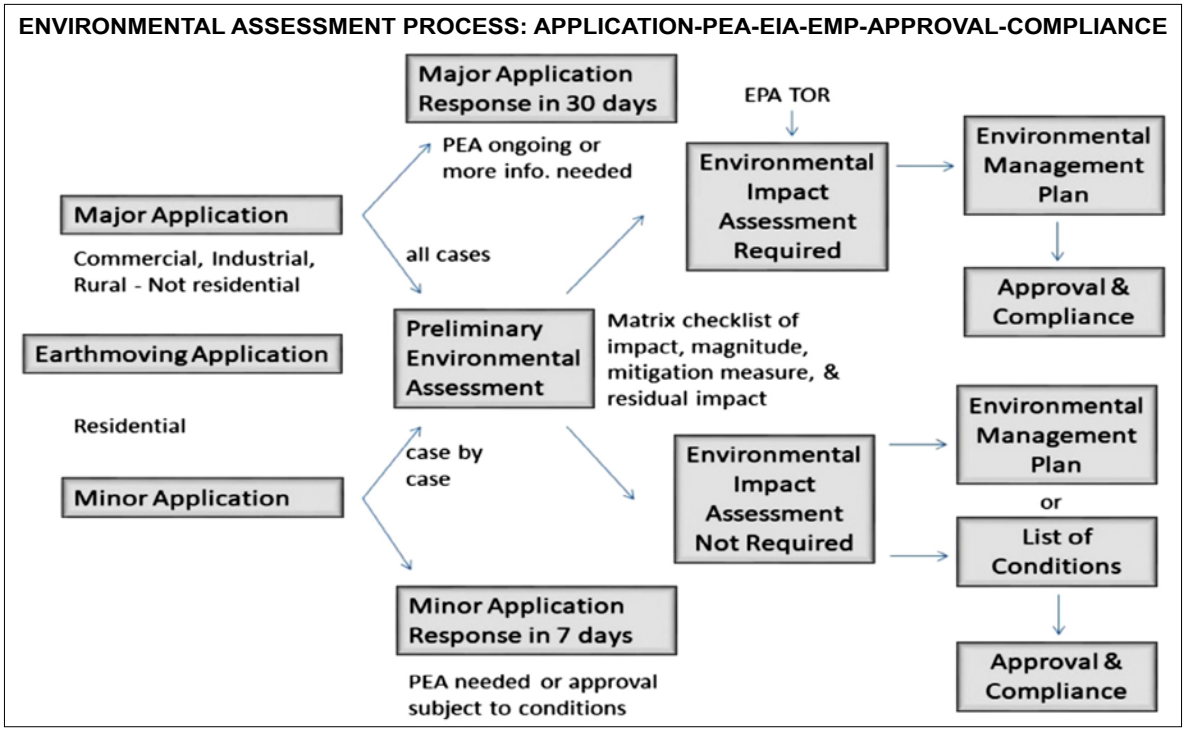
If approval to proceed with the project is given without an EIA but with a PEA and any associated surveys

(which is typical), the conditions of the Permit are stated on the EmP (front and/or back) with an associated permitting letter as needed. These conditions will re-state the mitigation needed for the project to go ahead, which is a synthesis of the actions committed to in the applicant EmPA, required by the PEA, required by the in-house flora and fauna surveys, recommended by the applicant marine survey, and/or otherwise required by any of the divisions, RMI EPA or its GM. The EmP (Major) will state a requirement for RMI EPA CLCD to be notified in writing at least 1 week before any permitted Earthmoving activities begin. The applicant should expect that RMI EPA CLCD compliance staff conduct unscheduled site visits at permitted sites (Minor and Major) at any time, and have the authority to require that operations stop (with oversight from the GM) if there are compliance issues or if new conditions arise that appear to create, or are likely to generate, unanticipated environmental impacts. RMI EPA CLCD may also require that the applicant submit an Environmental Management Plan (EMP) for the project before an EmP is issued. While it is understandable that applicants for large projects may elect to start working on this ahead of time in anticipation of this requirement, there needs to be an allowance for significant adaptation to meet the project-specific EMP criteria that RMI EPA CLCD will outline. Note that it may be necessary to relocate coral if a project (Major) is approved in the marine environment.

