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REPUBLIC OF MARSHALL ISLANDS MARITIME INVESTMENT PROJECT (MIMIP)

Environmental and Social Management Framework and Environmental and Social Management Plan

Prepared for the Government of RMI Division of International Development Assistance

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ACRONYMS AND ABBREVIATIONS

CEDAW	Convention of the Elimination of All Forms of Discrimination Against Women
CERC	Contingent Emergency Response Component
CFA	Compact of Free Association
CIU	Centralized Implementation Unit
DIDA	Division of International Development Assistance
EA	Executing Agency
EAP	Emergency Action Plan
EIA	Environmental Impact Assessment
EPA	Environmental Protection Agency
EEZ	Exclusive Economic Zone
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
FY	Financial Year
GBV	Gender-based Violence
GHG	Greenhouse Gas
GoRMI	Government of Republic of Marshall Island
GRM	Grievance Redress Mechanism
HT	Human Trafficking
IA	Implementing Agency
HT	Human Trafficking
IMO	International Maritime Organization
IOM	International Organization for Migration
IPCC	International Panel on Climate Change
ISPS	International Ship and Port Facility Security
M&E	Monitoring and Evaluation

MEC	Majuro Energy Corporation
MIMIP	Marshall Islands Maritime Investment Project
MoF	Ministry of Finance
MoTC	Ministry of Transport and Communications
MOHHS	Ministry of Health and Human Services
NDC	Nationally Determined Contribution
NDMO	National Disaster Management Office
NGMP	National Gender Mainstreaming Policy
NGO	Non-Governmental Organization
NSP	National Strategic Plan
NTHT	National Taskforce against Human Trafficking
OHS	Occupational Health and Safety
OM	Operations Manual
PM	Project Manager
POM	Project Operations Manual
PPA	Project Preparation Advance
RMI	Republic of Marshall Islands
RMI EPA	Republic of Marshall Islands Environmental Protection Agency
RMIPA	Republic of Marshall Islands Port Authority
SAR	Search and Rescue
SDG	Sustainable Development Goal
SEP	Stakeholder Engagement Plan
SOP	Standard Operating Procedure
SPREP	Secretariat of the Pacific Regional Environment Program
STDs	Sexually Transmitted Diseases
TA	Technical Assistance
TEUs	Twenty-foot equivalent units

UNFCC	United Nations Framework on Climate Change
WB	World Bank
WUTMI	Women United Together Marshall Islands

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How to Use this Document

This Environment and Social Management Framework (ESMF) is for the Marshall Island Maritime Investment Project (MIMIP) in the Republic of Marshall Islands (RMI). It was prepared by the ESIA Consult Pty Ltd, Division of International Development Assistance (DIDA) and RMI Ports Authority (RMIPA).

It is developed as part of the preparatory documentation for the MIMIP, to provide guidance for the RMI Implementing Agency (RMIPA) and Centralized Implementation Unit (CIU) on environmental and social safeguard aspects of the Project.

The ESMF sets out how the safeguards aspects of the MIMIP will be applied during the identification and where necessary, screening of all sub-project activities, and in their subsequent design and implementation.

The ESMF will also inform the development of the Project Operations Manuals (POM) and the preparation of the required safeguard tools and instruments for selected priority sub-projects to be funded under the MIMIP.

Overall, the ESMF applies to the entire project.

EXECUTIVE SUMMARY

The Government of the Republic of Marshall Islands (RMI) is applying to the World Bank for grant financing to undertake the "*Marshall Islands Maritime Investment Project*" (MIMIP). The MIMIP will improve the safety, efficiency and climate resilience of maritime infrastructure and operations in the RMI in compliance with the International Ship and Port Facility Security (ISPS) Code to ensure safety and security arounds its port.

As part of the requirements of the submission to the World Bank, the Government of RMI is required to prepare environmental and social safeguards documentation as part of the Project Preparation Advance stage. The MIMIP has been categorized as a Category B (Moderate Risk) project consistent with World Bank Environmental and Social Safeguard protocols. To fulfil the requirements of the World Bank, the Government of RMI has prepared this Environmental and Social Management Framework (ESMF) and Environmental and Social Management Plan (ESMP) in support of the MIMIP proposal.

This Environmental and Social Management Framework, (ESMF), provides the tools for the integration of environmental and social stewardship into the project as required by the RMI's relevant laws and regulations and the Environmental and Social Safeguards Policies of the World Bank (WB). The ESMF is a necessary instrument for the RMI's preparation for the MIMIP under World Bank Policy OP/BP 4.01 Environmental Assessment because the specific subprojects/activities for implementation are not yet known.

Project Objectives and Components

The MIMIP will improve the safety, efficiency and climate resilience of maritime infrastructure and operations in the RMI in compliance with the International Ship and Port Facility Security (ISPS) Code to ensure safety and security arounds its port.

The project has three main components, these being:

- Component One (1) related to marine infrastructure. This component will enhance the resilience of maritime structures to natural disasters and climate change impacts through better design and quality of infrastructure, as well as safer and more efficient operation of port facilities;
- Component Two (2) which will improve maritime safety and security, which will strengthen connectivity between the islands of RMI States, and facilitate access to food, water, fuel and emergency response services. This component will also address an urgent need of waste management in ports. The component will include the provision of Search and Rescue equipment and safety devices; as well as review and assess options and measures to counter trafficking of persons and will propose steps RMI could take to comply with the minimum standards under the U.S. TVPA; and
- Component Three (3) will support technical assistance to strengthen oversight and management of port facilities, improve the coordination of emergency response systems, elevate awareness of SAR awareness and ISPS requirements, and implement project activities

The activities will be undertaken over a five-year timeframe.

RMI Legislation

The MIMIP Project is consistent with the RMI legislation relating to ports, including the National Environmental Protection Act 1984 and EIA Regulation 1994, Solid Waste Regulations 1989, Coastal Conservation Act 1988 and the Endangered Species Act 1975. RMI has no occupational health and safety (OH&S) legislation and in such an absence, OH&S aspects under the MIMIP will be regulated through the World Bank Group's Environmental, Health, and Safety Guidelines.

Earthworks associated with any construction activities undertaken in relation to the MIMIP project would likely be deemed to be minor but would need an Earthmoving Permit and associated Environment and Social Management Plan (ESMP). All workers engaged on the MIMIP Project will need to be covered under the terms of the WB EHS Guidelines, which means development of comprehensive job safety analyses (JSAs) for each role, including potential contractors involved in building works. This process will involve development of Safety Management Plans for each position.

World Bank Safeguard Policies

Initial screening indicates that Environmental Assessment (OP/BP 4.01) World Bank Safeguard Policy will be triggered as a result of the Project, requiring the Borrower to prepare the safeguards instruments to guide detailed planning once sub-projects are identified firmly at a later stage of Project planning. This ESMF is an integral part of compliance with this policy, as well as the other WB policies that are triggered (OP/BP 4.04 Natural Habitats and OP/BP 4.10 Indigenous People). Screening of known activities

and those likely to be undertaken has indicated an assessment of Category B for the project. The screening found that the impacts are less significant and that a range of potential measures for mitigation can be readily designed. For unknown activities, further screening, as outlined in this ESMF, will be required to ensure that only Category B or C sub-projects are undertaken as part of the project.

This ESMF follows the protocols set out in OP/BP 4.01.

Significant and Potential Environmental and Social Impacts and Mitigation Measures

The following table summarizes potentially adverse social and environmental impacts identified as a consequence of the MIMIP, along with associated mitigation measures that are able to be implemented within the scope of the project.

Component / Sub-component	Negative Impacts	
	Negative	Mitigation
Component 1: Maritime Infrastructure Investments		
Repairs to existing berths and facilities at Delap, Uliga and on the outer islands of Jaluit, Wotje and Arno	Hazardous substances and waste management Source of aggregates for construction (sand and gravel). Construction impacts (noise and dust, and disruption) to port users and nearby communities Occupational injuries or loss of life.	Development of waste management plans Removal and export of all solid and hazardous waste to permitted landfills. Import aggregate material. If imported from Part 1 countries, no further due diligence required; If from Part 2 countries[1] , conduct due diligence on sources to ensure compliance with source government laws and regulations. Constrain working hours and provide adequate warning of works to affected people.
Acquire cargo handling equipment for Delap and Uliga Docks e.g. terminal-tractor units, reach stackers and lift trucks	Requirement of ongoing maintenance.	Develop an O&M plan
Repair quay wall structures and replace quay furniture (fenders, bollards, ladders) at Delap, Uliga and Ebeye Docks	Waste management Occupational injuries or loss of life Potential to impact marine environment during construction	Contractors are required to prepare and implement Contractors ESMP, which includes an OHS/JSA manual. All staff must be adequately trained and resourced for the job. Provide barriers to exclude the public from work sites. Implement ESMP to mitigate risks
Upgrade/provide fencing, gates and terminal lighting to ensure compliance with ISPS requirements at Delap, Uliga and Ebeye Docks	Waste production Construction impacts (noise, dust, erosion) Increased power use through lighting	Develop waste management plans Implement ESMP to manage construction impacts Select power efficient lighting, design to optimise efficiency

[1] Part II Countries – Developing Countries including potential source PICs such as Palau, Nauru, Solomon Is., Fiji, Kiribati etc.

Component 2: Maritime Security and Safety Equipment		
Replace/upgrade Aids to Navigation (AtoNs) at Majuro, Jaluit and Wotje (excluding Ebeye)	Potential for environmental impacts during installation Occupational injuries or loss of life	Utilize existing markers / foundations if possible. Ecological survey of marker locations to identify presence of any sensitive habitats. Contractors are required to prepare and implement Contractors ESMP, which includes an OHS/JSA manual. All staff must be adequately trained and resourced for the job.
Oil spill equipment	Ongoing storage, maintenance and training in use of equipment required.	Develop O&M plans. Training programs (including train the trainers) Used spill material is contaminated – waste management plan required
Provide Search and Rescue (SAR) equipment and safety devices	Need for O&M and ongoing training	Develop O&M plan Develop training program and undertake SAR drills.
Assess the benefits of a scanner for Delap Dock	Perceived privacy issues	Raise community awareness
Gender-based Violence and Trafficking Prevention	Cultural resistance to discussing GBV and HT	Design gender sensitive, popular, and culturally appropriate IEC materials Hold workshops to raise awareness Adopt culturally appropriate communication and teaching methods
Component 3: Technical Assistance and Project Management		
Supervise maritime infrastructure works	Lack of skilled resources Lack of safeguards experience	Recruit and include mentoring component in role. Safeguards Specialist to provide support and capacity building
Review institutional and governance arrangements		
Review port operations at Delap and Uliga Docks	Existing poor practices	Identify poor practices, provide training and rectify
Maritime sector planning	Lack of local experience in Port Master Planning	Recruit consultant and include capacity building role Involve local agencies in process Ensure local 'ownership' in process and outcomes

Capacity building initiatives	RMIPA has limited safeguards capacity	Strengthen capacity of RMIPA personnel to undertake safeguard activities. Safeguards Specialist to provide support and act as mentor
Encourage employment opportunities for women	Potential for exploitation Existing gender bias	Ensure compliance with RMI labour and OHS laws Raise community awareness
Project management	Added demands on low capacity offices and ministries involved in the implementation of the project	Strengthen capacity of designated ministry and/or local government personnel to undertake project activities.
Emerging priority issues	Issues currently unknown Some priorities may have significant impacts	Identify as early as possible Screen potential sub-projects as per ESMF
Component 4: Contingent Emergency Response	Emergencies unknown By nature, emergencies severe Potential for environmental and social impacts associated with responses	Review needs based on PDNA Liaise with NDMO Comply with ESMF, in particular screening of projects and reference to CERC negative list

Environmental and Social Management Process

The ESMF sets out a process for screening sub-projects during project implementation, based on each sub-project being evaluated according to a predetermined screening process to determine the potential risk of environmental and social impacts, and associated mitigation options.

Consultation

Consultation is mandated by OP/BP 4.01; Environment Assessment. Consultation required is a two-way process in which beneficiaries provide advice and input on the design of proposed projects that affect their lives and environment.

The ESMF sets out protocols for stakeholder engagement and grievance redress.

Institutional Arrangements for Safeguards Implementation

DIDA will be responsible for the ESMF and integrating the requirements into the Program. RMIPA will have responsibility for the day-to-day implementation of all safeguard requirements.

For MOF/DIDA, a Safeguards Advisor attached to the Centralized Implementation Unit (CIU) will ensure the effective implementation of the Project ESMF and ESMP.

ESMF Capacity Building and Budget

The RMI Government has carried out stakeholder and community consultations during preparation and has prepared this ESMF to manage the residual social and environmental impacts from the project. The implementing agencies involved do not have safeguard policy experience, however the Centralized Implementation Unit (CIU) of the Division of International Development Assistance (DIDA) includes a Safeguards Specialist with the capacity and capability to provide support and capacity building to implement the mitigation measures from the ESMF.

The ESMF provides an indicative budget for implementing the elements of this ESMF, based on best estimates with assumptions of the kind of activities likely to be undertaken in the MIMIP.

Budgeting for environmental interventions and the application of mitigation measures to enhance positive impacts for RMI is an investment in the future as it will reduce the environmental and social liability at local, and national levels. Overall, the MIMIP will provide significant environmental and social benefits to the ports and communities.

1 INTRODUCTION

1. The Government of the Republic of Marshall Islands (RMI) is applying to the World Bank for grant financing to undertake the "*Marshall Islands Maritime Investment Project*" (MIMIP). The MIMIP will improve the safety, efficiency and climate resilience of maritime infrastructure and operations in the RMI in compliance with the International Ship and Port Facility Security (ISPS) Code to ensure safety and security around its port.
2. The submission to the World Bank by the Government of RMI is required to incorporate environmental and social safeguards documentation as part of the Project Preparation Advance (PPA) stage. The MIMIP has been categorized as a Category B (Moderate Risk) project consistent with the World Bank Environmental and Social Safeguards protocols. To fulfil World Bank requirements, the Government of RMI has prepared this Environmental and Social Management Framework (ESMF) and Environmental and Social Management Plan (ESMP) in support of the MIMIP proposal.

1.1 PURPOSE AND SCOPE OF ESMF

3. The World Bank is supporting the RMI to deliver the MIMIP. This ESMF provides for the integration of environmental and social stewardship into the project as required by the Environmental and Social Safeguards Policies of the World Bank. World Bank Policy OP/BP 4.01 Environmental Assessment states that: "*For projects involving the preparation and implementation of annual investment plans or subprojects, identified and developed over the course of the project period during the preparation of each proposed subproject, the project coordinating entity or implementing institution carries out appropriate EA according to country requirements and the requirements of OB/BP4.01*".
4. The ESMF is necessary under World Bank Policy OP/BP 4.01 Environmental Assessment because the specific sub-projects/activities for implementation are not yet known. The primary purpose of the ESMF is to provide a screening process for activities that are identified during project implementation that were not identified during project preparation.

1.1.1 Environmental and Social Management Framework

5. An ESMF is an instrument that examines the issues and impacts associated when a project consists of a program and/or series of sub-projects, and the impacts cannot be determined until the program or sub-project details have been identified.
6. The ESMF sets out the principles, rules, guidelines and procedures to assess the environmental and social impacts. It contains measures and plans to reduce, mitigate and/or offset adverse impacts and enhance positive impacts, provisions for estimating and budgeting the costs of such measures, and information on the agency or agencies responsible for addressing project impacts.
7. The ESMF provides the overarching framework that is to be applied to the MIMIP. As MIMIP activities become defined then environmental and social management plans (ESMPs) specific to those activities can be developed, using the ESMF as a basis for risk assessment and mitigation strategies. In this way, the ESMP/s sit beneath the ESMF. A benefit of this approach is:
    - multiple ESMPs can be produced within a common framework
    - ESMPs can be produced for activities of different sizes (from task size to sub-project size)
    - preparation of ESMPs is simplified – there is not the need to repeat all the baseline/background material.

1.1.2 Environmental and Social Management Plan

8. An ESMP is a management tool used to assist in minimizing the impact to the environment and socially; and establish a set of environmental and social objectives for specific known activities. To ensure the environmental and social objectives of the MIMIP are met, the ESMP will be used by the project implementers to structure and control the environmental and social management safeguards that are required to avoid or mitigate adverse effects on the environment and communities.
9. The ESMP will be updated from time to time by RMIPA and the contractors in consultation with the Safeguards Advisor to incorporate changes in the detailed design phase of the MIMIP.

2 BACKGROUND AND RATIONALE

2.1 COUNTRY CONTEXT

10. The Republic of the Marshall Islands (RMI), which is located approximately midway between Hawaii and the Philippines, consists of 29 atolls, 5 islands and numerous small islets. The country covers an area of 1.9 million km^2, but has just 181 km^2 of land area (Figure 1). The overall population is about 55,000, with about 75% living in the capital Majuro and in Ebeye.

11. As with other small island developing states in the region, RMI faces significant challenges related to its small size, remoteness, geographical dispersion, environmental fragility and exposure to external shocks. Frequent natural disasters and climate change impose high costs and may even threaten the physical viability of some areas of both the main islands and more remote outer islands. Such events can and do cause severe damage to infrastructure and other economic assets and have adverse impacts on livelihoods.

12. RMI is highly dependent on their maritime services for both international and domestic trade. In addition, maritime services support inclusive economic growth and social development by providing communities with reliable access to economic opportunities, services and information. As such, the provision of safe, efficient, reliable and affordable sea transport services is considered essential for both countries basic economic and social functions, and to achieving national development plans.

13. To enhance the safety and efficiency of maritime operations, RMI is developing a project that will focus on improving maritime infrastructure and services; the MIMIP. The Governments of RMI has received a Project Preparation Advance (PPA) to assist in the preparation of MIMIP. The PPA is being used to fund the preparation of the necessary technical, economic, environmental and design studies for the projects, as well as establishing the operational framework within which the projects will be implemented. An essential part of project preparation is the consultative process with stakeholders and development of safeguards instruments. This ESMF/ESMP and its associated annexures have been developed, in accordance with World Bank safeguards policies and RMI environmental and social laws and regulations, to satisfy the safeguard requirements to support project appraisal for the MIMIP.

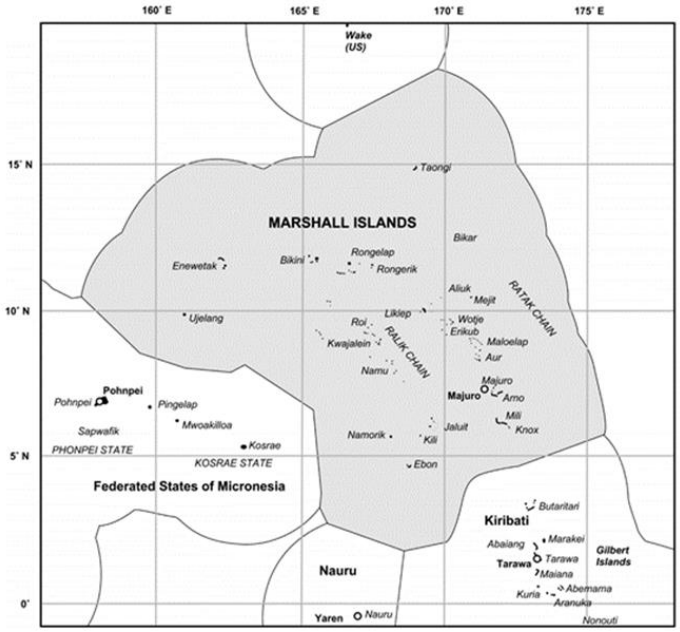


Figure 1 Map of RMI and Exclusive Economic Zone[2]

2.2 Sectoral and Institutional Context

2.2.1 Sectoral Context.

14. Given RMI's geographic characteristics and distant outer islands, the provision of efficient, reliable and affordable sea transport services is considered essential for the country's basic economic and social functions, and to achieving RMI's national development plans. A fundamental requirement for providing intra-island shipping services is safe, well-functioning maritime transport infrastructure and assets, including wharfs, docks and jetties. Combined, maritime services and assets underpin inclusive economic growth and social development by providing RMI's communities with reliable access to economic opportunities, services and information.
15. Majuro is regularly served by international cargo services from the U.S, Asia and Australia. Majuro is the largest regional tuna transshipment port and transshipped 600,000 metric tons of tuna in 2016. Fishing vessels make-up as much as 75 percent of vessel traffic calling at Majuro. Typically, refrigerated "mother vessels" harvest tuna and, when full, transship fish to larger carrier ships that are anchored in the Majuro lagoon. Most have an average stay of ten days.
16. There are two principal docks (ports) at Majuro:
    - Delap Dock for international cargo
    - Uliga Dock for domestic passengers and cargo.
17. Delap Dock is the hub of RMI's cash economy and serves as the gateway for imports and exports that support the livelihoods of RMI residents, private business, and government agencies. It is accessed through a deep-water channel and well-protected lagoon. The dock predominantly serves international cargo vessels that deliver a wide variety of imported food and household items, construction equipment and materials, and diesel fuel. International cargo vessels call at Delap Dock an average of once per week, while tankers deliver fuel about once per month. Intra-island cargo vessels periodically offload copra to the dock, where it is delivered to a coconut processing operation located on the northeast side of Delap Dock. A limited number of other international vessels use Delap Dock to load locally produced coconut oil. International fishing vessels also make occasional use of Delap Dock for purse seine[3] net repairs, fuel resupplies, and vessel maintenance. The international wharf is not equipped with shore or mobile cranes, necessitating vessels calling at the dock to have their own equipment.
18. Delap Dock has been designated as compliant with the International Ship and Port Facility Security (ISPS) Code, which is a set of measures to enhance the security of ships and port facilities. However, formal regulations governing activities at the port are lacking, and the dock has been operating under informal regulations for a considerable time.

2.2.2 Institutional Context.

19. At the national level, the Ministry of Transport and Communications (MoTC) is responsible for policymaking and some regulatory oversight, as well as the management and development of the maritime sector in RMI. However, there is no up-to-date maritime transport sector policy and MoTC does not have a harbor master with a mandate to oversee RMI's ports. MoTC also manages intra-island shipping services by contracting them out to private ship operators to make voyages into the designated shipping region.
20. The Republic of the Marshall Islands Ports Authority (RMIPA) is a state-owned entity, which is responsible for operating RMI's publicly-owned ports at Majuro and Jaluit, as well as all facilities and structures situated within public port and airport areas. In addition to operational responsibilities, RMIPA carries out regulatory and enforcement functions related to port use and vessel activities.

[2] SPC 2011
[3] A purse seine is a wall of netting that is released around a school of fish. The seine has floats along the top line with a lead line threaded through rings along the bottom. Once a school of fish is identified, a small boat encircles the school with the net.

21. RMI is a member of the International Maritime Organization (IMO) and is party to most IMO conventions and other maritime-related international conventions. RMI's delegate to IMO is an officer from The Trust Company of the Marshall Islands (TCMI), which through a joint venture agreement with the RMI Government, is authorized by legislation to administer the maritime and corporate programs for RMI. TCMI acts as registrar and registered agent for RMI's non-resident companies. MoTC and TCMI essentially share maritime responsibilities. TCMI generally acts as maritime administrator for international shipping related matters, whereas MoTC acts as maritime administrator for domestic shipping.

2.3 Relevance to Higher Level Objectives

22. The Marshall Islands Maritime Investment Project (MIMIP) is closely aligned with the World Bank's twin goals of ending extreme poverty and boosting shared prosperity given the evidence of the strong negative relationship between extreme poverty and accessibility/mobility as an auxiliary support to trade and competitiveness.

23. MIMIP is consistent with the Regional Partnership Framework (RPF) for FY17 to FY21, which was approved in February 2017, and covers nine small Pacific island countries (PIC9), including RMI. The RPF identifies four areas of focus for PIC9 as:

    - fully exploiting the available economic opportunities
    - enhancing access to economic opportunities
    - protecting incomes and livelihoods
    - strengthening the enablers of growth and opportunities (macro-economic management, infrastructure and addressing knowledge gaps).

24. MIMIP generally supports all four focus areas. Improved port and maritime services enhance opportunities to increase transshipment services, which in turn enhances access to economic opportunities. Without a well-functioning maritime sector, livelihoods could also be compromised, particularly as RMI imports almost 100% of food, pharmaceuticals and fuel. The RPF also highlights the key role that maritime shipping and internal connectivity play in trade of basic goods in the nine PICs.

25. As defined in RMI's National Strategic Plan 2015-2017 (NSP), the scope and objective of MIMIP are in line with key Government development objectives. The NSP recognizes the critical importance of a strong maritime sector in terms of the quality, frequency, and cost-effectiveness of inter-island transport services, as well as the fostering of international charter and tourist vessels. Given the country's geographical characteristics, the provision of efficient and reliable shipping services is considered essential for health care and education.

26. This project seeks to enhance the resilience of RMI's maritime transport sector to the impacts of natural hazards and climate change by strengthening port facilities against the incursion of high tides, storm surges and sea level rise, such as through the provision of floating pontoons for passenger access to ferries. In addition, strengthening the safety of navigation and the efficiency of port services will also enhance connectivity and access to goods and services for these remote islands. This is aligned with RMI's National Climate Change Policy Framework, which identifies the protection of infrastructure from sea-level rise, sea surges, and typhoons as priority area for urgent response. As stated in RMI's National Communication to the United Nations Framework Convention on Climate Change (UNFCCC), RMI is already experiencing climate change in the form of increased intensity and frequency of extreme events and droughts. Improving the efficiency and safety of maritime transport will help address vulnerabilities associated with water, food and fuel security and strengthen the capacity for communication, transportation and emergency response to the outer islands where some of the most vulnerable communities live.

27. Improved efficiency of maritime transport also contributes to RMI's objective of reducing greenhouse gas (GHG) emissions. RMI is the founder of the High Ambition Coalition, a group of progressive countries advocating for and pursuing aggressive climate action. RMI is the first developing country to present an economy-wide absolute GHG emission reduction target. In its Nationally Determined Contribution (NDC), land transport and shipping are identified as priority sectors. The target for emissions reductions in the transport sector is 16% by 2025 and 27% by 2030.

3 PROJECT SETTING

3.1 PROJECT AREA / GEOGRAPHIC EXTENT

28. The project is focused on existing maritime facilities at six existing ports in RMI: Majuro (Delap and Uliga), Ebeye, Jaluit, Wotje and Arno. The works are limited to the port boundaries, ie land currently occupied by the ports and immediate waters (existing channels and berth pockets). Some existing channel markers, which are more remote from the ports, are also included in the project.
29. The port areas are expected to have sufficient space to provide temporary laydown areas, fabrication yards and temporary waste storage areas.

3.2 EXISTING PORTS AND MARKERS

30. The following is a brief summary of each of the ports. Detailed descriptions of the existing port facilities are provided in Annexure A.

3.2.1 Majuro

3.2.1.1 Delap

31. Delap Port is on the leeward, southern lagoon shore of the large Island on the eastern corner of Majuro atoll. Delap is the main port for marine cargo in RMI. Delap Port has five berths, with a wharf length of 308 m and an apron width of 30 m. The berth pocket is dredged to between 17 m. The container yard is 30,000 m^2 of crushed coral base.
32. Port is fenced and there is a security gatehouse adjacent to the RMIPA offices, which are located away from the dock on the road.
33. Surrounding land use is industrial in nature: the Majuro Energy Corporation (MEC) power station and the Toboalar Copra Corporation lie to the east of the port, across the road from the port MEC has its fuel farm, there is warehousing, businesses and then residences to the east. The PII dock is approximately 1.3 km to the east.
34. The benthic habitat is predominately macro-abiotic at the main operational area (the northern facing dock), consisting mostly of coarse sand, bare rubble and litter/refuse, with sparse visible epiflora or fauna. This area rapidly changes to deep lagoon habitat to the north via a sandy slope. The area immediately to the east of the port dock is also an operationally busy area with a shallow lagoon benthic habitat: abundant macroalgae (≈30% cover) sparse individual hard coral colonies, and coarse sand. To the west of the port the benthic habitat transitions from a deeper lagoon environment to a fringing reef flat environment, although mostly consisting of algal turf covered hard substrate with sparse hard coral cover.

3.2.1.2 Uliga

35. Uliga port is situated on the leeward eastern lagoon shore of the large Island on the eastern corner of Majuro atoll. Uliga is the main port for local vessels in Majuro. Uliga Port has four berths, with a wharf length of 120 m and has an apron width of 15 m, which is the width of the whole dock. The berth pocket is dredged to between 9 m. The main wharf which is L shaped serves local vessels, tenders for fishing vessels while the inside of the L serves as a marina for private and smaller commercial domestic vessels. The port is fenced with a security checkpoint at the main gate. There is potential access via the boat ramp.
36. The area around the port is heavily urbanised. Immediately behind (NW) of the port is the MIMRA Outer Islands Fish Market Center, adjacent to this is the Uliga Inn and which could potentially be used by fishers etc. A new multi-story commercial building is being built adjacent to Uliga port. Approximately 150 m to the north west of the port is the Cost Price Supermarket and across the main Majuro road is the Adele Museum and Public Library (approximately 220 m NW of the wharf).
37. The benthic habitat around the north and west of the dock is predominately a mix of macroalgae beds on coarse sands with large sandy spaces and sparse visible epiflora or fauna, transitioning via a steep slope to deep lagoon habitat to the west. To the east of the dock, in-between the dock and land, the benthic environment consists of a small reef among coarse

sand. To the south of the dock, the habitat transitions from deep lagoon to shallow lagoon abutting fringing reef slope and flat to the island shore. The shallow lagoon here is predominately biotic habitat consisting mostly of macroalgae and algal turf on hard substrate, with some in between coarse sand and sparse individual hard coral colonies. The reef slope to the south-east has relatively high coral cover in a small area (≈35% cover) and abundant algal turf on hard substrate.

3.2.1.3 Channel Markers

38. Majuro Atoll is the major location for international shipping to RMI and the anchorage most utilized by the commercial fishing fleet including carriers, purse seine and long line vessels. As the lagoon is within the atoll, navigational aids are vital to ensure the safe movement of vessels.

39. Majuro has eleven channel navigation aids (refer Annexure A for map). Of these, No 7 marker is missing, while channel navigation aids 1, 4, 8, 9, 10 and 11 do not have lights. The project includes repair/upgrades to some of these existing channel markers.

40. Marine surveys of the markers were not undertaken, however given their locations in areas that generally have good tidal exchange and are distant from industry and urban development, it is likely that there will be healthy coral formations in the area (as markers are usually located on coral bommies or reefs rather than in the deep channels).

3.2.2 Ebeye

41. The dock at Ebeye is on the leeward, lagoon shore of Ebeye Island on the southern corner of Kwajalein atoll. Ebeye is the main port for marine cargo on Kwajalein atoll. Ebeye Port has three berths, with a wharf length of 120 m and has an apron width of 20 m. The container yard is 5,000 m^2 of crushed coral base. The main cargo wharf serves international cargo vessels and tankers, while a smaller wharf north of the port that is used by domestic vessels and the ferry from Kwajalein. The berth pocket is dredged to between 9 m.

42. The depth around the main operational port area (the western side of the dock) is around 12-17m, which falls away rapidly to the west to deep lagoon, sandy bottom habitat. The existing benthic habitat at the main operational area and to the north of Ebeye port predominately consists of both macroalgae (*Halimdea* sp. meadows) and macro-abiotic substrate (mostly coarse sand, bare rubble and litter/refuse) with sparse visible epifauna. The area immediate south and SSE of the port is a shallow lagoon area abutting the western shore of Ebeye Island. The shallow lagoon area is where the substrate transitions to higher algal turf cover and there is also sparse hard coral cover of ≈<5%.

43. Ebeye is highly urbanised and the area around the port is no exception. Some of the nearest buildings to the port are the Payless Triple J supermarket, the Hotel Ebeye and the Little Mermaid Chinese restaurant. All three business are approximately 150m from the front face of the wharf. It is less than 400 m from the dock face to the lagoon side of the island and that distance is heavily urbanised.

3.2.3 Jaluit

44. The port at Jaluit is situated on the leeward, lagoon shore on the southern corner of Jaluit atoll. The port has one single berth for a ship and a roll on roll off facility on the northern side, the structure is approximately 33 m long by 10 m wide. There are dolphins off the northern and southern ends of the wharf, otherwise there are limited facilities associated with the wharf. A single lane road provides access from the wharf to the nearby village. The nearest urban development is approximately 75 m from the front face of the wharf.

45. There are two non-operational navigational aids. One is located at the entrance to the lagoon and the second is located within the lagoon itself on a reef.

46. Excepting the fringing reef around 80m to the NNW of the port, its benthic habitat is predominately macro-abiotic, consisting mostly of coarse sand with sparse visible epiflora or fauna. The area immediately to the west of the port dock has < 10% biotic substrate cover and recedes westward into deeper lagoon habitat. The benthic habitat immediately north of the port consists of small sandy channel which meets a shallow fringing reef habitat abutting the western shoreline of Jaluit. The shallow lagoon to the south and east of the port dock consists mostly of coarse sand, however sparse hard coral colonies are present (≈10% cover).

3.2.4 Wotje

47. Wotje's dock facilities consist of a concrete, earth filled finger wharf. The dock extends approximately 200 m into the lagoon. There is a small boat landing area on the southern side of the dock. Large vessels are unable to directly use the dock. The dock was extensively damaged by bombing in WWII – debris is scattered in the water around the outer end of the dock.
48. Approximately 500 m to the north is a concrete ramp on which MEC has an oil transfer connection (refer Annexure E). Both the dock and the ramp were built by the Japanese prior to WWII.
49. The sandy beaches alongside both wharves shelve out gently, so water depths at the end of the wharves is not significant. There is rubble alongside and at the ends of the wharves, but otherwise the immediate habitat consists of mostly sandy substrate. The shorelines in the area consist of sandy beaches, fringed by coconut palms. Urban development is mostly set back behind the trees.
50. There are limited facilities associated with the landing; each facility has one solar powered light, there are no steps or fences on the structures. Single land roads lead from the landing to the village of Wotje a short distance away. The airstrip is less than 400 m inland.
51. Oil spills arising from the MEC oil transfer on the northern ramp structure have been reported as common (Annexure E).
52. Any works on the dock/ramp will fall under the provisions of the Historic Preservation Act 1991, and the Historic Protection Office (HPO).

3.2.5 Arno

53. Arno was a late addition to the project, so no sub-project activities details have been provided, nor has the island been visited. The following is based on Google imagery and available information.
54. Arno has a dock on the south-western end of the island of Arno. The dock is approximately 75 m long. It has a concrete top and stairs on the eastern side providing access to water level. At the landward end of the dock there is a building approximately 12 m x 15 m. Vessels utilize the eastern side of the wharf where the water is deepest. On the western side there appears to be sand and coral substrate.
55. The presence of an extremely rare species of coral (an archetypal elkhorn) has been reported within swimming distance of the dock[4]. The Pacific elkhorn population consists of < 100 mature colonies at 3–6 m depth along a 2-km stretch of exposed reef front. While the exact population size remains to be quantified, this growth form is so far unique to this locale; no additional colonies were found during recent extensive surveys of nine other Marshall Island atolls, and there are no recent records from elsewhere in the Pacific Ocean.

[4] Z.T. Richards, C.C. Wallace and D.J Miller (2010) Research Article: Archetypal 'elkhorn' coral discovered in the Pacific Ocean. Systematics and Biodiversity, 8(2): 281-288

4 PROJECT DESCRIPTION

4.1 PROJECT DEVELOPMENT OBJECTIVES AND RESULTS

56. The proposed project development objective (PDO) is to improve the safety, efficiency and climate resilience of maritime infrastructure and operations in the Republic of the Marshall Islands, and in the event of an Eligible Crisis or Emergency, to provide an immediate response to the Eligible Crisis or Emergency.

57. The achievement of the PDO will be measured through the following PDO-level results indicators:

- Reduction in cargo vessel turnaround times at Delap Dock (minutes);
- Container yard productivity (moves/hour);
- Project docks fully compliant with ISPS requirements (number);
- Project docks rehabilitated with at least one climate resilience measure (number);
- Ports with sectoral and contingency planning tools that address natural disasters and climate change (number);
- Referrals of trafficking survivors to NGOs (number).

4.2 PROJECT COMPONENTS

58. The MIMIP has four (4) components:

- **Component 1: Maritime Infrastructure Investments.** Component 1 will enhance the resilience of maritime structures to natural disasters and climate change impacts through the integration of planning, design, construction, rehabilitation and operation of facilities. Examples are repairs to existing berth and apron facilities including the underwater quay structure, improvement in drainage systems to avoid pooling of water in cargo handling area and container yards, and the provision of floating pontoons for passenger transport. The following sub-components are envisaged:
  - Hardening and ensuring adequate drainage at container and cargo yards at Delap Dock;
  - Repairs to the existing superstructure and buildings at Delap and Uliga Docks, including the rehabilitation of utilities related to water and power supply, if required;
  - Construct simple port control tower at Uliga Dock;
  - Repairs to existing facilities on the outer islands of Arno, Jaluit and Wotje; and
  - Acquisition of cargo handling equipment for Delap and Uliga Docks.
- **Component 2: Maritime Security and Safety Equipment.** Component 2 will enhance the climate resilience of communities by strengthening security and safety of maritime transport and thereby improving connectivity between Majuro and outer islands for access to food, water, fuel, and emergency response services.
  - Improve existing berths and facilities at Delap, Uliga and Ebeye Docks through repairs/upgrades of quay wall structures, and replacing quay furniture (bollards, fenders, ladders), as required.
  - Replace/upgrade Aids to Navigation (AtoNs) at Majuro, and Outer Islands, but excluding Ebeye.
  - Upgrade/provide fencing, gates, terminal lighting, backup generators, CCTV systems to comply with ISPS requirements.
  - Provide spill kits for Delap, Uliga, Ebeye, Arno, Jaluit and Wotje Docks, and 150m boom containment systems for Delap and Ebeye Docks.
  - Support to elevate awareness of, and help prevent, human-trafficking, in coordination with existing Government and IOM programs.

- Provide Search and Rescue (SAR) equipment and safety devices.
- Assess the benefits of a scanner for Delap Dock.

- **Component 3: Technical Assistance and Project Management.** Component 3 will enhance the climate resilience of maritime transport and local communities through Technical Assistance designed to strengthen the planning and management of port facilities, improve coordination of emergency response systems, elevate awareness of SAR and ISPS requirements, and implement MIMIP activities.
  - Prepare strategic development plans, review port operations, including development of security, site safety, efficiency, waste management, and compliance requirements, and maintenance regimes for Delap, Uliga, and Ebeye Docks with particular attention around key areas of concern including safety, security, and climate resilience.
  - Prepare designs that consider climate resilient measures and supervise works on maritime infrastructure.
  - Review institutional and governance arrangements for port/dock management.
  - Capacity building initiatives to better operate and regulate the project docks (SAR awareness, ISPS training, use of spill kits & booms, etc.).
  - Encourage employment opportunities for women.
  - Support to implement MIMIP, including to the Central Implementation Unit (CIU).
  - Incremental operating costs for Project-related travel and communications.
- **Component 4: Contingent Emergency Response.** Component 4 is designed to provide swift response in the event of an Eligible Crisis or Emergency by allowing a portion of undisbursed project funds to be reallocated to respond to natural disasters and/or other crises and emergencies. The CERC may be used following natural disasters or other crises and emergencies, allowing funds to be reallocated from other components of the MIMIP.

59. Consumables such as aggregate, cement, steel and other infrastructure fittings will need to be transported to the sites – these materials will need to be imported (the project does not include the mining of aggregate). Majuro and Ebeye have reticulated water systems, the outer islands do not. However, as RMI is already experiencing severe droughts, water sources and availability will need to be assessed before commencement of works.

60. Accommodation is relatively limited on the islands, however, the current program of works is unlikely to require significant numbers of off-island workers, so the existing accommodation options (hotels, hostels and guesthouses) should be sufficient and is unlikely to represent an increase in impacts over and above those that already exist.

5 POLICIES, LEGAL AND ADMINISTRATIVE FRAMEWORK

61. The following section provides an overview of the institutional and legal framework under which the MIMIP will be undertaken.

5.1 RMI LEGISLATION AND REGULATIONS

62. The government of the Marshall Islands operates under a mixed parliamentary-presidential system as set forth in its Constitution. Elections are held every four years, with each of the twenty-four constituencies electing one or more representatives (senators) to the lower house of RMI's uni-cameral legislature, the Nitijela. The President, who is head of state as well as head of government, is elected by the 33 senators of the Nitijela.

63. Legislative power lies with the Nitijela. The upper house of Parliament, called the Council of Iroij, is an advisory body comprising twelve tribal chiefs. The executive branch consists of the President and the Presidential Cabinet, which consists of ten ministers appointed by the President with the approval of the Nitijela. The twenty-four electoral districts into which the country is divided correspond to the inhabited islands and atolls

64. The following GoRMI legislation is relevant to the MIMIP:

- **RMI Constitution -** The Preamble to the Constitution of the Republic of the Marshall Islands states: "All we have and are today as a people, we have received as a sacred heritage which we pledge ourselves to safeguard and maintain, valuing nothing more dearly than our rightful home on the islands within the traditional boundaries of this archipelago." This means that the government of the RMI has a responsibility to safeguard and maintain heritage and ensure that the islands can continue to provide a home to the people of the Marshall Islands for generations to come.
- ***Animal and Plant Inspection Act*** - In order to protect the agricultural and general well-being of the people of the Republic, quarantine regulations are promulgated as a means of preventing the introduction and further dissemination of injurious insects, pests, and diseases into and within the Republic. All aircraft and vessels or their cargoes, including baggage, ship's stores and ballast, entering or moving within the Republic, are subject to inspection by agricultural quarantine inspectors for the purpose of enforcing the controls, quarantines and regulations established pursuant to this Part, provided, that such inspections of U.S. military aircraft and vessels shall be subject to existent military security regulations.
- ***Coastal Conservation Act (CCA) 1988*** - An Act to make provision for a survey of the coastal zone and the preparation of a coastal zone management plan; to regulate and control development activities within the coastal zone; to make provisions for the formulation and execution of schemes for coast conservation. Notwithstanding the provisions of any other law, no person shall engage in any development activity other than a prescribed development activity within the Coastal Zone except under the authority of a permit issued in that behalf by the Director. Upon receipt of an application for a permit to engage in a development activity within the Coastal Zone, the Director may require the applicant to furnish an environmental impact assessment relating to such development activity and it shall be the duty of the applicant to comply with such requirement.
- ***Disaster Assistance Act*** - An Act to reduce vulnerability of people and communities of the Republic to damage, injury, and loss of life and property resulting from natural or manmade catastrophes; to clarify the role of the Cabinet and local governments in the prevention of, preparation for, response to, and recovery from disaster; to authorize and provide for coordination of activities relating to disaster prevention, preparedness, response, and recovery between agencies. Every person shall conduct himself and keep and manage his affairs and property in ways that will reasonably assist and will not unreasonably detract from the ability of the Government of the Marshall Islands and the public to successfully meet disasters.
- ***Endangered Species Act 1975*** - An Act to provide for the protection of endangered species of fish, shellfish and game in the Republic. The indigenous plants and animals of the Republic are of esthetic, ecological, historical, recreational, scientific, and economic value and it is the policy of the Government of the Marshall Islands to foster the well-being of these plants and animals by whatever means necessary to prevent the extinction of any species or subspecies from the islands of the Republic or the water surrounding them.