6. The Environmental Impact Assessment

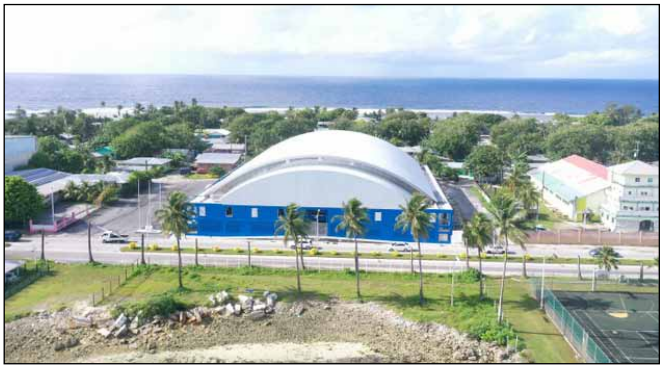
If a project needs to go to EIA, there are legislative and regulatory requirements that go beyond the preliminary assessments and landowner permissions. However, the terrestrial or marine survey (if carried out) would rarely need to be repeated in the EIA. The primary difference lies in the extensive public consultation process and its timeline. There are at least 2 periods of public comment and public hearings that need to occur after an EIA report is produced and publicized. For the comparatively few instances where an EIA has been required (as a proportion of total projects or projects with PEA and/or surveys), the process is driven by RMI EPA CLCD but funded by the applicant, with the public components conducted in Marshallese. Once the decision (post-PEA) to go to EIA has been made, RMI EPA CLCD will engage with the applicant and will jointly produce the ToR for the EIA, including the ToRs for the individual roles of the EIA team members. This will be an iterative process, with the final version approved by the RMI EPA GM. It is the position of RMI EPA that for project-specific environmental mitigation, PEAs and surveys are sufficient for most projects. For projects that are strategic and set precedents for future development direction in the RMI, or involve contentious technologies where the public may have strong differing views about impacts, an EIA is preferred. An applicant who proposes to conduct an EIA because of donor requirements or a desire to exceed local requirements may do so even if RMI EPA does not require it. However, there are two key things to consider. First, large donors tend to require EIAs on funded projects because their absence usually means that only scoping is done before a project goes ahead and that key mitigation actions are missed in the process. This is understandable but is not the case with the RMI because RMI EPA has a substantive PEA and flora/fauna surveying process that addresses mitigation. Second, an applicant deciding to conduct an EIA may not replace the PEA and surveying process outlined in this document. The process must proceed as outlined above, and only after the PEA is complete may the EIA be initiated. The only difference is that any flora and fauna survey requirement coming out of the PEA may be deferred to the EIA if an EIA is to take place. RMI EPA may be able to recommend EIA practitioners for applicants to engage. However, it is acceptable for applicants to choose to engage off-island practitioners as long as the applicant fully evaluates the availability of local practitioners who may be able to carry out aspects of the EIA (e.g. public and agency engagement, terrestrial and marine surveys). RMI EPA supports the use of off-island firms to manage the EIA process and produce the reports, as long as the majority of their team is either based or has significant experience in the RMI. The RMI EPA GM reserves the right to review the credentials of the lead firm and the individual practitioners before final selection is made. The following graphic of the RMI EPA EA decision tree summarizes the general

progression of the various stages of the EmPA, PEA, EIA, EmP Conditions, EMP, and compliance process discussed in this document.



Although it may seem like an overwhelming process, it is the goal of the RMI EPA to protect our environment and communities by ensuring compliance with both pre-and post-permit application approval. In Fiscal Year 2023 (FY23) there were a total of 57 minor applications and 30 major applications. The figures below are of a few of the 28 current, ongoing Major development projects.