- ***Ethics in Government Act 1993*** - recognizes the right of the people to a responsible and an ethical government and the obligation of the government to take every step reasonable and necessary to conduct government in accord with a comprehensive code of ethics.
- ***Historic Preservation Act 1991*** - An Act to promote the preservation of the historic and cultural heritage of the Republic of the Marshall Islands.
- ***International Organizations Immunity Act 1974*** - An Act to provide immigration immunities to international organizations and their staff. This act has implications for tax, property, privacy etc. The Protection of Resident Workers Act shall not apply to international organizations.
- ***Jaluit Atoll Economic Development Authority Act 2000*** - An Act to establish the Jaluit Atoll Economic Development Authority and to provide all the powers necessary to plan for the development and implementation of all programs and projects for the social, economic and educational betterment of the people of Jaluit Atoll, with responsible and appropriate review by the Government of the Republic of the Marshall Islands to ensure fiscal responsibility and consistency with the development policies of the Government of the Republic.
- ***Land Acquisition Act 1986*** -An Act to make provision for the acquisition of lands and servitudes for public use for payment of just compensation.
- ***Local Government Act 1980*** – an Act providing for the manner of operation of the system of local government. Each atoll has its own local Council.
- ***National Environmental Protection Act 1984*** (NEPA) - An Act to provide for the establishment of a National Environmental Protection Authority for the protection and management of the environment. Marshall Islands EIA legislation is found largely in Part IV of the *National Environmental Protection Act 1984* (NEPA). The NEPA Act 1984 is supported and further elaborated in a set of 8 regulations for protection of surface and marine waters, and air quality, and managing of potential impacts from earth works, sanitation systems, waste and new infrastructure development. The Act, and these regulations along with the Coast Conservation Act 2008, provides the framework for the protection of resources and environmentally sustainable development in RMI. The 1994 Environmental Impact Assessment Regulations (Regulations) promulgated by the Republic of the Marshall Islands Environmental Protection Authority provide MIMIP proponents specific details for the EIA process for both NEPA and CCA. Relevant regulations include:
- **Earthmoving regulations 1988 (with amendments in 1994 and 1998)** – all earthmoving activities shall be planned in such a manner so as to prevent accelerated erosion, sedimentation and disturbance of cultural resources. This regulation is to be replaced by the Sustainable Development Regulation.
- **Solid Waste Regulations 1989** – Establishment of minimum standards governing the design, construction, installation, operation and maintenance of solid waste storage, collection and disposal systems to:
  - Prevent pollution of the drinking and recreational waters of the RMI;
  - Prevent air and land pollution;
  - Prevent the spread of disease and the creation of nuisances
  - Protect the public health and safety
  - Conserve natural resources; and
  - Preserve and enhance the beauty and quality of the environment
- **Toilet Facilities and Sewage Disposal Regulation 1990** – The purpose of this regulation is to establish minimum standards for toilet facilities and sewage disposal to minimize environmental pollution, health hazards, and public nuisance.
  - Part II, Section five - It is required that all public buildings or any buildings which may be used for dwellings shall have toilet and sewage facilities.

- Part IX, Section 37 – Prohibition of disposal of treated, semi-treated, or untreated sewage or excreta into any pond, well, reservoir, body of water, or onto the ground, whether public or private, unless such activity is of economic or social value or research purposes that poses no public health hazard.

- **Marine Water Quality Regulation 1992** – Identify the uses for which the marine waters of the RMI shall be maintained and protected, specify the water quality standards required to maintain the designated uses and to prescribe regulations necessary for implementing, achieving and maintaining the specified marine water quality.
- **Public Water Supply Regulation 1994** - The purpose of the regulation is to establish certain minimum standards and requirements to be necessary for the public health and safety and to ensure that public water supply systems are protected against contamination a pollution and do not constitute a health hazard. The regulations state that no person shall cause or allow the construction of or change to any public water supply without approval of final drawings and specifications. All work performed on a public water supply shall be in accordance with accepted engineering practices. Any pipe, solder flux or fitting in a public water system or any building connected to a public water system shall be lead-free. The Authority shall review a notice of intent to construct or modify a public water supply system for completeness within 60 calendar days from receipt.
- **Environmental Impact Assessment Regulation 1994** – Implementation of the NEPA 1984 and Coast Conservation Act 1988 for proposed development activities that may affect the quality of the environment of the RMI.
  - Part III, Section 9a - Proposed development activities that have the potential for significant effect to the environment shall conduct an Environmental Impact Assessment and submit to the EPA.
  - Part III, Section 11 - A scoping process identifying the significant issues related to the proposal shall be initiated by the EPA.
  - Part III, Section 13 - Formulation of an EIA must take into considerations any guidelines, directions, policies or plans issued by the EPA regarding the protection, conservation and management of the environment.
- ***Planning and Zoning Act 1987*** - An Act to provide for: (a) planning in land water use; (b) the promotion of the health, safety and general welfare of the people; (c) the creation of zones in municipal areas in order to lessen the congestion and to secure safety from fire and other hazards; (d) the regulation and control of the construction of buildings and the prevention of overcrowding of land. Section 208 Planning Local Areas includes (d) "the necessity to establish and maintain catchment areas and water reserves for the collection and supply of water" as one of the aspects that local government Section 209 Restrictions on Buildings includes (b) "specifying the requirement of rain water catchment for every future construction of a house or for every building or industry where water is being used"
- ***Wotje Development Authority Act 2002***- An Act to establish the Wotje Atoll Development Authority and to provide all the powers necessary to plan for the development and implementation of all programs and projects for the social, economic and educational betterment of the people of Wotje Atoll, with responsible and appropriate review by the Government of the Republic of the Marshall Islands to ensure fiscal responsibility and consistency with the development policies of the Government of the Republic
- **The Historic Preservation Legislation of 1992** - has codified Cultural Resource Management into law. The process associated with the production of resource management plans is an eight-step process that is heavily reliant on community consultation to develop community-based management plans.

5.2 Environmental Impact Assessment in the Marshall Islands

65. The Marshall Islands has a comprehensive set of EIA regulations, and includes subsequent monitoring, mitigation reporting, auditing, and penalties and enforcement in case of non-compliance following approval of a final EIA. Marshall Islands EIA legislation is found largely in Part IV of the *National Environmental Protection Act 1984* (NEPA), which requires governmental decisions regarding any proposed actions "in all matters in which there is or may be an environmental impact" to include assessment of potential environmental and cultural impacts.
66. The *1994 Environmental Impact Assessment Regulations* (Regulations) promulgated by the Republic of the Marshall Islands Environmental Protection Authority provide project proponents specific details for the EIA process for both NEPA and CCA.

5.2.1 EIA process

67. Under the 1994 Regulations, the EIA process screens out activities with insignificant impacts from review in an initial "Preliminary Proposal." Such a proposal is required by proponents of "each and every proposed development activity," and must contain information on the activity and any potential environmental impacts as well as alternatives to mitigate the impacts. Following a review of the proposal, the reviewing agency (i.e. NEPA or CCA, hereafter "the reviewer") makes a written determination of his or her decision to the proponent. In case the reviewer determines the project will have a significant effect on the environment, a full or partial EIA is required from the proponent. Otherwise, the proponent may continue with the activity as planned, although still subject to regulatory and permitting requirements under any relevant law.
68. The EIA may be performed via separate phases of the activity, and a scoping process open to relevant members of the public identifies issues significant enough to be addressed in the EIA. Following completion of the scoping process, the proponent completes and submits a Draft EIA, which must include a list of alternatives to the proposed actions, a description of the affected environment and a scientific and economic analysis of potential consequences of the action. After receiving the Draft EIA, the reviewer provides for public notice and comment, including a public hearing. The reviewer then responds to the proponent, requiring either further revisions or a Final EIA, the latter of which must include the final chosen alternative, any mitigation measures and monitoring plans. The reviewer has discretion to approve or reject the Final EIA. If approved, the reviewer monitors activities and can perform audits and enforce the EIA regulations by means of fines, cease and desist orders, or entry without notice.
69. The CCA requires an EIA to be conducted in accordance with the 1994 EIA regulations described above for any proposed development activity on the coastal zone. For the purpose of the CCA, 'development activity' means any activity likely to alter the physical nature of the coastal zone.
70. The ESMF integrates the requirements of RMI EIA regulations.

5.3 Multilateral Agreements and Biodiversity Protocols

71. RMI is a signatory to a number of international and regional agreements and conventions, which are related to the environment. They include:

- 1993 Agreement Establishing the South Pacific Regional Environment Programme (SPREP);
- 2000 Cartagena Protocol on Biosafety on the Convention on Biological Diversity;
- 1945 Constitution of the United Nations Educational, Scientific and Cultural Organization;
- 1972 Convention Concerning the Protection of the World Cultural and Natural Heritage;
- 1923 Convention and Statute on the International Regime of Maritime Ports;
- 1986 Convention for the Protection of the Natural Resources and Environment of the South Pacific Region;
- 1992 Convention on Biological Diversity;
- 1971 Convention on Wetlands of International Importance especially as Waterfowl Habitat;
- 1980 Convention on the Physical Protection of Nuclear Material;
- 1989 Convention on the Rights of the Child;
- 1995 Convention to Ban the Importation into Forum Island Countries of Hazardous and Radioactive Wastes and to Control the Transboundary Movement and Management of Hazardous Wastes within the South Pacific Region, Waigani, Papua New Guinea;
- 1990 International Convention on Oil Preparedness and Co-operation;
- 2001 International Treaty on Plant Genetic Resources for Food and Agriculture;
- 1997 Kyoto Protocol to the United Nations Framework Convention on Climate Change;

- 1986 Protocol concerning co-operation in Combating Pollution Emergencies in the South Pacific Region;
- 1988 Protocol of 1988 Relating to the International Convention for the Safety of Life at Sea of 1 November 1974;
- 2001 Stockholm Convention on Persistent Organic Pollutants;
- 1998 Tampere Convention on the Provision of Telecommunication Resources for Disaster Mitigation and Relief Operations;
- 1987 The Montreal Protocol on Substances that deplete the Ozone Layer;
- 1992 United Nations Framework Convention on Climate Change;
- 2009 Statute of the International Renewable Energy Agency;
- 1982 United Nations Convention on the Law of the Sea;
- 1994 United Nations Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification particularly in Africa; and
- 1985 Vienna Convention for the Protection of the Ozone Layer.

5.4 World Bank Safeguard Policies

72. Initial screening indicates that the World Bank Safeguard Policies Environmental Assessment (OP/BP 4.01), Natural Habitats (OP/BP 4.04) and Indigenous Peoples (OP/BP 4.10) will be triggered as a result of the Project, requiring the Borrower to prepare the safeguards instruments to guide detailed planning once sub-projects are identified firmly at a later stage of Project planning.

73. Screening based on field investigations, stakeholder consultations and a review of potential options for implementation confirms an assessment of Category B for the MIMIP. The Screening finds that potential impacts are less significant, site specific, mostly reversible and that a range of potential measures for mitigation can be readily designed in the majority of cases.

5.4.1 OP/BP 4.01 Environmental Assessment

74. The purpose of Environmental Assessment is to help ensure the environmental and social soundness and sustainability of investment projects, and to support the integration of environmental and social aspects of MIMIP into the decision-making process. The policy defines procedures to screen and assess potential impacts and mitigation, prepare safeguard instruments, ensure public consultation and transparency and that there are implementation and supervision of commitments relating to findings and recommendations of the environmental assessment.

75. OP/BP 4.01 was triggered at Concept Stage and an Environmental and Social Management Plan (ESMP) and an Environmental and Social Management Framework (ESMF) prepared for the project. Consultations were held during the environmental assessment and on the draft instruments. The project has been screened as Category B as the impacts are considered moderate and readily prevented and mitigated. The ESMP has been prepared for the activities identified during project preparation and mostly relate to the physical works to upgrade the various ports. The ESMF has been prepared to provide a screening and risk management process for sub-projects that are identified following the strategic management planning processes and to inform the safeguards approaches to technical advisory activities.

76. In alignment with RMI's National Climate Change Policy Framework, this project seeks to enhance the resilience of RMI's maritime transport sector to the impacts of natural hazards and climate change by strengthening port facilities against the incursion of high tides, storm surges and sea level rise, such as through the provision of floating pontoons for passenger access to ferries. Improving the efficiency and safety of maritime transport will help address vulnerabilities associated with water, food and fuel security and strengthen the capacity for communication, transportation and emergency response to the outer islands where some of the most vulnerable communities live.

77. This ESMF is an integral part of compliance with this policy. All activities proposed for funding and implementation under the MIMIP are subject to the provisions and stipulations within this document. This includes the physical investments and associated facilities, the advice provided under Technical Assistance, the management of environmental and social risks relating to port facilities, and in the design of the future port related projects.

5.4.2 OP/BP 4.04 Natural Habitats

78. The conservation of natural habitats is essential for long-term sustainable development. The Bank therefore supports the protection, maintenance, and rehabilitation of natural habitats and their functions. The Bank does not support projects involving the significant conversion of natural habitats unless there are no feasible alternatives for the project and its siting, and comprehensive analysis demonstrates that overall benefits from the project substantially outweigh the environmental costs.

79. The policy is triggered because of the proximity of natural habitats to the ports e.g. corals, sandy beaches and/or mangroves. However, most components/sub-projects will not affect any natural habitats as they will be undertaken on already disturbed areas e.g. the existing port landside areas. Furthermore, the assessment concludes that the maritime habitat near the Delap, Uliga, Ebeye and Jaluit ports is highly modified and degraded due to pollution, waste and sedimentation. Further impacts on these immediate environments will be negligible.

80. Jaluit atoll is a RAMSAR site (Jaluit Atoll Conservation Area) with significant mangrove communities and habitats for critically endangered and vulnerable marine species. It is therefore a critical habitat. However, the proposed physical works in Jaluit are small scale and will not result in significant degradation or conversion of natural habitat.

81. Remnant coral habitats in all lagoons beyond the immediate port area may be affected in the short term from contaminated storm water from earthworks and construction activities if not adequately managed, and in the long term from contaminated storm water drainage from the ports or spill events. Mitigation measures in the ESMP address the design and operation of drainage and storm water treatment devices, erosion and sediment control measures, removal of waste, improved oil and fuel management procedures, and improved spill response skills and equipment, and ongoing monitoring, and are considered satisfactory for reducing short and long term risk to these habitats.

82. The policy is also relevant for the preparation of future projects.

5.4.3 OP/BP 4.10 Indigenous Peoples

83. The Bank recognizes that the identities and cultures of Indigenous Peoples are inextricably linked to the lands on which they live and the natural resources on which they depend.

84. This policy contributes to the Bank's mission of poverty reduction and sustainable development by ensuring that the development process fully respects the dignity, human rights, economies, and cultures of Indigenous Peoples. For all projects that are proposed for Bank financing and affect Indigenous Peoples, the Bank requires the borrower to engage in a process of free, prior, and informed consultation. The Bank provides project financing only where free, prior, and informed consultation results in broad community support to the project by the affected Indigenous Peoples.

85. This policy is triggered as almost the entire population of Majuro is indigenous Marshallese. To ensure that the principles of the policy are addressed, the Stakeholder Engagement and Consultation Plan has been prepared in compliance with the policy and consistent with an Indigenous Peoples Policy Framework, reflecting a Free, Prior and Informed consultation approach that addresses the needs of vulnerable people and women.

5.4.4 OP/BP 4.11 Physical Cultural Resources

86. The baseline surveys carried out as part of the ESIA process did not identify the presence of any physical cultural resources within the project's area of influence. All physical works will be within the dock boundaries or on Government leased land, which are heavily modified environments. Hence, the policy is **not** triggered.

5.4.5 OP/BP 4.12 Involuntary Resettlement

87. The project will involve physical investments on Government-leased land. Involuntary land acquisition or resettlement will not be required; therefore, this policy is **not** triggered. Any supporting infrastructure or facilities such as laydown areas will be located on Government-leased land. Any compensation in relation to the project, but not related to land acquisition, will be managed under the ESMP.

88. No adverse livelihood impacts have been identified in the social assessment.

5.4.6 World Bank General Environmental, Health and Safety Guidelines

89. The World Bank Group's General Environmental, Health, and Safety Guidelines (EHS Guidelines) (World Bank Group, 2007) represent good international practice for managing occupational health and safety (OH&S) risks. The EHS Guidelines contain the performance levels and measures that are generally considered to be achievable in new facilities by existing technology at reasonable costs.

90. The fundamental premise for OH&S under the EHS Guidelines is that "*Employers and supervisors are obliged to implement all reasonable precautions to protect the health and safety of workers*" and that "*Companies should hire contractors that have the technical capability to manage the occupational health and safety issues of their employees…*".

91. The overall OH&S philosophy embodied in the EHS Guidelines is that preventive and protective measures should be introduced according to the following order of priority:

    - Eliminating the hazard by removing the activity from the work process. Examples include substitution with less hazardous chemicals, using different manufacturing processes, etc.;
    - Controlling the hazard at its source through use of engineering controls. Examples include local exhaust ventilation, isolation rooms, machine guarding, acoustic insulating, etc.;
    - Minimizing the hazard through design of safe work systems and administrative or institutional control measures. Examples include job rotation, training safe work procedures, lock-out and tag-out, workplace monitoring, limiting exposure or work duration, etc.
    - Providing appropriate personal protective equipment (PPE) in conjunction with training, use, and maintenance of the PPE.

92. The EHS Guidelines also require that prevention and control measures to minimise occupational hazards should be based on comprehensive job safety analyses (JSA). The EHS guidelines apply to the design, construction and operation of facilities that are part of the MIMIP.

93. All workers engaged on the MIMIP will need to be covered under the terms of the EHS Guidelines.

5.4.7 Gap Analysis of RMI laws and regulations and WB Safeguards Policies

94. The following table identifies requirements of the triggered WB Safeguard Polices (OP/BP 4.01, OP/BP 4.04 and OP/BP 4.10) alongside relevant RMI legislation and confirms compliance.

Bank Safeguards Policy Requirement	RMI Equivalent	Equivalence
OP/BP 4.01 Environmental Assessment		
Environmental Screening. Projects categorised as A, B or C.	The EIA Regulations address a number of these matters (screening, mitigation, monitoring, and consultations) in regard to earthworks and infrastructure activities. If these activities are undertaken as part of the project, they will be subject to the EIA regulations. Otherwise, the legislation is silent in regard to activities contemplated for the MIMIP.	The ESMF follows OP/BP 4.01. All sub-projects will be managed as per the ESMF, which integrates the requirements of RMI EIA regulations.
Category B projects require a 'limited' environmental assessment (which includes a social assessment) and requires a safeguards instrument (ESIA, ESMP etc.) depending on the nature and scale of impacts.		
An ESMP that includes mitigation measures, allocation of responsibilities, costs and reporting requirements.		
Monitoring is required that includes a monitoring framework that allocates location, frequency, costs and responsibilities.		
Public consultation required for Category A and B projects		
Disclosure is required		
Institutional capacity and training requirements are assessed.		
OP/BP 4.04 Natural Habitats		
Application of precautionary principle to natural resources to ensure environmentally sustainable development	The NEPA, Endangered Species Act, Animal and Plant Inspection Act, Planning and Zoning Act, and Coastal Conservation Act contain elements that address aspects of natural resource management and protection. Activities that have the potential to impact natural habitats will be subject to RMI legislation above.	The ESMF follows OP4.04. All sub-projects will be managed as per the ESMF, which integrates the requirements of RMI EIA regulations.
Identification of natural habitat issues and special needs for natural habitat conservation		
Measures for protecting natural areas in the context of country development strategies		
Mitigation measures		
OP/BP 4.10 Indigenous Peoples		
Screening to identify whether Indigenous Peoples are present	RMI Constitution recognises the heritage, traditional boundaries and cultural ties to the islands. The Historic Preservation Act 1991 provides protection for cultural heritage. Otherwise, the legislation is silent in regard to activities contemplated for the MIMIP	As the overwhelming majority of beneficiaries are indigenous, the elements of the policy are 'integrated into design' and no separate Indigenous People Plan is required. The ESMF fulfils the intent of OP/BP 4.01. All sub-projects will be managed as per the ESMF, including recognition of cultural norms, land tenure, continuing consultation and participation and disclosure.
Social assessment to assess potential adverse impacts		
Consultation and participation		
Indigenous Peoples Plan (if required)		
Disclosure is required		

6 PROCEDURES TO ADDRESS ENVIRONMENTAL AND SOCIAL IMPACTS AND RISKS

95. This ESMF was developed to ensure due diligence, to avoid causing harm or exacerbating risks or impacts. This section describes the procedures in place to determine: (i) the categorization of the project activity based on potential adverse environmental and social impacts of project activities, and (ii) how potential impacts will be addressed through the selection of appropriate mitigation and management plans.

96. The Project involves development of sub-projects or provision of Technical Assistance ("TA"), which are all collectively termed "sub-projects and associated elements" in this ESMF.

97. There are certain physical investments that are known, and the rest will be identified during project implementation. The activities (sub-projects) that are known are covered by the ESMP (Annexure C). The sub-projects that will be identified during project implementation need to go through the screening process, described below, to identify the nature and scale of potential impacts, the OPO4.01 categorization and the safeguard instrument that will be required. The safeguard instrument will either be:

- the existing ESMP;
- a new ESMP;
- a new ESIA and ESMP;
- something else like a guideline, standard operating procedure, etc.; or
- no instrument required.

98. Contractors must prepare a Construction Environmental Management Plan (CEMP) – and ESMP specifically focused on construction related issues. The Contractor can use the resources included in the ESMF/ESMP (ie Annexures with plan outlines) to prepare the CEMP. The CEMP must be cleared by the IA and WB prior to works starting.

6.1 APPLICABLE SAFEGUARD INSTRUMENTS

99. Table 1 outlines the various safeguard instruments.

Table 1 Safeguard instruments

Safeguard Policy	Type of sub-project	Applicable Instrument
OP/BP 4.01 Environmental Assessment	All sub-projects or activities	An ESMF has been prepared as the project comprises a series of activities, and the impacts of some activities cannot be determined until the details have been identified during implementation. All subprojects require completion of the Safeguard Screening Form (Annex D).
	Category A - Broad, diverse, potentially irreversible impacts; major resettlement; conversion of natural habitats; hazardous materials	Any sub-projects screened as Category A will be ineligible for financing. As most sub-projects will involve rehabilitation of existing infrastructure, Cat A sub-projects are unlikely. Exceptions could include sub-projects that require dredging or removal of areas of coral, or activities that have the potential (perhaps as a secondary impact) to result in significant contaminant production e.g. as produced during careening. Cat A projects will require new ESIAs and ESMPs. Cat A projects are not financeable under the MIMIP.

	Category B – Geographically - limited, readily identified impacts that can be mitigated	An EIA is undertaken for Category B sub-projects to provide sub-project-specific data/information and further analysis including site assessment, and analysis of alternatives / environmental and technical constraints to determine the full extent of environmental and social impacts. It may also involve an environmental audit, hazard assessment, etc. An ESMP will be prepared to manage potential environmental and social risks. Cat B sub-projects are permissible under the MIMIP.
	Category C - Negligible or minimal potential impacts that are easily mitigated	Category C projects do not require any safeguard instrument beyond screening. Cat C sub-projects are permissible under the MIMIP.
Natural Habitats OP/BP 4.04	Marine works	Safeguard Screening Form. EIA/ESMP requirements as for OP/BP 4.01. Cat B and C sub-projects are permissible under MIMIP.
Indigenous Peoples OP/BP 4.10		Almost the entire population of the country are indigenous Marshallese and their rights are represented through administrative system of the country. Municipal Council is the key administrative body for representation at the local level and therefore consultations with the Council members should be included at each sub-project development step. A Stakeholder Engagement Plan has been developed and must be applied. No Indigenous Peoples Plan is required for the MIMIP

6.2 Environmental Safeguard Procedures

100. This section sets out a process for screening sub-projects and associated elements during project implementation. Any sub-project and associated elements developed during the Project should be evaluated according to the screening process described below to determine the potential risk of associated environmental and social impacts, and associated mitigation options. The process consists of the following steps:

- Step1: at the time of preparing Terms of Reference for each sub-project or associated element (TA or services delivery component), each sub-project or associated element shall be screened and categorized, with a decision made to proceed or modify the proposal to ensure it remains within Category B or C, and identify relevant safeguards instruments.
- Step 2: Preparation of required safeguards instruments (ESMP) including stakeholder consultations as necessary
- Step 3: Review of prepared safeguards instruments as per RMI and WB safeguards policies; additional stakeholder consultations as deemed necessary. (DIDA and WB)
- Step 4: Submit prepared safeguards instruments to WB for no objection. Disclosure of approved instruments locally and on WB's website. (CIU)

- Step 5: Implementation – monitoring, reporting and remedial measures as per approved ESMP etc. Ongoing consultations and community engagement. (IA)

6.2.1 Step 1: Screening Review and Determination of Safeguard Instruments

101. Activities associated with each sub-project and associated elements will be screened by the Safeguards Specialist to assess whether the sub-project will create any of the environmental and social risks identified in the Screening Form (Annexure D).
102. This screening shall be undertaken at the point at which ToR are being prepared for the sub-project or associated element. This will ensure all relevant matters can be taken into account when ToR are finalized.
103. Each sub-project or associated element is screened for Categorization (A, B, C), since the detailed nature and scale of subprojects are not known at the time of project preparation. If screening indicates Category A then that element will not be eligible for funding, since the risks are higher than what was appraised at project preparation. The ToR for that element will need to be modified to ensure compliance with Category B and C which are eligible for funding.
104. Reference should be made in each case to the mitigation measures identified in Section 8 – Environmental and Social Impact Mitigation Strategies. Any new impacts shall be noted, and associated mitigation measures shall be developed. Any new mitigation measures should also be added to the ESMF as part of the review/update process.
105. There is the possibility that the project could diverge away from what has been screened in this ESMF. The ESMF recognizes a need for such flexibility, but "sub-project and associated element categorization" ensures that all projects/programs etc. under the project will meet WB safeguards requirements, including preparation of an ESMP as necessary or inclusion of standard environmental/social clauses in contracts/ToR. For TA, the minimum requirement will be that compliance with WB policies and the project ESMF is included in the ToR.

6.2.2 Step 2: Preparation of safeguards instruments

106. After each element is assessed in Step 1 relevant safeguard instruments are prepared as appropriate.
107. For sub-projects involving physical works, potential risks should be assessed against those presented in Section 8 and appropriate mitigation strategies selected. An ESMP will then be developed using the template EMSP is provided in Annex E.
108. For TA: a clause should be inserted in the ToR requiring (as a minimum) compliance with ESMF and policies. Specific clauses may be required to ensure mitigation measures from Table 2 are included in the outputs / recommendations or approaches.
109. The CIU will be responsible for preparing relevant safeguards documentation and undertaking stakeholder consultations as necessary.

6.2.3 Step 3: Review of prepared safeguards instruments as per WB Safeguards Policies

110. The WB Safeguards Team will review all prepared safeguards instruments to determine their adequacy vis-à-vis the Bank's safeguards policies. The review will ensure that the ESMP is consistent with WB's requirements. Apply for RMI Environmental Permit at this time if relevant.

6.2.4 Step 4: Disclosure of safeguards instruments.

111. The CIU will proceed with disclosing the instruments locally. Disclosure is intended to support the decision making by RMI and the WB by allowing the public access to information on the environment and social aspects of projects.
112. The WB will also disclose the same safeguards instruments on its website.

6.2.5 Step 5: Implementation and Monitoring

113. Projects are implemented according to ESMP (if required), including ensuring Contractor's bid documents include the ESMP, Standard Environmental and Social Contract Clauses (Annexure F), roles and responsibilities are clearly explained, and suitable budgets are allocated. DIDA will provide support for development and implementation of the ESMP as relevant.

114. During project implementation, CIU monitors progress and reports on

- compliance with measures agreed with the WB on the basis of the findings and results of the EA, including implementation of any ESMP, as set out in the project documents;
- the status of mitigation measures; and
- the findings of monitoring programs.

6.3 Contingent Emergency Response Component

115. A Contingent Emergency Response Component (CERC) is also included within to enable MIMIP funds to quickly be reallocated to respond to emergency events. Component 4 is designed to provide swift response in the event of an Eligible Crisis or Emergency[5] by allowing a portion of undisbursed project funds to be reallocated to respond to natural disasters and/or other crises and emergencies. The CERC may be used following natural disasters or other crises and emergencies, allowing funds to be reallocated from other components of the project.

116. Activities under Component 4 will be governed by the World Bank Directive *Contingent Emergency Response Components (CERC)* (October 2017). Disbursement of emergency financing under the CERC will be contingent upon: a) the recipient establishing a nexus between the disaster event and the need to access funds to support recovery and reconstruction activities (an "eligible event"); and b) submission to and no objection granted by the World Bank of an Emergency Action Plan (EAP). The EAP will include a list of activities, procurement methodology and safeguards procedures.

117. The EAP will require consideration of safeguard implications for any proposed emergency supplies procurement or reconstruction activities. The World Bank, through the no objection process, will closely examine the nature of the proposed activities, particularly those involving civil works, to ensure (i) that they are not prohibited under the negative list and (ii) that the recipient is aware of the required safeguard compliance documentation before initiating the process by which the proposed works will be prepared and implemented.

118. Emergency activities financed under the CERC will involve financing provision of critical goods or emergency recovery and reconstruction works and it is likely these will fall into Category B or C. Activities that fall under Category C could involve procurement of emergency supplies such as medicine and water and do not require the application of safeguard instruments, post-screening or assessment. Other emergency supplies, such as fuel products, will require safeguard instruments (such as Environmental Codes of Practice or EMPs) to ensure procurement, storage and dispensing procedures are adequate.

119. Preparation of the EAP will have regard to this ESMF and safeguard instruments will require World Bank approval prior to commencement of activities. Importantly, the EAP will need to include procedures for:

- Consultation and disclosure;
- Integration of mitigation measures and performance standards into contracts; and
- Supervision/monitoring and reporting measures to ensure compliance.

120. In order to ensure that CERC subproject activities comply with the requirements of the Bank's Safeguard Policies, a positive and negative list has been developed to provide guidance on critical imports and/or for emergency works, goods or services which may be eligible for financing. The negative list and screening process will be retained, but will need to allow for a

[5] Defined as "an event that has caused, or is likely to imminently cause, a major adverse economic and/or social impact associated with natural or man-made crises or disasters", Paragraph 12, Bank Policy: Investment Project Financing, *Projects in Situations of Urgent Need of Assistance or Capacity Constraints.*

degree of flexibility and efficiency in processing potential sub-projects. Further guidance will be detailed in the Finance Agreement (FA) and CERC Operations Manual.

6.3.1 CERC Positive List

121. The purpose of the positive list is to indicate the types of critical imports and emergency works following a loss and needs assessment that would be acceptable to the Bank to be financed under Component 4 (CERC). Project funds allocated to the CERC Disbursement Category may be used to finance any expenditure of the Recipient that is consistent with the FA provisions.

122. The following subproject or activities will be deemed eligible under the CERC:

- Critical Imports: Eligible expenditures on critical imports required by the public/private sectors (imported or locally manufactured) under the CERC include:
- Construction materials, equipment and industrial machinery
- Water, air, land transport equipment, including spare parts
- Purchase of petroleum and other fuel products;
- Any other item agreed to between the World Bank and the Recipient (as documented in an Aide-Memoire or other appropriate Project document)
- Emergency Sub-projects: Eligible expenditures for emergency sub-projects initiated following the Declaration of a National Emergency/Disaster in response to damage, losses and needs caused by an event are as follows:
- Repair of reconstruct streets, roads, bridges, transportation and other infrastructure damaged by the event;
- Reestablish telecommunications infrastructure damaged by the event;
- Reestablish drainage systems damaged by the event;
- Remove and dispose of debris associated with any eligible activity;
- Stabilize heavy erosion along waterfronts.

6.3.2 CERC Negative List

123. Sub-projects with the following potential impacts will not be eligible for financing under the CERC component or the parent project:

- involve the significant conversion, clearance or degradation of critical natural habitats, forests, environmentally sensitive areas, significant biodiversity and/or protected conservation zones;
- will cause, or have the potential to result in, permanent and/or significantly damage to nonreplicable cultural property, irreplaceable cultural relics, historical buildings and/or archaeological sites;
- will negatively affect rare or endangered species;
- will result in involuntary land acquisition or physical displacement of affected communities, or relocation of Indigenous Peoples that would restrict or cease their access to traditional lands or resources;
- do not meet minimum design standards with poor design or construction quality, particularly if located in vulnerable areas;
- Require or involve:
- purchase, application or storage of pesticides or hazardous materials (e.g. asbestos);
- building structures that will alter coastal process or disrupt breeding sites such as retaining walls or seawalls;
- sand/aggregate mining or land reclamation;

- land that has disputed ownership, tenure or user rights;
- land that is considered dangerous due to presence of UXO
- political campaign materials or donations in any form
- weapons
- any activity that supports drug crop production, processing or distribution;
- a higher proportion of funding than is available

7 SIGNIFICANT POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS

7.1 BASELINE CONDITIONS

124. General national environmental and social baseline information is provided in Annexure J.

125. The MIMIP is proposed to be undertaken in existing ports in Majuro, Ebeye, Jaluit, Wotje and Arno. Site specific baseline information about these ports is provided in Annexures A, B, C, D and E.

7.2 COMPONENTS/ACTIVITIES

7.2.1 Component 1 Maritime Infrastructure Investments

126. Component 1 will enhance the resilience of maritime structures to natural disasters and climate change impacts through the integration of planning, design, construction, rehabilitation and operation of facilities. Examples are repairs to existing berth and apron facilities including the underwater quay structure, improvement in drainage systems to avoid pooling of water in cargo handling area and container yards, and the provision of floating pontoons for passenger transport.

127. There are a number of potential impacts associated with the works including but not limited to the potential erosion and sediment movement during rainfall events and as a result of dust, all of which could have impacts on water quality, noise impacts from the use of trucks and excavators, the potential leakage of chemicals and oils, and other potential impacts. There is also the potential for the construction activities to generate sediment that may increase silt load through overland flow to other environments. The likelihood of these impacts is moderate, and the impacts are considered to also be moderate.

128. There are limited, if any, local options for the sustainable sourcing of large volumes of aggregate needed for concreting of large areas of hardstand (container yards). The option of reef mining is problematic given the potential adverse impacts on the health of the inshore area, marine biodiversity and the long term structural integrity of the reef plate itself. As there is limited published scientific studies and evidence for and or against the environmental impacts of reef quarrying there remains a degree of uncertainty exists for which more scientific information is needed. It is likely that reef quarrying, and similarly dredging represents a Category A project and is therefore not acceptable under the MIMIP. To avoid adverse local impacts, aggregate should be imported from approved quarries off-island.

129. The construction works involve in the building of the levelling, subbase, drainage and payment works will result in the movement of sediment to install the pipe and channel works. It is anticipated that some of the material to be used for the construction of the channel works will where possible, be pre-fabricated and purchased in RMI although that will be very dependent on specific activities. The proper handling of this material, and where possible, recycling and reuse of any local materials should be considered. The likelihood of these impacts is moderate, and the impacts are considered to also be moderate.

130. The construction activities could also result in changes to people's ability and particularly port user's ability to use the port. The likelihood of these impacts is moderate and the impacts are considered to also be moderate and particular care should be undertaken to ensure operations can continue uninterrupted.

131. All construction and operation activities have the potential to cause noise nuisance. Vibration disturbance to nearby residents and sensitive habitats is likely to be caused through the use of vibrating equipment, machinery and the like particularly when undertaken container yard works. Blasting is not required to be undertaken as part of the MIMIP.

132. Heavy machinery and haul trucks can generate high noise levels within and along the MIMIP area and route. All machinery and vehicles used will be restricted to 7am to 5pm. The likelihood of these impacts is moderate and the impacts are considered to also be moderate.

133. Air quality is unlikely to be affected due to the limited exhaust emissions from construction vehicles and machinery such as plant for excavating foundations, concrete mixers, water tankers, small cranes, dumpers, forklift for the block work and fugitive emissions from aggregates, dust from exposed soils and stock piles. The likelihood of these impacts is slight and the impacts are considered to also be negligible.

134. The MIMIP is unlikely to result in significant waste, notwithstanding that waste is already a significant issue for the five ports. There may be the potential for sediment waste during substrate levelling etc. activities. Where possible, any extra sediment will be used on site, or in the alternative, provided to local users. The likelihood of these impacts is moderate and the impacts are considered to also be minor.

135. There is unlikely to be any significant impacts on both terrestrial and marine ecology. Terrestrially, the sites are all highly disturbed. As such, the likelihood of any impacts is considered to slight with negligible impact. The MIMIP is also unlikely to have a significant impact on marine environments. The MIMIP will not construct any new structures that will reduce fish movement and/or alter existing benthic environments and moreover, will not undertake in water activities, unless there is the need to change existing superstructure for the aids for navigation. The likelihood of these impacts is moderate and the impacts are considered to also be moderate.

136. Access to port facilities are critical for the loading and re-provisioning of both the domestic and international purse-seine and longline fisheries. The use of the port by these vessels makes an economic contribution to the local and regional economies. During the construction phase, there may delays and disruptions to port activities, however from available information it is not possible to determine the duration and extent of any such delays or disruptions. If all operational efforts are made to reduce disruptions and delays, the potential impacts overall should be moderate (moderately likely impacts of minor magnitude). It should be recognized that this is a precautionary categorization only.

137. The works proposed are unlikely to result in a significant influx of workers due to their limited scale, none the less, some off-island workers may be required. Materials will be required to be imported and waste exported. The additional shipping movements, although not significant in number, still represent potential for illegal movement of people e.g. human trafficking and/or the contribution to prostitution, harassment and violence.

7.2.2 Component 2 Maritime Security and Safety Equipment

138. Component 2 will enhance the climate resilience of communities by strengthening security and safety of maritime transport and thereby improving connectivity between Majuro and outer islands for access to food, water, fuel, and emergency response services.

139. Replacement of quay furniture, fences, navigation aids etc. could result in waste creation through the need to dispose of the old infrastructure, along with packaging for new materials. The waste materials are expected to be mostly benign.

140. Some port users may object to increased security and more restricted access. This is likely to be temporary until users get used to the new arrangements and stakeholders better understand the benefits that improved security and safety bring.

141. RMI's population age structure is heavily skewed to people 14 years and younger. The more populated islands of Majuro and Ebeye have issues with overcrowding and the existence of conditions that will expose vulnerable young people to underage sex, HIV, drugs, violence and human trafficking. Ports can provide sources of some of these vices, so increase security should help in reducing the likelihood, particularly of GBV, human trafficking and importation of drugs.

142. Through improved port facilities, particularly at Jaluit and Wotje, the risk to vulnerable groups such as women, the elderly and especially school children (who attend boarding school on these islands) is expected to be reduced.

143. The project will increase awareness of the issues and provide services for nearby communities to access. The increased community awareness and capacity building with respect to human trafficking and prostitution will also have positive impacts outside the maritime sector.

144. Provision of spill kits and search and rescue equipment will certainly have positive environmental and social impacts, although training and ongoing maintenance of the equipment will be needed. Also, disposal of any used spill kits will require handling of contaminated material. A Waste Management Plan will need to be developed in conjunction to the provision of the spill kits.

7.2.3 Component 3 Technical Assistance and Project Management

145. Component 3 will enhance the climate resilience of maritime transport and local communities through Technical Assistance designed to strengthen the planning and management of port facilities, improve coordination of emergency response systems, elevate awareness of SAR and ISPS requirements, and implement MIMIP activities.

146. Port Master Plans will have positive impacts in terms of facilitating logical and orderly development of ports in a way that best responds to predicted current and future needs. Port Master Plans will require updating, say approximately every 10 years.

147. MIMIP has the potential to assist in the empowerment of women through the promotion of female employment in the maritime sector.

148. World Bank safeguards policies also apply to technical assistance delivered under the project. Several key pieces of work funded by the project are under Component 3:

- Prepare strategic development plans (Port Master Plans)
- Prepare designs that consider climate resilient measures and supervise works
- Review institutional and governance arrangements for port/dock management
- Capacity building initiatives.

149. Each Terms of Reference will include relevant scope of work to ensure that environmental and social safeguards are integrated into the methodology and outputs of each technical assistance contract. The Terms of Reference will indicate the specific safeguards expertise required in the team and the level of effort required by the specialist(s). Standard clauses are provided below.

150. The Terms of Reference for any Technical Advisory projects should contain the following clauses as a minimum:

- Analysis should include the environmental and social aspects and impacts, consistent with the safeguard policies of the World Bank and the Environmental and Social Management Framework, and RMI's National Infrastructure Plan and Coastal Management Framework.
- Reviews, plans and designs should take into consideration IPCC predicted climate change impacts.
- Outcomes and outputs (including, but not limited to, ESIA, ESMPs, concept designs and detailed designs) should be consistent with the safeguard policies of the Environmental and Social Management Framework.

7.2.4 Component 4 Contingent Emergency Response

151. Component 4 is designed to provide swift response in the event of an Eligible Crisis or Emergency by allowing a portion of undisbursed project funds to be reallocated to respond to natural disasters and/or other crises and emergencies. The CERC may be used following natural disasters or other crises and emergencies, allowing funds to be reallocated from other components of the MIMIP.

7.3 Assessment of Environmental and Social Impacts

Component / Sub-component	Positive Impacts		Negative Impacts	
	Positive	Enhancement	Negative	Mitigation
Component 1: Maritime Infrastructure Investments				
Repairs to existing berths and facilities at Delap, Uliga and on the outer islands of Jaluit, Wotje and Arno	Improved maritime infrastructure, leading to enhanced port operations and efficiency and increased safety. Improved drainage and interception of pollutants Improved user safety Enhanced connectivity through improved climate resilience of maritime infrastructure Improved climate resilience of maritime infrastructure	Inclusion of gross pollutant traps and oil separators into drainage system. Consider ease of maintenance in design. Mapping of utility infrastructure and marking of same on-ground (improved safety and maintainability) Stakeholder engagement to ensure that user needs are considered / met	Hazardous substances and waste management Source of aggregates for construction (sand and gravel). Construction impacts (noise and dust, and disruption) to port users and nearby communities Occupational injuries or loss of life.	Development of waste management plans Removal and export of all solid and hazardous waste to permitted landfills. Import aggregate material. If imported from Part 1 countries, no further due diligence required; If from Part 2 countries[6] , conduct due diligence on sources to ensure compliance with source government laws and regulations. Constrain working hours and provide adequate warning of works to affected people.
Acquire cargo handling equipment for Delap and Uliga Docks e.g. terminal-tractor units, reach stackers and lift trucks	Enhanced port operations and efficiency. Improved safety	Develop SOPs and training/certification programs	Requirement of ongoing maintenance.	Develop an O&M plan

[6] Part II Countries – Developing Countries including potential source PICs such as Palau, Nauru, Solomon Is., Fiji, Kiribati etc.

Repair quay wall structures and replace quay furniture (fenders, bollards, ladders) at Delap, Uliga and Ebeye Docks	Enhanced port operations and efficiency. Improved safety	Consider sustainability in selection of materials and design/installation.	Waste management Occupational injuries or loss of life Potential to impact marine environment during construction	Contractors are required to prepare and implement Contractors ESMP, which includes an OHS/JSA manual. All staff must be adequately trained and resourced for the job. Provide barriers to exclude the public from work sites. Implement ESMP to mitigate risks
Upgrade/provide fencing, gates and terminal lighting to ensure compliance with ISPS requirements at Delap, Uliga and Ebeye Docks	Increase port security. Increase in number of ports fully compliant with ISPS requirements Reduced opportunities for human trafficking. Increase safety for port workers and visitors.	Design to minimise light spill to reduce impacts to receptors (humans and fauna)	Waste production Construction impacts (noise, dust, erosion) Increased power use through lighting	Develop waste management plans Implement ESMP to manage construction impacts Select power efficient lighting, design to optimise efficiency
Component 2: Maritime Security and Safety Equipment				
Replace/upgrade Aids to Navigation (AtoNs) at Majuro, Jaluit and Wotje (excluding Ebeye)	Navigation safety improved	Reinforce community awareness of importance and value of navigation aids to minimise vandalism / theft	Potential for environmental impacts during installation Occupational injuries or loss of life	Utilize existing markers / foundations if possible. Ecological survey of marker locations to identify presence of any sensitive habitats. Contractors are required to prepare and implement Contractors ESMP, which

				includes an OHS/JSA manual. All staff must be adequately trained and resourced for the job.
Oil spill equipment	Oil spill kits available (currently none) Minimise and reduce the nature and scale of oil spills and associated impacts on ecosystems and wildlife.	Provide training and develop program for scenario drills Develop Spill Contingency Plans that include communication and cooperation protocols (including non-RMIPA entities e.g. Marshall Air, Police to assist in rapid and effective deployment) Increase awareness of port users of potential for spills, how to avoid them and what to do in the event of a spill. Signage for port users to assist in detection and response to spills	Ongoing storage, maintenance and training in use of equipment required.	Develop O&M plans. Training programs (including train the trainers) Used spill material is contaminated – waste management plan required
Provide Search and Rescue (SAR) equipment and safety devices	SAR recommendations implemented (equipment available) Improved maritime safety	Community awareness program – safety at sea	Need for O&M and ongoing training	Develop O&M plan Develop training program and undertake SAR drills.
Assess the benefits of a scanner for Delap Dock	Improved oversight and safety of port operations	Raise community awareness of benefits	Perceived privacy issues	Raise community awareness
Gender-based Violence and Trafficking Prevention	Enhanced GBV, VAC and trafficking prevention training and support in the maritime sector	Social services accessible to project-adjoining communities Increase in proportion of community who are aware of available GBV and HT trafficking services	Cultural resistance to discussing GBV and HT	Design gender sensitive, popular, and culturally appropriate IEC materials Hold workshops to raise awareness

	Increase likelihood of GBV/HT survivors seeking assistance	Raise the awareness of mariners and build capacity of vessel owners on issues related to human trafficking. Set up processes and train potential enumerators for on-going Human Trafficking Assessment		Adopt culturally appropriate communication and teaching methods
Component 3: Technical Assistance and Project Management				
Supervise maritime infrastructure works	Improved delivery of program	Nominate deputy or assistant PM to provide both support and redundancy (in event of sickness or accident) as well as a capacity building opportunity	Lack of skilled resources Lack of safeguards experience	Recruit and include mentoring component in role. Safeguards Specialist to provide support and capacity building
Review institutional and governance arrangements	Improved understanding of roles and responsibilities	Seek opportunities to involve CBOs and NGOs		
Review port operations at Delap and Uliga Docks	Opportunities to optimize port operations identified	Involve vessel operators and dockside workers in review	Existing poor practices	Identify poor practices, provide training and rectify
Maritime sector planning	Planning documents (e.g. design reports, strategic plans) completed	Involve wide range of port users	Lack of local experience in Port Master Planning Enables future developments that may require land reclamation, dredging, coral destruction, land acquisition and other activities that could affect marine ecosystems and social wellbeing.	Recruit consultant and include capacity building role Involve local agencies in process Ensure local 'ownership' in process and outcomes
Capacity building initiatives	Consultants hired and training delivered to fill capacity gaps	Oopportunity to partner with non-government organizations (NGO) and civil society organizations	RMIPA has limited safeguards capacity	Strengthen capacity of RMIPA personnel to undertake safeguard activities.

	Improved capacity for oversight, planning and management of the maritime sector and operations, Reduced risk of environmental incidents, pollution discharges and the associated impacts on marine ecosystems and human health and safety.	(CSOs) to be involved in the entire project cycle		Safeguards Specialist to provide support and act as mentor
Encourage employment opportunities for women	Strengthened capacity across government to deliver gender-responsive programs and services Enabling environment for equitable participation in, and benefit from, economic development	Increase numbers of women in decision making positions within the maritime sector and related government agencies Set targets for women at different technical and management levels	Potential for exploitation Existing gender bias	Ensure compliance with RMI labour and OHS laws Raise community awareness
Project management	Introduction of project management rigor Schedule and budget management improved	Recruitment of capable PM. PM to mentor one or more agency staff to improve PM skills Establish mechanism of coordination such as an inter-agency coordination committee with clear roles and responsibilities of each member, plan of action, and milestones	Added demands on low capacity offices and ministries involved in the implementation of the project	Strengthen capacity of designated ministry and/or local government personnel to undertake project activities.
Emerging priority issues	Flexibility to deal with new / emerging issues	Seek to complete a comprehensive Port Master Plan early to assist in identifying priority issues	Issues currently unknown Some priorities may have significant impacts	Identify as early as possible Screen potential sub-projects as per ESMF

Component 4: Contingent Emergency Response	Improved emergency response. Reduced nature and scale of risk to social wellbeing and environmental impact.	Coordinate with NDMO	Emergencies unknown By nature, emergencies severe Potential for environmental and social impacts associated with responses	Review needs based on PDNA Liaise with NDMO Comply with ESMF, in particular screening of projects and reference to CERC negative list

8 Environmental and Social Impact Mitigation Strategies

152. This section of the ESMF identifies the key environmental and social indicators identified for the MIMIP and outlines respective management objectives, potential impacts, control activities and the environmental and social performance criteria against which these indicators will be evaluated (e.g. audited).

153. This section also addresses monitoring and reporting of environmental and social performance with the aim of communicating the success and failures of control procedures, distinguishing issues that require rectification and identifying measures that will allow continuous improvement in the processes by which the projects are managed.

154. The strategies below will help identify the likely issues and mitigation measures for inclusion in sub-project ESMPs and CEMPs.

155. As previously indicated, Contractors must prepare a Construction Environmental Management Plan (CEMP) specifically focused on construction related issues. The Contractor can use the resources included in the ESMF/ESMP (ie Annexures with plan outlines) to prepare the CEMP. The CEMP must be cleared by the IA and WB prior to works starting.

8.1 Sediment and Erosion Control

156. Soil erosion depends on several parameters such as type of soil, slope, vegetation, the nature of topography and rainfall intensity. The loss of soil stability and soil erosion can take place due to the removal of vegetation cover, and numerous construction activities. It can cause the loss of soil fertility and induce slope instability. Land preparation for the MIMIP could result in blockage or alteration of natural flow paths causing changes in the drainage patterns in the area. Effective and efficient mitigation measures can not only reduce but could improve the conditions over the existing conditions.

157. Activities that have the potential to cause erosion should only be undertaken after consideration of likely weather conditions.

8.1.1 Performance Criteria

158. The following performance criteria are set for the projects:

- no build-up of sediment in the aquatic environments and/or surface and/or groundwater as a result of construction and operation activities;
- no degradation of water quality on or off site of all projects;
- all water exiting the MIMIP sites and/or into groundwater systems is to have passed through best practice erosion, drainage and sediment controls; and
- effective implementation of site-specific EDSCP.

159. By following the management measures set out in the ESMP, construction and operation activities of the projects will not have a significant impact as a result of sedimentation across the broader area.

8.1.2 Monitoring

160. A standardized sediment control monitoring program has been developed for the projects (Table 2). The program is subject to review and update at least every two months from the date of issue. The Contractor will be required to:

- conduct site inspections on a weekly basis or after rainfall events exceeding 20 mm in a 24-hour period;
- develop a site-specific checklist to document non-conformances to this ESMP or any applicable EDSCPs; and
- communicate the results of inspections and/or water quality testing and ensure that any issues associated with control failures are rapidly rectified and processes are put in place to ensure that similar failures are not repeated.

8.1.3 Reporting

161. All sediment and erosion control monitoring results and/or incidents will be tabulated and reported as outlined in the ESMP. The CIU and RMIPA must be notified immediately in the event of any suspected instances of material or serious environmental harm, or if a determined level with respect to erosion and sediment control is exceeded.

Table 2 Erosion, Drainage and Sediment Control Measures

Issue	Control activity (and source)	Action timing	Responsibility	Monitoring & reporting
E0: Undertaking earthworks	E0.1: Apply to RMI EPA to obtain earthworks permit.	Pre-construction	RMIPA	Maintain records
E1: Loss of soil material and sedimentation to the surface and/or groundwater systems from site due to earthwork activities	E1.1: Develop and implement an EDSCP for any surface works, embankments and excavation work, water crossings and stormwater pathways. Matters to be addressed in the EDSCP are set out in Annexure K.	Construction phase	Contractor	Maintain records
	E1.2: Ensure that erosion and sediment control devices are installed, inspected and maintained as required.	Construction phase	Construction Site Supervisor	Maintain records
	E1.3: Schedule/stage works to minimize cleared areas and exposed soils at all times.	Pre and during construction	Construction Site Supervisor	Maintain records
	E1.4: Incorporate the design and location of temporary and permanent EDSC measures for all exposed areas and drainage lines. These shall be implemented prior to pre-construction activities and shall remain onsite during work	Pre and during construction	Construction Site Supervisor	Maintain records
	E1.5: Schedule/stage proposed works to ensure that vegetation disturbance and earthworks are carried out during periods of lower rainfall and wind speeds.	Pre and during construction	Construction Site Supervisor	Maintain records
	E1.6: Schedule/stage works to minimize the duration of stockpiling topsoil material. Vegetate stockpiles if storage required for long periods.	During construction	All Personnel	Maintain records
	E1.7: Locate stockpile areas away from drainage pathways, waterways and sensitive locations.	Pre and during construction	Contractor	Maintain records

Issue	Control activity (and source)	Action timing	Responsibility	Monitoring & reporting
E1: Loss of soil material and sedimentation to the surface and/or groundwater systems from site due to earthwork activities	E1.9: Design stormwater management measures to reduce flow velocities and avoid concentrating runoff.	Pre and during construction	Contractor	Maintain records
	E1.10: Include check dams in drainage lines where necessary to reduce flow velocities and provide some filtration of sediment. Regularly inspect and maintain check dams.	Pre and during construction	Contractor	Maintain records
	E1.11: Mulching shall be used as a form of erosion and sediment control and where used on any slopes (dependent on-site selection), include extra sediment fencing during high rainfall.	During construction	All Personnel	Maintain records
	E1.12: Bunding shall be used either within watercourses or around sensitive/dangerous goods as necessary.	During construction	All Personnel	Maintain records
	E1.13: Grassed buffer strips shall be incorporated where necessary during construction to reduce water velocity.	During construction	Construction Site Supervisor	Maintain records
	E1.14: Silt fences or similar structures to be installed to protect from increased sediment loads.	During construction	Construction Site Supervisors	Maintain records
	E1.15: Excess sediment in all erosion and sediment control structures (for example sediment basins, check dams) shall be removed when necessary to allow for adequate holding capacity.	During construction	Construction Site Supervisors	Maintain records
E2: Soil Contamination	E2.1: If contamination is uncovered or suspected (outside of the MIMIP footprints), undertake a Stage 1 preliminary site contamination investigation. The contractor should cease work if previously unidentified contamination is encountered and activate management procedures and obtain advice/permits/approval (as required).	Construction phase	All Personnel	Daily and maintain records

Issue	Control activity (and source)	Action timing	Responsibility	Monitoring & reporting
E2: Soil Contamination	E2.3: Drainage control measures to ensure runoff does not contact contaminated areas (including contaminated material within the MIMIP footprints) and is directed/diverted to stable areas for release.	Construction phase	All Personnel	Daily and maintain records
	E2.4: Avoid importing fill that may result in site contamination and lacks accompanying certification/documentation. Where fill is not available through on-site cut, it must be tested in accordance with geotechnical specifications.	Construction phase	All Personnel	Maintain records
	E2.5: Remediate areas of contamination under the guidance of an appropriately qualified and experienced professional.	Construction phase	Construction Site Supervisor / RMIPA	Maintain records
E3. Poor maintenance of ESCs	E3.1: Regularly check and clear debris from trash racks/drain grates	Construction and Operation phase	Construction Site Supervisor / Operator	Maintain records
	E3.2: Regularly inspect all pits and oil/sediment traps for sediment accumulation and remove as necessary.	Operation	RMIPA	Monthly

8.2 UNEXPLODED ORDINANCE

8.2.1 Background

162. RMI is known to have UXO as a result of actions in WWII. While much UXO has been cleared, some UXO remains undiscovered.
163. Due to the materials used at the time of manufacture and the passage of time, most UXO is now corroding and in an unstable state.
164. UXO is extremely dangerous and should be treated as such.

8.2.2 Performance Criteria

165. The following performance criteria are set for the construction of the projects:
    - No workers or public are exposed to UXO hazards
    - Chance UXO finds are disposed of without any injuries.

8.2.3 Monitoring

166. Job safety hazard analyses are to be undertaken prior to the commencement of any works. This is particularly important for any works involving earthworks. Permits are to be obtained prior to the commencement of any earthworks.
167. An excavation observer should be present throughout earthworks operations to watch for UXO as well as provide general safety support to machinery operators.

8.2.4 Reporting

168. Any UXO finds are to be reported to the Port Authority and Police immediately.

Table 3 Unexploded Ordinance

Issue	Control activity (and source)	Action timing	Responsibility	Monitoring & reporting
UXO.1 Chance discovery of UXO	UXO1.1: Undertake risk assessment prior to any works that could result in unearthing UXO. If risk considered high, then ensure a survey is done by qualified professionals	Pre and during construction	All Personnel	Daily and maintain records
	UXO1.2: Ensure workers are aware of potential for UXO and of procedures to deal with it. Stop work immediately if possible UXO identified.	Pre and during construction	Construction Site Supervisor	Daily and maintain records
	UXO1.3 Notify authorities immediately and evacuate immediate area and surrounds as appropriate.	During construction	Construction Site Supervisor	Daily and maintain records

8.3 AIR QUALITY

8.3.1 Background

169. All construction activities have the potential to cause air quality nuisance.

170. Existing air quality reflects urban areas, with dust being the main air quality nuisance.

171. Workers involved in construction and operation activities should be familiar with methods minimizing the impacts of deleterious air quality and alternative construction procedures as contained in RMI legislation or good international industry practice.

8.3.2 Performance Criteria

172. The following performance criteria are set for the construction of the MIMIP:

- release of dust/particle matter must not cause an environmental nuisance;
- undertake measures at all times to assist in minimizing the air quality impacts associated with construction and operation activities; and
- corrective action to respond to complaints and/or grievances is to occur within 48 hours.

8.3.3 Monitoring

173. A standardized air monitoring program has been developed for the projects (Table 4). The program is subject to review and update at least every two months from the date of issue. Importantly:

- the requirement for dust suppression will be visually observed by site personnel daily and by RMIPA and CIU staff when undertaking routine site inspections; and
- Vehicles and machinery emissions – visual monitoring and measured when deemed excessive.

8.3.4 Reporting

174. All air quality monitoring results and/or incidents will be tabulated and reported as outlined in the ESMP. The CIU and RMIPA must be notified immediately in the event of any suspected instances of material or serious environmental harm, or if a determined level with respect to air quality is exceeded.

Table 4 Air Quality Management Measures

Issue	Control activity (and source)	Action timing	Responsibility	Monitoring & reporting
A.1 Increase in dust levels at sensitive receptors	A1.1: Implement effective dust management measures in all areas during design, construction and operation.	Pre and during construction	All Personnel	Daily and maintain records
	A1.2: Restrict speeds on roads and access tracks.	During construction	Construction Site Supervisor	Daily and maintain records
	A1.3: Manage dust/particulate matter generating activities to ensure that emissions do not cause an environmental nuisance at any sensitive locations	During construction	Construction Site Supervisor	Daily and maintain records
	A1.4: Construction activities should minimize risks associated with climatic events (check forecasts).	During construction	Construction Site Supervisor	Daily and maintain records
	A1.5: Implement scheduling/staging of proposed works to ensure major vegetation disturbance and earthworks are minimized.	Entire construction	Construction Site Supervisor	Daily and maintain records
	A1.6: Locate material stockpile areas as far as practicable from sensitive receptors. Cover if appropriate.	During construction	Construction Site Supervisor	Daily and maintain records
	A1.7: Source sufficient water of a suitable quality for dust suppression activities complying with any water restrictions.	During construction	Construction Site Supervisor	Daily and maintain records
	A1.8: Schedule revegetation activities to ensure optimum survival of vegetation species.	During construction	Construction Site Supervisor	Maintain records
	A1.9: Rubbish receptacles should be covered and located as far as practicable from sensitive locations	During construction	Construction Site Supervisor	Maintain records

Issue	Control activity (and source)	Action timing	Responsibility	Monitoring & reporting
A2. Increase in vehicle / machinery emissions	A2.1 Ensure vehicles/machines are switched off when not in use.	During construction and Operation	Construction Site Supervisor / RMIPA	Daily and maintain records
	A2.2 Ensure only vehicles required to undertake works are operated onsite.	During construction	Construction Site Supervisor	Daily and maintain records
	A2.3 Ensure all construction vehicles, plant and machinery are maintained and operated in accordance with design standards and specifications.	During construction and Operation	Construction Site Supervisor / RMIPA	maintain records
	A2.4 Develop and implement an induction program for all site personnel, which includes as a minimum an outline of the minimum requirements for environmental management relating to the site.	Pre and during construction	Construction Site Supervisor	Maintain records
	A2.5 Locate construction vehicle/plant/equipment storage areas as far as practicable from sensitive locations.	During construction	Construction Site Supervisor	Daily and maintain records
	A2.6 Direct exhaust emissions of mobile plant away from the ground.	During construction	Construction Site Supervisor	Daily and maintain records
	A2.7: Mount protective canvasses on all trucks which transport material that could generate dust	During construction	Contractor	Daily and maintain records
	A2.8: Site exhaust emitting equipment, such as generators, so that emissions do not cause nuisance to nearby receptors	Operation	RMIPA	Maintain records
A3: Odor	A3.1: Ensure waste and other potential odor sources do not cause nuisance to port users or nearby receptors	Operation	RMIPA	Maintain records

8.4 Noise and Vibration

8.4.1 Background

175. All construction and operation activities have the potential to cause noise nuisance. Vibration disturbance to nearby residents and sensitive habitats is likely to be caused through the use of vibrating equipment. Blasting is not required to be undertaken as part of the MIMIP.
176. The use of machinery or introduction of noise generating facilities could have an adverse effect on the environment and residents if not appropriately managed.
177. Contractors involved in construction activities should be familiar with methods of controlling noisy machines and alternative construction procedures as contained within specific RMI legislation or in its absence, good international industry practice may be used if the legislation has not been enacted.
178. Potential noise sources during construction may include:

- heavy construction machinery;
- power tools and compressors;
- delivery vehicles and vessels.

8.4.2 Performance Criteria

179. The following performance criteria are set for the construction of the projects:

- noise from construction and operational activities must not cause an environmental nuisance at any noise sensitive place;
- undertake measures at all times to assist in minimizing the noise associated with construction activities;
- no damage to off-site property caused by vibration from construction and operation activities; and
- corrective action to respond to complaints and/or grievances is to occur within 48 hours.

8.4.3 Monitoring

180. A standardized noise monitoring program has been developed for the projects (Table 5). The program is subject to review and update at least every two months from the date of issue. Importantly, the site supervisor will:

- ensure equipment and machinery is regularly maintained and appropriately operated; and
- carry out potentially noisy construction activities during ‘daytime’ hours only.

8.4.4 Reporting

181. All noise monitoring results and/or incidents will be tabulated and reported as outlined in the ESMP. The CIU and RMIPA must be notified immediately in the event of any suspected instances of material or serious environmental harm, or if a determined level with respect to noise is exceeded

Table 5 Noise and Vibration Management Measures

Issue	Control activity (and source)	Action timing	Responsibility	Monitoring & reporting
N1: Increased noise levels	N1.1: Select plant and equipment and specific design work practices to ensure that noise emissions are minimized during construction and operation including all pumping equipment.	All phases	Construction Site Supervisor / RMIPA	Maintain records
	N1.2: Specific noise reduction devices such as silencers and mufflers shall be installed as appropriate to site plant and equipment.	Pre and during construction	Construction Site Supervisor	Maintain records
	N1.3 Minimize the need for and limit the emissions as far as practicable if noise generating construction works are to be carried out outside of the hours: 7am-5.30pm	Construction phase	All Personnel	Daily and maintain records
	N1.4: Consultation with nearby residents in advance of construction activities particularly if noise generating construction activities are to be carried out outside of 'daytime' hours: 7am-5.30pm.	Construction phase	All Personnel	Daily and maintain records
	N1.5 The use of substitution control strategies shall be implemented, whereby excessive noise generating equipment items onsite are replaced with other alternatives.	Construction phase	All Personnel	Daily and maintain records
	N1.6 Provide temporary construction noise barriers in the form of solid hoardings where there may be an impact on specific residents.	Construction phase	Construction Site Supervisor	Daily and maintain records
	N1.7 All incidents complaints and non-compliances related to noise shall be reported in accordance with the site incident reporting procedures and summarized in the register.	Construction phase	Construction Site Supervisor	Maintain records
	N1.8 The contractor should conduct employee and operator training to improve awareness of the need to minimize excessive noise in work practices through implementation of measures.	Pre and during construction	Construction Site Supervisor	Maintain records
	N1.9: Permanent noise producing equipment should be either sited or fitted with acoustic shielding such that it does not cause noise nuisance to nearby receptors	Operation	RMIPA	Maintain records

Issue	Control activity (and source)	Action timing	Responsibility	Monitoring & reporting
N2. Vibration due to construction	N2.1: Identify properties, structures and habitat locations that will be sensitive to vibration impacts resulting from construction and operation of the MIMIP.	Pre and during construction	Construction Site Supervisor	Maintain records
	N2.2: Design to give due regard to temporary and permanent mitigation measures for noise and vibration from construction and operational vibration impacts.	Pre-construction	Construction Site Supervisor	Maintain records
	N2.3: All incidents, complaints and non-compliances related to vibration shall be reported in accordance with the site incident reporting procedures and summarized in the register.	Construction phase	Construction Site Supervisor	Maintain records
	N2.4: During construction, standard measure shall be taken to locate and protect underground services from construction and operational vibration impacts.	Construction phase	Construction Site Supervisor	Maintain records

8.5 SURFACE WATER

8.5.1 Background

182. Water is a valuable resource, particularly in RMI where water is often limited. There are no natural watercourses on the RMI port sites, however concentrated flows from buildings and hardstands can result in the movement of sediments and other contaminants. Construction activities have the potential to divert or contaminate surface and marine waters. Similarly, many of the operational activities carried out within ports have the potential to release contaminants that can impact waterways.

183. Having water of a quality that is fit for purpose is important. Poor water quality can be detrimental to both terrestrial and marine flora and fauna.

8.5.2 Performance Criteria

184. The following performance criteria are set for the construction of the projects:

- no significant decrease in water quality as a result of construction and operational activities;
- water quality shall conform to any approval conditions stipulated by WB, EPA and/or other government departments, or in the absence of such conditions follow a 'no worsening' methodology; and
- effective implementation of site-specific EDSCPs.

8.5.3 Monitoring

185. Drains and sediment/oil control structures should be regularly monitored to ensure performance remains satisfactory.

186. Table 6 outlines the monitoring required.

8.5.4 Reporting

187. All water quality monitoring results and/or incidents will be tabulated and reported as outlined in the ESMP. The CIU and the RMIPA must be notified immediately in the event of any suspected instances of material or serious environmental harm, or if a determined level with respect to water quality is exceeded.

Table 6 Water Quality Management Measures

Issue	Control activity (and source)	Action timing	Responsibility	Monitoring & reporting
W1: Elevated suspended solids and other contaminants in surface water systems.	W1.1: Develop and implement a site-specific Erosion, Drainage and Sediment Control Plan (EDSCP) to address drainage control, sediment and erosion control and stockpiling of materials including soil during construction of all components of the projects. EDSC measures to be inspected regularly to ensure all devices are functioning effectively.	Pre-Earthworks / construction works	Construction Site Supervisor	Initial set up and then as required with reporting to CIU and RMIPA
	W1.2: Designated areas for storage of fuels, oils, chemicals or other hazardous liquids should have compacted impermeable bases and be surrounded by a bund to contain any spillage. Refueling to be undertaken in areas away from water systems.	Entire construction and operation phase	All Personnel	Weekly with reporting to RMIPA
	W1.3: Conduct marine quality monitoring in locations where discharges could occur	Entire construction and operation phase	RMIPA	As required with reporting to RMIPA
	W1.4: Schedule works in stages to ensure that disturbed areas are stabilized and/or revegetated progressively and as soon as practicable after completion of works.	Avoid undertaking bulk earthworks during wet season	Construction Site Supervisor and RMIPA	Maintain records
	W1.5: Construction materials will not be stockpiled in proximity to aquatic environment that may allow for release into the environment. Construction equipment will be removed from in proximity to the aquatic environment at the end of each working day or if heavy rainfall is predicted	Entire construction and operation phase	Construction Site Supervisor	Maintain records
W2. Marine spills	W2.1 Develop an Oil Spill Contingency Plan. Contractor to comply with port OSCP if one exists, otherwise separate plan for proposed works to be developed (refer Annexure H).	All phases	RMIPA	Maintain records
W2. Marine spills	W2.2 Ensure that appropriate spill kits/clean up equipment is available. Kit should be appropriate for the scale of spill likely from works.	Construction / Operation	RMIPA / Construction Site Supervisor	Monthly. Maintain records
	W2.3 All personnel to be aware of spill plan and spill response requirements. All spills to be reported.	All phases	All personnel	Maintain records

8.6 GROUNDWATER

8.6.1 Background

188. Groundwater conditions vary across each island. There are no significant usable groundwater reserves in the port areas due to their proximity to the ocean and the porosity of substrate. However, activities carried out at ports (e.g. fuel and other hazardous goods handling, workshops and earthworks) have the potential to contaminant groundwater supplies if not appropriately managed.

8.6.2 5.3.1 Performance Criteria

189. The following performance criteria are set for the MIMIP:

- no significant decrease in the quality and quantity of groundwater as a result of construction and operational activities in proximity to the projects;
- effective implementation of site-specific EDSCPs and other measures to protect groundwater.

190. By following the management measures set out in the ESMF, the MIMIP will not have a significant impact on water quality across the broader area.

8.6.3 Monitoring

191. Refer to Table 7 for the monitoring requirements for groundwater.

192. Monitoring of any nearby well should be done both before, during and after works.

8.6.4 Reporting

193. All water quality monitoring results and/or incidents will be tabulated and reported as outlined in the ESMF. The Safeguards Specialist must be notified immediately in the event of any suspected instances of material or serious environmental harm, or if a determined level with respect to water quality is exceeded.

Table 7 Groundwater management measures

Issue	Control activity (and source)	Action timing	Responsibility	Monitoring & reporting
GW 1: Increase of gross pollutants, hydrocarbons, metals and other chemical pollutants into the groundwater and/or surface water environment.	GW1.1: Prevent contaminated surface water from entering aquifers via surface substrate and wells - protect from runoff and flooding and keep surrounds clean.	All phases	All Personnel	Weekly
	GW1.2: Designated areas for storage of fuels, oils, chemicals or other hazardous liquids should have compacted impermeable bases and be surrounded by a bund to contain any spillage. Refueling to be undertaken in areas away from water systems.	Construction and operation	All Personnel	Weekly with reporting to CIU and RMIPA
	GW1.3: Check all vehicles, equipment and material storage areas daily for possible fuel, oil and chemical leaks. Undertake refueling at designated places away from water systems.	All phases	All Personnel	Daily and maintain records
	GW 1.4: Minimize the use of herbicides, pesticides and other chemicals and use only biodegradable herbicides that have minimal impact on water quality and fauna. Use only as per directions	All phases	Contractor Site Supervisor / RMIPA	Monthly reporting to CIU and RMIPA

8.7 Terrestrial and Aquatic Flora and Fauna

8.7.1 Background

194. The port areas are heavily disturbed and modified and therefore represent limited habitat for terrestrial flora and fauna.

8.7.2 Performance Criteria

195. The following performance criteria are set for the construction of the projects:

- no clearance of vegetation outside of the designated clearing boundaries;
- no deleterious impacts on aquatic environments and terrestrial habitats;
- no introduction of new weed species as a result of construction activities; and
- no increase in existing weed proliferation within or outside of any MIMIP footprint as a result of construction activities.

8.7.3 Monitoring

196. A flora and fauna monitoring program will be implemented (Table 8).

197. Weed monitoring will be undertaken and appropriate action taken in the event of alien or noxious species being identified.

198. The delivery organization will, when undertaking works, compile a weekly report to RMIPA outlining:

- any non-conformances to this ESMP;
- the areas that have been rehabilitated during the preceding week; and
- details of the corrective action undertaken.

8.7.4 Reporting

199. All flora and fauna monitoring results and/or incidents will be tabulated and reported as outlined in the ESMF. The Safeguards Specialist must be notified in the event of any suspected instances of death to native fauna and where vegetation if detrimentally impacted.

Table 8 Flora and Fauna Management Measures

Issue	Control Activity (and Source)	Action Timing	Responsibility	Monitoring and Reporting
FF1. Habitat loss and disturbance of fauna	FF1.2: Minimize noise levels and lighting intrusion throughout construction and operation in the vicinity of any sensitive locations, such as sandy beaches that turtles and birds might use.	During construction	Construction Site Supervisor	Daily and maintain records
	FF1.3: Ensure that all site personnel are made aware of sensitive fauna/habitat areas, such as areas of coral (Annexure C), the area around Arno dock and Jaluit Ramsar wetland (international agreement) and the requirements for the protection of these areas.	During construction	Construction Site Supervisor	Daily and maintain records
	FF1.4 Minimize disturbance to on-site fauna and recover and rescue any injured or orphaned fauna during construction and operation.	During construction	Construction Site Supervisor	Daily and maintain records, report
FF2. Introduced flora and weed species	FF2.1: Implement an ESCP to reduce the spread of weeds through erosion and sediment entering any waterways and therefore spreading.	Pre and during construction	Construction Site Supervisor	Maintain records
	FF2.2: Revegetate disturbed areas using native and locally endemic species that have high habitat value.	During construction	Construction Site Supervisor	As required and maintain records
	FF2.3: Environmental weeds and noxious weeds within the MIMIP footprints shall be controlled.	During and post construction	Construction Site Supervisor / RMIPA	Maintain records

8.8 Marine Flora and Fauna

8.8.1 Background

200. The marine environment of RMI is high in biodiversity and is of critical importance in terms of economy. Ports by their nature have a direct impact on the marine environment, therefore vigilance in terms of minimizing impacts to the marine environment are critical.

8.8.2 Performance Criteria

201. The following performance criteria are set for the construction of the projects:

- no deleterious impacts on aquatic environments and terrestrial habitats;
- no introduction of new species as a result of construction activities;

8.8.3 Monitoring

202. A flora and fauna monitoring program will be implemented (Table 9).

203. The delivery organization will when undertaking works, compile a weekly report to CIU and RMIPA outlining:

- any non-conformances to this ESMF;
- the areas that have been rehabilitated during the preceding week; and
- details of the corrective action undertaken.

8.8.4 Reporting

All marine flora and fauna monitoring results and/or incidents will be tabulated and reported as outlined in the ESMF. The CIU and RMIPA must be notified in the event of any suspected instances of death to native fauna and where vegetation if detrimentally impacted

Table 9 Flora and Fauna Management Measures

Issue	Control Activity (and Source)	Action Timing	Responsibility	Monitoring and Reporting
FF1. Habitat loss and disturbance of fauna	FF1.1 Sensitive marine habitat is to be protected from construction/operational impacts. Such areas include where coral has been recorded (Annexure C), the area around Arno wharf where a rare coral has been reported, and the Jaluit Ramsar wetland (as per international agreement).	Construction and operation	Construction Site Supervisor / RMIPA	Maintain records
	FF1.2: Minimize noise levels and lighting intrusion throughout construction and operation in the vicinity of sandy beaches that seabirds and turtles could use (outer islands only).	During construction	Construction Site Supervisor	Daily and maintain records
	FF1.3: Ensure that all site personnel are made aware of sensitive fauna/habitat areas (coral areas and sandy beaches) and the requirements for the protection of these areas.	During construction	Construction Site Supervisor	Daily and maintain records
	FF1.4 Minimize disturbance to on-site fauna and recover and rescue any injured or orphaned fauna during construction and operation.	During construction	Construction Site Supervisor	Daily and maintain records, report
	FF1.5 In relation to navigation aids-related works on the seabed, consider the temporary relocation of coral heads/benthos for replacement when work is completed, propagation of corals that may be damaged for return to the environment; propagation of corals for later return and hardening of the impacted area to allow proper recolonization	During construction	Construction Site Supervisor	Daily and maintain records, report
	FF1.6 Ensure that an Oil Spill Contingency Plan is in place. Personnel to be trained in its implementation and equipment to be available.	Construction and operation	Contactor and RMIPA	Maintain Records

8.9 Social Management and Population

8.9.1 Background

204. RMI's economy is highly dependent on marine resources for international, inter-state and inter-island trade. Citizens of outer islands depend on marine resources for travel to main and other outlying islands, and for access to education, markets and health services.
205. Nonetheless, construction activities and operations at ports can have a negative impact on communities if not managed appropriately.
206. In RMI there are many relics from World War II, these should be considered as physical cultural resources. The objective of WB OP/BP 4.11 is to avoid, or mitigate, adverse impacts on cultural resources. Screening indicated that impacts to cultural heritage are unlikely and therefore OP/BP 4.11 (Physical Cultural Resources) is not triggered. Nonetheless, chance finds sometimes occur and need to be dealt with.

8.9.2 Performance Criteria

207. The following performance criteria are set for the MIMIP:
    - the community has been consulted and MIMIP elements have been designed with their informed consultation and participation throughout the MIMIP;
    - all stakeholders are appropriately represented;
    - avoid adverse impacts to local community during construction and operations and where not possible, minimize, restore or compensate for these impacts;
    - cultural heritage is not adversely impacted;
    - community health and safety is protected and overall well-being benefits derived from the MIMIP;
    - complaint and grievance mechanisms are put in place and proactively managed; and
    - long-term social benefits are achieved.
208. Local stakeholders and community members have a key role to play in the implementation and monitoring of the MIMIP.
209. Consultation with stakeholders will continue. This will help ensure that stakeholders continue to be aware of the MIMIP, its progress and any changes in the MIMIP. It will also assist in identifying any issues as they arise.
210. The CIU and RMIPA will be responsible for advisory support and extensions services to local beneficiaries along with being responsible for distributing material inputs and providing technical training and backstopping in the implementation of program activities.

8.9.3 Reporting

211. Records of all consultations are to be kept and reported on monthly basis.
212. The CIU and RMIPA must be notified in the event of any individual or community complaint or dissatisfaction and ensure the Grievance Redress Mechanism is complied with.

Table 10 Social Management and Population Measures

Issue	Control activity (and source)	Action timing	Responsibility	Monitoring & reporting
SM1: Community Consultation	SM1.1 Implement Stakeholder Engagement Plan	All phases	RMIPA / DIDA	Maintain records
	SM1.2 Include indigenous representation – include local governance mechanisms in consultation and decision making processes	All phases	RMIPA	Maintain records
	SM1.3: Ensure compliance with the Grievance Redress Mechanism process	All phases	CIU and RMIPA	Maintain records
SM2: Damage or disturbance to physical cultural resources during works	SM2.1: Should any physical cultural resources be discovered during works the WB Chance Finds Procedure is to be applied (Annexure M)	Pre and during construction	Construction Site Supervisor	During works and immediately notify HPO
SM3: Public nuisance caused by construction/operation activities (e.g. noise, dust etc.)	SM3.1: Carry out community consultation prior to undertaking activities	Pre-construction	CIU and RMIPA	Maintain records
	SM3.2: Implement appropriate management plans (refer to Noise, Air, ESCP, and Waste sections of the ESMF and ESMP)	Construction and operation	CIU and RMIPA	Daily and maintain records
	SM3.3: Ensure compliance with the Grievance Redress Mechanism process	All phases	CIU and RMIPA	Maintain records

8.10 CUSTOMARY ENGAGEMENT

213. All stakeholders, including the communities who host or use the docks, are entitled to be fully informed about the project and engaged in design, mitigation and operations of the docks. No person should be resettled from their land as a consequence of this work.

8.10.1 Performance Criteria

214. The following performance criteria are set for the MIMIP:

- the community has been consulted and MIMIP elements have been designed with their informed consultation and participation throughout the MIMIP;
- all stakeholders are appropriately represented;
- land owners are dealt with openly and fairly
- complaint and grievance mechanisms are put in place and proactively managed; and
- long-term social benefits are achieved.

215. Consultation with stakeholders will continue. This will help ensure that stakeholders continue to be aware of the MIMIP, its progress and any changes in the MIMIP. It will also assist in identifying any issues as they arise.

216. The CIU and RMIPA will be responsible for advisory support and extensions services to local beneficiaries along with being responsible for distributing material inputs and providing technical training and backstopping in the implementation of activities.

8.10.2 Reporting

217. . Records of all consultations are to be kept and reported on monthly basis. Any land use agreements must be in writing.

218. The CIU and RMIPA must be notified in the event of any individual or community complaint or dissatisfaction and ensure the Grievance Redress Mechanism is complied with.

Table 11 Social Management Measures

Issue	Control activity (and source)	Action timing	Responsibility	Monitoring & reporting
LO1: Ensure no impact on Land Ownership	LO1.1: There shall be no displacement or resettlement associated with MIMIP.	Entire construction and operation phase	CIU and RMIPA	Maintain records
	LO1.2: Ensure all works are carried out within the existing footprint of the ports, navigation aids or other Government-leased land	Pre-construction	CIU and RMIPA	Maintain records
	LO1.3: All activities will be undertaken in full compliance with the RMI laws and World Bank and Standards, with the most stringent requirements being complied with	Entire construction and operation phase	CIU and RMIPA	Maintain records
	LO1.4: Ensure compliance with the SEP and Grievance Redress Mechanism process	Entire construction and operation phase	CIU and RMIPA	Maintain records

8.11 Gender, Gender Based Violence and Human Trafficking

8.11.1 Background

219. Women in the Marshall Islands face multiple barriers to equal opportunities and a life free from violence and coercion. Gender-based violence (GBV), particularly intimate partner and sexual violence against women is widespread. This brings a range of serious physical, mental, community, and family consequences felt in the home, workplace, and society as a whole, and correlates with a high incidence of human trafficking.

220. RMI is a source of, and a destination for, human trafficking for commercial sexual exploitation linked to the fishing industry. Women and girls represent the greater share of victims of human trafficking for commercial sexual exploitation and are therefore considered a particularly vulnerable group.

221. Many women live under the threat of violence and this restricts their ability to move freely in the community, to use public transport, to access health and education services, and to travel to market or to the workplace. The normalization of violence has specific implications for women's trafficking risk: with limited sexual agency and high dependency on families, young women are acutely vulnerable to sexual coercion and trafficking.

222. A separate report on Gender, Gender-Based Violence and Human Trafficking has been prepared (refer Annexure N).

8.11.2 Performance Criteria

223. The following performance criteria are set for the MIMIP:

- Increased opportunities and employment of women in the maritime sector;
- Manage the labour workforce to avoid behavior that could lead to gender based violence or involvement in illegal behavior.
- Reduction in gender-based violence (zero target);
- Increased representation of women and vulnerable groups in decision making processes;
- Immigration/customs/police facilities and/or presence at each port
- Human trafficking is reduced (zero target); and
- long-term social benefits are achieved.

224. The CIU and RMIPA will be responsible for advisory support and extensions services to local beneficiaries along with being responsible for distributing material inputs and providing technical training and backstopping in the implementation of activities.

8.11.3 Reporting

225. Records of all consultations/reports/incidents are to be kept and reported on monthly basis.

226. The CIU and RMIPA must be notified in the event of any individual or community report

Table 12 Gender and Human Trafficking Measures

Issue	Control activity (and source)	Action timing	Responsibility	Monitoring & reporting
GE1: Gender Equality and Women Empowerment	GE1.1: Incorporate 'equal employment opportunity' and in particular 'equal career progression' statements in sectoral strategies and policies	All phases	CIU and RMIPA	Maintain records
	GE1.2: Rise the profile and visibility of women employed in maritime sector	All phases	RMIPA	Maintain records
	GE1.3 Increase numbers of women in decision making positions within the maritime sector and related government agencies	All phases	CIU and RMIPA	Maintain records
	GE1.4: Ports to be safe for women – improve lighting, shelters, toilets, security	All phases (particularly design)	RMIPA	Maintain records
GE2: Human Trafficking	GE2.1: Raise the capacity of agencies to deal with the HT issues and to collaborate	All phases	CIU and RMI Port Authority	Maintain records
	GE2.2: Ensure there are Immigration/Customs/Police facilities and presence at main Ports and I/C/P can patrol anchorage areas. Provide fencing and adequate lighting at the ports	All phases	RMIPA	Maintain records
	GE2.3: Raise the awareness of mariners and build capacity of vessel owners on issues related to human trafficking	Operation	CIU and RMI Port Authority	Maintain records
	GE2.4: Raise human trafficking awareness of communities	All phases	CIU and RMI Port Authority	Maintain records
	GE2.5: Set up processes and train potential enumerators for the ongoing Human Trafficking Assessment	Operation	CIU	Maintain records

Issue	Control activity (and source)	Action timing	Responsibility	Monitoring & reporting
GE3: Gender based violence	GE3.1: Improve port security e.g. fencing, lighting and identity requirements	Operation	CIU and RMI Port Authority	Maintain records
	GE3.2: Raise community awareness	All phases	CIU and RMI Port Authority	Maintain records
	GE3.3: Improve facilities for women e.g. shelter, security, lighting	All phases	CIU and RMI Port Authority	Maintain records
	GE3.4: Increase police/security presence. Ensure that police/security have had adequate training	All phases	CIU and RMI Port Authority	Maintain records
	GE3.5: The Contractor will prepare a specific Code of Conduct to describe the expected behaviours of their project worker in relation to the local communities and their social sensitivities. This is to avoid creating demand for illegal sex work, avoid gender-based violence and violence against children, manage alcohol consumption and avoid the use of illegal substances, and abide by cultural and social norms of the host community. • The Contractor is to ensure that all overseas project staff undergo a cultural familiarisation session as part of their induction training. The purpose of this induction will be to introduce the project staff to the cultural sensitivities of the local communities and the expected behaviours of the staff in their interactions with these communities. Gender based violence and HIV Aids and communicable disease awareness raising and resources shall be provided to all workers. The client shall provide to the Contractor a list of approved service providers which shall include recognized NGOs and others for conducting this training. • The Contractor is to stipulate the conditions under which visitors may attend the workers accommodation, including curfews. • The Contractor shall ensure that basic social/collective rest and recreation spaces and activities within the Workers Accommodation to help minimise the impact that the workers would have on the leisure and recreational facilities of the nearby communities.	Construction	Contractor	Maintain records

8.12 Employment, Labor and Working Conditions

8.12.1 Background

227. The MIMIP has been designed with the assistance of stakeholders and aims to provide benefits to the broader community who will be involved in the construction of MIMIP interventions. Notwithstanding, as with any project that involves construction, some dissatisfaction can occur, and conflicts may arise where individuals are unable to be provided employment. It is important that potential areas of tension are recognized early, and appropriate actions taken to avoid or minimize conflict

8.12.2 Performance Criteria

228. The following performance criteria are set for the MIMIP:

- ensure compliance with RMI labor and occupational health and safety laws, with obligations under international law, and consistency with the principles and standards embodied in the International Labor Organization fundamental conventions, including freedom of association, elimination of discrimination in employment and occupation, elimination of forced or compulsory labor and Good International Industry Practice with respect to labor and occupational health and safety, and
- ensure no forms of child labor
- where possible, local residents will be employed first for all construction activities;
- all employees and contractors will be paid equitably;
- where practicable, preference should be given to women for any employment;
- ensure workers' health and safety is protected and overall well-being benefits derived from the MIMIP;
- ensure workers are trained in occupational health and safety;
- ensure workers are provided appropriate personal protective equipment suitable for their duties; and
- complaint and grievance mechanisms are put in place and proactively managed

229. Local stakeholders and community members have a key role to play in the implementation and monitoring of the MIMIP and therefore preference should be given to them with respect to employment with respect to the relevant Codes.

230. Consultation with stakeholders will continue. This will help ensure that stakeholders continue to be aware of the MIMIP, its progress and any changes in the MIMIP. It will also assist in identifying any issues as they arise.

231. The RMIPA and CIU will be responsible for advisory support and extensions services to local beneficiaries along with being responsible for distributing material inputs and providing technical training and backstopping in the implementation of activities.

8.12.3 Reporting

232. Records of all consultations are to be kept and reported on monthly basis.

233. The RMIPA must be notified in the event of any individual or community complaint or dissatisfaction and ensure the Grievance Redress Mechanism is complied with.