Beach Lodge Marina.



Educational and Cultural Center - ECC in Uliga.

Jenrok Track and Field.

MEC Armor Rock and Seawall upgrade.

Several reports have documented the problems of erosion in the Marshall Islands, particularly in Majuro. Erosion is most acute in the urban areas of DUD on Majuro and Ebeye. Alterations to natural shorelines, aggregate extraction such as beach mining and nearshore dredging, and expanding reclamation and direct construction impacts such as run-off and sedimentation, all contribute to the devastation of what was once a natural beach barrier, and increase the vulnerability to storm surges and sea-level rise. Outside these urban areas, land clearing and removal of protective indigenous vegetation from the coasts increase the vulnerability of communities to these natural hazards. The Coastal Management Framework of 2006 (updated in 2009) provides a valuable framework for coastal management, although the implementation of all the preventative and mitigation measures therein is well beyond the RMI EPA's current capacity. Key approaches to managing the most pressing negative impacts of coastal erosion include capacity building. The CLCD recently undertook multiple Shoreline Risk Assessments and Drone Pilot License training. The RMI EPA has taken a significant step toward advancing its technical capabilities with technical support that included a comprehensive training program and supply of equipment by SPC via the PREP Project funded through the World Bank. The capacity-building program provided in collaboration with experts from SPC has empowered the RMI EPA with cutting-edge tools to strengthen environmental management and conservation efforts. The capacity building also included two RMI EPA staff on an attachment at SPC, in early 2023, for more hands-on training. RMI EPA expresses sincere appreciation to the World Bank SPC PREP project for the support and looks forward to further collaboration in the pursuit of sustainable environmental stewardship. Activities and Equipment provided as part of the project include Shoreline Change Analysis and Risk Assessment; Asset Data Collection and GIS training; Procurement of a high-end desktop for RMI EPA to assist with data processing and storage as part of our support in the coastal management area; Supply of a DJI Matrice Drone and Camera accessories including Drone Pilot License Training; and GNSS Tablets for data collection.

The CLCD was also involved in an array of other collaborative efforts with local, regional, and national-level partners. The goal of the ADB Marine Survey Methodology training facilitated by MICS is to improve and refresh the existing capacity within the RMI's Marine Survey team. As well as to increase the number of surveyors in the RMI. The training comes as a part of deliverables for the ADB Coastal Resilience through nature-based and integrated solutions projects. This project will focus on utilizing the Reimaanlok process to assist target communities in developing resource management plans. The target jurisdictions for this project include Majuro, Lib, and Jaluit. Another MICS partnership was the UH Hilo Terrestrial Baseline Survey training which allowed for introduction courses in data processing and reporting. This included geodetic surveying, using GPS technology for the establishment of ground control and verification points. As well as aerial data acquisition for terrestrial surveys for flood risk and shoreline change assessments and vegetation mapping.

RMI EPA is an active member at the Port State Training workshops organized regularly by the Ministry of Transportation, Communication and Information Technology and the Trust Company of the Marshall Islands (TCMI)These trainings are focused on inspection of Vessels entering RMI Ports. RMI EPA's involvement is to ensure vessels are equipped with proper oil containment storage, record keeping of oil disposal, and ensuring other wastes from vessels are properly disposed of.

Trainings and Workshops

Solid Waste and Pollutants Division

The Solid Waste and Pollutants Division (SWPD) has focused on several priority activities over the past fiscal year that are to be continued in the coming Fiscal Year 2024 (FY24):

- Assist in coordinating training on monitoring Solid and Hazardous Wastes with other agencies and other groups;
- Respond to complaints of environmental incidents;
- Continue implementation of the Styrofoam/plastic bags ban and activities for the container deposit legislation;
- Develop criteria for responding to complaints of environmental incidents;
- Seek legal advisor/lawyer to address outstanding violations and enforcement issues;
- Translate the requirements for permits to be more user friendly;
- Ensure continued compliance with the Solid Waste Regulations under NEPA (National Environmental Protection Act);
- Continue to make weekly site visits to businesses and institutions;
- Collaborate with MOHHS, National Police, and MalGov Police to enforce the local by-laws, for littering, sanitation, and unregistered dump sites;
- Revision of existing laws and regulations on solid waste;
- Continue to monitor the MAWC Landfill Environmental Management Plan;
- Continue implementation of the de-ratting activity in Majuro (all incoming vessels);
- Perform ship clearance on all vessels entering the RMI Ports;
- Develop and implement a new policy/strategy to outbound ship clearance; and
- Assist coordination of solid and hazardous wastes awareness in Radio Programs, schools and communities with the Education and Awareness Division.

Solid waste in Majuro and Ebeye in particular, is a major problem. Increasing urbanization and changing consumption patterns have left more waste than can be dealt with on a small atoll. Solid and liquid waste is a breeding ground for disease vectors. In addition, there are many scrap vehicles, heavy machinery, and appliances all around the shoreline – a significant eyesore.

The RMI has obligations for the management of solid, liquid, and hazardous waste under the Stockholm, Montreal, and Kigali conventions. In 2016, the RMI EPA was instrumental in passing Public Law 'Styrofoam Cups and Plates, and Plastic Products Prohibition establishing a ban on certain plastics and Styrofoam, and will continue to enforce this ban. In 2018, the Nitijela amended the Public Law to include the 'Container Deposit Legislation (CDL)' and further enacted through Cabinet the RMI EPA Recycling Regulation 2020. This has helped with the reduction of plastic waste going into the marine environment. Through the Beverage containers (PET bottles and aluminum cans) the environment is cleaner. The program is sustainable and has shown significant success. In July 2021, Ebeye launched its Recycling Program. RMI EPA is in consultation with other stakeholders to expand the CDL to address more toxic waste streams such as used lead acid batteries, bulk scrap metals, medical bulk waste (x-ray machines, etc.), lubricants, and petroleum products.

The broader issue of waste cannot be solved only with simple regulatory tools but requires a system-wide approach. It is clear that better cooperation and collaboration is needed, coordination between RMI EPA and Local Government bodies with jurisdictional waste management responsibilities, landowners, ministries that oversee the importation of materials, and utilities that plan and build landfills for final disposal. Without this cooperation RMI will continue to struggle to manage waste, with added pressures from the changing climate.

Workshops and Training

Marine pollution, especially in Majuro, is an urgent priority. Over the last few years, with the establishment of the Parties to the Nauru Agreement (PNA), there has been a massive increase in tuna fishing boats in Majuro. Now the largest transshipment port in the Pacific, Majuro Lagoon is regularly polluted by illegal discharges of sewage and oil from vessels. While the RMI EPA is responsible for Marine Pollution regulations, there are shared responsibilities and unclear mandates around this issue. MIMRA, Ports Authority, KALGov, MALGov all have a role to play. The RMI EPA to date has not had the equipment or capacity to effectively monitor pollution discharges from vessels. There is also significant marine pollution in Majuro from land-based sources. The most significant of these is the broken sewage outfall (since at least 2008) on the ocean side at Delap, which has killed all of the shallow living coral on much of the south and east side of Majuro Atoll through eutrophication and shifts to macroalgae reefs. Combined with climate change and El Nino impacts from warmer waters, even deeper corals are impacted and have lost much of their species diversity. The damage is not limited to the ocean side, since the deleterious macroalgae has moved into the lagoon through the bridge channel, and has overgrown most of the branching and table corals historically found in the area. The difficulty here is that RMI EPA's usual tools of regulations and enforcement cannot resolve the problem, which requires a new ocean outfall and macroalgae eradication. What RMI EPA can do is to advocate strongly to government and development partners the urgency of new construction through evidence of the very significant threats to human health and environmental problems. There are other point source and non-point source discharges to the lagoon (such as stormwater run-off), urgent priorities to be dealt with. Taking on the discharge of pollutants from vessels will require a major step up in RMI EPA's capacity. Significant resources will need to go into the management of ship and regular (twice-weekly) monitoring. Negotiations with other agencies will require the engagement of the GM, and prosecution of violations. Significantly more discipline will be required around collecting and recording evidence, and the RMI EPA will need to draw heavily on the assistance of the US Coast Guard. The revenue that may be obtained from fines should be ample to support funding of this program, once established. It will be important to not under-fund this work or give it inadequate human resources to be effective.