Table 13 Social Management Measures

Issue	Control activity (and source)	Action timing	Responsibility	Monitoring & reporting
WC1: Poor Employment, Labor and Working Conditions	WC1.1: Ensure compliance with RMI labor and occupational health and safety laws and Good International Industry Practice with respect to labor and occupational health and safety	Entire construction and operation phase	CIU, RMIPA and Construction Site Supervisor	Maintain records
	WC1.2: Employ local residents and women first where practicable and where consistent with WB procurement protocols	Entire construction and operation phase	CIU, RMIPA and Contractor	Maintain records
	WC1.3: Ensure workers' health and safety is protected and overall well-being benefits derived from the MIMIP	Entire construction and operation phase	Contractor / RMIPA	Maintain records
	WC1.4: Ensure workers are trained in occupational health and safety in compliance with RMI laws and Good International Industry Practice. Prepare OHS plans and JSAs as appropriate (refer Annexure O for example)	Entire construction and operation phase	Contractor	Maintain records
	WC1.5: Ensure workers are provided appropriate personal protective equipment suitable for their duties, adequate accommodation and recreational facilities [for overseas / off island workers].	Entire construction and operation phase	Construction Site Supervisor / RMIPA	Maintain records

8.13 WASTE MANAGEMENT

8.13.1 Background

234. The preferred waste management hierarchy and principles for achieving good waste management is as follows:

- waste avoidance (avoid using unnecessary material on the projects);
- waste re-use (re-use material and reduce disposing);
- waste recycling (recycle material such as cans, bottles, etc.); and
- solid waste disposal (all putrescible and/or contaminated waste to be exported for disposal at a licensed and engineered landfill).

235. The key waste streams generated during construction are likely to include residual sediment and construction wastes such as:

- the excavation wastes unsuitable for reuse during earthworks;
- wastes from construction equipment maintenance. Liquid hazardous wastes from cleaning, repairing and maintenance of this equipment may be generated. Likewise, leakage or spillage of fuels/oils within the site needs to be managed and disposed of appropriately;
- non-hazardous liquid wastes will be generated through the use of workers' facilities such as toilets; and
- general wastes including scrap materials and biodegradable wastes.

236. Key waste streams generated during operations are likely to include:

- excavated sediment from drains and oil traps;
- general waste;
- packaging;
- ablution waste; and
- used oil and machinery parts.

237. Workers involved in construction and operational activities should be familiar with methods minimizing the impacts of their activities to minimize the footprint to that essential for the works. By doing these activities, the MIMIP should minimize the impact of waste generated by the MIMIP.

8.13.2 Performance Criteria

238. The following performance criteria are set for the construction of the projects:

- waste generation is minimized through the implementation of the waste hierarchy (avoidance, reduce, reuse, recycle);
- no litter will be observed within the MIMIP area or surrounds as a result of activities by site personnel;
- no complaints received regarding waste generation and management;
- any waste from on-site portable sanitary facilities will be sent off site for disposal by a waste licensed contractor; and
- waste oils will be collected and shipped for recycling at a licensed facility.

8.13.3 Monitoring

239. A waste management monitoring program has been developed for the projects (Table 14). The program is subject to review and update at least every two months from the date of issue.

8.13.4 Reporting

240. The RMIPA as implementing agency must be notified immediately in the event of any suspected instances of material or serious environmental harm, or if a determined level with respect to waste is exceeded.

Table 14 Waste Management Measures

Issue	Control activity (and source)	Action timing	Responsibility	Monitoring & reporting
WM1: Production of wastes and excessive use of resources	WM1.1: Preference shall be given to materials that can be used to construct the MIMIP that would reduce the direct and indirect waste generated.	Pre and during construction	Construction Site Supervisor	Maintain records
	WM1.2: Daily waste practices shall be carried out unless these are delegated to the activities of external waste management bodies.	During construction	Construction Site Supervisor	Daily and maintain records
	WM1.3: The use of construction materials shall be optimized in terms of achieving sustainability and where possible a recycling policy adopted.	During construction	Construction Site Supervisor	Weekly and maintain records
	WM1.4: Separate waste streams shall be maintained at all times into. “general domestic waste”, “construction waste” and “contaminated waste”. Specific areas on-site shall be designated for the temporary management of the various waste streams. Refer to the Waste Code of Conduct Requirements (Annexure P)	During construction	Construction Site Supervisor	Weekly and maintain records
	WM.1.5: If sub-projects include ablution facilities (e.g. under CERC), they are to be either connected to the municipal sewerage system /on-site treatment plant / or removed by a licensed contractor.	All phases	RMIPA / Construction Site Supervisor	Maintain records
	WM1.6: Recyclable waste (including oil and some construction waste) shall be collected separately and disposed of correctly.	During construction	Construction Site Supervisor	Weekly and maintain records
	WM1.7: “General domestic waste” (particularly food waste) shall be sufficiently covered to ensure that wildlife does not have access.	During construction	Construction Site Supervisor	Daily
	WT1.8: Fuel and lubricant leakages from vehicles and plant shall be immediately rectified	During construction	Construction Site Supervisor	Daily and maintain records

Issue	Control activity (and source)	Action timing	Responsibility	Monitoring & reporting
WM2: Management and disposal of waste	WM2.1: Develop and implement a Waste Management Plan (refer Annexure P)	Pre-construction	Construction Site Supervisor	Maintain records
	WM2.2: Provide bins for use by both staff and visitors	All phases	RMIPA	Weekly
	WM2.3: All solid waste is transported off-island for recycling or disposal at a licensed and engineered landfill, with appropriate permits and approvals under international treaties such as Waigani.	During construction	Contractor	Weekly and maintain records
	WM2.4: Any hazardous or contaminated waste shall be disposed of at an approved facility at a licensed and engineered landfill, with appropriate permits and approvals under international treaties such as Waigani.	All phases	Construction Site Supervisor / RMIPA	Weekly and maintain records
	WT2.5: Fuel and lubricant leakages from vehicles and plant shall be immediately rectified.	All phases	Construction Site Supervisor / RMIPA	Daily and maintain records
WM3: Asbestos	WM3.1: Where there is a risk of asbestos being present (e.g. lagging on pipes, building materials, insulation etc.), an assessment should be carried out by a qualified professional. All work in areas where there may be an asbestos risk is to stop until an assessment has been carried out.	Pre-construction	RMIPA / Contractor	Maintain records
	WM3.2: Asbestos management plan is to be prepared by a qualified person. Removal and disposal is to be undertaken as per plan, by suitably trained personnel.	Pre-construction	RMIPA / Contractor	Maintain records
	WM3.3: Asbestos material is to be contained and disposed of off-island (WM3.2 is to identify approved disposal location)	Construction	Construction Site Supervisor	Maintain records
WM4: Contaminated Waste	WM4.1 Develop a Contaminated Waste Management Plan	Pre-construction	RMIPA / Contractor	Maintain records

8.14 Emergency Management Measures

8.14.1 Background

241. In the event of actions occurring, which may result in serious health, safety and environmental (catastrophic) damage, emergency response or contingency actions will be implemented as soon as possible to limit the extent of environmental damage.

242. The CIU will need to incorporate emergency responses into the MIMIP complying with the requirements under the Occupational, Health and Safety Policy of the delivery organization and the relevant RMI legislation.

8.14.2 Performance Criteria

243. The following performance criteria are set for the construction of the projects:

- no incident of fire outbreak;
- no failure of water retaining structures;
- no major chemical or fuel spills;
- no preventable industrial or work-related accidents;
- provide an immediate and effective response to incidents that represent a risk to public health, safety or the environment; and
- minimize environmental harm due to unforeseen incidents.

8.14.3 Monitoring

244. An emergency response monitoring program has been developed for the projects (Table 15). The program is subject to review and update at least every two months from the date of issue. Importantly, visual inspections will be conducted by Contractor daily with reporting to RMIPA and DIDA staff on a weekly basis (minimum) noting any non-conformances to this ESMP.

8.14.4 Reporting

245. The RMIPA and DIDA must be notified immediately in the event of any emergency, including fire or health related matter including those that have resulted in serious environmental harm.

Table 15 Emergency Management Measures

Issue	Control activity (and source)	Action timing	Responsibility	Monitoring & reporting
E1. Fire and Emergency management and prevention strategies implemented	E1.1: Develop an Emergency Response Plan.	Pre-construction / Operation	RMIPA / Construction Site Supervisor	Maintain records
	E1.2: All personnel to be familiar with and trained in the implementation of the Emergency Response Plan. Emergency Response Plan to include / link to Oil Spill Contingency Plan	All phases	All personnel	Maintain records
	E1.3 Flammable and combustible liquids bunding/storage areas to be designed in accordance with appropriate international standards	All phases	RMIPA / Construction Site Supervisor	Daily and maintain records
	E1.4: Fire extinguishers are to be available on site	All phases	RMIPA / Construction Site Supervisor	Daily and maintain records
	E1.5: No open fires are permitted within the MIMIP area	All phases	All personnel	Daily
	E1.6: Communication equipment and emergency protocols to be established prior to commencement of construction activities.	Pre-construction	Construction Site Supervisor	Maintain records
	E1.7: Train all staff in emergency preparedness and response (cover health and safety at the work site). Coordinate with NDMO.	Construction and Operation	RMIPA	Maintain records
	E1.8: HSE / First Aid officers to be designated and provided with appropriate training. Staff to be advised who they are.	All phases	RMIPA/ Construction Site Supervisor	Maintain records
	E1.9: Check and replenish First Aid Kits	Construction and Operation	RMIPA/ Construction Site Supervisor	Monthly and maintain records
	E1.10: Use of Personal Protection Equipment. Staff to be issued with appropriate PPE and trained in use	Construction and Operation	RMIPA/ Construction Site Supervisor	Daily and maintain records

9 CONSULTATION

246. Consultation is mandated by OP/BP 4.01 Environment Assessment. Consultation required for is a two-way process in which beneficiaries provide advice and input on the design of proposed projects that affect their lives and environment.

9.1 STAKEHOLDER ENGAGEMENT DURING PROJECT PREPARATION

247. During Project preparation, discussions were held between the implementing agencies and various stakeholder RMI Government agencies, along with and the World Bank team. Refer Section 9.3.2 below and Annexure Q.

9.2 STAKEHOLDER ENGAGEMENT DURING IMPLEMENTATION

248. During Project implementation, monitoring systems will be setup and used to identify successes and issues related to Project activities, and will include the GRM, (refer Section 10) together providing a useful platform for citizen/beneficiary input into adaptation of the Project as it progresses.

9.3 STAKEHOLDER ENGAGEMENT PLAN

9.3.1 Introduction

249. The MIMIP was discussed with a wide range of stakeholders including relevant government departments, industry groups, NGOs, and individual community members and approved by Government. On-ground consultation has been undertaken during the design of the MIMIP and it is expected that consultation with stakeholders and any affected communities will continue throughout the project.

9.3.2 Stakeholders

250. Key stakeholders identified in the project so far are:

- Project Partners:
- MTC
- RMIPA
- DIDA
- Department of Immigration
- Ministry of Cultural and Internal Affairs
- Marine Resources Authority
- Environmental Protection Authority
- The World Bank Regional Office
- Project Affected Parties
- Communities:
- Island Councils and Mayor of Jaluit
- Island Councils and Mayor of Wotje
- MIMA Mayors association

- Senators for the relevant islands
- KAL Government
- Traditional resource users and rights holders
- Other natural resources users
- Dock/transport users
- Businesses
- Marshall Islands Shipping Corporation
- Kwajalein Atoll Port Authority
- PII Port
- Chamber of commerce
- Stevedores
- Matson lines (Ebeye)
- Stevedores
- Majuro Stevedore and Terminal Company
- Other Interested Parties
- Chief Secretaries office
- MIMRA
- CMAC s umbrella organization for coastal managements includes EPA
- Representatives of vulnerable and disadvantaged groups:
- Municipal church groups
- Country Manager, International Organization for Migration (IOM)
- Women United Together Marshall Islands (WUTMI)

9.3.3 Plan Content

251. A Stakeholder Engagement Plan (SEP) has been prepared (Annexure Q). Features of the SEP include:

- A list of stakeholders
- Identification of ways to engage the stakeholders in the key outputs of the project
- A Stakeholder Action Plan
- Identification of roles and responsibilities for stakeholder engagement
- Mechanisms for regular monitoring and evaluation of project issues, outcomes and feedback
- Proposed engagement techniques for meaningful engagement and encouraging participation
- A summary of consultations undertaken during formulation of the ESMF
- Inclusion of the GRM

252. DIDA or its delegate and/or RMIPA will develop and release updates on the MIMIP on a regular basis to provide interested stakeholders with information on MIMIP status. Updates may be via a range of media e.g. print, radio, social media or formal reports. A publicized telephone number will be maintained throughout the MIMIP to serve as a point of contact for

enquiries, concern, complaints and/or grievances. All enquiries, concern, complaints and/or grievances will be recorded on a register and the appropriate manager will be informed.

- Where there is a community issue raised, the following information will be recorded:
- time, date and nature of enquiry, concern, complaints and/or grievances;
- type of communication (e.g. telephone, letter, personal contact);
- name, contact address and contact number;
- response and investigation undertaken as a result of the enquiry, concern, complaints and/or grievances; and
- actions taken and name of the person taking action.

253. Some enquiries, concern, complaints and/or grievances may require an extended period to address. The complainant(s) will be kept informed of progress towards rectifying the concern. All enquiries, concerns, complaints and/or grievances will be investigated, and a response given to the complainant in a timely manner. A grievance redress mechanism has been included in the ESMF to address any complaints that may not be able to be resolved quickly.

254. Nominated DIDA (or its delegate) and/or RMIPA and contractor staff will be responsible for undertaking a review of all enquiries, concern, complaints and/or grievances and ensuring progress toward resolution of each matter.

10 GRIEVANCE REDRESS MECHANISM

10.1 INTRODUCTION

255. During the implementation of MIMIP, a person or group of people can be adversely affected, directly or indirectly due to the MIMIP activities. The grievances that may arise can be related to social issues such as disruption of services, temporary or permanent loss of livelihoods and other social and cultural issues. Grievances may also be related to environmental issues such as excessive dust or noise generation, damages to infrastructure due to construction related vibrations or transportation of raw material, noise, traffic congestions, changes to access etc.

256. Should such a situation arise, there must be a mechanism through which affected parties can resolve such issues in a cordial manner with the MIMIP personnel in an efficient, unbiased, transparent, timely and cost-effective manner. To achieve this objective, a grievance redress mechanism has been included in the ESMF for the MIMIP.

10.2 RMI JUDICIARY LEVEL GRIEVANCES

257. The project level process will not impede affected persons access to the RMI legal system. At any time, a complainant may take the matter to the appropriate legal or judicial authority as per the laws of the Republic of the Marshall Islands.

10.3 GRIEVANCE REDRESS MECHANISM

10.3.1 Introduction

258. The MIMIP allows those that have a compliant or that feel aggrieved by the MIMIP to be able to communicate their concerns and/or grievances through an appropriate process. The Grievance Redress Mechanism set out in this ESMF is to be used as part of the MIMIP and will provide an accessible, rapid, fair and effective response to concerned stakeholders, especially any vulnerable group who often lack access to formal legal regimes.

259. While recognizing that many complaints may be resolved immediately, the Grievance Redress Mechanism set out in this ESMF/ESMP encourages mutually acceptable resolution of issues as they arise. The Grievance Redress Mechanism set out in this ESMF/ESMP has been designed to:

- be a legitimate process that allows for trust to be built between stakeholder groups and assures stakeholders that their concerns will be assessed in a fair and transparent manner;
- allow simple and streamlined access to the Complaints Register and Grievance Redress Mechanism for all stakeholders and provide adequate assistance for those that may have faced barriers in the past to be able to raise their concerns;
- provide clear and known procedures for each stage of the Grievance Redress Mechanism process, and provides clarity on the types of outcomes available to individuals and groups;
- ensure equitable treatment to all concerned and aggrieved individuals and groups through a consistent, formal approach that, is fair, informed and respectful to a complaint and/or concern;
- to provide a transparent approach, by keeping any aggrieved individual/group informed of the progress of their complaint, the information that was used when assessing their complaint and information about the mechanisms that will be used to address it; and
- enable continuous learning and improvements to the Grievance Redress Mechanism. Through continued assessment, the learnings may reduce potential complaints and grievances.

260. Eligibility criteria for the Grievance Redress Mechanism include:

- Perceived negative economic, social or environmental impact on an individual and/or group, or concern about the potential to cause an impact;

- clearly specified kind of impact that has occurred or has the potential to occur; and explanation of how the MIMIP caused or may cause such impact; and
- individual and/or group filing of a complaint and/or grievance is impacted, or at risk of being impacted; or the individual and/or group filing a complaint and/or grievance demonstrates that it has authority from an individual and or group that have been or may potentially be impacted on to represent their interest.

261. Local communities and other interested stakeholders may raise a grievance/complaint at all times to the Ombudsman. Affected local communities should be informed about the ESMF/ESMP provisions, including its grievance mechanism and how to make a complaint.

10.3.2 Grievance Redress Mechanism

262. The Grievance Redress Mechanism has been designed to be problem-solving mechanism with voluntary good-faith efforts. The Grievance Redress Mechanism is not a substitute for the legal process. The Grievance Redress Mechanism will as far as practicable, try to resolve complaints and/or grievances on terms that are mutually acceptable to all parties. When making a complaint and/or grievance, all parties must act at all times, in good faith and should not attempt to delay and or hinder any mutually acceptable resolution.

263. The process for the Grievance Redress Mechanism is shown in Figure 2.

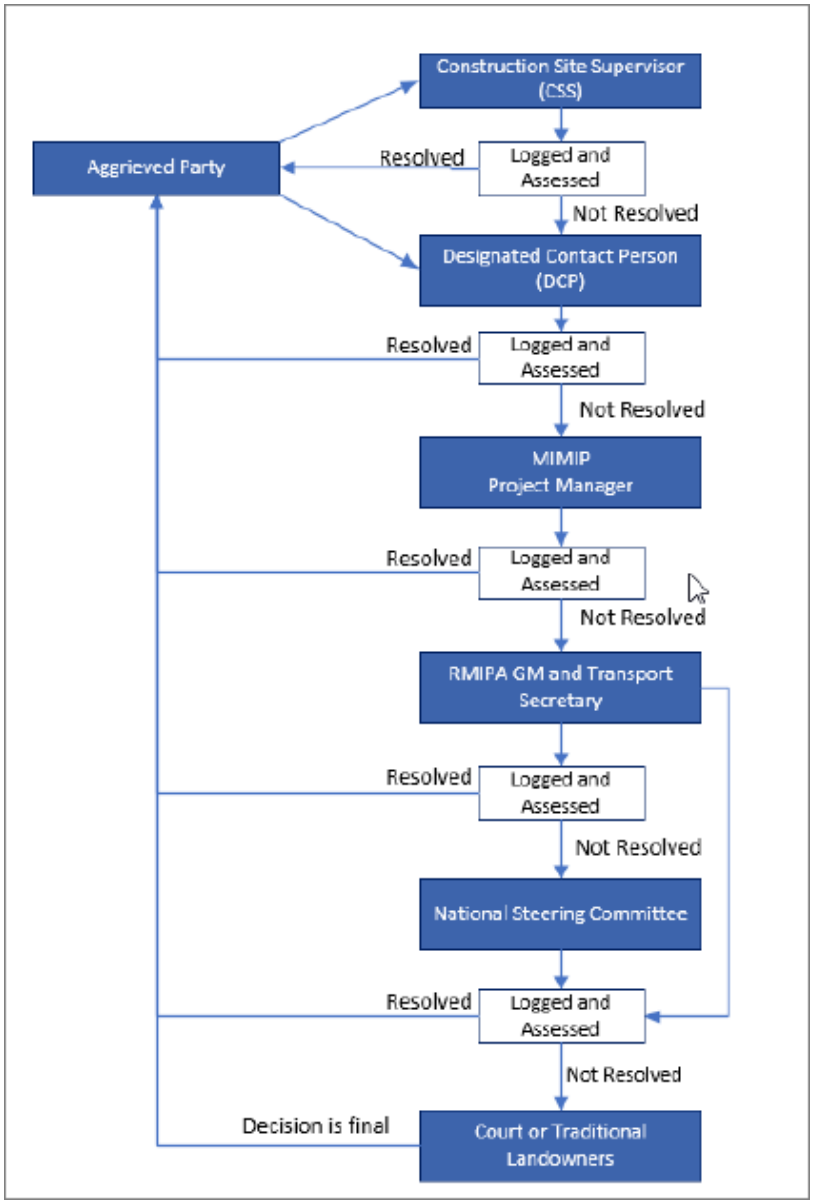


Figure 2 MIMIP Grievance Redress Mechanism

The GRM covers the entire duration of the project. It recognizes that complaints can come at any time, including pre-design, design, construction and post-construction. The GRM is provided as a standalone document in Annexure R, while the GRM process is outlined in

264. Table 16.

Table 16 GRM process (source: DIDA)

Stage	Process	Duration
1	Aggrieved Party (AP) takes their grievance to either Construction Site Supervisor (CSS) or Designated Contact Person (DCP) – obviously in the pre-construction period there will be no CSS and the DCP is the appropriate person. Once construction commences, the CSS becomes the initial focal point for information. If the AP contacts any of the Project Representatives set out in Section 3, those Project Representatives will communicate the grievance to the DCP or CSS. **Pre- and post-construction –** DCP endeavours to resolve it immediately. Where AP is not satisfied, the DCP will refer the AP to the MIMIP Project Manager. For complaints that were satisfactorily resolved by the DCP, the incident and resultant resolution will be logged and reported to the MIMIP Project Manager. **Post-construction commencing –** CSS endeavours to resolve issue immediately. Where AP is not satisfied, the CSS will refer the AP to the DCP. For complaints that were satisfactorily resolved by the CSS, the incident and resultant resolution will be logged and reported to the MIMIP Project Manager.: Complaints records (letter, email, record of conversation) are stored together, electronically or in hard copy. Each record is allocated a unique number reflecting year and sequence of received complaint (i.e. 2018-01, 2018-02 etc.).	Anytime
2	On receipt of the complaint, the Project DCP endeavors to resolve it immediately. For complaints that were satisfactorily resolved by the DCP, the incident and resultant resolution will be logged by the DCP and reported to the MIMIP Project Manager. If unsuccessful, DCP then notifies MIMIP Project Manager	Immediately after logging of grievance.
3	The MIMIP Project Manager endeavors to address and resolve the complaint and inform the aggrieved party. For complaints that were satisfactorily resolved by the MIMIP Project Manager, the incident and resultant resolution will be logged by the MIMIP Project Manager. The MIMIP Project Manager will refer to the RMIPA General Manager and Transport Secretary other unresolved grievances for his/her action/resolution.	2 weeks
If the matter remains unresolved, or complainant is not satisfied with the outcome:		
4	The Transport Secretary will then refer to matter to the Project Steering Committee (PSC) for a resolution. The MIMIP Project Manager will log details of issue and resultant resolution status.	1 month
5	If it remains unresolved or the complainant is dissatisfied with the outcome proposed by the PSC, he/she is free to refer the matter to the appropriate legal or judicial authority. A decision of the Court will be final	Anytime

265. In addition to the project-level and national grievance redress mechanisms, complainants have the option to access the World Bank's Grievance Redress Service, with both compliance and grievance functions.

266. Communities and individuals may request a Grievance Redress Service process when they have used standard channels for project management and quality assurance and are not satisfied with the response (in this case the project level grievance redress mechanism). For information on how to submit complaints to the World Bank Inspection Panel, visit www.inspectionpanel.org.

10.3.3 Complaints register

267. A complaints register will be established as part of the MIMIP to record any concerns raised by the community during construction. Any complaint will be advised to the World Bank and DIDA within 24 hours of receiving the complaint. The complaint will be screened. Following the screening, complaints regarding corrupt practices will be referred to the World Bank for commentary and/or advice. 328. Wherever possible, the MIMIP team will seek to resolve the complaint as soon as possible, and thus avoid escalation of issues. However, where a complaint cannot be readily resolved, then it must be escalated. 329. A summary list of complaints received, and their disposition must be published in a report produced every six months by DIDA and RMIPA.

11 INSTITUTIONAL ARRANGEMENTS FOR SAFEGUARDS IMPLEMENTATION

11.1 PROJECT INSTITUTIONAL AND IMPLEMENTATION ARRANGEMENTS

268. Chapter 5 of this ESMF describes the broader legal and policy framework relating to MIMIP. Operational relationships are set out as follows.

269. The Ministry of Finance will be the Executing Agency for the MIMIP, while RMIPA will be the Implementing Agency (IA). There shall be a Project Steering Committee (PSC), whose primary role will be to provide general oversight and policy direction to MIMIP stakeholders during MIMIP implementation, convene key stakeholders in the event of disagreement, and periodically review MIMIP progress. The membership of the PSC will include the Ministry of Finance, the Ministry of Transport and Communications, and RMIPA. The Chair of the PSC will be a senior RMI Government official such as the Secretary of Finance. The PSC will meet at least twice a year, or more often, as needed.

270. DIDA will help streamline MIMIP implementation. DIDA is the single entity for fiduciary functions, including procurement, financial management and safeguards support for projects financed by international donors and will provide an oversight function on MIMIP implementation with support in areas of procurement, finance and safeguards. RMIPA, as the Implementing Agency for the IA will be responsible for all the procurement of all goods, works and services under the project including contract implementation.

271. The RMI team will be supported by a team from the World Bank. The World Bank will be represented by a Task Team Leader and Co-Task Team Leader, who will lead a team of people with different technical specializations.

272. Figure 3 summarizes the MIMIP implementation arrangements.

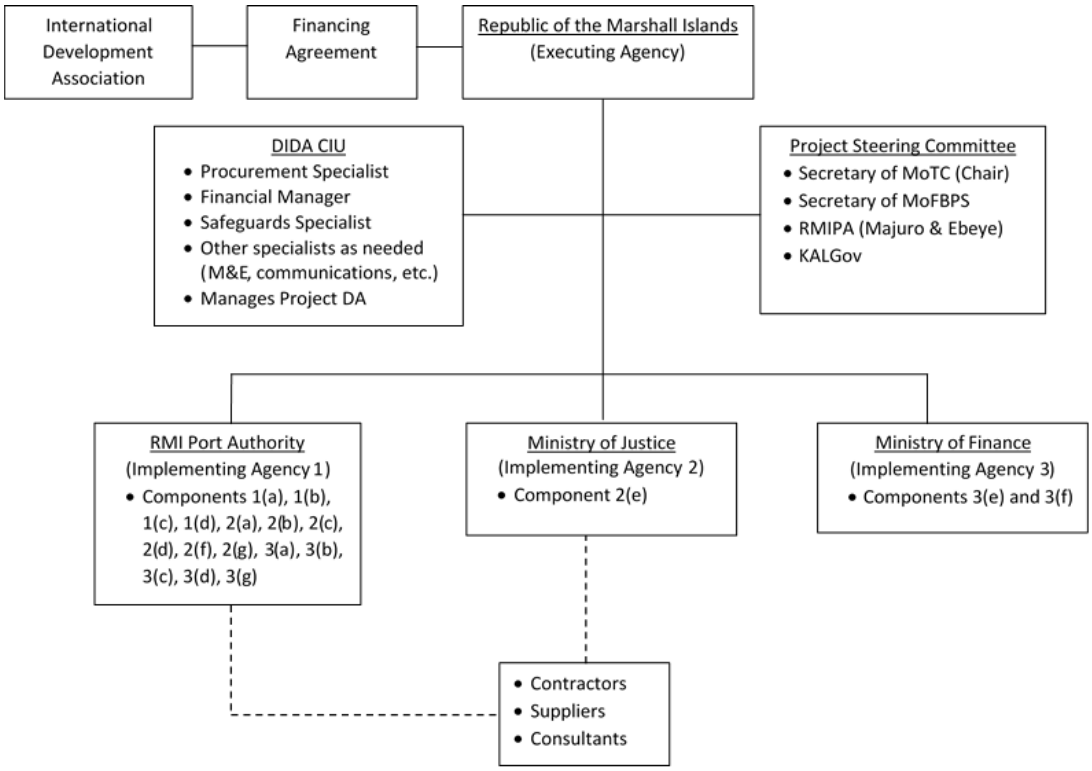


Figure 3 MIMIP Implementation Arrangements[7]

[7] MIMIP POM 2019

11.1.1 Administration

273. The ESMF will be assessed for each sub-project by DIDA, with periodic review by WB as necessary, prior to any works being undertaken. The ESMF identifies potential risks to the environment and social matters from the projects and outlines strategies for managing those risks and minimizing undesirable environmental and social impacts. Further, the ESMF provides a Grievance Redress Mechanism for those that may be potentially impacted by the projects that do not consider their views have been heard.
274. The RMIPA will be responsible for the supervision of the ESMP. DIDA, with the endorsement of the WB, will ensure the ESMP is adequate and followed with RMIPA as IA, being responsible for ensuring timely remedial actions are taken by the contractor where necessary.
275. The RMIPA will be responsible for the revision or updates of this document during the course of work. It is the responsibility of the person to whom the document is issued to ensure it is updated.
276. The site supervisor will be responsible for daily environmental inspections of the construction site. DIDA or its delegate will cross check these inspections by undertaking monthly audits.
277. The contractor will maintain and keep all administrative and environmental records which would include a log of complaints together with records of any measures taken to mitigate the cause of the complaints.
278. The contractor will be responsible for the day to day compliance of the ESMP.
279. The RMIPA will be the IA and will be responsible for the implementation and compliance with the ESMP via the collaborating partners and contractors. The ESMP will be part of any tender documentation.
280. The Supervising Engineer/Project Manager will supervise the contractor, while the Safeguards Specialist will be responsible for environment and social issues.

11.2 Safeguards Implementation Arrangements

281. DIDA will be responsible for the ESMF and integrating the requirements into the Program. RMIPA will have responsibility for the day-to-day implementation of all safeguard requirements.
282. For MOF/DIDA, a Safeguards Advisor will be attached to the Centralized Implementation Unit (CIU) and will ensure the effective implementation of the Project ESMF and ESMP. The Safeguard Specialist's functions include the supervision of RMIPA's safeguards activities, implementation of the Stakeholder Engagement Plan, and for the overall record keeping and reporting of safeguards for the project.
283. Table 17 outlines the key responsibilities for safeguards implementation.

Table 17 Key Responsibilities for Safeguards Implementation

	Tasks	Responsible Party
Scoping	Review and clearance of ESMF	WB
	Disclosure of ESMF	RMIPA/DIDA/WB
	Eliminate all activities that are excluded by Screening Form (Annexure G) or listed on the CERC Negative List (refer Chapter 6)	RMIPA / CIU
	Confirm consultations are adequate	WB
Screening	Screen all proposed activities for adverse environmental and social impacts based on scoping exercise with Safeguard Screening Form (Annexure G) and categorize sub-projects	RMIPA
	Screening records filed for review	RMIPA / CIU
	Review screening process	WB
Sub-project preparation and design	Undertake field surveys to inform sub-project design and EA and ESMP as required	RMIPA / Consultant
	Design subproject and activities in accordance with national and international standards and environmental/social practices.	RMIPA / Consultant
	Prepare documentation or arrange/organize for preparation of documentation (i.e. EAs, ESMPs etc.) for each sub-project, in accordance with ESMF and national legislation and agreements	RMIPA / CIU
	Support review process and documentation	WB
	Approve RMI permits	RMI EPA
	Disclose draft documents in country	RMIPA
	Undertake consultation with stakeholders and affected peoples as required.	RMIPA / CIU
Monitoring	Project monitoring, Construction compliance management, oversight of Contractors, enforcement of Contractor behaviour, incident management etc.	RMIPA / CIU

12 DISCLOSURE

284. As part of the requirements of World Bank policy OP/BP 4.01 (Environmental Assessment), the ESMF is to be publicly disclosed by DIDA. DIDA will ensure the ESMF Executive Summary is translated into Marshallese prior to disclosure in hard copy and online. A newspaper advertisement will alert the public to the disclosure of the instruments Likewise, DIDA and RMIPA will ensure that copies of all prepared safeguard instruments are available locally at the DIDA office and RMIPA office, easily accessible to interested and affected groups and local NGOs.
285. The ESMF is a dynamic document and will be reviewed, updated and approved as necessary throughout the implementation of the MIMIP. For each approved updated version of this ESMF, DIDA will be responsible for disclosure through the above channels.
286. Other project disclosure activities will happen as part of the stakeholder engagement plan.

13 ESMF MONITORING, EVALUATION AND REPORTING

287. MOF/DIDA through the DIDA Safeguards Specialist will have coordination responsibility for ESMF monitoring and evaluation of progress by the RMIPA. Regular reports will be prepared by the RMIPA in regard to implementation progress, for review by the Safeguards Specialist. Reporting to the Bank will be undertaken in accordance with Project reporting process.

14 ESMF CAPACITY BUILDING

14.1 CAPACITY DEVELOPMENT

288. RMIPA has no in-house safeguards specialists, therefore the DIDA Safeguards Specialist will fulfill the MIMIP safeguards role on a part time basis for the duration of the MIMIP.
289. As part of the Safeguards Specialist role, under Component 3 they will undertake a safeguards capacity gap assessment, the current terminal operator and the RMI EPA with the goal of supporting the operationalization of safeguards into their standard operating procedures (SOP). This includes, in full consultation with key stakeholders, developing the outline of a Waste Management Code of Practice for the Ports in this ESMP into a functional Code of Practice to be adopted by RMIPA.
290. They will contribute to capacity building of RMIPA through the technical support and advisory role delivered during the preparation and implementation of sub-projects, the review of safeguards instruments, and in ESMP monitoring and reporting.
291. Other short-term consultants may be engaged from time to time to perform specific tasks including, as necessary, the preparation of safeguards instruments for sub-projects, monitoring and evaluation, external monitoring of implementation.

14.1.1 Training

292. The DIDA Safeguards Specialist shall have the skills and expertise to train and mentor local counter-part staff and others.
293. Areas recommended for DIDA and RMIPA training include the following –
    - World Bank's Safeguards Policies, in particular those triggered and relevant to the MIMIP;
    - Roles and responsibilities of different key agencies in safeguards implementation.
    - How to effectively review WB safeguards instruments and to integrate the ESMF/ESMPs and SEP into MIMIP management and implementation.
294. Training in the above areas is recommended to be held within three months of MIMIP initiation.

295. On-going support will be provided by the World Bank team for the duration of the MIMIP, including during environmental and social screening of sub-projects and review of prepared safeguards instruments.

296. Delivery organizations have the responsibility for ensuring systems are in place so that relevant employees, contractors and other workers are aware of the environmental and social requirements for construction, including the ESMF/ESMP.

297. All MIMIP personnel will attend an induction that covers health, safety, environment and cultural requirements.

298. All workers engaged in any activity with the potential to cause serious environmental harm (e.g. handling of hazardous materials) will receive task specific environmental training.

15 BUDGET

299. The following is an approximate budget for implementing the EMSP/ESMF. These items are over and above those considered to be covered by normal operations.

Table 18 Indicative budget for ESMP/ESMF implementation

Item	Cost estimate (USD)
ESMP Updating and Auditing	$10,000
General ESMP Expenses	$20,000
Monitoring and evaluation of environmental impact mitigation measures and development and enforcement of SOPs relating to environmental mitigation	$100,000
Oil spill kits (small to large size)	$150,000
Stakeholder Engagement (Catering, venue hire, media, materials, travel and accommodation, translation and interpretation services, etc.)	$50,000
GRM related costs	$20,000
Institutional Training	$50,000
HIV/GBV/Human Trafficking Training (Costs of training by local organizations)	$50,000
Monitoring and reporting (Travel and accommodation costs in Ebeye and Outer Islands; report production costs (non-staff costs)	$40,000
Engagement of DIDA Safeguards Specialist (shared) Fees, operating costs, office support and maintenance, communication etc.	$500,000
Additional services	$50,000
Total	**$1,040,00**

ANNEXURES

Annexure A: Existing Ports

Republic of Marshall Islands Maritime Investment Project

Description of Existing Ports

1 EXISTING PORTS AND MARKERS

1. The following provides a description of the existing ports on the islands of Majuro, Ebeye, Jaluit, Wotje and Arno

1.1 MAJURO

1.1.1 Delap

2. Delap is the main port for marine cargo in RMI. Delap is owned and operated by RMPA. The main cargo wharf serves international cargo vessels, tankers, and purse seiners, while a smaller adjacent wharf is used by domestic vessels.
3. Delap Port has five berths, with a wharf length of 308 m and has an apron width of 30 m. The berth pocket is dredged to between 17 me. No commercial vessel calls data was provided by RMIPA.
4. The container yard is 30,000 m^2 of crushed coral base. The surface is very uneven in places and could present safety issues for users. Water pooling was observed within the yard during the site visit immediately after rain. RMIPA indicated that between 10,000 and 30,000 Gross Registered Tonnage could be put through the port. The port has the capacity for 500 twenty-foot equivalent units (TEUs). There are presently ten (10) reefer stations. During the site visit in December 2018, numerous purse seine vessels were alongside however in February 2018, no vessels were observed alongside the port.
5. Located to the east of the main wharf, the eastern berth is dedicated to local trading vessels along with copra transporters.
6. The port is poorly fenced, and there are gaps where access can be obtained through although there is signage restricting entry. Fence between the neighboring power station and the port is non-compliant in terms of security. Fencing at several other locations are also deficient in terms of preventing unauthorized access. There is relatively little lighting except at the main gate area. Vessels mooring alongside have their lights on at night.
7. Some of the fenders at the port were observed to be damaged although the vast majority were in good condition.
8. Figure 1 is an aerial image of Delap Port. Figure 2 is the layout of Delap, while Figure 3, Figure 4, and Figure 5 are the electrical, fuel and water distribution networks of the port respectively. Figure 6 are photos of within the port.

Figure 1 Aerial Image of Delap[8]

[8] Photo supplied by Garry Venus

Figure 2 Delap Port Layout

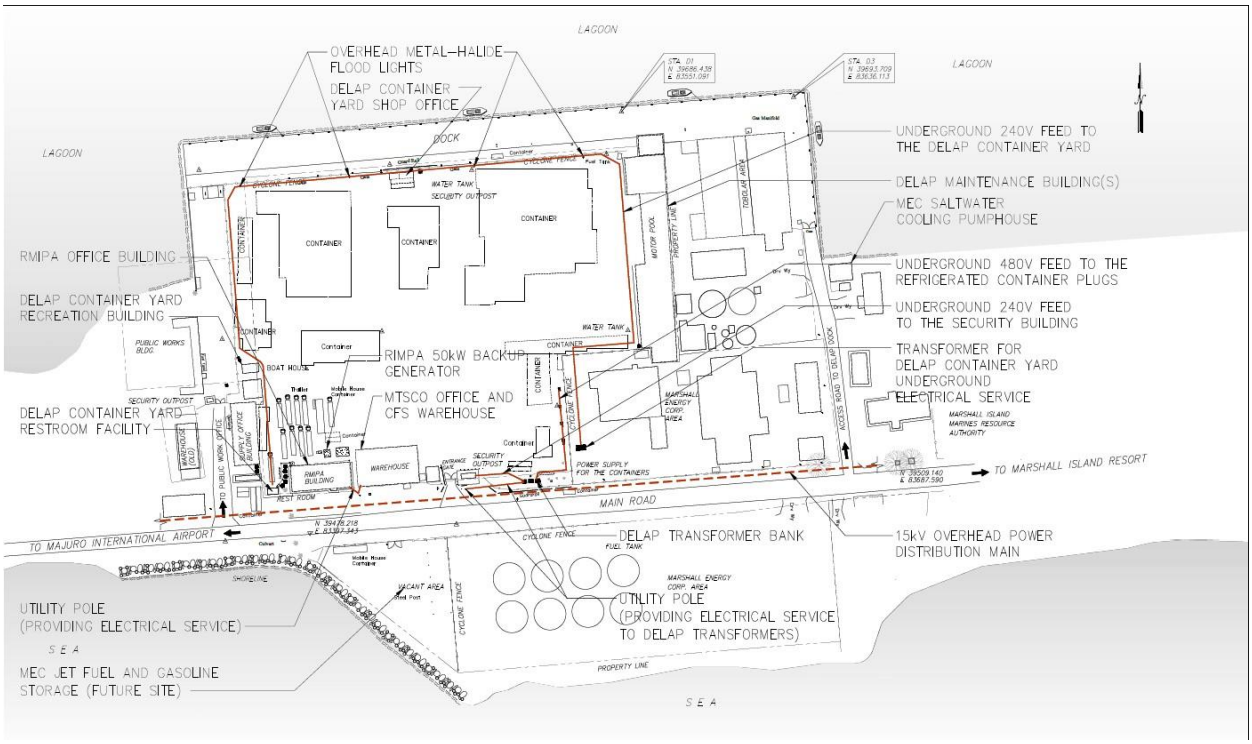


Figure 3 Delap Electrical Distribution Network

Figure 4 Delap Fuel Distribution Network

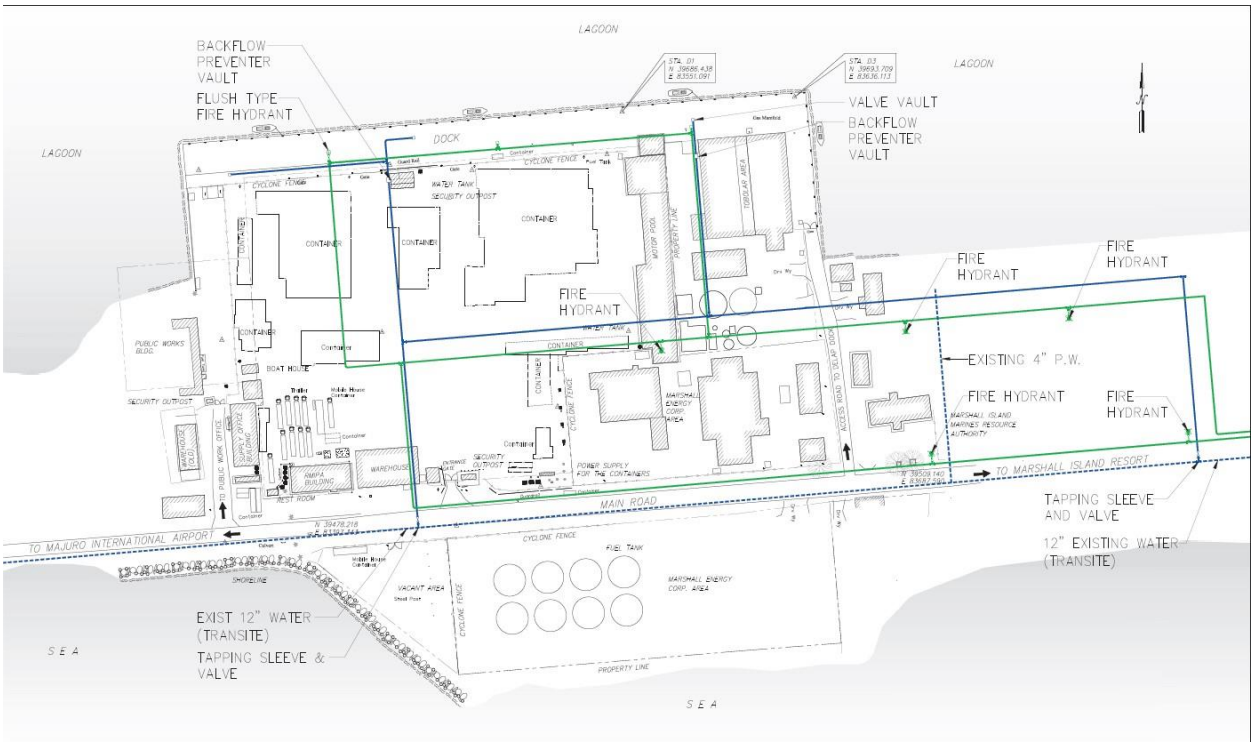


Figure 5 Delap Water Distribution Network

Delap Container Yard

Waste within the Delap port

Delap Container Yard

Liquids in the container yard in Delap Port

Wet Areas in the Delap Container Yard

Wet Areas in the Delap Container Yard

Fishing Vessel alongside Delap wharf

Tuna being unloaded at Delap

Fishing Vessel alongside Delap wharf

Fishing Vessel unloading at Delap

Security Camera - Delap

Sign at front gate of Delap Port

Figure 6 Delap Port

1.1.2 Uliga

9. Uliga is the main port for local vessels in Majuro. Uliga is owned and operated by RMIPA. The main wharf which is L shaped serves local vessels, tenders for fishing vessels while the inside of the L serves as a marina for private and smaller commercial domestic vessels. There are a number of small boats on the land side of wharf. The current access to these vessels if via steps that are not connected to the main infrastructure and/or via a tiered dockside that is very narrow and, in some locations, falling apart. This would pose a significant issue for vulnerable users. One length of lower tier at the western end of dock is broken (reinforcing is exposed) so that rounded edge would be difficult for passengers to stand on.
10. Uliga Port has four berths, with a wharf length of 120 m and has an apron width of 15 meters which is the width of the whole dock. The berth pocket is dredged to between 9 m. No commercial vessel calls data was provided by RMIPA.
11. The structure is made of concrete and the surface of the dock is in good condition. The port is fenced and security is in place at the main gate. There is potential access via the boat ramp. There is relatively little lighting except at the main gate area and one light post was broken and being used as a bollard. The restricted area around the generator set is open and fencing is damaged and/or non-existent. Several drums (likely to be fuel and/or oil were stored adjacent to the generator. Some minor oil leakage was observed around the generator although there is no suggestion this oil is released into the marine environment. There is a small bunded area in front of generator (presumably for storage/delivery of fuel or of empty drums) which has been breached. Some of the fenders at the port were observed to be damaged although the majority were in good condition.
12. The Uliga Inn and Apartments is immediately adjacent to the Uliga port and could potentially be used by fishers etc.
13. Figure 7Figure 1 is an aerial image of Uliga Port. Figure 8 is the layout of Uliga, while Figure 9, Figure 10, and Figure 11 are the electrical, fuel and water distribution networks of the port respectively. Figure 6 are photos of within the port.