International Environment Policy Coordination

The International Environment Policy Coordinator is responsible for ensuring compliance with international protocols and treaties related to environmental protection. The coordinator works closely with the Environmental Protection Agency (EPA) to serve as the national focal point for the Republic of Marshall Islands (RMI) and ensure the timely completion and submission of reports required by international obligations.

The primary responsibilities encompass ensuring adherence to various international protocols and treaties related to environmental conservation, such as the Minamata Convention on Mercury, Ramsar Convention on Wetlands, Basel Convention on Hazardous Waste, Rotterdam Convention on Hazardous Chemicals, Stockholm Convention on Persistent Organic Pollutants, Vienna Convention for the Protection of the Ozone Layer, Montreal Protocol, and Kigali Amendment. Prioritizing compliance, the coordinator works to enhance awareness among importers and stakeholders about persistent organic pollutants (POPs), ozone-depleting substances (ODS), pesticides, and hazardous waste. This involves a comprehensive review and update of regulations pertaining to the ozone layer, chemicals, and POPs.

In addition to regulatory oversight, the coordinator establishes effective communication channels with customs offices and local governments to enforce restrictions on chemicals and regulated products. Data collection on the importation of ODS and POPs is a crucial aspect, leading to the generation of annual

reports based on this information. Furthermore, the coordinator organizes workshops for importers of POPs and pesticides, emphasizing priority areas. Collaborative efforts with regional and international organizations are vital for the coordination of awareness programs on ODS and POPs. Conducting national inventories to identify ODS and POPs within the country, coordinating the Minamata Initial Assessment (MIA) project, and engaging in community outreach initiatives to educate local residents about changes in refrigerants form integral parts of the coordinator's multifaceted approach.


JICA's Hikoyuki Ukai and EPA's Moriana Phillip.

JICA-EPA sign waste deal

The Marshall Islands and the Japan International Cooperation Agency (JICA) signed an agreement last month for the third phase of a Marshall Islands and Pacific regional solid waste program to move into gear.

The program is officially known as the Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries Phase 3 (J-PRISM3).

RMI Environmental Protection Authority General Manager Moriana Phillip and JICA Resident Representative Hikoyuki Ukai signed the new agreement. The aim of the agreement is promotion of international cooperation by supporting the socioeconomic development and economic stability of developing regions.

In the RMI, JICA contributes to waste disposal, health and sanitation, and education. JICA comes in by providing assistance with a focus on controlling the generation of waste and maintaining lifelines such as electric power, water systems, transportation, and communication.

After negotiations between the RMI and JICA, with consideration for RMI's priority needs, the following was agreed: Identifying viable measures to improve the sustainability of "3R+Return" — collect and domestically reuse/repurpose or return — of target waste streams.

This may entail the strengthening of legal, institutional and financial capability and other measures to be prepared through a feasibility study, trial-pilot activity, or training of people of relevant programs. The Phase 3 of the regional project for self-sustaining solid waste management and 3R+Return will start beginning next month and continue for five years.

At the signing, Phillip recognized JICA as an important counterpart in the J-PRISM3 project.

Other policy outputs and activities include:

- Ongoing Stakeholders consultation meetings with regional environment groups to monitor Japan's plan to release Advanced Liquid Processing System (ALPS) water into the ocean. RMI EPA also joined high level discussions coordinated by the Majuro Japan Embassy to engage with experts from Japan. Consultation meeting took place in Majuro with Japan Expert Yumiko Hata, Japan Ambassador to RMI and key members of Nitijela HESA Committee. At this consultation meeting, Japan experts relayed that Prime Minister Kishida announced at the Pacific Island Forum Japans' plan to safely dispose of ALPS-treated water, the water is processed and diluted before discharge, meeting international safety standards, and ensuring minimal impact, with continuous monitoring for transparency.

- Ongoing discussions with MAWC continue regarding the Container Deposit Legislation (CDL) process. Recently, RMI EPA participated in SPREP's Sustainable Financing Peer-to-Peer Learning Event in Palau (P2P), where delegates from ten Pacific Islands nations exchanged knowledge for a week. The focus remains on finding sustainable funding methods for waste management. The ongoing goal is to help participating countries learn from Palau's government about creating, implementing, tracking, and improving financial systems for managing recyclable materials. This continuous exchange of knowledge follows the guidelines of the 21-Step Pathway for Enacting a Sustainable Financing Program for Waste Management, endorsed during the 2021 SPREP Meeting. Sustainable Finance for Waste Management systems, known by different names in the Pacific, such as Advanced Recovery Fee, Container Deposit, Beverage Deposit, Advanced Disposal Fee, or Waste Levy, are ongoing legislative efforts globally to support waste management and recycling, encouraging governments to have enough funds to promote recycling and reduce reliance on landfills.

- RMI is actively participating in the ongoing US EPA Region 9 Biannual Environmental Conferences.

The 31st Pacific Islands Environment Conference (PIEC) with the theme: "Harmonizing Strategies in the Pacific (Islands, Oceans and Economies)." The involvement includes engagement in conversations regarding environmental concerns, exploring groundbreaking approaches to environmental issues, strengthening existing partnerships, and establishing novel collaborations within the Pacific region.

- Attendance of RMI at the newly established coalition of Intergovernmental Negotiating Committee (INC-3) responsible to create an international legally binding instrument against plastic pollution, including in the marine environment at the UN Environment Programme headquarters in Nairobi, Kenya.

- Attendance at a workshop to launch the Automated System for Customs Data (ASYCUDA) World system developed by UNEP for Customs administration. ASYCUDA is a computerized system managed by the United Nations Conference on Trade and Development (UNCTAD) that simplifies foreign trade tasks. It manages customs declarations, accounting, and transit procedures, using international standards. It can be customized for specific countries and enables electronic communication between traders and customs through formats like XML (Extensible Markup Language). We will discuss and organize upcoming stakeholder meetings in 2024 concerning the ASYCUDA program.

- Ongoing engagement with the Secretariat of the Basel, Rotterdam, Stockholm Conventions to meet RMI's reporting obligations. RMI has successfully submitted BRS National Reports for 2018, 2019 and completed a relevant training course, Project Management Practice Course.

- Ongoing engagement at International meetings to review and draft chapters of the Minamata Initial Assessment (MIA) submitted by the Biodiversity Research Institute (BRI) team. The RMI Government acceded to the joined the Minamata Convention on Mercury in 2019 to elevate needs to address the increasing environmental presence of toxic mercury caused by human activities. RMI is a beneficiary of a project under the convention-namely the, nowThey are now part of the Minamata Initial Assessment (MIA) Pacific Region Project, led by the Global Environment Facility (GEF) and implemented with the help of the Biodiversity Research Institute (BRI) to assess legislative needs, track mercury releases, identify contaminated sites, and conduct social assessments. The project findings will be shared globally to support efforts in making mercury history.

- Continued participation in the regional preparatory sessions for the Conference of the Parties to the Waigani Convention, with a specific emphasis on revising the convention to streamline the incorporation of the 2019 Basel Convention Plastic Waste Amendments.

- Continuous involvement and participation in regional preparatory meetings for the Minamata Convention on Mercury, culminating in MC COP-5 scheduled from October 30 to November 3, 2023.

- Participation in the GEF ISLANDS Pacific Project Steering Committee (PSC) to evaluate the advancement of the ISLANDS project, present key achievements from 2022/2023 activities, and partake in conversations regarding national and regional initiatives.