Figure 7 Uliga Dock[9]

[9] Photo courtesy of Garry Venus

Figure 8 Uliga Layout

Figure 9 Uliga Electrical Distribution Network

Figure 10 Uliga Fuel Distribution

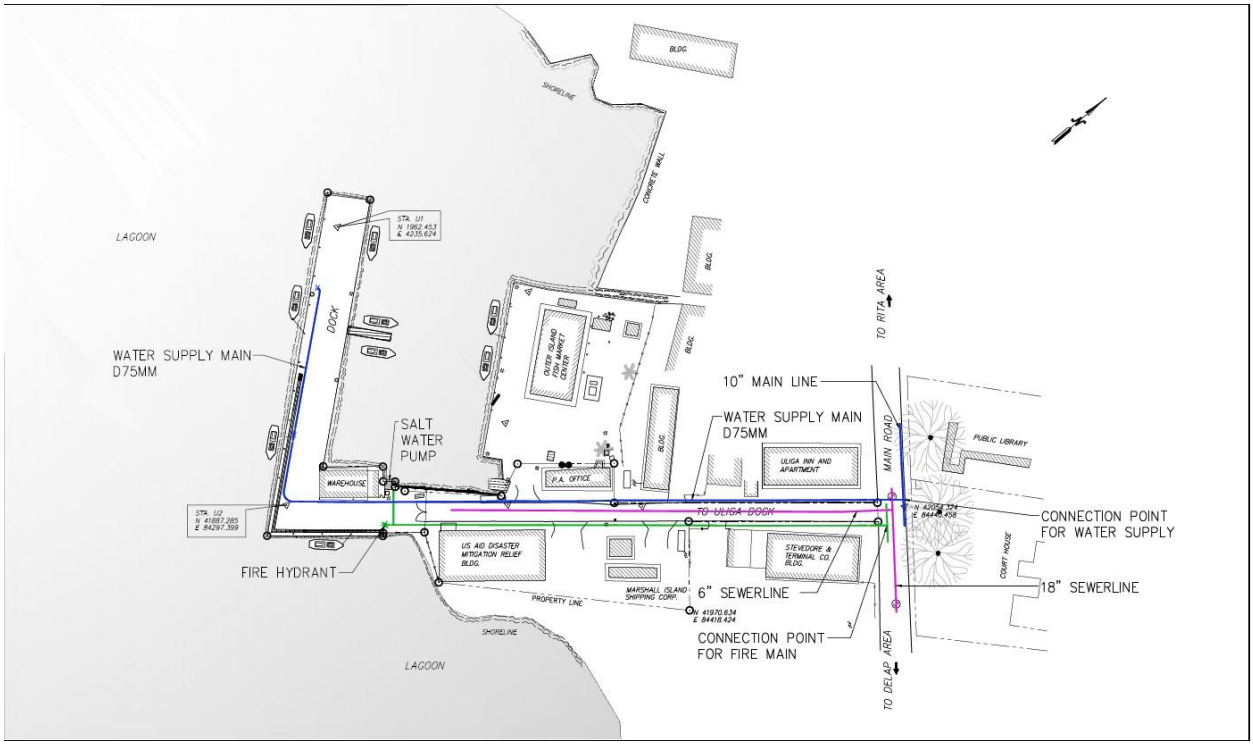


Figure 11 Uliga Water Distribution

Boat Ramp at Uliga Dock

Main Gate at Uliga Dock

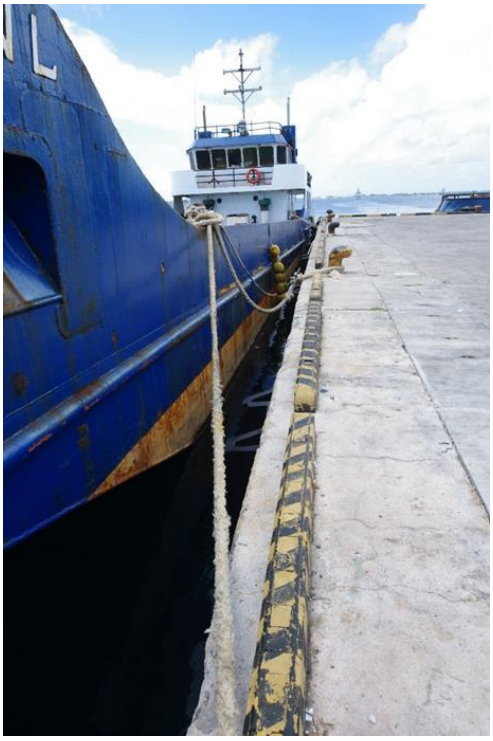
Vessel at berth at Uliga Dock

Infrastructure at Uliga Dock

Fender at Uliga Dock

Main Entrance at Uliga Dock

Oil drums at Uliga Dock



Vessel at berth at Uliga Dock

Fender at Uliga Dock

Fender at Uliga Dock

Vessel at berth at Uliga Dock

Vessel at berth at Uliga Dock

Private Vessels at berth - Uliga

Private Vessels at Berth - Uliga

Broken Light Pole at Uliga

Waiting Area Uliga

1.1.3 Majuro Channel Markers

14. Majuro Atoll is the major location for international shipping the anchorage most utilized by the commercial fishing fleet including carriers, purse seine and long line vessels. As the lagoon is within the atoll, navigational aids are vital to ensure the safe movement of vessels.

15. Majuro has eleven channel navigation aids. Of these, No 7 marker is missing. Channel navigation aids 1, 4, 8, 9, 10 and 11 do not have lights. Channel navigation aid 11 is severely damaged after a Chinese fishing vessel ran into it. All channel navigation aid except for No 2 are very old and in need of repair and/or significant maintenance. There is also a light on Eroj Island. Figure 12**Error! Reference source not found.** is a chart showing the location of the channel navigation aids within the main channel while Figure 13 are photos of the current channel navigation aids.

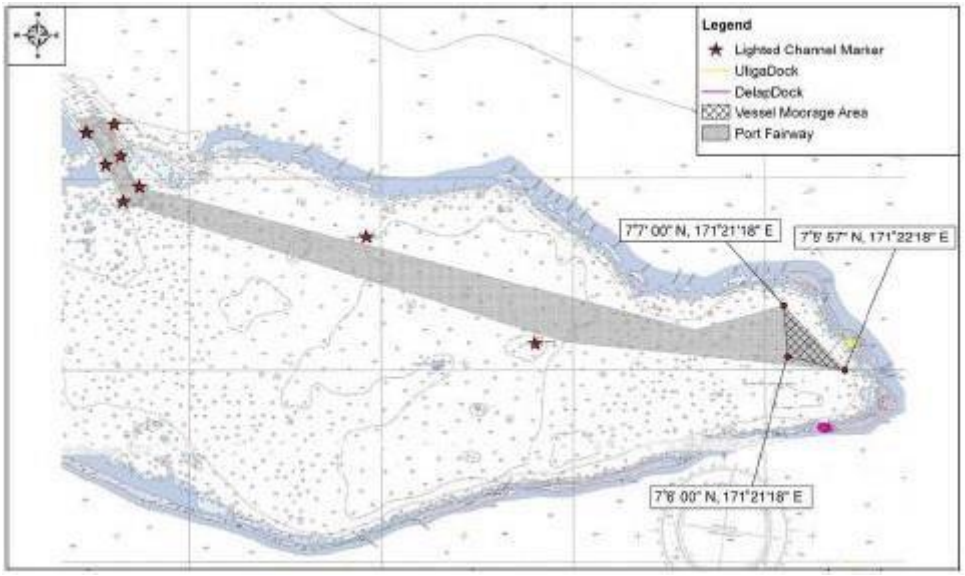


Figure 12 Majuro channel and navigation aid locations

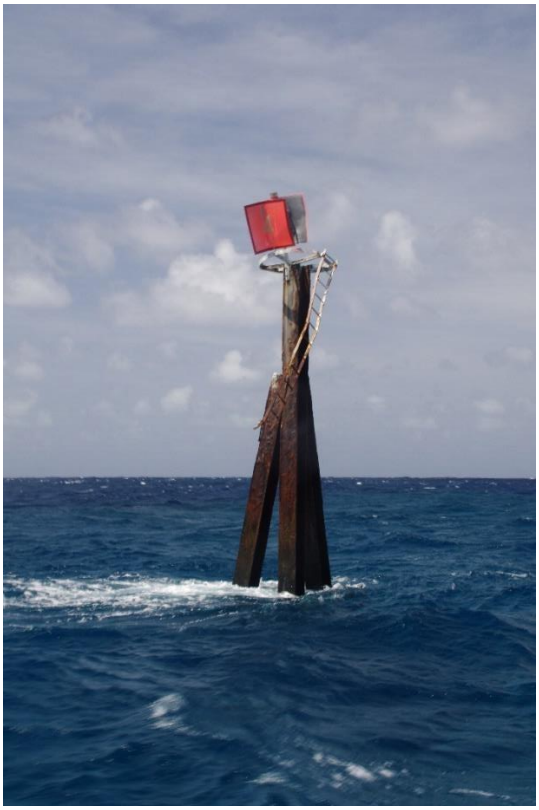
Majuro Channel Navigation Aids

Navigation Aid No 1

Navigation Aid No 1

Navigation Aid No 2

Navigation Aid No 3



Navigation Aid No 4

Navigation Aid No 5

Navigation Aid No 6

Navigation Aid No 8

Navigation Aid No 9

Navigation Aid No 11

Eroj Island

Eroj Island

Figure 13 Majuro Channel Navigation Aids

1.2 EBEYE

16. Ebeye is the main port for marine cargo on Kwajalein atoll. Ebeye is owned and operated by RMIPA. The main cargo wharf serves international cargo vessels and tankers, while a smaller wharf north of the port that is used by domestic vessels and the ferry from Kwajalein.

17. Ebeye Port has three berths, with a wharf length of 120 m and has an apron width of 20 m. The berth pocket is dredged to between 9 m. No commercial vessel calls data was provided by RMIPA.

18. The container yard is 5,000 m^2 of crushed coral base. The surface is uneven in places and could present safety issues for users. The port has the capacity for 100 twenty-foot equivalent units (TEUs), although on the day the site was visited, it was badly organized with containers extremely close to the wharf front. There are no reefer stations. There are 20 people employed at the port.

19. Ebeye Port Manager indicated that two main issues occurred at the port. The first is that fuel is transshipped by trucks to the power station through town. Secondly, the port manager advised that larger vessels needed to tie up on a bollard on the ferry terminal, although no bollard could be located.

20. The port is poorly fenced, and there are gaps where access can be obtained through although there is signage restricting entry. Fencing at several other locations are also deficient in terms of preventing unauthorized access. There is relatively little lighting except at the main gate area. There are no fixed fenders at the port; the fenders are large tires.

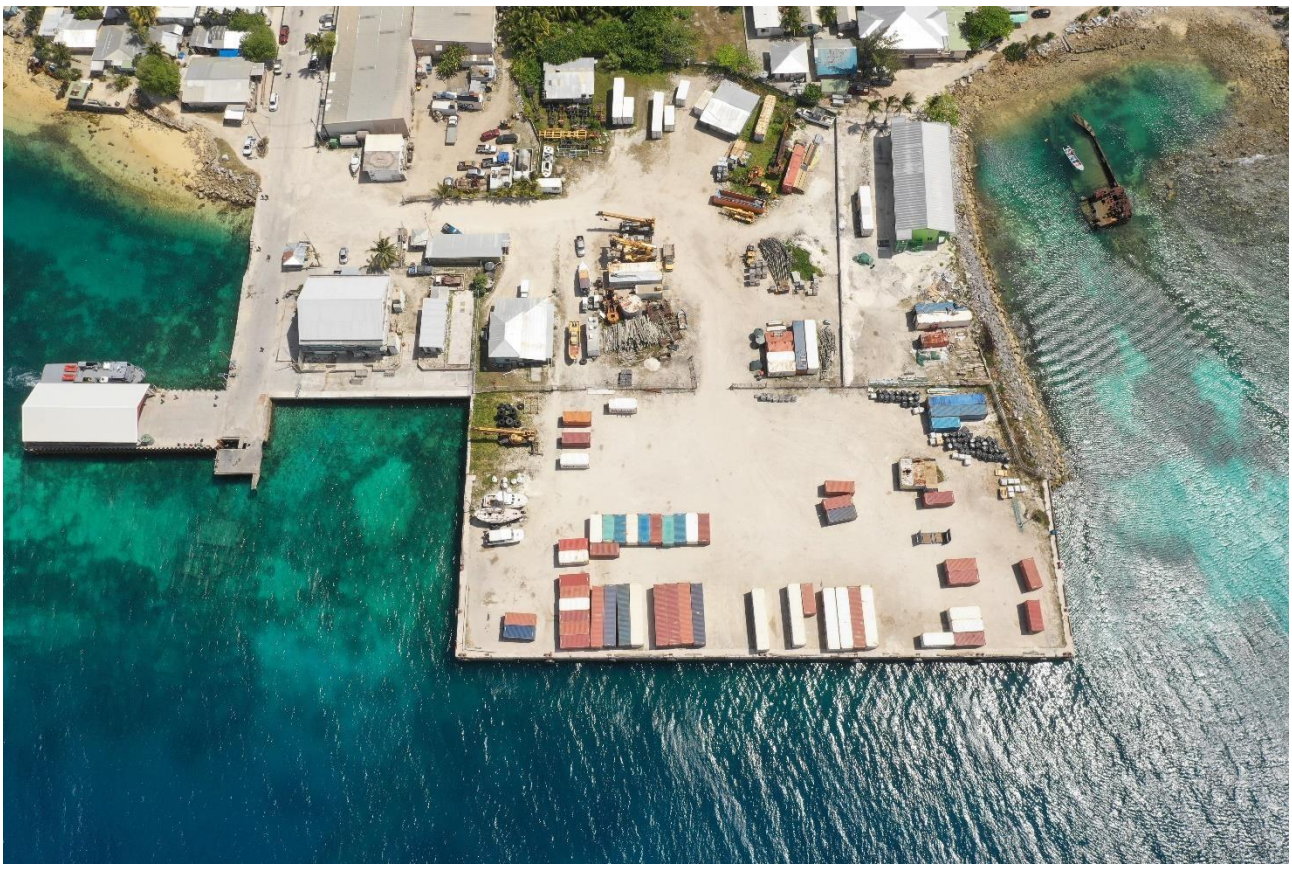


Figure 14 Aerial of Ebeye Port[10]

Cargo at Ebeye Port

Old Machinery at Ebeye Port

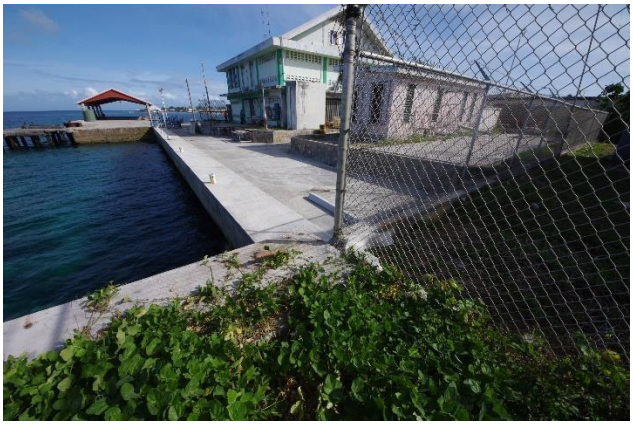
Three vessels on the hard at Ebeye

Supposed Bollard on Ferry Terminal - Ebeye

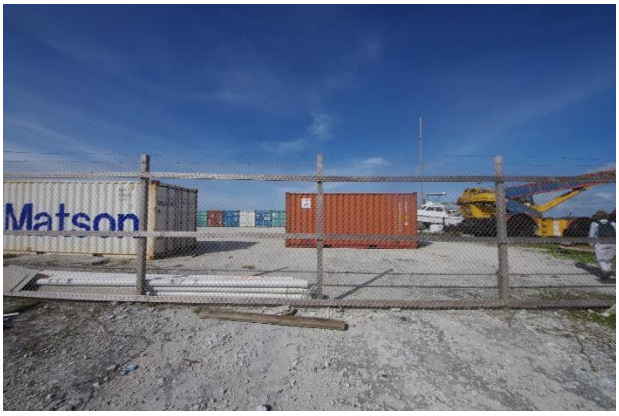
[10] Photo courtesy of Garry Venus

Ebeye Port

Ebeye Port Container Yard



Fence at Ebeye Port



Fence at Ebeye Port

Wharf Front at Ebeye Port

Ebeye Port Container Yard

Wharf Front at Ebeye Port

Ebeye Port Container Yard

Ebeye Port Container Yard

Ebeye Port Container Yard

Figure 15 Photos of Ebeye Port

1.3 JALUIT

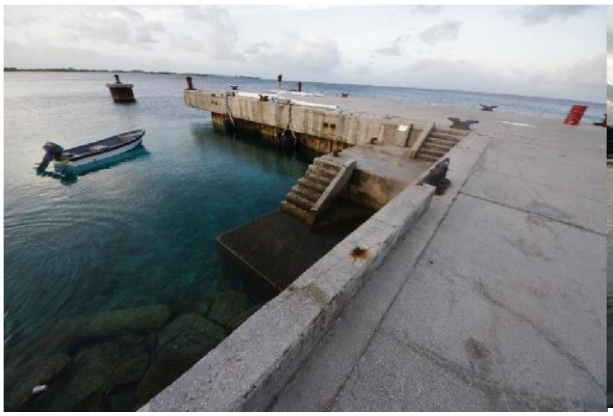
21. Jaluit port is classified as an international port under RMI legislation. The port has one single berth for a ship and a roll on roll off facility on the northern side. The port services on Government vessel along with private vessels bring food, fuel and school students.

22. Based on Google Earth imagery, the structure is about 33 meters long by 10 meters wide. The port structure itself is in excellent condition and recent works have been undertaken on the dock. New oval fenders have been installed on the landward side of the wharf and new light towers are currently being installed. There is one damaged fender on the north western corner of the wharf.

23. There are limited facilities associated with the wharf; there are fences or there is currently a number of rotted steel struts sticking out of the wharf itself which are a safety hazard. There is a single lane road that lead from the wharf to the village of. On the landward side, there are stairs allowing access to smaller vessels.

24. There are two un-operational navigational aids. One is located at the entrance to the lagoon and was installed by the Japanese. It is essentially a cylindrical concrete structure with no infrastructure on top. The second was also build by the Japanese and is located within the lagoon itself. Its location could be off putting as it is located well inside a reef and as such, it could be considered a shipping hazard.

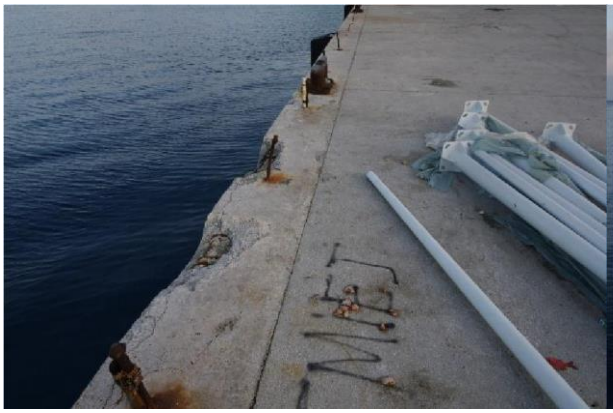
Figure 16 Aerial View of Jaluit Wharf[11]



Landward Side Access - Jaluit

Dock with to be installed light towers - Jaluit

[11] Photo courtesy of Garry Venus



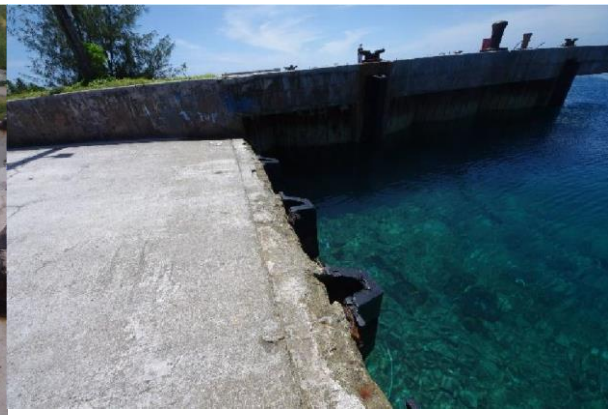
Corrosion of Dock - Jaluit

Rusted Steel Struts - Jaluit

Damaged Fender - Jaluit

Roll On Roll Off Fenders - Jaluit

Roll On Roll Off Infrastructure - Jaluit



Roll On Roll Off Infrastructure - Jaluit

New Light Tower Fittings - Jaluit

Corrosion of Jaluit Dock

Mooring Dolphin at Jaluit Port

Mooring Dolphin at Jaluit Port

Outer Channel Navigational Aid - Jaluit

In Lagoon Navigational Aid - Jaluit

Figure 17 Photos of Jaluit Port and Navigational Aids

1.4 WOTJE

25. No site visits to Wotje were possible by the ESIA Consult team during the development of the ESMF/ESMP due to logistical limitations (the airstrip was closed). However, in early March 2019, a DIDA team undertook a

site reconnaissance and met with some of the local stakeholders. That assessment was undertaken to supplement the information in this ESMF, and the additional information is in Annexure E of the ESMF.

26. Wotje's dock facilities consist of a concrete, earth filled finger wharf. The dock extends approximately 200 m into the lagoon.
27. Approximately 500 m to the south is a concrete ramp on which MC has an oil transfer connection (refer Annexure E of the ESMF)
28. The sandy beaches alongside both wharves shelve out gently, so water depths at the end of the wharves is not significant. There is coral rubble alongside and at the ends of the wharves, but otherwise the immediate habitat consists of mostly sandy substrate. The shorelines in the area consist of sandy beaches, fringed by coconut palms. Urban development is mostly set back behind the trees.
29. There are limited facilities associated with the landing; each facility has one solar powered light, there are no steps or fences on the structures. Single land roads lead from the landing to the village of Wotje a short distance away. The airstrip is less than 400 m inland.
30. There is no significant infrastructure associated with the port facilities, nor is there significant waste material stored around the area.
31. Figure 18 is an aerial view of Wotje facilities while Figure 19 is a photo of one of the ramp structure taken in 2018.

Figure 18 Aerial view of Wotje port facilities (source: Google Maps)

Figure 19 Wotje wharf

2 EXISTING ENVIRONMENTAL AND SOCIAL IMPACTS AND RISKS

32. While the ESMF has been prepared for the MIMIP, it is pertinent to identify existing environmental and social impacts and risks associated with the current operations of the ports in RMI. It is acknowledged that all the ports in RMI are acting as a normal industrial area operating with detrimental environmental and social impacts as part of their normal operation. The following section describes the impacts and risks that should be considered when undertaking the MIMIP to ensure the MIMIP manages these

2.1 OIL SPILLS

33. Numerous ports indicate that an existing impact was the significant potential for an oil spill. While this is an existing impact, the MIMIP could exacerbate this. Oil contamination was also observed in all ports associated with the port workshops, as well as where waste was stored on port land. While the oil spills within the port areas are not significant, stakeholders advised that it was an existing risk; and will have contaminated the sites. Depending on the substrate, these oil spills could both wash off into the marine environment, and/or be leaking through the substrate that could then impact groundwater. A few examples are provided in Figure 20.

Oil leakage at Delap Port

Oils at Delap Port

Oils in an old container at Ebeye

Oil leaking at Uliga Port

Figure 20 Example Oil Issues at RMI Ports

2.2 WASTE

34. All the ports visited in RMI had waste issues in varying scales, although the issue is greatest at ports with containers yards. It is estimated that between 30 to 40% of Delap is lost to normal use due to waste. Common waste was dumped/scrap cars, trucks and other machinery, tires, oil/fuel drums, old containers that were no longer useable, batteries, fishing gear and other items. This waste can cause environmental, health and safety risks for port users and the environment.

35. Port land is very valuable and therefore the storage of waste becomes an issue insofar as the land is no longer available and cannot be used for normal port activities. Secondly, as with oil spills, the waste can result in the release contaminants that could both wash off into the marine environment, and/or groundwater, or the waste itself can end up in the sea. The waste also becomes a significant health and safety issue to port users; and in some cases, the public when accessing the ports.

36. It is noted that under the ESMF/ESMP, the MIMIP will develop waste management plans for the MIMIP activities, however, if more comprehensive port waste management plans do not exist then it is recommended that consideration to the development be considered. Examples of port waste are shown in Figure 21.

Rusted Containers at Delap Port

Waste at Delap Port

Old trucks at Delap Port

Old Fishing Gear at Delap Port

Waste at Delap Port

Waste at Ebeye Port

Old boats at Ebeye Port

Rusted Containers at Ebeye Port

Figure 21 Examples of existing waste at ports

2.3 PROSTITUTION AND HUMAN TRAFFICKING

37. Imported and transient workforces such as the fishing industry and construction industry are known to contribute to issues of human trafficking, prostitution, harassment and violence [12].

38. Consultations with relevant stakeholders confirmed presence or anecdotal presence of sexual exploitation and labor exploitation, both of the foreigners and of RMI nationals. The presence of migrant smuggling was not evident, however, cannot be excluded.

39. The issues related to maritime industry are strongest felt in Majuro [13]. Majuro port is the largest regional tuna transshipment port and fishing vessels make-up as much as 75 percent of vessel traffic. Involvement in sex trade related to tuna industry, and resulting exposure to abuse and sexually transmitted diseases (STDs), have been previously reported[14]. Stakeholders reported current social impacts from shipping including prostitutions, border control not enforced properly, and poor enforcement of existing laws and policies in general.

40. A separate assessment of Gender and Human Trafficking was undertaken and is contained in Annexure N

[12] World Bank: Project Information Document/Integrated Safeguards Data Sheet (PID/ISDS) Concept Stage Document of February 12, 2018

[13] Human trafficking and sexual exploitation in Ebeye was reported as high however it was not linked by stakeholders to maritime sector but to contractors from the US Base. There is a reported good collaboration between immigration, police, government agencies and other organisations dealing with the subject on the island, and the development of “Ebeye Pass” (for the staff from the base) was discussed.

[14] Demmke, P.T. Gender issues in the Pacific Islands Tuna Industry. Suva, Fiji: Forum Fisheries Agency and Pacific Islands Forum Secretariat, 2006

Annexure B: Port Activity Data

Summary of Existing Port Infrastructure

	Delap	Uliga	Ebeye	Jaluit	Wotje
Area of Berths	5	4	3	1	1
Length of Berths	308	120	120		
Depths of Berth	17	9	9		
Width of Apron	30	15	20		
Number of Vessel Calls/Year (2017/2018)					
Number of Cargo Vessels using Port (2017-2018)					
Number of Fuel Vessels using Port (2017-2018)					
Number of Fishing Vessels using Port (2017-2018)					
Number of Domestic Vessels using Port (2017-2018)					
Number of Other Vessels using Port (2017-2018)					
Type of Cargo Vessels using Port (2017-2018)	10k to 30k GRT Container Ships	n/a	containers		
Type of Fuel Vessels using Port (2017-2018)	Diesel/Gasoline	Diesek/Gas/Jett A1	Diesel/Gasoline		
Type of Fishing Vessels using Port (2017-2018)	Purse seiners/Carriers	purse seiners	no		
Type of Domestic Vessels using Port (2017-2018)	Passengers/Cargo	cargo/passenger	cargo/passenger		
Type of Other Vessels using Port (2017-2018)	Military	patrol boats/yaghts	patrols/ferries		
Normal Turn Around Times	24hours	72 hours	24hrs		
Area of Yard	30,000	500	5000		
Common Cargo	Containers	loose	Containers		
Stevedores servicing	Yes	yes	yes		
Terminal Handling Charge	Yes	no	yes		
Dockage	Yes	yes	yes		
Anchorage	Yes	yes	yes		
Line Handling	n/a	no	no		
Navigational Aid Fee	Yes	yes	no		
Wharfage	Yes	yes	yes		
Pilotage	Yes	yes	no		
Container Yard Surface	Crushed Coral	crushed coral	crushed coral		
Shipping Companies Servicing Port	n/a	yes	no		

Number of Container that can be stored	500	no	100
Cargo by Weight (metric tonnes)	n/a	no	no
Number of TEUs/Year (2017/2018)			
Refridgerator Container Storage	Yes	no	no
Number of Reefer Stations	10	no	no
Existing Infrastructure	8	yes	yes

Oil Storage	yes	no	no
Petroleum Product Storage	yes	no	no
Oil Seperators	yes	yes	no
Gross Pollution Traps	yes	yes	no
Existing Gates	yes	yes	yes
Existing Fencing	yes	yes	yes
Number of Tugs	2	no	no
Dockside Cranes	yes	no	yes
Container Gantry	yes/forklift	no	yes
Mobile Cranes	no	no	no
Rech Staker	no	no	no
RoRo Ability	no	no	no
Number of Forklifts	3	2	1
Other Equipment	yes	light equipment/pilot boats	light trucks
Number of Staff Employed	60	15	20
Port Security	yes	yes	yes
Current ISPS Compliance Level	1	1	1
Police Boats	yes	yes	yes
Fire Engines	no	no	no
Office Space	yes	yes	yes
Number of Intl Passengers	n/a	n/a	n/a
Number of Domestic Passengers	n/a	n/a	n/a
Number of Passengers Incidents	n/a	n/a	n/a
Frequency (e.g., once every # years) of Passenger Incidents	n/a	n/a	n/a
Number of Fatalities	n/a	n/a	n/a
Number of Injuries	n/a	n/a	n/a
Number of Shipping Incident Reports	n/a	n/a	n/a
Type of Ship Damage	n/a	n/a	n/a
Value of Ship Damage	n/a	n/a	n/a
Number of Fuel Spills (2017-2018) (provide details)	n/a	n/a	n/a
Number of Other Environmental Incidents (provide details)	n/a	n/a	n/a
Annual Maintence Budget	100,000	n/a	n/a
Annual Budget for Environmental Issues	n/a	n/a	n/a

Annexure C: Benthic Studies at Ports

Republic of Marshall Islands Maritime Investment Project

Benthic Marine Environment Description of Areas Within and Adjacent to the Proposed Physical Investments

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Figure 9 Representative photos of the benthic environment of each surveyed site at Delap Port 158

Figure 10 Basic sampling scheme for benthic surveys of Uliga Port. Sampling sites are indicated by named purple circles and approximate depths are given in parentheses. Note, the length of the seaward (western) port bib is shown, but otherwise diagram is not to scale. 159

Figure 11 Percent cover of main benthic substrate categories at each surveyed site at Uliga Port. Values are mean values based on stratified random point sampling of individual photo quadrats, summarized by transect, according the sampling summarized in Table 1. Whiskers on bars are Standard Error of the mean 162

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Table 2 Mean coverage of macro-abiotic substrate categories at Jaluit Port. Values are mean values (Standard Error Mean) based on stratified random point sampling of individual photo quadrats according the sampling summarized in Table 1. 144

Table 3 Sampling effort summary of benthic surveys at Ebeye Port. See Figure 4 for schematic of sampling areas in relation to the port. 147

Table 4 Mean coverage of abiotic substrate categories at the Ebeye Port. Values are mean values (Standard Error) based on stratified random point sampling of individual photo quadrats according the sampling summarized in Table 3. 148

Table 5 Sampling effort summary of benthic surveys at Delap Port. See Fig 1. for schematic of sampling areas in relation to the port 152

Table 6 Mean coverage of abiotic substrate categories at Delap Port. Values are mean values (Standard Error) based on stratified random point sampling of individual photo quadrats according the sampling summarized in Table 5. 155

Table 7 Sampling effort summary of benthic surveys at Uliga Port. See Figure 10 for schematic of sampling areas in relation to the port 160

Table 8 Mean coverage of abiotic substrate categories at Uliga Port. Values are mean values (Standard Error) based on stratified random point sampling of individual photo quadrats according the sampling summarized in Table 7. 162

16 PART ONE: METHODS USED TO ASSESS BENTHIC HABITATS AND TECHNICAL CONSIDERATIONS

A number of factors dictated the methods used to describe the benthic marine environment within and adjacent to the areas of the proposed physical investments. Because of the extremely tight timelines for the work (both in terms of field work, and also reporting) and the fact that associates of various levels of professional ability were engaged locally, we employed a simple photographic technique to document benthic environments, that employs easy to use waterproof cameras (most GoPro Hero 7) taking unframed quadrat photographs along randomly placed 30m transects at within and adjacent to Ports. These photos are then analyzed using 'random point count' methodology, which is a common method to enumerate community/habitat statistics in a variety of fields of biology (Kohler and Gill, 2006), and commonly used for coral reef habitats (Carleton and Done 1995). This method allowed many sites to be assessed quickly and quantitatively using basic habitat descriptors. However, the broad overview of marine benthic habitats this method has produced is by no means a comprehensive biological/ecological inventory and should only be used for semi-quantitative descriptive purposes rather than representing a current biological baseline dataset.

At each port the site was initially assessed both from satellite photographs and then *in situ*. Survey sites were selected for data collection to assess the benthic environment based on both proximity to the physical investments (directly around ports) and adjacent to ports, based on the variety of habitats present (i.e. deep channels, fringing reef slopes, reef flats, intertidal areas etc). At each site two divers (or a single snorkeler) were deployed. The diver/snorkeler randomly placed the start of a 50m surveyors measuring tape on the bottom and deployed 30m of tape in a random direction. The diver (or a second diver) then swam along the transect length, taking 8-15 photographs of the seafloor from directly above the transect tape with the transect tape in-shot. This was performed 4-8 times per site, depending on logistical restraints. At one port (Uliga), instead of transects being deployed at a single survey site, a drop-camera was used to take 24 random 1m x 1m photo quadrats throughout the broader area.

Photos were analyzed using the program CPCe (Kohler and Gill, 2006), which allows users to correctly spatially scale photographs according to known measures (in this case the surveyors tape). The program then has an algorithm to place random points within a pre-defined area (the photo quadrat area), and database functions that allow the user to catalog the benthic habitat category/taxonomic group under individual datapoints. For this study, photographs had a quadrat (area of predefined dimension) defined based on as large an area as practical given the field of view of the photograph. The usual quadrat size was usually approximately 1m x 1m, however for some ports surveyed by snorkel (Jaluit and Ebeye), quadrats of up to 7m x 1m were used because of limitations with the field of view of the photograph. Within each quadrat a point was placed at random in each 10cm column of the quadrat, and the user then recorded the benthic habitat category/taxonomic group at this point. Habitat categories and taxonomic groupings used to record data for this report are provided below in Appendix 1.

After data was collected for each site, data were summarized per transect such that descriptive statistics (means, standard deviations, standard errors) were generated across transects (or quadrats for the drop-camera at Uliga). Benthic habitat data is presented in graph and table form however all data (photographs, CPCe outputs) is available in electronic appendices.

17 PART TWO: BENTHIC ENVIRONMENT DESCRIPTION

17.1 JALUIT PORT

17.1.1 Jaluit Port, Benthic Environment Executive Summary

The port at Jaluit is situated on the leeward, lagoon shore on the southern corner of Jaluit atoll. Excepting the fringing reef around 80m to the NNW of the port, its benthic habitat is predominately macro-abiotic, consisting mostly of coarse sand with sparse visible epiflora or fauna. The area immediately to the west of the port dock has < 10% biotic substrate cover and recedes westward into deeper lagoon habitat. The benthic habitat immediately north of the port consists of small sandy channel which meets a shallow fringing reef habitat abutting the western shoreline of Jaluit. The fringing reef slop is dominated hard substrate with algal turf and relatively high hard-coral cover (≈36%). The shallow lagoon to the south and east of the port dock consists mostly of coarse sand, however sparse hard coral colonies are present (≈10% cover). A quantitative description of the benthic habitats around and immediately adjacent to the port is presented in detail below. The port area appears to already be impacted by port and maritime activity, given the prevalence of industrial and domestic waste on the seafloor. The proposed project appears to pose little threat to the existing marine benthic environment, however some general recommendations, revolving around pollution management are provided considering the likely industrial operations associated with the project and as a result of potentially increased future port capacity and/or use.

17.1.2 Jaluit Port Benthic Sampling Overview

The dock at Jaluit was sampled at one location on the widest north-western facing area of the dock (Sites 1 and 2; Figure 4), two locations adjacent to the dock (Site 1 and Site 4; Figure 4) as well as two close-by locations, one where benthic habitat transitioned from a deeper lagoon to a fringing reef slope and reef flat environment (Site 2; Fig 1) and the other with shallow (<5m) lagoon sandflats and scattered hard corals (Site 5; Figure 4). In total, the benthic habitat was quantitatively characterized at 1756 randomly selected points from 101 photo-quadrats, representing a random selection of 175.8m^2 of benthic habitat, from 510 linear meters of haphazardly placed 30m (*n*=17) transects (Figure 4;

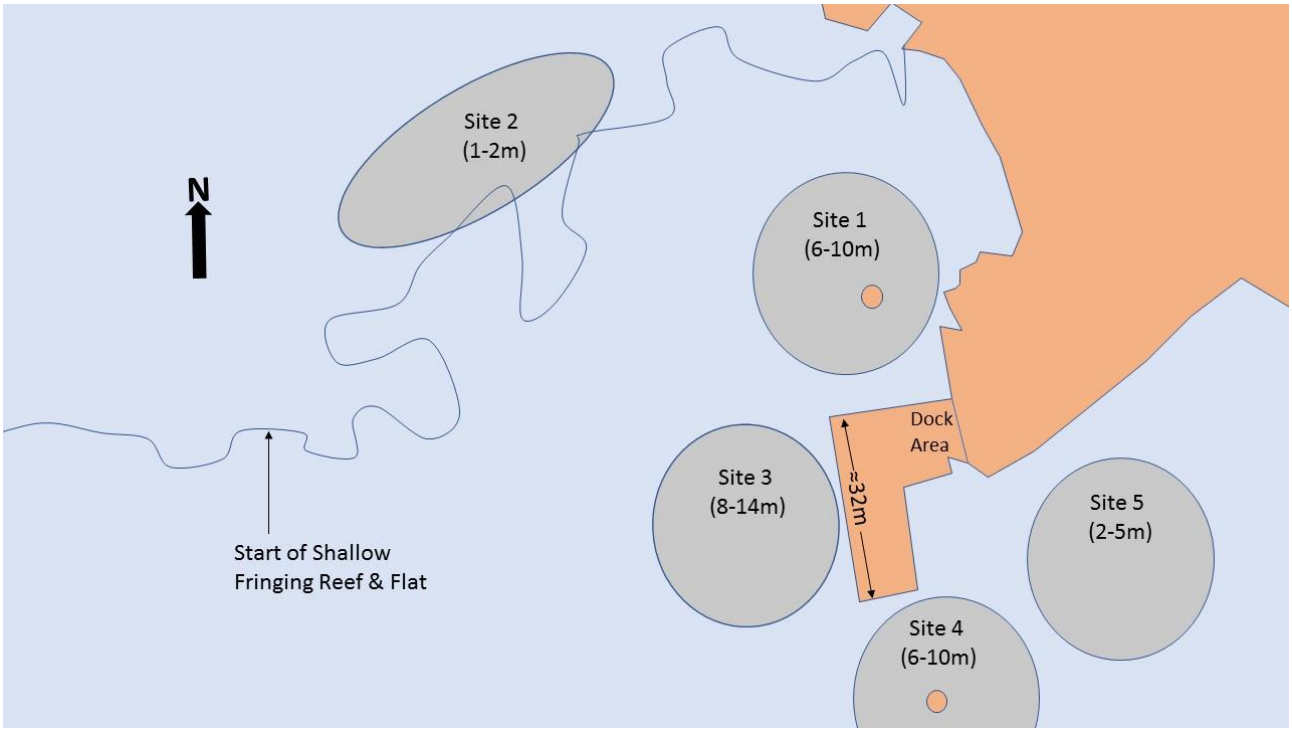

Figure 4 Basic sampling scheme for benthic surveys of Jaluit Port. Note, the seaward length of the west facing dock is included, but otherwise diagram is not to scale.

Table 19 Sampling summary of benthic surveys at Jaluit Port. See Figure 4 for schematic of sampling areas in relation to the port.

SITE	TRANSECT	TOTAL DATA POINTS	TOTAL M^2 SURVEYED	# PHOTO QUADRATS	MEAN (M^2) QUADRAT SIZE	MIN (M^2) QUADRAT SIZE	MAX (M^2) QUADRAT SIZE
1	1	130	13	6	2.17	2	3
1	2	122	12	6	2.03	2	2
1	3	92	9	4	2.3	2	3
1	**Totals**	**344**	**34**	**16**			
2	1	104	9.88	8	1.3	0.8	2
2	2	68	7.9	7	0.97	0.6	2
2	3	80	8	8	1	1	1
2	4	80	8	8	1	1	1
2	**Totals**	**332**	**33.78**	**31**			
3	1	120	12	6	2	2	2
3	2	120	12	6	2	2	2
3	**3**	60	6	3	2	2	2
3	Totals	300	30	15			
4	1	80	8	4	2	2	2
4	2	120	12	6	2	2	2
4	3	100	10	5	2	2	2
4	**Totals**	**300**	**30**	**15**			
5	1	120	12	6	2	2	2
5	2	120	12	6	2	2	2
5	3	120	12	6	2	2	2
5	4	120	12	6			
5	**Totals**	**480**	**48**	**24**			

	Transect	Total Data Points	Total M^2 Surveyed	# Photo Quadrats
JALUIT - TOTALS	**17**	**1756**	**175.78**	**101**

17.1.3

17.1.4 Jaluit Port Benthic Environment Description

The dock at Jaluit is on the leeward, lagoon shore of Jaluit Island on the southern corner of Jaluit atoll. The depth around the main operational port area (the western side of the dock) is around 8-14m, which falls away rapidly to the west to deep lagoon, sandy bottom habitat. The benthic habitat immediately surrounding the north, west and south of the dock at Jaluit was dominated by abiotic substrate with very little epiflora and epifauna visible (Sites 1, 3, and 4; Figure 5). The majority of abiotic substrate consisted of course sand, bare rubble and litter at sites 1 & 3 (Table 2). Coarse sand at all sites showed clear signs it is composed of the calcareous remains of *Halimeda spp*., which is a common feature of marine sediments in atoll and lagoonal reef environments with *Halimeda spp.* present (Hoek et al. 1995). Except for Site 4, which also had ≈27 +/- 9% cover (mean +/- SEM) of hard substrate (mostly rubble) with turf algae, the little biotic benthic cover present at these sites (<10%) was generally macroalgae (mostly *Halimeda spp*) or sparse colonies of hard coral at Sites 1 and 3 (mostly *Montipora* sp.).