- **World Ozone Day**
  Coordinating the World Ozone Day event in RMI, collaborating with the Education and Awareness division and local schools with the participation of 100 attendees. We organized interactive activities, including discussions and Q&A sessions, as well as educated students about the divisions of RMI EPA.

Education and Awareness Division

The provision of information and support for community stewardship is a core function of the RMI EPA. The Education and Awareness Division (EAD) has slowly but surely evolved into a collaborative program, not separate from monitoring and enforcement, which focuses more on specific issues rather than being very general. This was put into place as one of the priority focuses of the division is to have the people of the RMI understand how negative activities impact the environment, to have them value a clean and healthy environment, as well as comply with all relevant regulations. Being educated on the environment, the effects of human conduct on the environment, and the significance of environmental protection is what is meant by "environment awareness." Raising awareness has a direct impact on change and contributes to education and understanding. Increasing awareness encourages people to take action. Increasing awareness by broadly disseminating information about environmental challenges, particularly those that affect the RMI. The purpose of the RMI EPA Education and Awareness Division is to educate and raise awareness of environmental issues among the entire RMI population, with a special emphasis on the young and vulnerable population. All in all, the goal is to have proactive not reactive citizens.

The EAD has focused on several priority activities over the past fiscal year that are to be continued in the coming Fiscal Year 2024 (FY24):

- Develop information materials about the core functions of RMI EPA;
- Assist all divisions with public awareness;
- Establishing with support of High Schools, Environmental Clubs, to help address need to outreach initiatives to clean up communities and raise awareness around public health and cleanliness;
- Conduct awareness programs in schools and communities on Majuro and Ebeye;
- Visit neighboring islands to raise awareness about the functions of RMI EPA and the RMI environmental regulations;
- Continue to provide public information on V7AB and social media; and
- Continue involvement in capacity building activities such as training, workshops, and conferences.

In FY23, vacancies with the Education and Outreach division were filled. A Chief of Division and assistant, Outreach Officer were recruited. An overall RMI EPA operations (functions, mandate, and regulations) presentation was created for school and community outreach. Throughout the year, updates to the outreach presentations have included solid waste management practices, water quality demonstrations, and information about ozone depleting substances. The aim for our outreach materials in FY24 is to continue to develop and evolve to include detailed and issue-specific information related to each division. The EAD assisted each division by creating tri-fold posters, pamphlets and presentation materials for the educational outreach. To date, the annual goal of an initial presentation with follow up outreach to each school has been successfully reached. The Education and Awareness Division of RMI EPA successfully outreached at all Majuro Atoll elementary schools in 2023.

Outreach Activities and Workshops

School Outreach Activities

School Outreach Activities

School Outreach Activities

Workshops

School Outreach Activities

Workshops

Resources and funding

In 2023/24, the EPA will receive $186k from the RMI General Fund, and around $200k from funding under the Military Use and Operating Rights Agreement (MUORA) for environmental oversight work at the US Military Base on Kwajlein. In addition, the EPA can access revenue for operations from permit processing fees, water testing/ laboratory fees and for fines on violations of regulations. As a developing Pacific nation, areas and programs within the EPA can seek out donor funding or resources for specific activities and outcomes. This has been a greatly underutilized area, and part of the organizational capacity building will be to encourage each department to develop their own funding and resource networks. There are currently a total of 31 staff members working for RMI EPA, in Majuro and Ebeye.

Marshall Islands Culture: Modern vs. Traditional Governance

Traditional governance has a significant impact on the effectiveness of the EPA in the Marshall Islands. The principles of land tenure are such that there are landowners, Alaps, and chiefs, Iroij- the enforcement of violations can be difficult as it is seen as someone else “telling them what to do” on their own land. In addition, social ties are strong and widespread, and officers can find it difficult to serve or carry through violations on relatives or people with whom they have a strong social connection. In looking at the effectiveness of this over the last 35 years, it becomes apparent that the enforcement approach needs to be customized for local culture.