The reef slope immediately to the NNW of the dock (Site 2; Figure 4) was dominated by hard substrate, either algal turf covered rubble/dead coral (≈50%) or hard coral (≈37%). Hard coral present at site 2 was almost exclusively *Monitpora sp.*. (see Site 2, Figure 6 for example) and most macroalgae present was *Padina sp.*, albeit at low cover (<≈5%).

The shallow lagoon area at site 5 (Figure 4) was mostly macro-abiotic, predominately sandy bottom (Figure 5; Table 2), however there was also around 10% hard coral cover consisting mostly of isolated branching growth form *Acropora spp.* colonies (See Site 5, Figure 6 for example).

Litter/refuse of both industrial and domestic origin was noted at all sites except Site 2, the reef slope immediately to the NNW of the dock and was also point-scored in quadrats all sites except site 2 (Table 20).

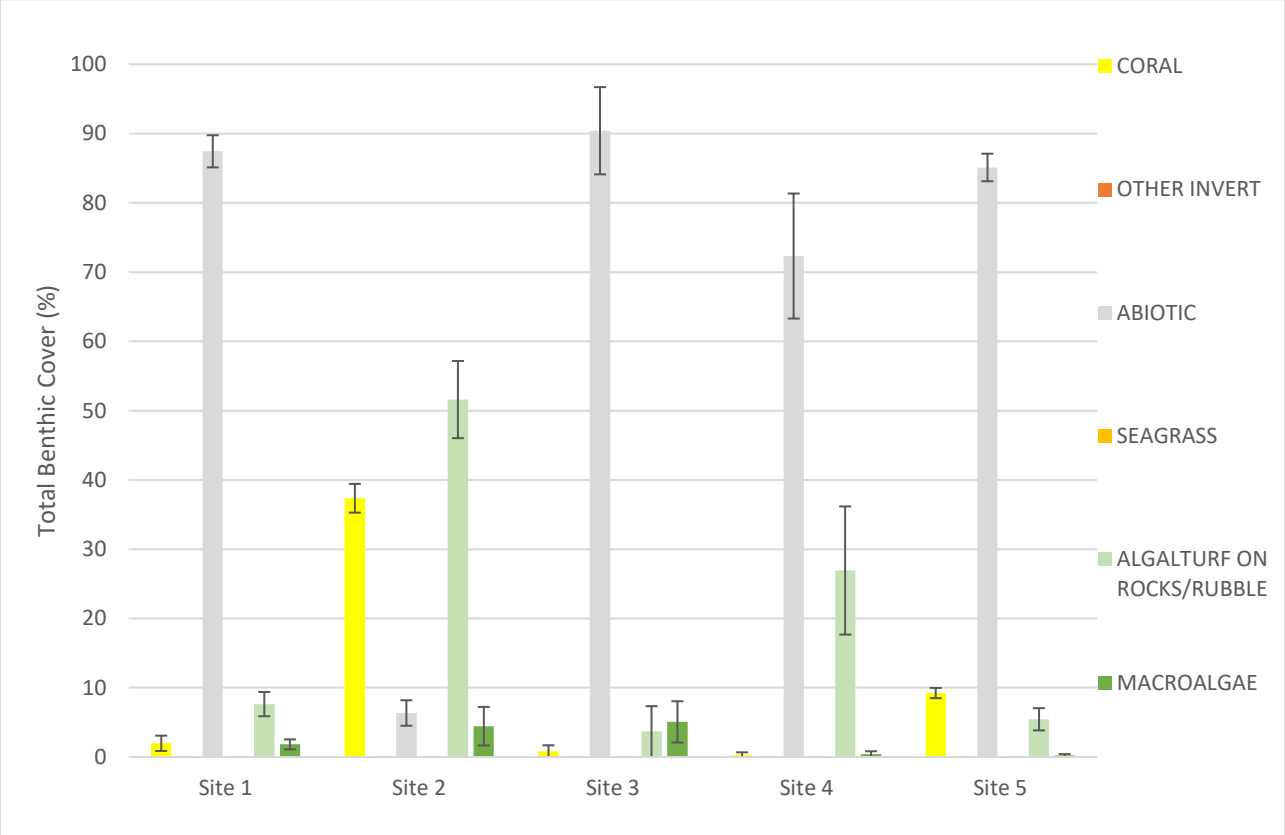

Figure 5 Percent cover of main benthic substrate categories at each surveyed site at Jaluit Port. Values are mean values based on stratified random point sampling of individual photo quadrats according the sampling summarized

in Table 19. Whiskers on bars are Standard Error of the mean

Table 20 Mean coverage of macro-abiotic substrate categories at Jaluit Port. Values are mean values (Standard Error Mean) based on stratified random point sampling of individual photo quadrats according the sampling summarized in Table 19.

	BARE ROCK (BARERO)	BARE RUBBLE (BARERU)	COURSE SAND (CSAND)	FINE SAND (FSAND)	LITTER INDUSTRIAL (LITI)	LITTER DOMESTIC (LITD)	NON-CORAL BOLDER/ROCK (BOLD)	SILT/MUD (SILT)
SITE 1	1.38 (0.9)	16.00 (7.0)	56.47 (5.9)	0.00 (0.0)	0.87 (0.5)	11.86 (1.9)	0.00 (0.0)	0.00 (0.0)
SITE 2	0.00 (0.0)	6.36 (1.8)	0.00 (0.0)	0.00 (0.0)	0.00 (0.0)	0.00 (0.0)	0.00 (0.0)	0.00 (0.0)
SITE 3	0.00 (0.0)	1.13 (1.1)	79.95 (9.3)	0.00 (0.0)	0.00 (0.0)	9.32 (7.3)	0.00 (0.0)	0.00 (0.0)
SITE 4	0.00 (0.0)	12.32 (6.6)	57.84 (11.7)	0.00 (0.0)	0.00 (0.0)	2.15 (0.8)	0.00 (0.0)	0.00 (0.0)
SITE 5	0.00 (0.0)	11.13 (9.5)	71.87 (10.8)	1.47 (1.5)	0.00 (0.0)	0.63 (0.4)	0.00 (0.0)	0.00 (0.0)

Representative images of all sites surveyed at Jaluit are shown in Figure 6.

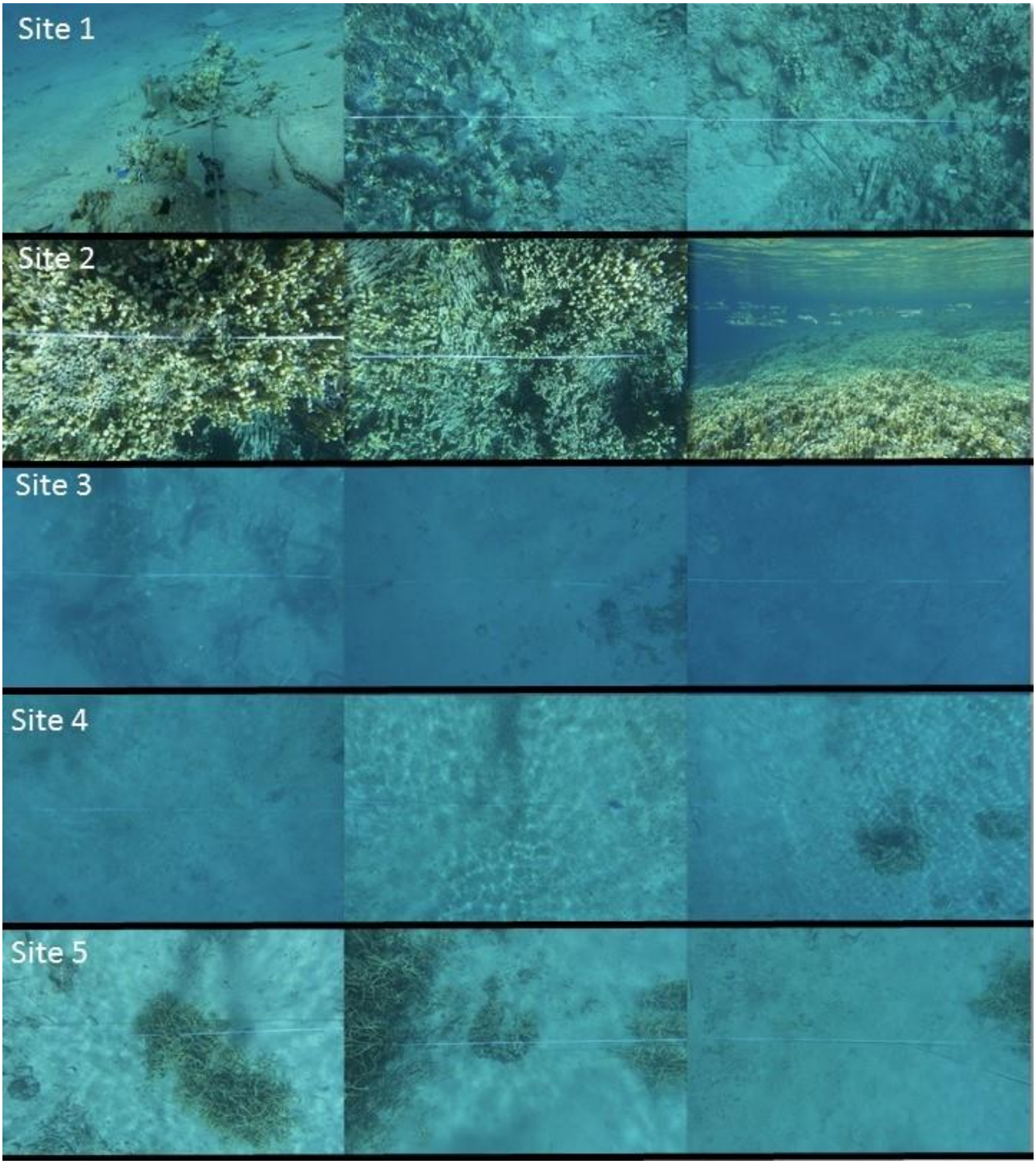

Figure 6 Representative photos of the benthic environment of each surveyed site at Jaluit Port

17.2 EBEYE PORT

17.2.1 Ebeye Port, Benthic Environment Executive Summary

The dock at Ebeye is on the leeward, lagoon shore of Ebeye Island on the southern corner of Kwajalein atoll. The depth around the main operational port area (the western side of the dock) is around 12-17m, which falls away rapidly to the west to deep lagoon, sandy bottom habitat. The existing benthic habitat at the main operational area and to the north of Ebeye port predominately consists of both macroalgae (*Halimdea* sp. meadows) and macro-abiotic substrate (mostly coarse sand, bare rubble and litter/refuse) with sparse visible epifauna. The area immediate south and SSE of the port is a shallow lagoon area abutting the western shore of Ebeye Island. The shallow lagoon area is where the substrate transitions to higher algal turf cover and there is also sparse hard coral cover of ≈<5%. A quantitative description of the benthic habitats around and immediately adjacent to the port is presented in detail below. The area appears to already be impacted by industrial activity, given the prevalence of industrial and domestic waste on the seafloor. The proposed project appears to pose little threat to the existing marine benthic environment, however some general recommendations, revolving around pollution management are provided considering the likely industrial operations associated with the project and as a result of potentially increased future port capacity and/or use.

17.2.2 Ebeye Port Benthic Sampling Overview

The port at Ebeye was sampled at two sites on the widest western facing area of the dock (Sites 1, 2; Fig 4), one site on the southern side of the main dock in shallow lagoon sandflats leading up to a close fringing reef (Site 3; Fig 4) and one site on the northern side of the main port area, which was shallower than the main operational area of the port (Site 4; Fig. 4)). In total, the benthic habitat was quantitatively characterized at 2044 randomly selected points from 68 photo-quadrats, representing a random selection of 201 m^2 of benthic habitat, from 390 linear meters of haphazardly placed 30m (*n*=13) transects (Table 3).

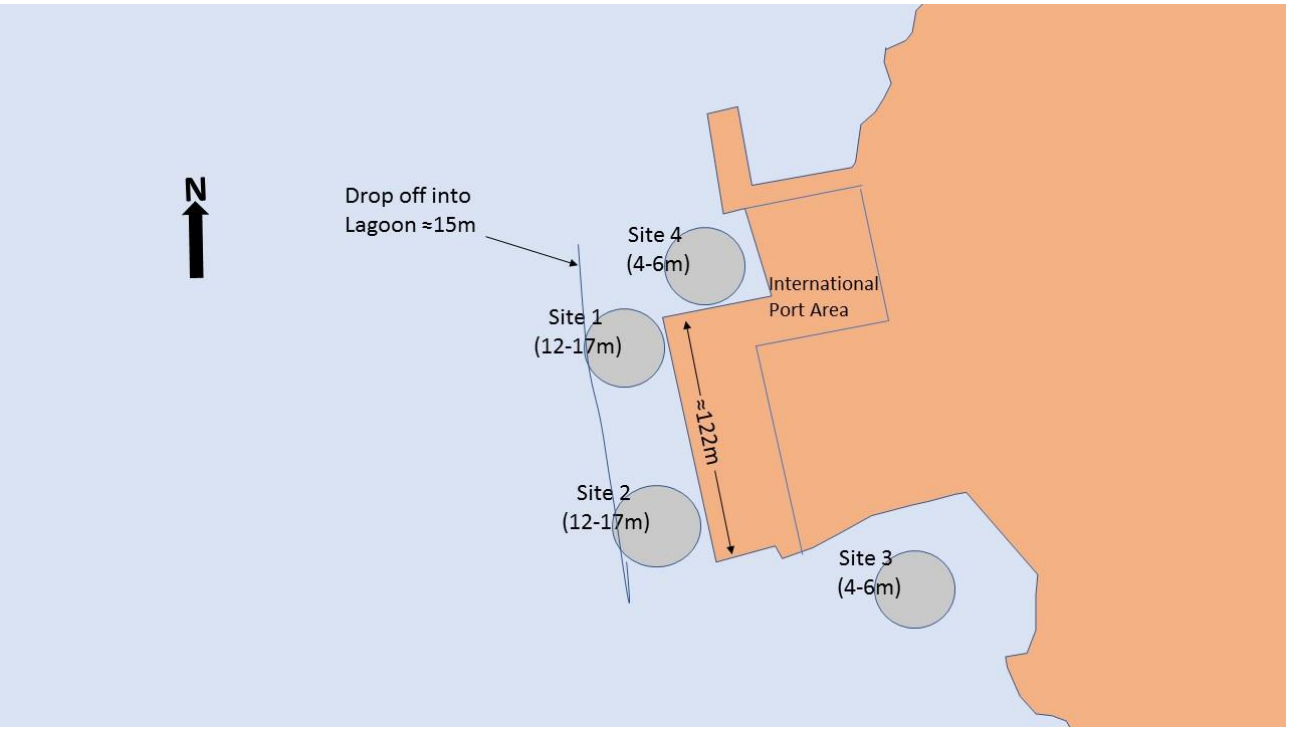

Figure 7 Basic sampling scheme for benthic surveys of Ebeye Port. Sampling sites are indicated by named purple circles and approximate depths are given in parentheses. Note, the length of the seaward (western) port bib is shown, but otherwise diagram is not to scale

Table 21 Sampling effort summary of benthic surveys at Ebeye Port. See Figure 7 for schematic of sampling areas in relation to the port.

SITE	TRANSECT	TOTAL DATA POINTS	TOTAL M^2 SURVEYED	# QUADRATS	MEAN (M^2) QUADRAT SIZE	MIN (M^2) QUADRAT SIZE	MAX (M^2) QUADRAT SIZE
1	1	224	19	5	4.48	3	7
1	2	180	18	5	3.6	3	4
1	3	100	10	2	5	3	7
1	4	100	10	2	5	4	6
1	**Totals**	**604**	**57**	**14**			
2	1	210	21	6	3.5	3	4
2	2	150	15	5	3	2	4
2	3	150	15	5	3	3	3
2	**Totals**	**510**	**51**	**16**			
3	1	240	24	8	3	3	3
3	2	160	16	6	2.67	2	3
3	3	140	14	6	2.33	2	3
3	4	160	16	6	2.67	2	3
3	**Totals**	**700**	**70**	**26**			
4	1	120	12	6	2	2	2
4	2	110	11	6	1.83	1	2
4	**Totals**	**230**	**23**	**12**			
	Transects	**Total Data Points**	**Total m^2 Surveyed**	**# Quadrats**			
EBEYE TOTALS	13	2044	201	68			

17.2.3

17.2.4 Ebeye Port, Benthic Environment Description

The dock at Ebeye is on the leeward, lagoon shore of Ebeye Island on the southern corner of Kwajalein atoll. The depth around the main operational port area (the western side of the dock) is around 12-17m, which falls away rapidly to the west to deep lagoon, sandy bottom habitat. Excepting shallow lagoon abutting the island shore immediately to the south of the main port area (Site 3), the benthic habitat surrounding and adjacent to Ebeye port (within 100m), was dominated by both macro-abiotic substrate (coarse *Halimeda spp*. sands – 40-55% cover; Figure 8) and macroalgae (mostly *Halimeda spp*. meadows - ≈40% cover; Figure 8). At

Sites 1 and 2 off the main operational area of the port, ≈10% of benthic cover was industrial litter/refuse (Table 22). At these sites (usually < 3% cover) there were also several uncommonly large bryozoan colonies (See Site 1 and Site 2; Figure 8). The presence of such bryozoan colonies, along with the depth of the area, suggests the benthic environment is likely to not be affected with continual suspension of sediment from ships props during movements etc.

At Site 3, the shallow lagoon abutting the island shore immediately to the south of the main port area, the benthic environment was dominated by macro-abiotic substrate (fine and coarse sands, ≈40% cover; Figure 8, Table 22) and algal turf covered rubble and dead coral (≈30% cover; Figure 8). There was also considerable cover of *Halimeda spp.* (≈20% cover; Figure 8) but much less than in other areas surveyed at Ebeye. There were also some hard corals present (≈6% cover; Figure 8), the hard-coral taxa noted were mostly branching growth form *Porites sp,* some *Pocillopora sp* and a few solitary growth form *Fungia sp,*

Three juvenile manta rays were also observed while conducting benthic surveys (two at Site 1, one at Site 3).

As with other RMI ports, litter/refuse of both industrial and domestic origin was noted at all locations and was point-scored in quadrats at all sites except for Site 4 (Table 22).

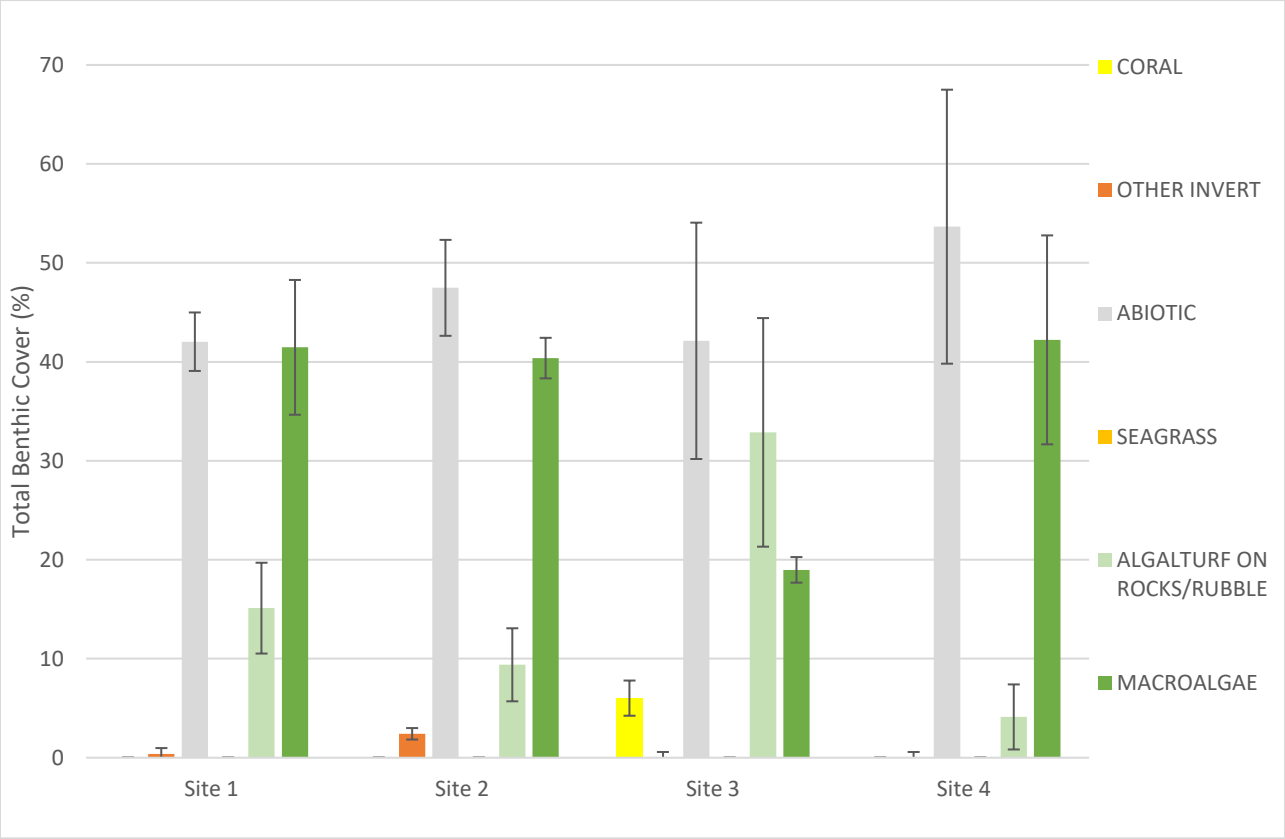

Figure 8 Percent cover of main benthic substrate categories at each surveyed site at Ebeye Port. Values are mean values based on stratified random point sampling of individual photo quadrats, summarized by transect, according the sampling summarized in Table 1. Whiskers on bars are Standard Error.

Table 22 Mean coverage of abiotic substrate categories at the Ebeye Port. Values are mean values (Standard Error) based on stratified random point sampling of individual photo quadrats according the sampling summarized in Table 21.

	BARE ROCK (BARERO)	BARE RUBBLE (BARERU)	COURSE SAND (CSAND)	FINE SAND (FSAND)	LITTER INDUSTRIAL (LITI)	LITTER DOMESTIC (LITD)	NON-CORAL BOLDER/ROCK (BOLD)	SILT/MUD (SILT)

SITE 1	1.01 (1.0)	9.72 (3.1)	21.04 (3.7)	0.00 (0.0)	8.83 (4.4)	1.21 (0.8)	0.00 (0.0)	0.00 (0.0)
SITE 2	0.45 (0.2)	14.80 (4.4)	21.09 (1.8)	0.00 (0.0)	10.30 (1.9)	0.84 (0.6)	0.00 (0.0)	0.00 (0.0)
SITE 3	0.00 (0.0)	2.02 (0.8)	7.18 (2.5)	31.73 (14.4)	0.00 (0.0)	0.16 (0.2)	0.00 (0.0)	0.00 (0.0)
SITE 4	0.00 (0.0)	0.00 (0.0)	53.66 (13.8)	0.00 (0.0)	0.00 (0.0)	0.00 (0.0)	0.00 (0.0)	0.00 (0.0)

Some representative images of all sites at Ebeye are shown in Figure 6.

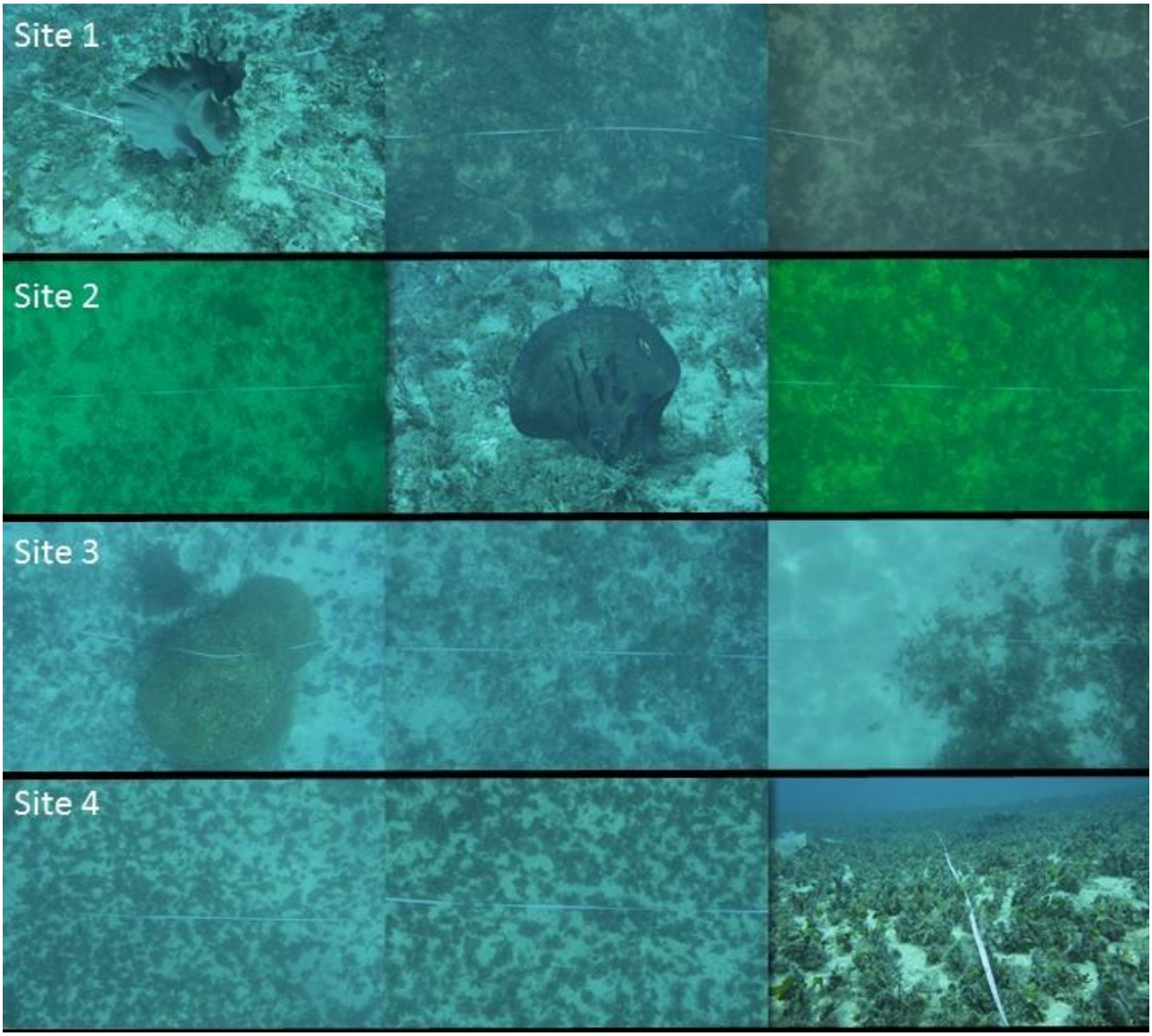

Figure 9 Representative photos of the benthic environment of each surveyed site at Ebeye Por

17.3 DELAP PORT, MAJURO

17.3.1 Delap Port, Majuro, Benthic Environment Executive Summary

Delap Port is on the leeward, southern lagoon shore of the large Island on the eastern corner of Majuro atoll. The benthic habitat is predominately macro-abiotic at the main operational area (the northern facing dock), consisting mostly of coarse sand, bare rubble and litter/refuse, with sparse visible epiflora or fauna. This area rapidly changes to deep lagoon habitat to the north via a sandy slope. The area immediately to the east of the port dock is also an operationally busy area with a shallow lagoon benthic habitat: abundant macroalgae (≈30% cover) sparse individual hard coral colonies, and coarse sand. To the west of the port the benthic habitat transitions from a deeper lagoon environment to a fringing reef flat environment, although mostly consisting of algal turf covered hard substrate with sparse hard coral cover. A quantitative description of the benthic habitats around and immediately adjacent to the port is presented in detail below. The port area appears to already be impacted by industrial activity, given the

prevalence of industrial and domestic waste on the seafloor. The proposed project appears to pose little threat to the existing marine benthic environment, however some general recommendations, revolving around pollution management are provided considering the likely industrial operations associated with the project and as a result of potentially increased future port capacity and/or use.

17.3.2 Delap Port, Majuro, Benthic Sampling Overview

Delap Port, Majuro was sampled at two sites on the widest northern facing area of the dock (Sites 1 and 2; Figure 10), one site on the eastern site of the main port area, where benthic habitat transitioned from deep lagoon to shallow lagoon (Site 3; Figure 10) and one site on the western side of the main port area where benthic habitat transitioned from a deeper lagoon environment to a fringing reef flat environment (Sites 4 and 4a; Figure 10i). In total, the benthic habitat was quantitatively characterized at 2152 randomly selected points from 216 photo-quadrats, representing a random selection of 214.5 m^2 of benthic habitat, from 810 linear meters of haphazardly placed 30m (*n*=27) transects (Table 23).

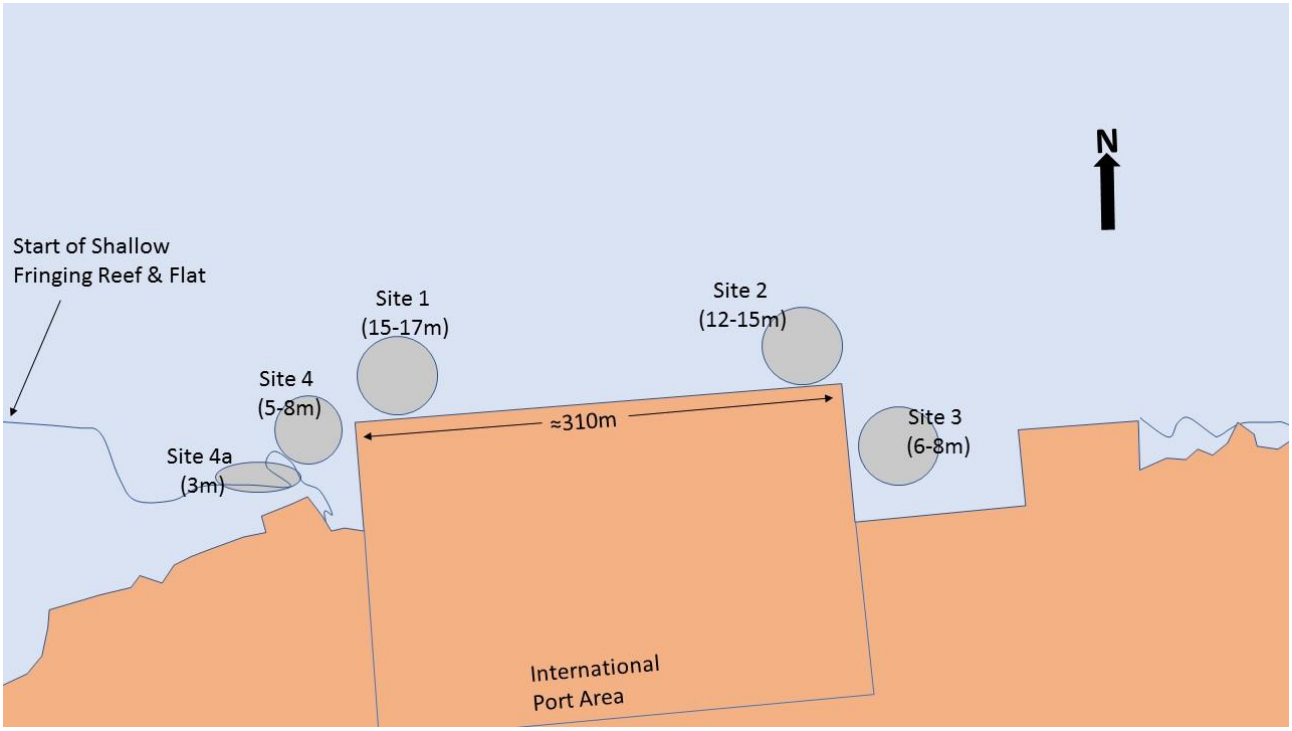

Figure 10 Basic sampling scheme for benthic surveys of Delap Port. Sampling sites are indicated by named purple circles and approximate depths are given in parentheses. Note, the length of the seaward (western) port bib is shown, but otherwise diagram is not to scale

Table 23 Sampling effort summary of benthic surveys at Delap Port. See Fig 1. for schematic of sampling areas in relation to the port

SITE	TRANSECT	TOTAL DATA POINTS	TOTAL M^2 SAMPLED	# QUADRATS	MEAN (M^2) QUADRAT SIZE	MIN (M^2) QUADRAT SIZE	MAX (M^2) QUADRAT SIZE
1	1	80	8	8	1	1	1
1	2	80	8	8	1	1	1
1	3	80	8	8	1	1	1
1	4	80	8	8	1	1	1
1	**Totals**	**320**	**32**	**32**			
2	1	79	7.81	8	0.99	0.9	1
2	2	75	7.13	8	0.94	0.7	1
2	3	79	7.81	8	0.99	0.9	1
2	4	79	7.81	8	0.99	0.9	1
2	5	80	8	8	1	1	1
2	6	80	8	8	1	1	1
2	7	80	8	8	1	1	1
2	8	80	8	8	1	1	1
2	**Totals**	**632**	**62.56**	**64**			
3	1	80	8	8	1	1	1
3	2	80	8	8	1	1	1
3	3	80	8	8	1	1	1
3	4	80	8	8	1	1	1
3	5	80	8	8	1	1	1
3	6	80	8	8	1	1	1
3	7	80	8	8	1	1	1
3	**Totals**	**560**	**56**	**56**			
4	1	80	8	8	1	1	1
4	2	80	8	8	1	1	1
4	3	80	8	8	1	1	1
4	4	80	8	8	1	1	1
4	5	80	8	8	1	1	1
4	6	80	8	8	1	1	1

4	**Totals**	**480**	**48**	**48**			
4A	1	80	8	8	1	1	1
4A	2	80	8	8	1	1	1
4A	**Totals**	**160**	**16**	**16**			
	Transects	**Total Data Points**	**Total m^2 Sampled**	**# Quadrats**			
DELAP TOTALS	27	2152	214.56	216			

17.3.3

17.3.4 Delap Port, Majuro, Benthic Environment Description

Delap Port is on the leeward, lagoon shore of the large Island on the eastern corner of Majuro atoll. The area surrounding the main operational area of the port (Sites 1, 2 and 4; Figure 10), was dominated by macro-abiotic substrate with very little epiflora and epifauna visible (Sites 1, 2, and 4; Figure 11). The majority of macro-abiotic substrate at these sites consisted of coarse sands with some bare rubble hard substrate also present (Table 24). These sites also had substantial industrial and domestic refuse/litter on the seafloor, which was apparent in most areas of all dives and was ≈3 - 9% of benthic cover (Table 24). The biotic habitats present at all these sites were mostly algal turf on hard substrate (≈20% cover; Fig. 8) or macroalgae (usually *Padina sp., Dictoya sp*. or *Halimeda. spp*. in descending order of abundance). Site 4 had more macroalgae present than the sites closest to the main operational area of the port (Sites 1 and 2); but was otherwise similar to these sites (Figure 11).

Site 3, to the immediate east of the port, consisted of a flat area of 6-8m depth shallow lagoon. This site was dominated by biotic cover: mostly macroalgae beds consisting predominately of *Padina sp.* (≈45% cover; Figure 11), but also algal turf covered hard substrate and some hard corals. Hard corals had a very low cover <5% and mostly consisted of scattered medium to large size massive growth form colonies of *Lobophillia sp.*, however there were also scattered solitary corals present (Family Fungidae). Other than the mostly biotic cover, the site mostly consisted of macro-abiotic sandy bottom habitat (Table 24).

Site 4a, to the immediate west of the port, consisted of a reef slope area where the benthic habitat transitions from a deep lagoon habitat to fringing reef and reef flat. This site was dominated by biotic cover (Figure 11): mostly algal turf covered hard substrate (≈47% cover; Figure 11) and macroalgae (≈21% cover; Figure 11). The macroalgae present was predominately *Padina sp*., unidentified macroalgae and *Dictoya sp*., (in descending order of abundance). Some of the hard-coral present at this site (only ≈5% cover; Figure 11) was identified as being *Porites sp.* (See Site 4a, Figure 12 for example) *Pocillopora sp*. and foliose *Pavona sp*..

As with other RMI ports, litter/refuse of both industrial and domestic origin was noted at all locations and was point-scored in quadrats at all sites (expect Site 4a- the reef slope) closest to the busiest operational areas of the ports (Table 24).

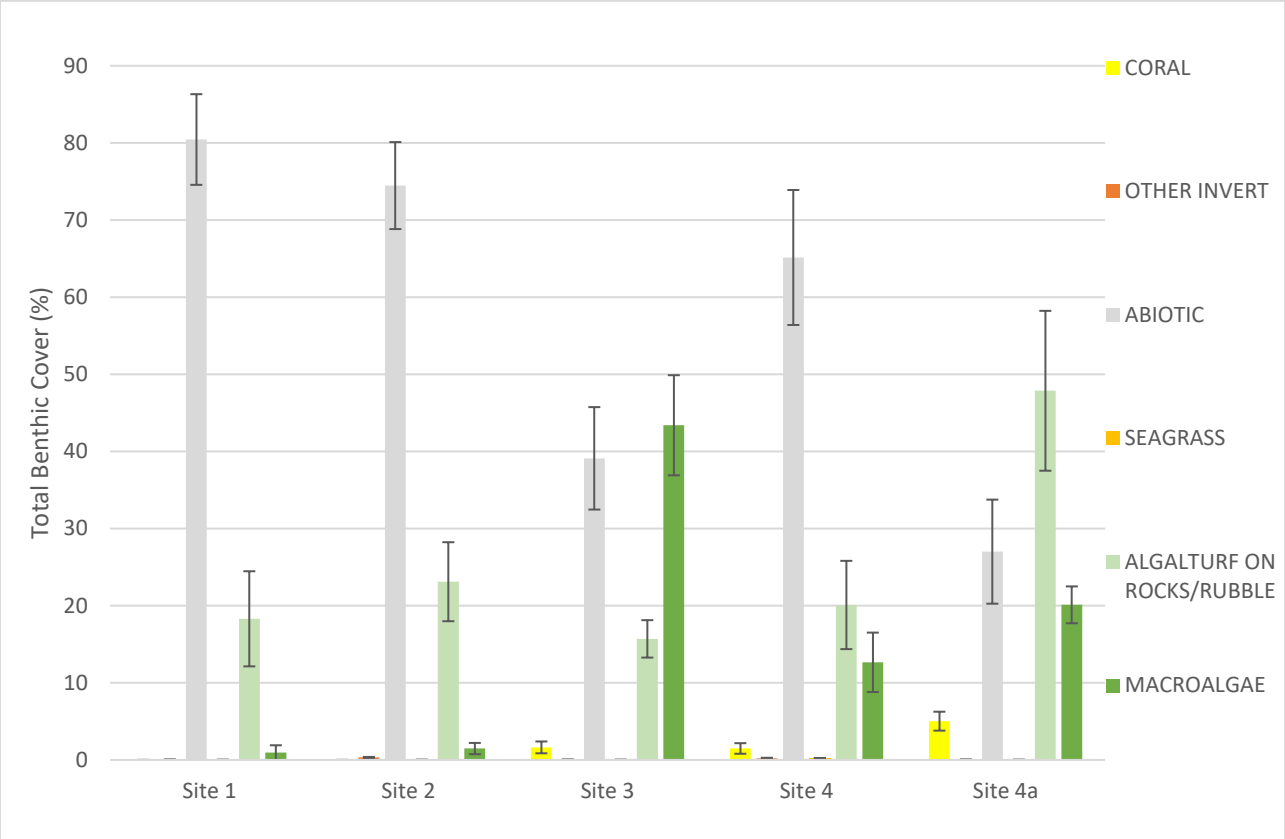

Figure 11 Percent cover of main benthic substrate categories at each surveyed site at Delap Port. Values are mean values based on stratified random point sampling of individual photo quadrats, summarized by transect, according the sampling summarized in Table 1. Whiskers on bars are Standard Error of the mean

Table 24 Mean coverage of abiotic substrate categories at Delap Port. Values are mean values (Standard Error) based on stratified random point sampling of individual photo quadrats according the sampling summarized in Table 23.

	BARE ROCK (BARERO)	BARE RUBBLE (BARERU)	COURSE SAND (CSAND)	FINE SAND (FSAND)	LITTER INDUSTRIAL (LITI)	LITTER DOMESTIC (LITD)	NON-CORAL BOLDER/ROCK (BOLD)	SILT/MUD (SILT)
SITE 1	0.94 (0.6)	26.83 (2.8)	47.29 (8.3)	0.00 (0.0)	4.74 (2.3)	0.63 (0.4)	0.00 (0.0)	0.00 (0.0)
SITE 2	0.00 (0.0)	5.13 (2.1)	49.75 (3.9)	10.01 (3.9)	6.70 (2.2)	2.89 (0.6)	0.00 (0.0)	0.00 (0.0)
SITE 3	0.00 (0.0)	5.13 (2.0)	49.75 (2.8)	10.01 (7.9)	6.70 (0.6)	2.89 (2.0)	0.00 (0.0)	0.00 (0.0)
SITE 4	0.00 (0.0)	6.74 (3.3)	22.52 (2.6)	30.39 (8.3)	2.32 (1.4)	1.27 (0.5)	0.00 (0.0)	0.43 (0.4)
SITE 4A	0.00 (0.0)	11.95 (0.6)	13.17 (5.6)	1.88 (0.6)	0.00 (0.0)	0.00 (0.0)	0.00 (0.0)	0.00 (0.0)

Some representative images of all sites are shown in Figure 9.

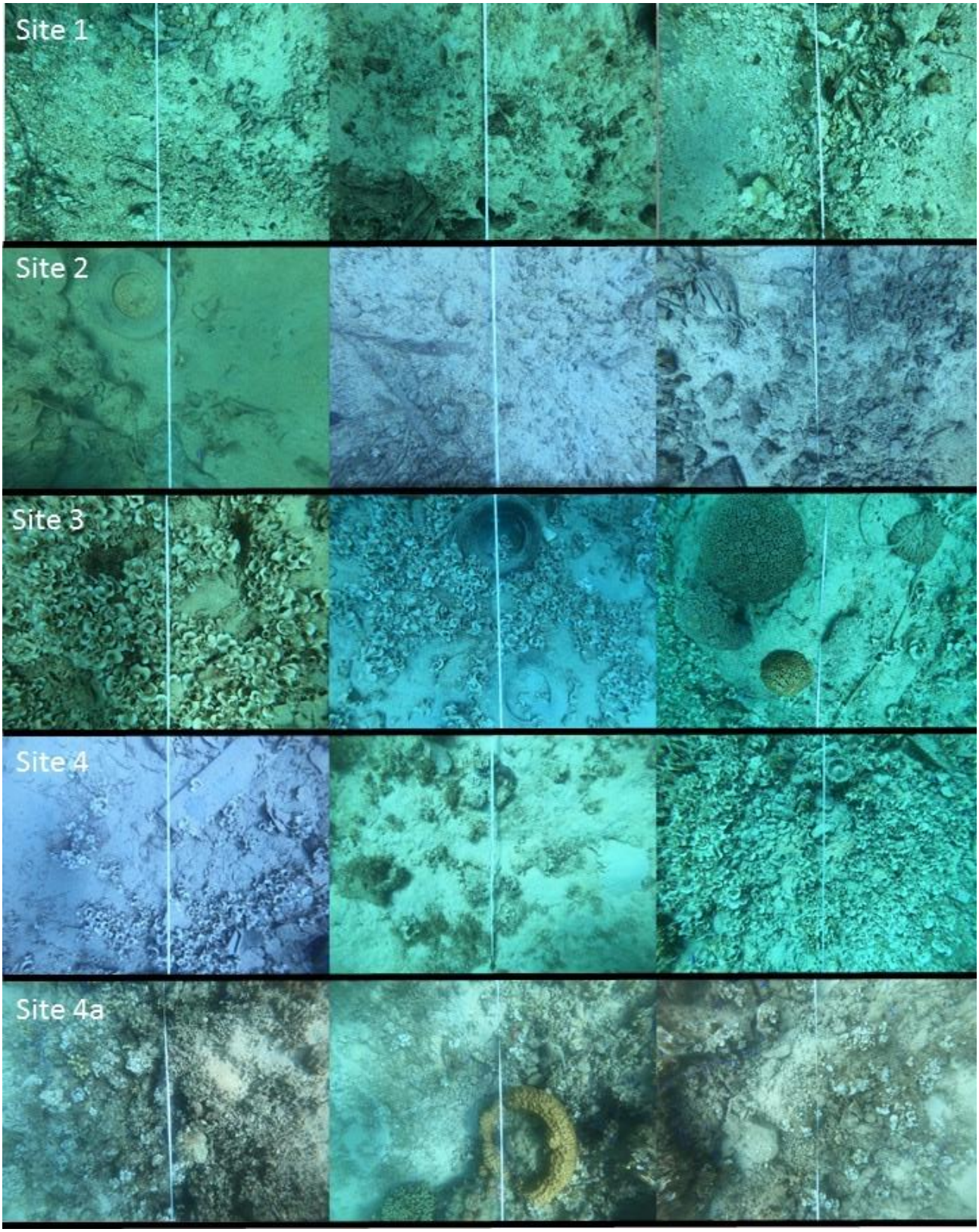
Site 1
Site 2
Site 3
Site 4
Site 4a

Figure 12 Representative photos of the benthic environment of each surveyed site at Delap Port

17.4 Uliga Port, Majuro

17.4.1 Uliga Port, Majuro, Benthic Environment Executive Summary

Uliga port is situated on the leeward eastern lagoon shore of the large Island on the eastern corner of Majuro atoll. The benthic habitat around the north and west of the dock is predominately a mix of macroalgae beds on coarse sands with large sandy spaces and sparse visible epiflora or fauna, transitioning via a steep slope to deep lagoon habitat to the west. To the east of the dock, in-between the dock and land, the benthic environment consists of a small reef among coarse sand. To the south of the dock, the habitat transitions from deep lagoon to shallow lagoon abutting fringing reef slope and flat to the island shore. The shallow lagoon here is predominately biotic habitat consisting mostly of macroalgae and algal turf on hard substrate, with some in between coarse sand and sparse individual hard coral colonies. The reef slope to the south-east has relatively high coral cover in a small area (≈35% cover) and abundant algal turf on hard substrate. A quantitative description of the benthic habitats around and immediately adjacent to the port is presented in detail below. The port area appears to already be impacted by industrial activity, given the prevalence of industrial and domestic waste on the seafloor. The proposed project appears to pose little threat to the existing marine benthic environment, however some general recommendations, revolving around pollution management are provided considering the likely industrial operations associated with the project and as a result of potentially increased future port capacity and/or use.

17.4.2 Uliga Port, Majuro, Benthic Sampling Overview

Uliga Port, Majuro was sampled at two sites on the widest south facing area of the dock (Sites 1 & 2; Fig 10), one site on the eastern side of the main port dock in the shallow inlet between the dock and land (Site 3; Fig 10), one site to the south of the main dock area where habitat transitions from a deep sandy lagoon to a fringing reef slope and reef flat (Sites 4 and 4a; Fig. 10) and one site to the north of the main dock area (Site 5; Fig 10) where habitat transitions from a deep sandy lagoon to a shallow lagoon area before the island shore. In total, the benthic habitat was quantitatively characterized at 2260 randomly selected points from 226 photo-quadrats, representing a random selection of 226 m^2 of benthic habitat, from 990 linear meters of haphazardly placed 30m (*n*=33) transects (Table 7).

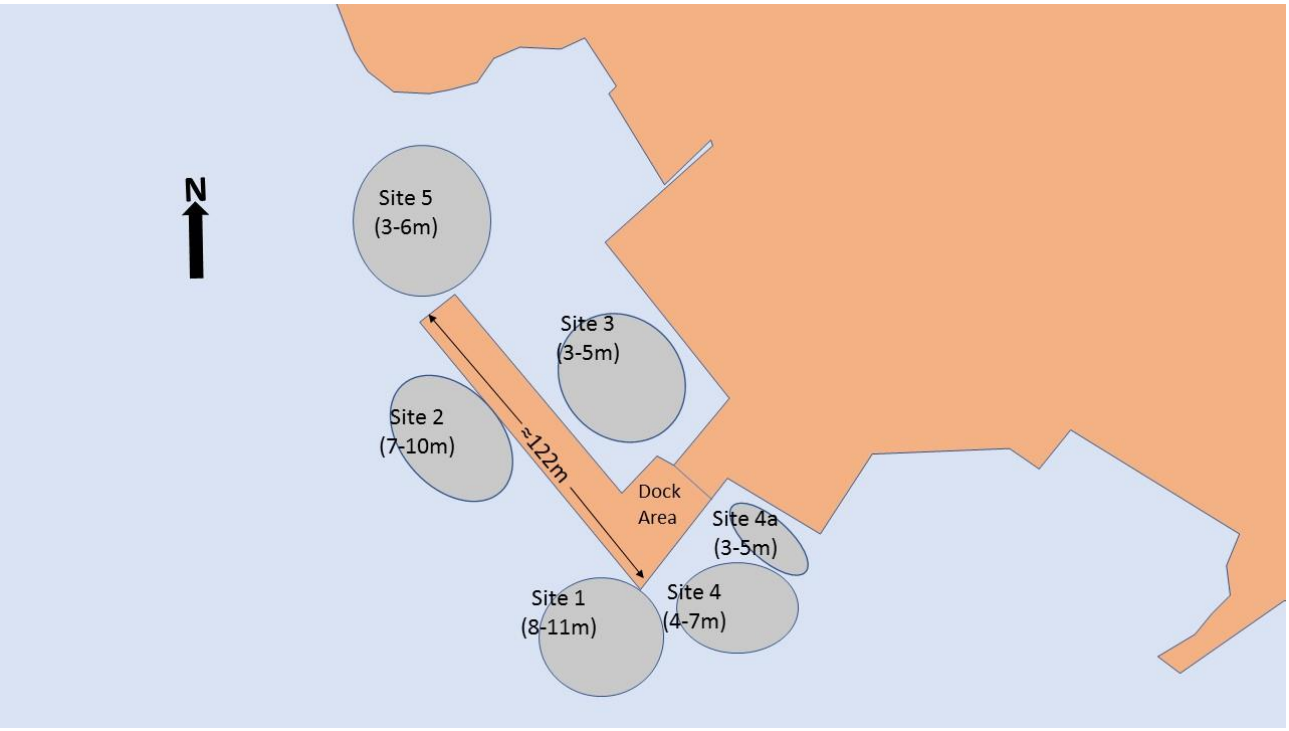

Figure 13 Basic sampling scheme for benthic surveys of Uliga Port. Sampling sites are indicated by named purple circles and approximate depths are given in parentheses. Note, the length of the seaward (western) port bib is shown, but otherwise diagram is not to scale.

Table 25 Sampling effort summary of benthic surveys at Uliga Port. See Figure 13 for schematic of sampling areas in relation to the port

SITE	TRANSECT	TOTAL DATA POINTS	TOTAL M^2 SAMPLED	# QUADRATS	MEAN (M^2) QUADRAT SIZE	MIN (M^2) QUADRAT SIZE	MAX (M^2) QUADRAT SIZE
1	1	60	6	6	1	1	1
1	2	70	7	7	1	1	1
1	3	60	6	6	1	1	1
1	4	60	6	6	1	1	1
1	5	60	6	6	1	1	1
1	6	60	6	6	1	1	1
1	7	70	7	7	1	1	1
1	8	60	6	6	1	1	1
1	**Totals**	**500**	**50**	**50**			
2	1	60	6	6	1	1	1
2	2	60	6	6	1	1	1
2	3	60	6	6	1	1	1
2	4	70	7	7	1	1	1
2	5	60	6	6	1	1	1
2	6	60	6	6	1	1	1
2	7	60	6	6	1	1	1
2	8	60	6	6	1	1	1
2	**Totals**	**490**	**49**	**49**			
3	NA – DROP CAMERA	240	24	24			
3	**Totals**	**240**	**24**	**24**			
4	1	70	7	7	1	1	1
4	2	50	5	5	1	1	1
4	3	60	6	6	1	1	1
4	4	60	6	6	1	1	1
4	5	60	6	6	1	1	1
4	6	60	6	6	1	1	1

4	7	70	7	7	1	1	1
4	8	60	6	6	1	1	1
4	**Totals**	**490**	**49**	**49**			
4A	1	70	7	7	1	1	1
4A	2	50	5	5	1	1	1
4A	**Totals**	**120**	**12**	**12**			
5	1	60	6	6	1	1	1
5	2	60	6	6	1	1	1
5	3	60	6	6	1	1	1
5	4	60	6	6	1	1	1
5	5	60	6	6	1	1	1
5	6	60	6	6	1	1	1
5	7	60	6	6	1	1	1
5	**Totals**	**420**	**42**	**42**			
	Transects	**Total Data Points**	**Total m^2 Sampled**	**# Quadrats**			
ULIGA TOTALS	33	2260	226	226			

17.4.3

17.4.4 Uliga Port, Majuro, Benthic Environment Description

Excepting the shallow lagoon areas in the harbor and to the north and the fringing reef slop and flat to the south (Sites 3,4 and 5), the benthic habitat at the west-facing main operational area of the port was made up of 30-55% macro-abiotic substrate, ≈20-45% cover of macroalgae and ≈25% cover of algal turf on hard substrates (Sites 1 and 2; Figure 14). The majority of macro-abiotic substrate at these sites consisted of *Halimeda*-derived course sand and bare rubble (Figure 14; Table 26), and the vast majority of identified macroalgae cover was *Padina sp.* meadows, although some *Dictoya sp*. and *Halimeda sp* were also present. At both sites there was also holothuroideans (Sea cucumbers) and some sponges present.

Site 3 was assessed by using a drop camera within the harbor, instead of laying and following individual transects on scuba. Although a slightly different methodology, it also yields 1mx1m quadrats which are then random-point sampled for percent cover of major benthic categories. This site was dominated by biotic cover: predominately algal turf on hard substrate (≈43% cover; Figure 14) but there was also ≈10% cover of both hard corals and macroalgae. Corals present included most branching growth form *Acropora sp.* however some *Porites sp.* were also noted. The macroalgae present that was identified was exclusively *Padina sp.* This site had small areas of exceedingly high hard coral cover (i.e. individual quadrats with >90% hard coral cover) because of a small but thriving reef of different hard coral species.

Site 4 consisted of shallow lagoon area slowly transitioning into fringing reef slope (Site 4a). Site 4 was dominated by macro-abiotic habitat (≈43% cover; Figure 14), mostly coarse sand and bare rubble (Table 26). The biotic substrate present was similar amounts

(≈25% cover; Figure 14) of algal turf on hard substrate and macroalgae (mostly *Padina sp*. and *Dictoya sp.*). The sparse hard coral cover here was mostly from solitary corals (Family Fungidae) and some *Pavona* sp.

Site 4a, the steep reef slope transitioning to a reef flat was dominated with biotic cover: mostly hard corals (≈35% cover; Figure 14), algal turf covered hard substrate (≈27% cover; Figure 14) and macroalgae (≈16% cover; Figure 14). Hard corals present were mostly *Acropora spp*. and *Pavona sp.* and macroalgae was predominately *Padina sp.* Most of the macro-abiotic cover was bare rubble (≈15% cover; Table 8), however this site also had a high cover of litter/refuse (Table 26).

Site 5 to the north of the port is a shallow lagoon area dominated by macro-abiotic substrate, almost entirely coarse sand (Figure 14; Table 26). Biotic substrate was mostly both algal turf covered hard substrate and macroalgae (≈25% cover each; Figure 14). Macroalgae present was predominately *Padina sp.* with a few records of *Halimeda sp.* A few sparse colonies of some hard corals were also recorded (*Montipora sp*. and *Porites sp.*).

As with other RMI ports, litter/refuse of both industrial and domestic origin was noted at all locations and was point-scored in quadrats at all sites, with some sites showing ≈10% cover (Sites 2, 3 and 4a: Table 26).

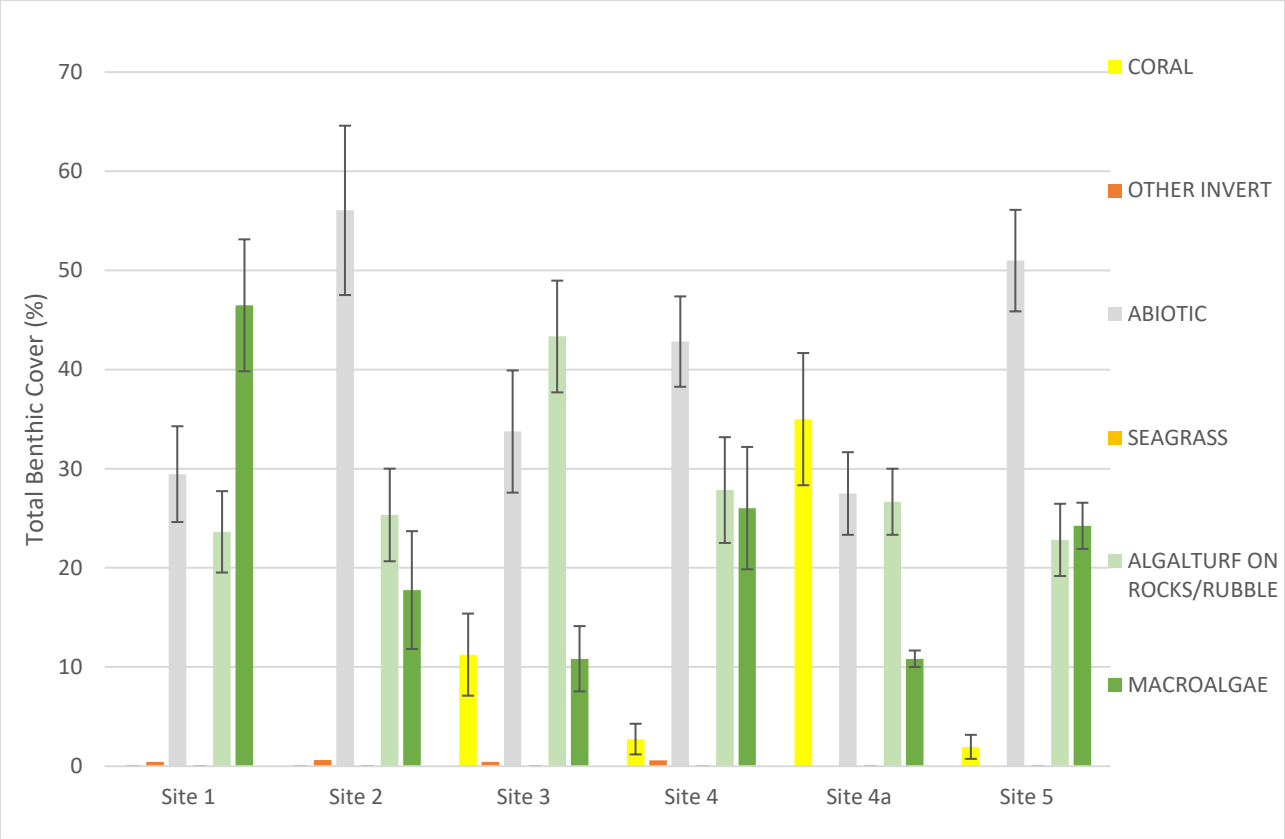

Figure 14 Percent cover of main benthic substrate categories at each surveyed site at Uliga Port. Values are mean values based on stratified random point sampling of individual photo quadrats, summarized by transect, according the sampling summarized in Table 1. Whiskers on bars are Standard Error of the mean

Table 26 Mean coverage of abiotic substrate categories at Uliga Port. Values are mean values (Standard Error) based on stratified random point sampling of individual photo quadrats according the sampling summarized in Table 25.

	BARE ROCK (BARERO)	BARE RUBBLE (BARERU)	COURSE SAND (CSAND)	FINE SAND (FSAND)	LITTER INDUSTRIAL (LITI)	LITTER DOMESTIC (LITD)	NON-CORAL BOLDER/ROCK (BOLD)	SILT/MUD (SILT)

SITE 1	0.00 (0.0)	3.43 (1.3)	22.99 (5.4)	0.00 (0.0)	0.57 (0.3)	2.46 (1.0)	0.00 (0.0)	0.00 (0.0)	0.00 (0.0)
SITE 2	0.18 (0.2)	15.93 (3.0)	29.21 (7.9)	0.21 (0.2)	4.46 (2.2)	5.47 (1.5)	0.00 (0.0)	0.00 (0.0)	0.18 (0.2)
SITE 3	0.83 (0.6)	3.33 (1.4)	16.25 (5.2)	3.33 (2.4)	0.83 (0.6)	9.17 (4.7)	0.00 (0.0)	0.00 (0.0)	0.83 (0.6)
SITE 4	0.00 (0.0)	11.62 (3.6)	23.84 (6.4)	0.00 (0.0)	0.58 (0.4)	6.78 (3.7)	0.00 (0.0)	0.00 (0.0)	0.00 (0.0)
SITE 4A	0.00 (0.0)	15.00 (0.0)	0.00 (0.0)	0.00 (0.0)	4.17 (4.2)	7.50 (0.8)	0.00 (0.0)	0.00 (0.0)	0.00 (0.0)
SITE 5	0.00 (0.0)	1.68 (0.7)	48.59 (5.2)	0.48 (0.5)	0.00 (0.0)	0.24 (0.2)	0.00 (0.0)	0.00 (0.0)	0.00 (0.0)

Representative images of all sites at Uliga are shown in Figure 12.

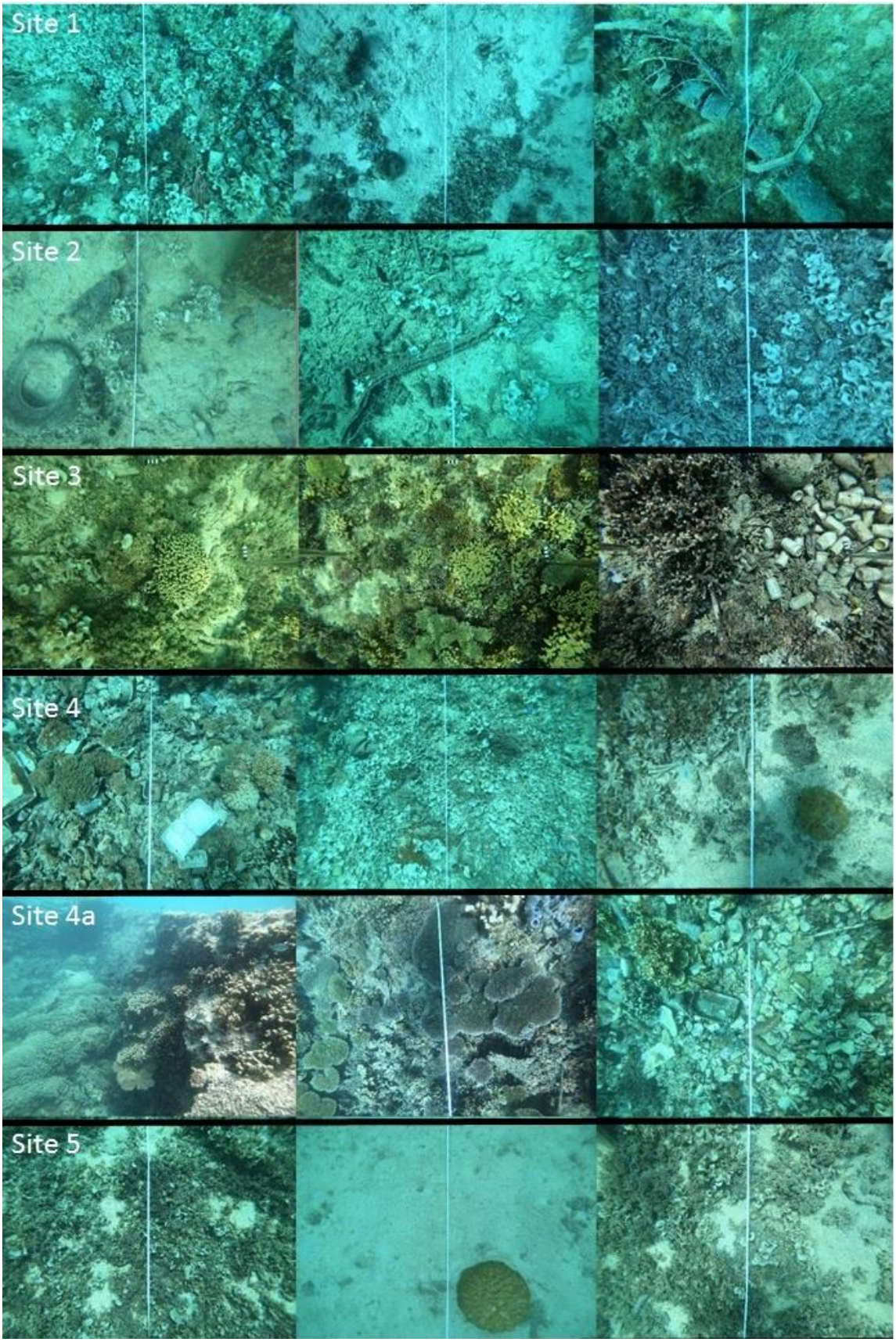
Site 1
Site 2
Site 3
Site 4
Site 4a
Site 5

Figure 15 Some representative photos of the benthic environment of each surveyed site at Uliga Port.

18 PART THREE: PROJECT MARINE ENVIRONMENTAL RISKS

Despite reef flat environments near some ports, the diversity of marine benthic habitats and organisms immediately surrounding, and adjacent to the ports is generally low, except for the reef slope environments noted above. Most benthic substrate in the main operational areas of ports is dominated by soft sediments, hard substrates with algal turf and thus much of the associated fauna is likely infauna (*i.e.* fauna that lives exclusively within the sediments). Given that the proposed physical investments do not involve extending the port footprint or in-water construction activity, such as dredging, piling etc, and considering that the nature of the work activities for the physical investments are similar to present ongoing industrial activities at the port, it is considered that the risks of the project to the existing benthic environment at all ports are minimal. There are, however, generic risks to the marine environment from increasing and ongoing industrial activity at the port the project should consider:

- **Light pollution:** Marine fauna can be adversely affected by artificial light - These effects may include adverse effects to marine zooplankton behavior, adverse effects from fish aggregations at artificial light sources, potential effects on invertebrate spawning behavior where lunar phase is used as a cue and displacement and/or disorientation of some marine wildlife (particularly marine turtles (hatchlings and adults) and marine birds) (Davies *et al.* 2014). Despite this, the impacts from the new lighting in the proposed project are expected to be negligible, particularly given the extensive existing artificial lighting already in the area, and the fact that there doesn't appear to be any sea turtle nesting habitat or significant seabird nesting areas in the coastal vicinity of the port.
- **Diffuse ship- and land-based pollution:** There was a considerable amount of industrial (i.e. likely refuse from port/shipping activities, for example, tires, steel wire etc) and domestic (i.e. personal/small scale waste, for example cans, plastic bags etc) hard waste seen during dives around the port and noted in photo quadrats. This indicates that it is highly likely more rigorous waste management practices are required. The management of wastes generated as a result industrial activity at the port needs to be an explicit part of any environmental plan of the port, as does monitoring of their efficacy. Given there will be increased industrial activity as a result of the works of this project, and possibly ongoing afterward due to a potential increase in port capacity and/or use, it is recommended a port environmental management plan addressing this be implemented as part of this project and/or any future port master plan.
    - Another area which should be considered in terms of this project and any current/future environmental management plan is the control of drainage away from the port in consideration of both hard waste and importantly, processes and procedures for the prevention and management of petrochemical spills. During tours of the port sites it was noted that hydrocarbon distribution (i.e. refueling sites etc) was not confined to a contained, bunded areas and there were no spill-kits available in the event of accidental petrochemical spills. Again, given there will be increased industrial activity as a result of the works of this project, and possibly ongoing afterward due to a potential increase in port capacity and/or use, it is recommended a port environmental management plan addressing this be implemented as part of this project and/or any future port master plan

19 APPENDIX 1 – BENTHIC HABITAT/TAXONOMIC GROUP CATEGORIES USED TO DESCRIBE BENTHIC ENVIRONMENTS

MAJOR CATEGORY (% OF TRANSECT)
CORAL (C)
OTHER INVERT (OI)
ABIOTIC (A)
SEAGRASS (SG)
CROPPED/OTHER ALGAE (CA)
MACROALGAE (MA)
UNIDENTIFIED (U)
TAPE, WAND, SHADOW (TWS)
SUM (EXCLUDING TAPE+SHADOW+WAND)
SUBCATEGORIES (% OF TRANSECT)
CORAL (C)
BRANCHING CORAL (BC)
COLUMNAR CORAL (CC)
DEAD CORAL (DEAD)
DIGITATE CORAL (DC)
ENCUSTING CORAL (EC)
FOLIOSE/LAMINAR CORAL (FLC)
MASSIVE CORAL (MC)
SOLITARY CORAL (SC)
TABULAR CORAL (TC)
UNINDENTIFIED CORAL (UNCO)
OTHER INVERT (OI)
ANENOME (ANEM)
ASTEROIDEA (ASTE)
BRYOZOAN (BRYO)
HOLOTHURIODIAN (HOLO)
MOBILE INVERT (MINV)
OCTOCORAL (OCTO)
OCTOCORAL ON DEAD CORAL (OC/DL)
OCTOCORAL ON RUBBLE (OC/R)
OTHER SESSILE INVERTS (OSIN)
SPONGE (SPNG)
TUNICATE (TUNI)
ZOANTHID (ZOAN)
ABIOTIC (A)

BARE ROCK (BARERO)
BARE RUBBLE (BARERU)
BEDROCK (BED)
BLACK HOLE (BHOL)
CORAL RUBBLE SILT COVERED (CRUSI)
COURSE SAND (CSAND)
FINE SAND (FSAND)
LITTER INDUSTRIAL (LITI)
LITTER DOMESTIC (LITD)
NON-CORAL BOLDER/ROCK (BOLD)
SILT/MUD (SILT)
SEAGRASS (SG)
CYMODOCEA SP (SGCY)
HALOPHILA SP (SGHA)
SYRINGODIUM SP. (SGSY)
THALASSIA SP. (SGTH)
UNID SEAGRASS (SEAG)
CROPPED/OTHER ALGAE (CA)
BLUE GREED ON DEAD COMPRESSA (BG/DC)
BLUE GREEN (BLGR)
BLUE GREEN ON DEAD CORAL (BG/DL)
BLUE GREEN ON RUBBLE (BG/R)
CRUSTOSE (CRST)
CRUSTOSE ON DEAD COMPRESSA (CR/DC)
CRUSTOSE ON DEAD CORAL (CR/DL)
CRUSTOSE ON RUBBLE (CR/R)
TURF/BARE (TU/B)
TURF/BARE ON DEAD COMPRESS (TB/DC)
TURF/BARE ON DEAD CORAL (TB/DL)
TURF/BARE ON RUBBLE (TB/R)
MACROALGAE (MA)
ACANTHOPHORA SPICIFERA (ASPI)
ASPARAGOPSIS SP (ASPA)
AVRAINVILLEA SP (AVRA)
CAULERPA SP. (CAUL)
CLADOPHORA SP (CLAD)
CODIUM SP (CODI)
CRUSTOSE MACROALGAE (CMAC)
DICTYOSPHAERIA CAVERNOSA (DCAV)

DICTYOSPHAERIA VERSLUYSII (DVER)
DICTYOTA SP (DICT)
GALAXAURA SP. (GALA)
GELATINOUS RED (GOOEY)
GRACILLARIA SALICORNIA (GSAL)
HALIMEDA SP. (HALI)
HALYMENIA SP (HALY)
HYPNEA MUSCIFORMIS (HMUS)
JOINTED CALCAREOUS RED (JCAL)
KAPPAPHYCUS SP (KAPP)
LARGE MACROALGAE (MACR)
LIAGORA SP (LIAG)
LOBOPHORA SP (LOBO)
LOW MACROALGAE (LMAC)
NEOMERIS SP (NEOM)
PADINA SP (PADI)
SARGASSUM SP (SARG)
STYPOPODIUM SP (STYP)
TURBINARIA SP (TURB)
UNINDENTIFED BROWN (UBRN)
UNINDENTIFIED GREEN (UGRE)
UNINDENTIFIED RED (URED)
VENTRICARIA SP (VENT)
UNIDENTIFIED (U)
UNIDENTIFIED (UNID)
TAPE, WAND, SHADOW (TWS)
SHADOW (SHADOW)
TAPE (TAPE)
WAND (WAND)
NOTES (% OF TRANSECT)
ACANTHASTREA (ACAN)
ACROPORA (ACRO)
AFRICANA (AFRI)
AGARICIA (AGAR)
ALATOTROCHUS (ALAT)
ALVEOPORA (ALVE)
AMPHIHELIA (AMPH)
ANACROPORA (ANAC)
ANOMASTRAEA (ANOMA)

ANOMOCORA (ANOM)
ANTHEMIPHYLLIA (ANTH)
ANTILLIA (ANTI)
ASTRANGIA (ASTRA)
ASTREA (ASTR)
ASTREOPORA (ASTRE)
ASTROIDES (ASTRO)
AULOCYATHUS (AULO)
AUSTRALOCYATHUS (AUSTC)
AUSTRALOGYRA (AUSTG)
AUSTRALOPHYLLIA (AUSTP)
BACHYTROCHUS (BACH)
BALANOPHYLLIA (BALAPH)
BALANOPSAMMIA (BALAPS)
BATHELIA (BATH)
BATHYCYATHUS (BATHC)
BATHYPSAMMIA (BATHP)
BERNARDPORA (BERN)
BLASTOMUSSA (BLASM)
BLASTOTROCHUS (BLAST)
BONINASTREA (BONI)
BOURNEOTROCHUS (BOUR)
CANTHARELLUS (CANT)
CARYOPHYLLIA (CARY)
CATALAPHYLLIA (CATA)
CAULASTRAEA (CAUL)
CERATOTROCHUS (CERA)
CLADANGIA (CLADA)
CLADOCORA (CLADO)
CLADOPSAMMIA (CLADS)
COELASTREA (COELTR)
COELOSERIS (COEL)
COENOCYATHUS (COENC)
COENOSMILIA (COENS)
COLANGIA (COLA)
COLPOPHYLLIA (COLP)
CONCENTROTHECA (CONC)
CONFLUPHYLLIA (CONF)
CONOCYATHUS (CONO)

CONOTROCHUS (CONOT)
COSCINARAEA (COSC)
CRATERASTREA (CRAT)
CRISPATOTROCHUS (CRIS)
CRYPTOTROCHUS (CRYP)
CTENACTIS (CTEN)
CTENELLA (CTENE)
CULICIA (CULI)
CYATHELIA (CYATE)
CYATHOTROCHUS (CYAT)
CYCLOSERIS (CYCL)
CYNARINA (CYNA)
CYPHASTREA (CYPH)
DACTYLOTROCHUS (DACT)
DANAFUNGIA (DANA)
DASMOSMILIA (DASM)
DELTOCYATHOIDES (DELT)
DELTOCYATHUS (DELTU)
DENDROCORA (DENDC)
DENDROGYRA (DENDA)
DENDROPHYLLIA (DEND)
DESMOPHYLLUM (DESM)
DICHOCOENIA (DICH)
DICHOPSAMMIA (DICHP)
DIPLOASTREA (DIPLA)
DIPLORIA (DIPL)
DIPSASTRAEA (DIPS)
DUNCANOPSAMMIA (DUNC)
DUNOCYATHUS (DUNO)
ECHINOMORPHA (ECHIM)
ECHINOPHYLLIA (ECHIP)
ECHINOPORA (ECHI)
EGUCHIPSAMMIA (EGUC)
ENALLOPSAMMIA (ENAL)
ENDOCYATHOPORA (ENDO)
ENDOPACHYS (ENDOC)
ENDOPSAMMIA (ENDOP)
ENIGMOPORA (ENIG)
ERICIOCYATHUS (ERIC)

ERYTHRASTREA (ERYT)
EUPHYLLIA (EUPH)
EUSMILIA (EUSM)
FALCATOFLABELLUM (FALC)
FAMILY ACROPORIDAE (FAM-ACROP)
FAMILY AGARICIIDAE (FAM-AGARI)
FAMILY ANTHEMIPHYLLIIDAE (FAM-ANTHE)
FAMILY ASTROCOENIIDAE (FAM-ASTRO)
FAMILY CARYOPHYLLIIDAE (FAM-CARYO)
FAMILY COSCINARAEIDAE (FAM-COSCI)
FAMILY DELTOCYATHIDAE (FAM-DELTO)
FAMILY DENDROPHYLLIIDAE (FAM-DENDR)
FAMILY DIPLOASTREIDAE (FAM-DIPLO)
FAMILY EUPHYLLIIDAE (FAM-EUPHY)
FAMILY FAVIIDAE (FAM-FAVII)
FAMILY FLABELLIDAE (FAM-FLABE)
FAMILY FUNGIACYATHIDAE (FAM-FUNGIC)
FAMILY FUNGIIDAE (FAM-FUNGI)
FAMILY GARDINERIIDAE (FAM-GARDI)
FAMILY GUYNIIDAE (FAM-GUYNI)
FAMILY LOBOPHYLLIIDAE (FAM-LOBOP)
FAMILY MEANDRINIDAE (FAM-MEAND)
FAMILY MERULINIDAE (FAM-MERUL)
FAMILY MICRABACIIDAE (FAM-MICRA)
FAMILY NOT (FAM-UNID)
FAMILY OCULINIDAE (FAM-OCULI)
FAMILY PLESIASTREIDAE (FAM-PLESI)
FAMILY POCILLOPORIDAE (FAM-POCIL)
FAMILY PORITIDAE (FAM-PORIT)
FAMILY PSAMMOCORIDAE (FAM-PSAMM)
FAMILY RHIZANGIIDAE (FAM-RHIZA)
FAMILY SCHIZOCYATHIDAE (FAM-SCHIZ)
FAMILY SIDERASTREIDAE (FAM-SIDER)
FAMILY STENOCYATHIDAE (FAM-STENO)
FAMILY TURBINOLIIDAE (FAM-TURBI)
FAVIA (FAVIA)
FAVITES (FAVIT)
FIMBRIAPHYLLIA (FIMB)
FLABELLUM (FLAB)

FOVEOLOCYATHUS (FOVE)
FUNGIA (FUNG)
FUNGIACYATHUS (FUNGC)
GALAXEA (GALA)
GARDINERIA (GARDA)
GARDINEROSERIS (GARDS)
GONIASTREA (GONI)
GONIOCORELLA (GONIC)
GONIOPORA (GONIP)
GUYNIA (GUYN)
GYROSMILIA (GYRO)
HALOMITRA (HALO)
HELIOFUNGIA (HELIF)
HELIOSERIS (HELI)
HERPOLITHA (HERP)
HETEROCYATHUS (HETEC)
HETEROPSAMMIA (HETEP)
HOLCOTROCHUS (HOLC)
HOMOPHYLLIA (HOMO)
HOPLANGIA (HOPL)
HORASTREA (HORA)
HYDNOPHORA (HYDN)
IDIOTROCHUS (IDIO)
ISOPHYLLIA (ISOPH)
ISOPORA (ISOPO)
JAVANIA (JAVA)
KIONOTROCHUS (KION)
LABYRINTHOCYATHUS (LABY)
LEPTASTREA (LEPT)
LEPTOPENUS (LEPTP)
LEPTOPSAMMIA (LEPTM)
LEPTORIA (LEPTA)
LEPTOSERIS (LEPTS)
LETEPSAMMIA (LETE)
LISSOTROCHUS (LISS)
LITHOPHYLLON (LITH)
LOBACTIS (LOBA)
LOBOPHYLLIA (LOBO)
LOCHMAEOTROCHUS (LOCH)

MACHADOPORITES (MACH)
MADRACIS (MADRA)
MADREPORA (MADR)
MANICINA (MANI)
MEANDRINA (MEAN)
MERULINA (MERU)
MICROMUSSA (MICR)
MONOHEDOTROCHUS (MONOH)
MONOMYCES (MONO)
MONTIGYRA (MONT)
MONTIPORA (MONTI)
MOSELEYA (MOSE)
MUSSA (MUSSA)
MUSSISMILIA (MUSS)
MYCEDIUM (MYCE)
MYCETOPHYLLIA (MYCET)
NEMENZOPHYLLIA (NEME)
NOMLANDIA (NOML)
NOTOCYATHUS (NOTO)
NOTOPHYLLIA (NOTOP)
OCULINA (OCUL)
ORBICELLA (ORBI)
OULANGIA (OULAN)
OULASTREA (OULA)
OULOPHYLLIA (OULO)
OXYPORA (OXYP)
OXYSMILIA (OXYS)
PACHYSERIS (PACH)
PALAUASTREA (PALA)
PARACONOTROCHUS (PARAC)
PARACYATHUS (PARACY)
PARAGONIASTREA (PARAG)
PARAMONTASTRAEA (PARA)
PAVONA (PAVO)
PECTINIA (PECT)
PEDICELLOCYATHUS (PEDI)
PEPONOCYATHUS (PEPO)
PETROPHYLLIA (PETR)
PHACELOCYATHUS (PHAC)

PHYLLANGIA (PHYL)
PHYSOGYRA (PHYS)
PHYSOPHYLLIA (PHYSP)
PLACOTROCHIDES (PLACC)
PLACOTROCHUS (PLAC)
PLATYGYRA (PLATG)
PLATYTROCHUS (PLAT)
PLEOTROCHUS (PLEO)
PLEROGYRA (PLER)
PLESIASTREA (PLES)
PLEURACTIS (PLEU)
POCILLOPORA (POCI)
PODABACIA (PODA)
POLYCYATHUS (POLYC)
POLYMYCES (POLYM)
POLYPHYLLIA (POLY)
PORITES (PORI)
POURTALOCYATHUS (POUR)
POURTALOPSAMMIA (POURP)
POURTALOSMILIA (POURS)
PREMOCYATHUS (PREM)
PSAMMOCORA (PSAM)
PSEUDOCYATHOCERAS (PSEUC)
PSEUDODIPLORIA (PSEUD)
PSEUDOSIDERASTREA (PSEUS)
RHIZOPSAMMIA (RHIZP)
RHIZOSMILIA (RHIZS)
RHIZOTROCHUS (RHIZ)
RHOMBOPSAMMIA (RHOM)
SANDALOLITHA (SAND)
SCAPOPHYLLIA (SCAP)
SCHIZOCULINA (SCHIL)
SCHIZOCYATHUS (SCHI)
SCLERHELIA (SCLE)
SCLEROPHYLLIA (SCLEP)
SCOLYMIA (SCOL)
SERIATOPORA (SERI)
SIDERASTREA (SIDE)
SIMPLASTREA (SIMP)

SINUOROTA (SINU)
SOLENASTREA (SOLE)
SOLENOSMILIA (SOLEO)
SPHENOTROCHUS (SPHE)
STENOCYATHUS (STEN)
STEPHANOCOENIA (STEPC)
STEPHANOCYATHUS (STEPY)
STEPHANOPHYLLIA (STEP)
STOLARSKICYATHUS (STOL)
STYLARAEA (STYL)
STYLOCOENIELLA (STYLC)
STYLOPHORA (STYLP)
SYMPODANGIA (SYMP)
TEMNOTROCHUS (TEMN)
TETHOCYATHUS (TETH)
THALAMOPHYLLIA (THAL)
THECOPSAMMIA (THEC)
THRYPTICOTROCHUS (THRY)
TRACHYPHYLLIA (TRAC)
TREMATOTROCHUS (TREM)
TROCHOCYATHUS (TROCC)
TROCHOPSAMMIA (TROC)
TROPIDOCYATHUS (TROP)
TRUNCATOFLABELLUM (TRUNF)
TRUNCATOGUYNIA (TRUN)
TUBASTRAEA (TUBA)
TURBINARIA (TURB)
TURBINOLIA (TURBO)
VAUGHANELLA (VAUG)
ZOOPILUS (ZOOP)
NOTES (% OF CORAL)
ACANTHASTREA (ACAN)
ACROPORA (ACRO)
AFRICANA (AFRI)
AGARICIA (AGAR)
ALATOTROCHUS (ALAT)
ALVEOPORA (ALVE)
AMPHIHELIA (AMPH)
ANACROPORA (ANAC)

ANOMASTRAEA (ANOMA)
ANOMOCORA (ANOM)
ANTHEMIPHYLLIA (ANTH)
ANTILLIA (ANTI)
ASTRANGIA (ASTRA)
ASTREA (ASTR)
ASTREOPORA (ASTRE)
ASTROIDES (ASTRO)
AULOCYATHUS (AULO)
AUSTRALOCYATHUS (AUSTC)
AUSTRALOGYRA (AUSTG)
AUSTRALOPHYLLIA (AUSTP)
BACHYTROCHUS (BACH)
BALANOPHYLLIA (BALAPH)
BALANOPSAMMIA (BALAPS)
BATHELIA (BATH)
BATHYCYATHUS (BATHC)
BATHYPSAMMIA (BATHP)
BERNARDPORA (BERN)
BLASTOMUSSA (BLASM)
BLASTOTROCHUS (BLAST)
BONINASTREA (BONI)
BOURNEOTROCHUS (BOUR)
CANTHARELLUS (CANT)
CARYOPHYLLIA (CARY)
CATALAPHYLLIA (CATA)
CAULASTRAEA (CAUL)
CERATOTROCHUS (CERA)
CLADANGIA (CLADA)
CLADOCORA (CLADO)
CLADOPSAMMIA (CLADS)
COELASTREA (COELTR)
COELOSERIS (COEL)
COENOCYATHUS (COENC)
COENOSMILIA (COENS)
COLANGIA (COLA)
COLPOPHYLLIA (COLP)
CONCENTROTHECA (CONC)
CONFLUPHYLLIA (CONF)

CONOCYATHUS (CONO)
CONOTROCHUS (CONOT)
COSCINARAEA (COSC)
CRATERASTREA (CRAT)
CRISPATOTROCHUS (CRIS)
CRYPTOTROCHUS (CRYP)
CTENACTIS (CTEN)
CTENELLA (CTENE)
CULICIA (CULI)
CYATHELIA (CYATE)
CYATHOTROCHUS (CYAT)
CYCLOSERIS (CYCL)
CYNARINA (CYNA)
CYPHASTREA (CYPH)
DACTYLOTROCHUS (DACT)
DANAFUNGIA (DANA)
DASMOSMILIA (DASM)
DELTOCYATHOIDES (DELT)
DELTOCYATHUS (DELTU)
DENDROCORA (DENDC)
DENDROGYRA (DENDA)
DENDROPHYLLIA (DEND)
DESMOPHYLLUM (DESM)
DICHOCOENIA (DICH)
DICHOPSAMMIA (DICHP)
DIPLOASTREA (DIPLA)
DIPLORIA (DIPL)
DIPSASTRAEA (DIPS)
DUNCANOPSAMMIA (DUNC)
DUNOCYATHUS (DUNO)
ECHINOMORPHA (ECHIM)
ECHINOPHYLLIA (ECHIP)
ECHINOPORA (ECHI)
EGUCHIPSAMMIA (EGUC)
ENALLOPSAMMIA (ENAL)
ENDOCYATHOPORA (ENDO)
ENDOPACHYS (ENDOC)
ENDOPSAMMIA (ENDOP)
ENIGMOPORA (ENIG)

ERICIOCYATHUS (ERIC)
ERYTHRASTREA (ERYT)
EUPHYLLIA (EUPH)
EUSMILIA (EUSM)
FALCATOFLABELLUM (FALC)
FAMILY ACROPORIDAE (FAM-ACROP)
FAMILY AGARICIIDAE (FAM-AGARI)
FAMILY ANTHEMIPHYLLIIDAE (FAM-ANTHE)
FAMILY ASTROCOENIIDAE (FAM-ASTRO)
FAMILY CARYOPHYLLIIDAE (FAM-CARYO)
FAMILY COSCINARAEIDAE (FAM-COSCI)
FAMILY DELTOCYATHIDAE (FAM-DELTO)
FAMILY DENDROPHYLLIIDAE (FAM-DENDR)
FAMILY DIPLOASTREIDAE (FAM-DIPLO)
FAMILY EUPHYLLIIDAE (FAM-EUPHY)
FAMILY FAVIIDAE (FAM-FAVII)
FAMILY FLABELLIDAE (FAM-FLABE)
FAMILY FUNGIACYATHIDAE (FAM-FUNGIC)
FAMILY FUNGIIDAE (FAM-FUNGI)
FAMILY GARDINERIIDAE (FAM-GARDI)
FAMILY GUYNIIDAE (FAM-GUYNI)
FAMILY LOBOPHYLLIIDAE (FAM-LOBOP)
FAMILY MEANDRINIDAE (FAM-MEAND)
FAMILY MERULINIDAE (FAM-MERUL)
FAMILY MICRABACIIDAE (FAM-MICRA)
FAMILY NOT (FAM-UNID)
FAMILY OCULINIDAE (FAM-OCULI)
FAMILY PLESIASTREIDAE (FAM-PLESI)
FAMILY POCILLOPORIDAE (FAM-POCIL)
FAMILY PORITIDAE (FAM-PORIT)
FAMILY PSAMMOCORIDAE (FAM-PSAMM)
FAMILY RHIZANGIIDAE (FAM-RHIZA)
FAMILY SCHIZOCYATHIDAE (FAM-SCHIZ)
FAMILY SIDERASTREIDAE (FAM-SIDER)
FAMILY STENOCYATHIDAE (FAM-STENO)
FAMILY TURBINOLIIDAE (FAM-TURBI)
FAVIA (FAVIA)
FAVITES (FAVIT)
FIMBRIAPHYLLIA (FIMB)

FLABELLUM (FLAB)
FOVEOLOCYATHUS (FOVE)
FUNGIA (FUNG)
FUNGIACYATHUS (FUNGC)
GALAXEA (GALA)
GARDINERIA (GARDA)
GARDINEROSERIS (GARDS)
GONIASTREA (GONI)
GONIOCORELLA (GONIC)
GONIOPORA (GONIP)
GUYNIA (GUYN)
GYROSMILIA (GYRO)
HALOMITRA (HALO)
HELIOFUNGIA (HELIF)
HELIOSERIS (HELI)
HERPOLITHA (HERP)
HETEROCYATHUS (HETEC)
HETEROPSAMMIA (HETEP)
HOLCOTROCHUS (HOLC)
HOMOPHYLLIA (HOMO)
HOPLANGIA (HOPL)
HORASTREA (HORA)
HYDNOPHORA (HYDN)
IDIOTROCHUS (IDIO)
ISOPHYLLIA (ISOPH)
ISOPORA (ISOPO)
JAVANIA (JAVA)
KIONOTROCHUS (KION)
LABYRINTHOCYATHUS (LABY)
LEPTASTREA (LEPT)
LEPTOPENUS (LEPTP)
LEPTOPSAMMIA (LEPTM)
LEPTORIA (LEPTA)
LEPTOSERIS (LEPTS)
LETEPSAMMIA (LETE)
LISSOTROCHUS (LISS)
LITHOPHYLLON (LITH)
LOBACTIS (LOBA)
LOBOPHYLLIA (LOBO)

LOCHMAEOTROCHUS (LOCH)
MACHADOPORITES (MACH)
MADRACIS (MADRA)
MADREPORA (MADR)
MANICINA (MANI)
MEANDRINA (MEAN)
MERULINA (MERU)
MICROMUSSA (MICR)
MONOHEDOTROCHUS (MONOH)
MONOMYCES (MONO)
MONTIGYRA (MONT)
MONTIPORA (MONTI)
MOSELEYA (MOSE)
MUSSA (MUSSA)
MUSSISMILIA (MUSS)
MYCEDIUM (MYCE)
MYCETOPHYLLIA (MYCET)
NEMENZOPHYLLIA (NEME)
NOMLANDIA (NOML)
NOTOCYATHUS (NOTO)
NOTOPHYLLIA (NOTOP)
OCULINA (OCUL)
ORBICELLA (ORBI)
OULANGIA (OULAN)
OULASTREA (OULA)
OULOPHYLLIA (OULO)
OXYPORA (OXYP)
OXYSMILIA (OXYS)
PACHYSERIS (PACH)
PALAUASTREA (PALA)
PARACONOTROCHUS (PARAC)
PARACYATHUS (PARACY)
PARAGONIASTREA (PARAG)
PARAMONTASTRAEA (PARA)
PAVONA (PAVO)
PECTINIA (PECT)
PEDICELLOCYATHUS (PEDI)
PEPONOCYATHUS (PEPO)
PETROPHYLLIA (PETR)

PHACELOCYATHUS (PHAC)
PHYLLANGIA (PHYL)
PHYSOGYRA (PHYS)
PHYSOPHYLLIA (PHYSP)
PLACOTROCHIDES (PLACC)
PLACOTROCHUS (PLAC)
PLATYGYRA (PLATG)
PLATYTROCHUS (PLAT)
PLEOTROCHUS (PLEO)
PLEROGYRA (PLER)
PLESIASTREA (PLES)
PLEURACTIS (PLEU)
POCILLOPORA (POCI)
PODABACIA (PODA)
POLYCYATHUS (POLYC)
POLYMYCES (POLYM)
POLYPHYLLIA (POLY)
PORITES (PORI)
POURTALOCYATHUS (POUR)
POURTALOPSAMMIA (POURP)
POURTALOSMILIA (POURS)
PREMOCYATHUS (PREM)
PSAMMOCORA (PSAM)
PSEUDOCYATHOCERAS (PSEUC)
PSEUDODIPLORIA (PSEUD)
PSEUDOSIDERASTREA (PSEUS)
RHIZOPSAMMIA (RHIZP)
RHIZOSMILIA (RHIZS)
RHIZOTROCHUS (RHIZ)
RHOMBOPSAMMIA (RHOM)
SANDALOLITHA (SAND)
SCAPOPHYLLIA (SCAP)
SCHIZOCULINA (SCHIL)
SCHIZOCYATHUS (SCHI)
SCLERHELIA (SCLE)
SCLEROPHYLLIA (SCLEP)
SCOLYMIA (SCOL)
SERIATOPORA (SERI)
SIDERASTREA (SIDE)

SIMPLASTREA (SIMP)
SINUOROTA (SINU)
SOLENASTREA (SOLE)
SOLENOSMILIA (SOLEO)
SPHENOTROCHUS (SPHE)
STENOCYATHUS (STEN)
STEPHANOCOENIA (STEPC)
STEPHANOCYATHUS (STEPY)
STEPHANOPHYLLIA (STEP)
STOLARSKICYATHUS (STOL)
STYLARAEA (STYL)
STYLOCOENIELLA (STYLC)
STYLOPHORA (STYLP)
SYMPODANGIA (SYMP)
TEMNOTROCHUS (TEMN)
TETHOCYATHUS (TETH)
THALAMOPHYLLIA (THAL)
THECOPSAMMIA (THEC)
THRYPTICOTROCHUS (THRY)
TRACHYPHYLLIA (TRAC)
TREMATOTROCHUS (TREM)
TROCHOCYATHUS (TROCC)
TROCHOPSAMMIA (TROC)
TROPIDOCYATHUS (TROP)
TRUNCATOFLABELLUM (TRUNF)
TRUNCATOGUYNIA (TRUN)
TUBASTRAEA (TUBA)
TURBINARIA (TURB)
TURBINOLIA (TURBO)
VAUGHANELLA (VAUG)
ZOOPILUS (ZOOP)

Annexure D: Marine Water Quality Data

Location	Site No	DATE	TIME	GPS Latitude (°)	GPS Longitude (°)	Barometer (mmHg)	Temp (°C)	Cond (µS/cm)	Sp Cond (µS/cm)	Sal (psu)	nLFCond (µS/cm)	TDS (mg/L)	Resistivity (ohms-cm)	Sigma-T (s t)	Sigma (s)	ODO (% Sat)	ODO (mg/L)	ODO (ppm)	pH	pH (mV)	ORP (mV)	Turbidity (FNU)
Jaluit	1	5/02/2019	12:25:38	6.01343 °	169.71791 °	754	28.4	54812.8	51471.7	33.73	51108.6	33457	18.24	21.3	21.3	97.5	6.29	6.29	8.2	-80.1	95.6	0.84
	2	5/02/2019	12:28:40	6.01523 °	169.71648 °	754	28.4	54774.3	51459.9	33.72	51099.9	33449	18.26	21.3	21.3	96.4	6.21	6.21	8.19	-79.6	70.4	0.79
	3	5/02/2019	12:31:30	6.01476 °	169.71625 °	754	28.3	54746.4	51457.2	33.72	51100	33447	18.27	21.3	21.3	96.8	6.25	6.25	8.2	-80.1	37	0.77
	4	5/02/2019	12:37:37	6.01253 °	169.71642 °	754.1	28.3	54721.2	51455.3	33.72	51100.8	33446	18.27	21.3	21.3	97.4	6.29	6.29	8.18	-79	70.8	0.81
	5	5/02/2019	12:38:19	6.01246 °	169.71631 °	754.1	28.3	54735.6	51456.7	33.72	51100.7	33447	18.27	21.3	21.3	95.1	6.14	6.14	8.17	-78.5	62.1	0.81
	6	5/02/2019	12:41:04	6.00455 °	169.71613 °	754	28.4	54824.1	51461.7	33.72	51096.2	33450	18.24	21.3	21.3	96.1	6.19	6.19	8.18	-79.2	62	0.74
	7	5/02/2019	11:02:30	5.92050 °	169.64162 °	754.9	28.6	54967.2	51453.2	33.71	51070.4	33445	18.19	21.2	21.2	95.7	6.15	6.15	8.06	-72.7	44.8	0.64
	8	5/02/2019	11:04:23	5.92031 °	169.64145 °	754.8	28.5	54846	51401.1	33.67	51026.2	33411	18.23	21.2	21.2	95.4	6.14	6.14	8.1	-75	0.9	0.62
	9	5/02/2019	11:06:57	5.92015 °	169.64159 °	754.9	28.6	54902.2	51406.1	33.68	51025.3	33414	18.21	21.2	21.2	95.8	6.16	6.16	8.13	-76.3	-12.9	0.62
	10	5/02/2019	13:18:12	5.92386 °	169.63222 °	753.7	28.7	55105.5	51466.7	33.72	51069.6	33453	18.15	21.2	21.2	96.6	6.2	6.2	8.23	-81.4	101.6	0.54
	11	5/02/2019	13:19:02	5.92357 °	169.63196 °	753.7	28.7	55099.6	51466.3	33.72	51069.8	33453	18.15	21.2	21.2	96.6	6.2	6.2	8.19	-79.7	92.5	0.51
	12	5/02/2019	13:21:56	5.92337 °	169.63759 °	753.8	28.7	55060	51459.7	33.71	51067	33449	18.16	21.2	21.2	96.2	6.18	6.18	8.18	-79.2	78.4	0.52
	13	5/02/2019	13:23:54	5.91977 °	169.63985 °	753.7	28.5	54853.1	51403.9	33.68	51028.5	33413	18.23	21.2	21.2	95.8	6.17	6.17	8.16	-78.1	66.3	0.56
	14	5/02/2019	13:26:07	5.91863 °	169.64128 °	753.8	28.5	54881.2	51407.1	33.68	51028.8	33415	18.22	21.2	21.2	97	6.24	6.24	8.16	-78	17.4	0.58
Ebeye	1	6/02/2019	9:47:46	8.77730 °	167.73502 °	756.9	27.9	54082.3	51253.2	33.58	50948	33315	18.49	21.4	21.4	94.8	6.17	6.17	8.17	-78.6	84.6	0.61
	2	6/02/2019	9:50:33	8.77750 °	167.73242 °	756.9	27.9	54121.4	51255.1	33.58	50945.7	33316	18.48	21.4	21.4	94.9	6.17	6.17	8.17	-78.3	83.4	0.59
	3	6/02/2019	9:52:25	8.77919 °	167.73163 °	757	28	54146.3	51256.3	33.58	50944.2	33317	18.47	21.3	21.3	95.1	6.18	6.18	8.16	-78	90.8	0.6
	4	6/02/2019	10:17:41	8.79025 °	167.73196 °	756.7	27.9	54126.6	51247.7	33.58	50936.8	33311	18.48	21.3	21.3	96.4	6.26	6.26	8.2	-79.8	120.7	0.6
	5	6/02/2019	10:28:37	8.78539 °	167.73337 °	756.7	27.9	54114.2	51244.8	33.58	50935	33309	18.48	21.4	21.4	95	6.17	6.17	8.18	-78.8	92.8	0.58
	6	6/02/2019	10:31:31	8.78120 °	167.73500 °	756.5	28	54083.9	51178.2	33.53	50864.3	33266	18.49	21.3	21.3	98.8	6.42	6.42	8.18	-79	109.3	0.72
Majuro	1	8/02/2019	12:39:26	7.10199 °	171.33855 °	754.2	28.2	54593.8	51450	33.72	51109.3	33442	18.32	21.4	21.4	96.5	6.24	6.24	8.11	-75.4	-4.4	0.71
	2	8/02/2019	12:43:45	7.09791 °	171.34441 °	753.8	28.2	54543.4	51440.4	33.71	51104.3	33436	18.33	21.4	21.4	96.5	6.24	6.24	8.16	-77.7	68.2	0.74
	3	8/02/2019	12:48:56	7.09490 °	171.35497 °	753.7	28.1	54445.2	51412.6	33.7	51084.4	33418	18.37	21.4	21.4	96.7	6.26	6.26	8.18	-78.9	63.4	0.72
	4	8/02/2019	12:53:11	7.08485 °	171.35124 °	753.7	28.1	54439.4	51405.1	33.69	51076.7	33413	18.37	21.4	21.4	96.8	6.27	6.27	8.19	-79.3	73.3	0.67
	5	8/02/2019	12:57:08	7.08492 °	171.35481 °	753.8	28.1	54432.2	51401.5	33.69	51073.5	33411	18.37	21.4	21.4	97.4	6.31	6.31	8.17	-78.5	29.1	0.71
	6	8/02/2019	13:00:06	7.08630 °	171.35901 °	753.4	28.1	54416.7	51402.4	33.69	51076.4	33412	18.38	21.4	21.4	96.7	6.27	6.27	8.19	-79.2	64.7	0.7
	7	8/02/2019	13:04:49	7.08611 °	171.36313 °	753.4	28.1	54406.1	51383.3	33.67	51056.2	33399	18.38	21.4	21.4	97.7	6.33	6.33	8.17	-78.2	43.5	0.83
	8	8/02/2019	13:06:52	7.08651 °	171.36571 °	753.7	28.1	54413.1	51407.1	33.69	51081.9	33415	18.38	21.4	21.4	96.7	6.27	6.27	8.16	-78	43.5	0.67
	9	8/02/2019	13:08:11	7.08619 °	171.36690 °	753.5	28.1	54419.8	51410.2	33.69	51084.7	33417	18.38	21.4	21.4	97.2	6.3	6.3	8.17	-78.3	50.7	0.7
	10	8/02/2019	13:10:53	7.09205 °	171.37022 °	753.6	28	54390.3	51400.4	33.69	51077.1	33410	18.39	21.4	21.4	96.6	6.26	6.26	8.17	-78.2	65.9	0.68
	11	8/02/2019	13:13:19	7.09835 °	171.37202 °	753.6	28.1	54432.5	51417.1	33.7	51090.9	33421	18.37	21.4	21.4	97	6.29	6.29	8.17	-78.2	83.5	0.7
	12	8/02/2019	13:15:47	7.10266 °	171.37448 °	753.7	28.1	54436.4	51419.1	33.7	51092.7	33422	18.37	21.4	21.4	98.3	6.37	6.37	8.18	-78.7	87	0.75
	13	8/02/2019	13:18:55	7.10556 °	171.37224 °	753.7	28	54409.5	51418.9	33.7	51095.5	33422	18.38	21.4	21.4	97.2	6.3	6.3	8.17	-78.6	84.8	0.72
	14	8/02/2019	13:20:53	7.10681 °	171.37109 °	753.6	28.1	54426.4	51420.2	33.7	51095.1	33423	18.37	21.4	21.4	96.8	6.28	6.28	8.17	-78.4	85.2	0.71
	15	8/02/2019	13:25:21	7.10616 °	171.37228 °	753.6	28.2	54550.7	51408.2	33.69	51067.6	33415	18.33	21.3	21.3	102.8	6.65	6.65	8.18	-78.7	100.3	0.88

Annexure E: Wotje Trip Report

Marshall Islands Maritime Investment Project

Wotje Site Inspection of Dock Facilities

2nd March 2019

Prepared by RMI Division of International Development Assistance

Marshall Islands Maritime Investment Project

Wotje

Site Inspection of Dock Facilities

2nd March 2019

Prepared by RMI Division of Development Assistance (DIDA)

Descriptive Report to Inform ESMF/ESMP

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1. INTRODUCTION

The RMI Ministry of Finance's Division of International Development Assistance (DIDA) undertook a field visit to Wotje to conduct initial stakeholder engagement and carry out a preliminary engineering/environmental inspection of the Wotje Dock facilities as part of the investigations relating to the World Bank's Marshall Islands Maritime Investment Project (MIMIP).

The visit was undertaken on 2nd March 2019 by a team comprising staff from DIDA and RMI Ports Authority (RMIPA). The team was accompanied by a civil engineer and a local commercial diver and historian.

2. BACKGROUND

The Marshall Islands Maritime Investment Project (MIMIP) has been designed to enhance the safety and efficiency of maritime operations in RMI, with a focus on improving maritime infrastructure and services. MIMIP is intended to provide for the repair/refurbishment of the sea port/docks on Majuro, Jaluit, Wotje, Arno and Ebeye, and is being implemented by RMIPA.

The project includes, the following components relating to Wotje:

a. *physical works and technical assistance at Delap and Uliga Docks in Majuro, Ebeye Dock, Kwajalein Atoll and the outer islands of Jaluit, Wotje and Arno;*

b. *technical assistance with respect to institutional arrangements and structures, governance and port operations and capacity building particularly related to Human Trafficking and Gender-Based Violence;*

…….

g. *Repair and maintenance of aids to navigation in Majuro, Jaluit and Wotje lagoons.*

In 2018, the RMI Government and World Bank commissioned ESIA Consult Limited to prepare the following documents for the project:

- Environmental and Social Management Framework (ESMF)
- Environmental and Social Management Plan (ESMP)
- Stakeholder Engagement Plans and Gender Plans.

Representatives of the consultancy visited RMI in February 2019, but owing to the Wotje airport closure, they were unable to visit Wotje.

The visit of 2nd March was intended to provide project information relating to Wotje and inform MIMIP project planning. The team engaged with stakeholders; informed them of the project and sought feedback on any current issues and challenges being faced by the Wotje community in regard to the dock facilities.

During the visit, the team also conducted a preliminary engineering assessment of the existing dock facilities to provide additional information for the World Bank to identify any repairs/refurbishments necessary for Wotje.

3. STAKEHOLDER MEETING

3.1. AGENDA

The meeting agenda was precirculated and was as follows: i) Introductions ii) Objective of meeting iii) Description of MIMIP Project iv) Potential Impacts and Benefits of Project v) Stakeholder discussion including:

a. Concerns about existing facility
b. Environment and social impact concerns of any upgrade works
c. Visiting vessels and management of any associated passengers

vi) Any further questions
vii) Responses to issues raised where possible viii) Where to from here ix) Meeting close

3.2. ATTENDEES

The Mayor of Wotje along with 94 Wotje residents and other interested parties attended the meeting.

3.3. PROCEEDINGS

Garry Venus (DIDA Safeguards Specialist) introduced the team and handed out a prepared presentation written in English and Kajin Mạjeḷ (Annex 1).

The following matters arose in discussion:

1. The dock and ramp were built by the Japanese administration prior to WWII.
2. The dock was extensively damaged by bombing in WWII. Debris is scattered in the water around the outer end of the dock. There is a small boat landing area on the southern side of the dock. (See photos in Annex 2)
3. Large boats and ships are unable to directly use the dock. These larger vessels anchor in the lagoon and rely on smaller boats as lighters to transfer goods and passengers to the dock.
4. It takes 3-4 days to offload a big vessel. Transfer avoids low tide owing to underwater debris. This constrains timing of cargo transfer.
5. Cargo is unloaded manually – there are potentially major safety issues - no crane on dock. The local community would like a crane for unloading diesel drums, building materials and other large items.
6. Bollards and cleats on the dock are in a state of serious disrepair, with many having been ripped from their foundations.
7. Oil spills commonly arise from MEC oil transfer on the northern ramp structure.

   Oil transfer occurs every 3 months by pipeline from ships arriving from Majuro. Spills occur on most trips.
8. The community expressed considerable interest in spill kits at the ramp and on the dock but recognize the need for proper training in spill response, both in terms of use of spill equipment and in measuring impacts. The community has little capacity to measure damage from spills

9. Community would like a covered passenger waiting area/cargo holding area at the end of the dock.
10. There are no navigation aids in the channel
11. Two ships visit every three months: General supply ship from Majuro to the dock; and a separate MEC oil supply vessel to the ramp.
12. There are about 15 small boats on Wotje currently moored in the lagoon.
13. Existing steps at boat loading dock are in poor repair and not readily useable.

    There is considerable community interest in new stairs for the as a safety issue.
14. The key overall issue is the poor state of the dock surface and facilities – considerable work is required according to locals.
15. Some community Interest in dredging around the dock and removing debris from seabed around wharf. They were advised that such activities were not part of MIMIP. There is the possibility that such works codl be undertaken separately by RMIPA, but this would be outside the scope of the MIMIP.
16. The northern ramp is used during high tide only. It is only used by MEC for fuel transfer.
17. Border Management/Passenger Control
    a) All incoming boats have gone through immigration control at Majuro or Kwajalein before coming to Wotje.
    b) Majuro Authorities (Immigration Department) inform Walgov who have police officers on standby for visits.
    c) Only a very infrequent number of private boats come to Wotje.
    d) No reports of boats coming in without prior approval.
18. Other Matters:
    a) Community members expressed general concerns about climate change impacts – want an RO plant on the island – it was agreed that such matters are not part of MIMIP.

4. SITE DESCRIPTION

4.1. PHOTOGRAPHS

Figures A, B and C set out Google Earth images of the Wotje Facilities.

Annex 2 sets out a series of land-based photographs of both facilities.

The following sections present underwater photographs of he dock and ramp.

4.2. STRUCTURAL NOTES

4.2.1. General

Both the dock and ramp were constructed by the Japanese administration prior to WWII when Wotje was operating as a commercial area in the build up to WWII. Original documents and design plans might be available from the Historic Preservation Office (HPO) and Japanese contacts.

Wotje lagoon has a generally sandy bottom that starts shallow and very slowly gets deeper with distance from the sandy beach. The depth at the end of the structures is approximately 3.3m - 3.6m (11 or 12 feet) at high tide. The tidal range is approximately 1.6m (5.3 feet) for a spring tide and 0.45m (1.5 feet) for a neap tide. The lengths of the structures are approximately 160m for the dock in the south and 200m for the sea plane ramp to the north.

The surface of each structure is approximately 0.6m (2 feet) above high tide.

Figure A: General Location of facilities
N
Wotje Ramp
Wotje Dock
© 2018 Google
Image © 2019 CNES / Airbus
115 m
2004
Google Earth
Imagery Date: 6/22/2016 lat 9.457859° lon 170.233706° elev 0 m eye alt 463 m

Figure B: Wotje Ramp. MEC power plant at base

Figure C: Wotje Dock. MIMRA Building at base

4.2.2. Wotje Dock

The dock sides are both constructed with a base of large precast tongue and groove concrete blocks with a capping 'beam' running along the top. The blocks are approximately 1m high, 1m wide and 2m long and are stacked 2 to 3 high. The capping strip is an asymmetric shape in cross section and is approximately 0.6m by 0.6m. The end of the dock has a very large section of mass concrete instead of the capping beam. General aggregate fill has been used to fill between the two sides and is the finished surface that is trafficked.

On the south side of the dock there is an approximately 30m length of side wall, starting at the beach end, where the topping beam is starting to fail by rotation and the top is leaning out (away from the dock).

The surface of the dock is gravel / fill material with grass and small weeds growing on it. Presumably there has been some topping up of the fill material over the years

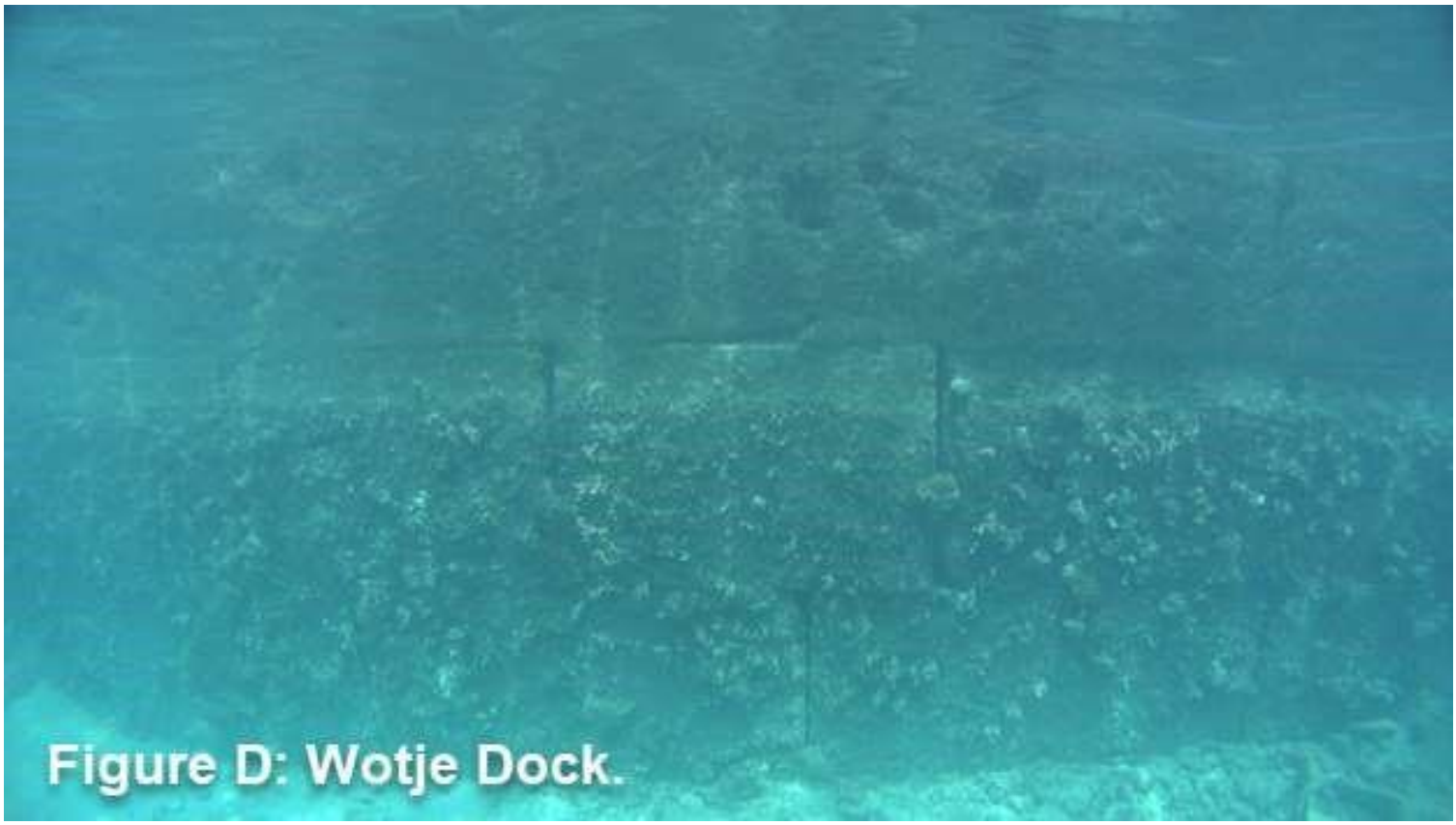


Figure D: Wotje Dock.

The blocks appear to be in good condition with little or no reduction in size. The blocks do not appear to be suffering from reinforcing steel corrosion. Between some of the blocks there are small gaps in the joints that are allowing wave action to erode the fill.

Figure E: Wotje Dock.

Figure F: Wotje Dock.

A WWII bomb blast scattered the large blocks at the end of the dock, allowing the wave action to erode the fill material – this has made the end of the dock (the position with the most access to the deeper water) completely unusable except for swimming. The bomb blast also destroyed the crane and crane dock structure, which was housed on a perpendicular dock extension / widening at the end of the dock; the large blocks are scattered on the seabed and some of the rusted steel crane assembly remains.

Figure G: Wotje Dock.

The single set of stairs to service smaller vessels is not easily accessible, and while useable, is not in good condition. These stairs appear to be suitable only for swimmers / spear fishers.

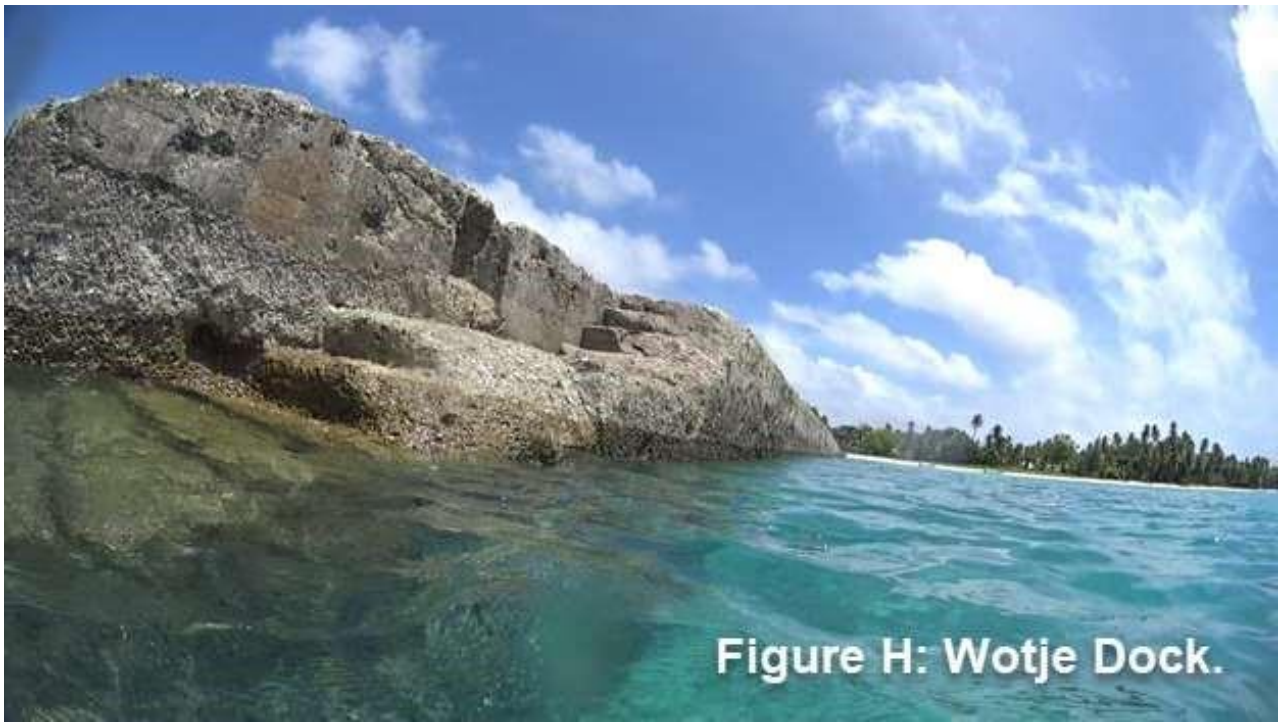


Figure H: Wotje Dock.

4.2.3. Wotje Ramp

The sea plane ramp is built from small solid concrete blocks on a sloping wall with large concrete blocks supporting and protecting the smaller block walls in deeper water and as necessary. The larger protecting blocks are positioned in a line parallel to the north side of the ramp for approximately 30m in the deeper end of the ramp and on the southside only adjacent to the sloping ramp. There appears to be no bomb damage, however the end sloping ramp has a section of concrete surface slabs missing and the fill under it was visibly eroding from wave action. Some of the small sloping blocks appear to have deteriorated over time and there is erosion taking place from between the smaller concrete blocks.

The bottom of the sloping ramp has sections of concrete slab that have been displaced, presumably by wave action.

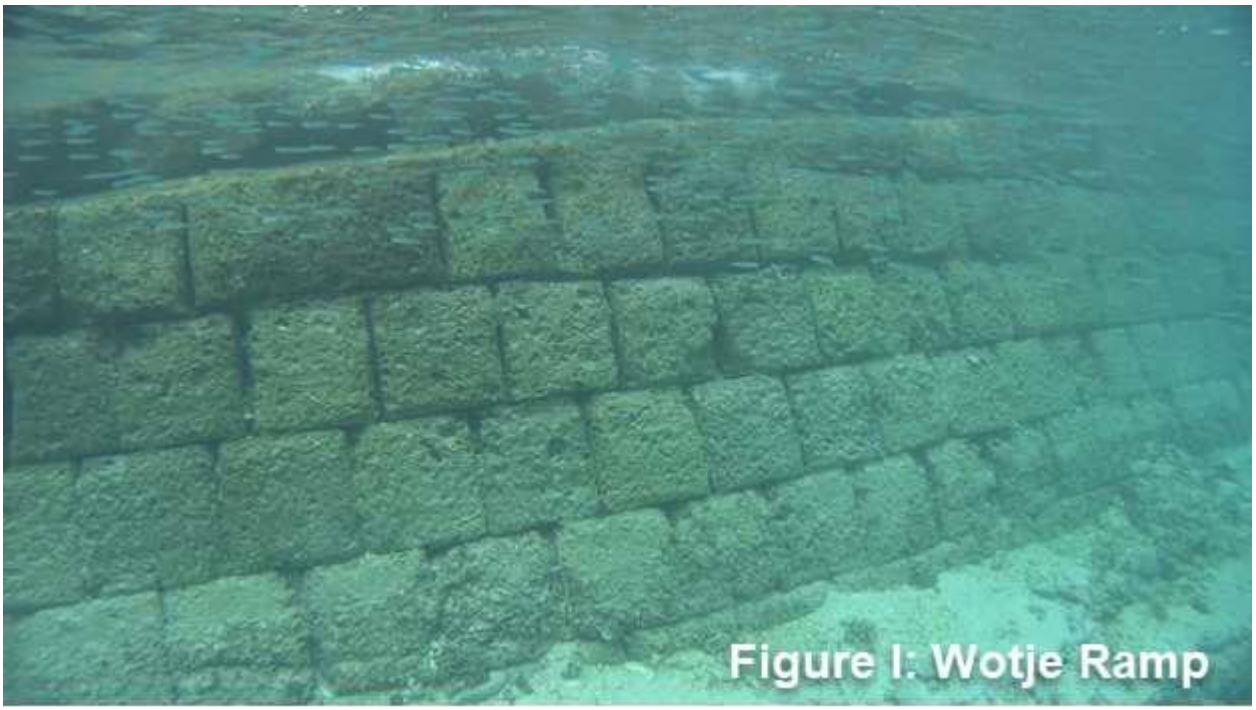
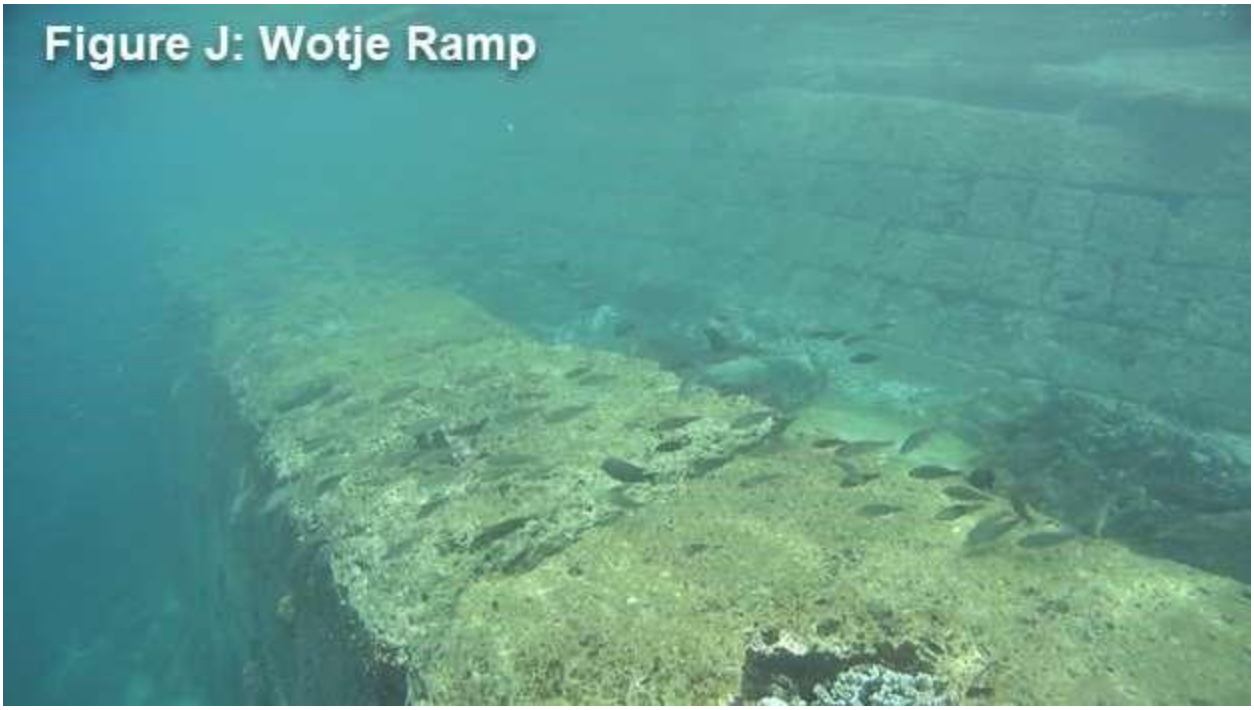


Figure I: Wotje Ramp

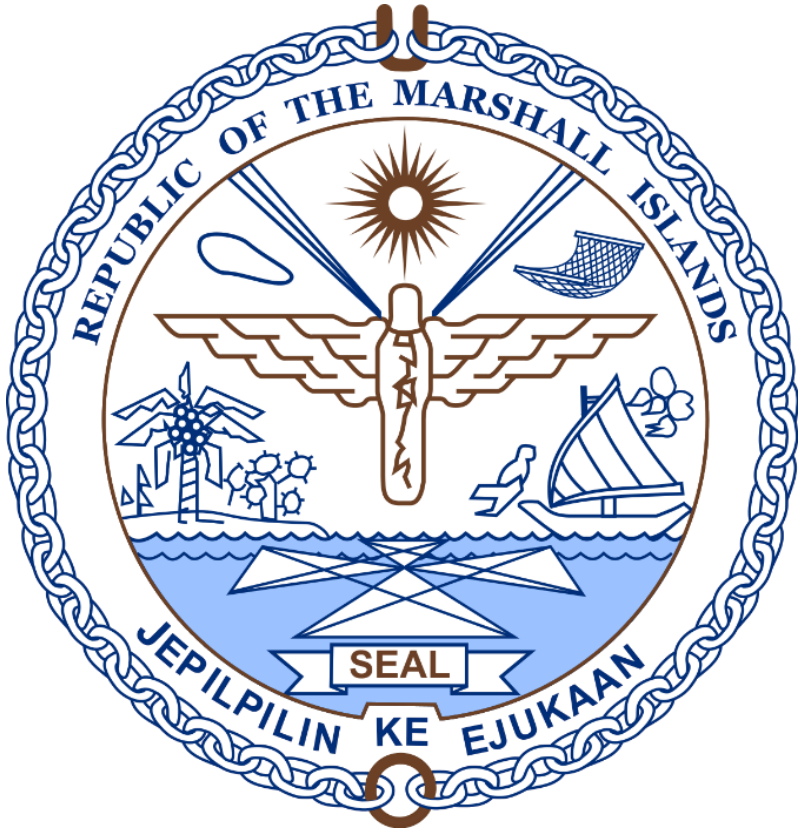


5. KEY ISSUES IDENTIFIED

1. The ramp is mainly used by MEC for fuel transfer.

2. Focus of MIMIP should be on the dock.
3. Works on the dock appear necessary from a safety and access point of view.
4. Consideration should be given to upgrading the steps, installing a crane and installation of passenger/cargo shelter.
5. Any works on the dock/ramp will fall under the provisions of the Historic Preservation Act 1991, and the HPO.
6. The dock appears to experience relatively low levels of use from the point of view of visiting boats.
7. Effective screening of visiting vessels is maintained by locals. We observed that Walgov Police Officers escorted passengers from a visiting superyacht. 8. There is evidence [Annex 2] of many bollards/cleats having been damaged – apparently by recent barge activity. These mooring structures warrant repair/reinstatement.
9. Remedial works can be undertaken on the dock without works affecting the seabed.

Annex 1 - Handout



RMI Maritime Investment Project

Wotje Consultation Meeting

02 March 2019

Division of International Development Assistance RMI
Ministry of Finance

Project Description

Overview	
World Bank RMI Maritime Investment Project (MIMIP)	
Repair and upgrade RMIPA port facilities Delap, Uliga, ebeye, Jaluit, Wotje and Arno	Project in ej ikijeen kakamanmanlak im kakaal lak jidrik ob ko im jerbal ko an ob ko ilo Majuro, Ebeye, Jaluit, Wotje im kab Arno.
Project currently in preparation - includes environmental and social impact studies to establish operational framework.	Project in kio ej bed wot ilo an kabobo – im kio rej lale ta ko rej jelet belaakin aelon ko kajojo im jej kenono kaki. Jenej lale belaakin aelon ko kab mour in armej ro ie ne ej itok nan ob kein bwe jen maron kalek juon plan in jerbale ob kein.

Will be implemented by Department of Transportation and Communication (DoTC) with assistance from RMI Ministry of Finance (DIDA) and RMIPA.	Project in ej itok iumwin Ministry eo an T&C ibben jiban ko an Finance im kab RMI Port Authority ro an aelon kein.
Project will run over Five (5) years	Project in bok 5 year aetokin.
Components	
Component 1: Marine Infrastructure (Years 3 to 5) Repair of outer islands port structures (Arno, Wotje and Jaluit)	Paat 1: Jerbal ko ioon ob ko (iyo 3 nan 5) Kakamanmanlak im repair e ob koi lo outer island ko (Arno, Wotje im Jaluit)
Component 2: Maritime Safety and Security (Years 1 to 5)	Paat 2: Bobrae in joreen ko kab ri kejbarok koi lo ioon Ob ko (iyo 1 nan 5)
• Upgrade Aids for Navigation • Spill kits (incl training) • Counter trafficking	• Kakaal kein jerbal in ejarakrok ko • Kein bobrae ikijeen jorren ak oil ko wa ko lojet (Training in kojerbal kein jerbal ko) • Bobrae jen joreen ko jen ilikin

Component 3: Technical Assistance (Years 1 to 5) • Prepare designs and construction supervision of infrastructure • Capacity Building • Project Management support	Paat 3: Armej ro im elon aer jelalokjen ilo jerbal in ob kein renej itok im kakamanmanlak ob kein (iyo 1 nan 5) • Kabooj kadede elaajarok in design ak plan in ekkal e oak kakaal ko renej bok jikin ilo ob ne. • Katakin armej ro ilo Wotje kin bar jerbal kein renej bok jikin • Jiban jen bar ro im rej bar bed iumin project in bwe en wonmaanlak wot.

Wotje Port – Repairs

Where we are now

Programme

Field Work – February – Early March 2019 ***
Final documents – 18th March 2019
World Bank Board Decision – May 14th 2019
Commence late 2019 (if approved)

Discussion About Potential Impacts and Benefits

Environmental	Social
• Impacts	• Impacts
• Benefits	• Benefits

Key Contacts

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Malie Tarbwillin (DIDA) - mtarbwilin@gmail.com

Thomas Maddison - thomas.maddison@rmipa.com

Annex 2 – Photos of Facilities

Wotje Dock

Figure 1: Wotje Dock. MIMRA
Building on right

Figure 2: Wotje Dock. South side.

Figure 3: Wotje Dock. South side.

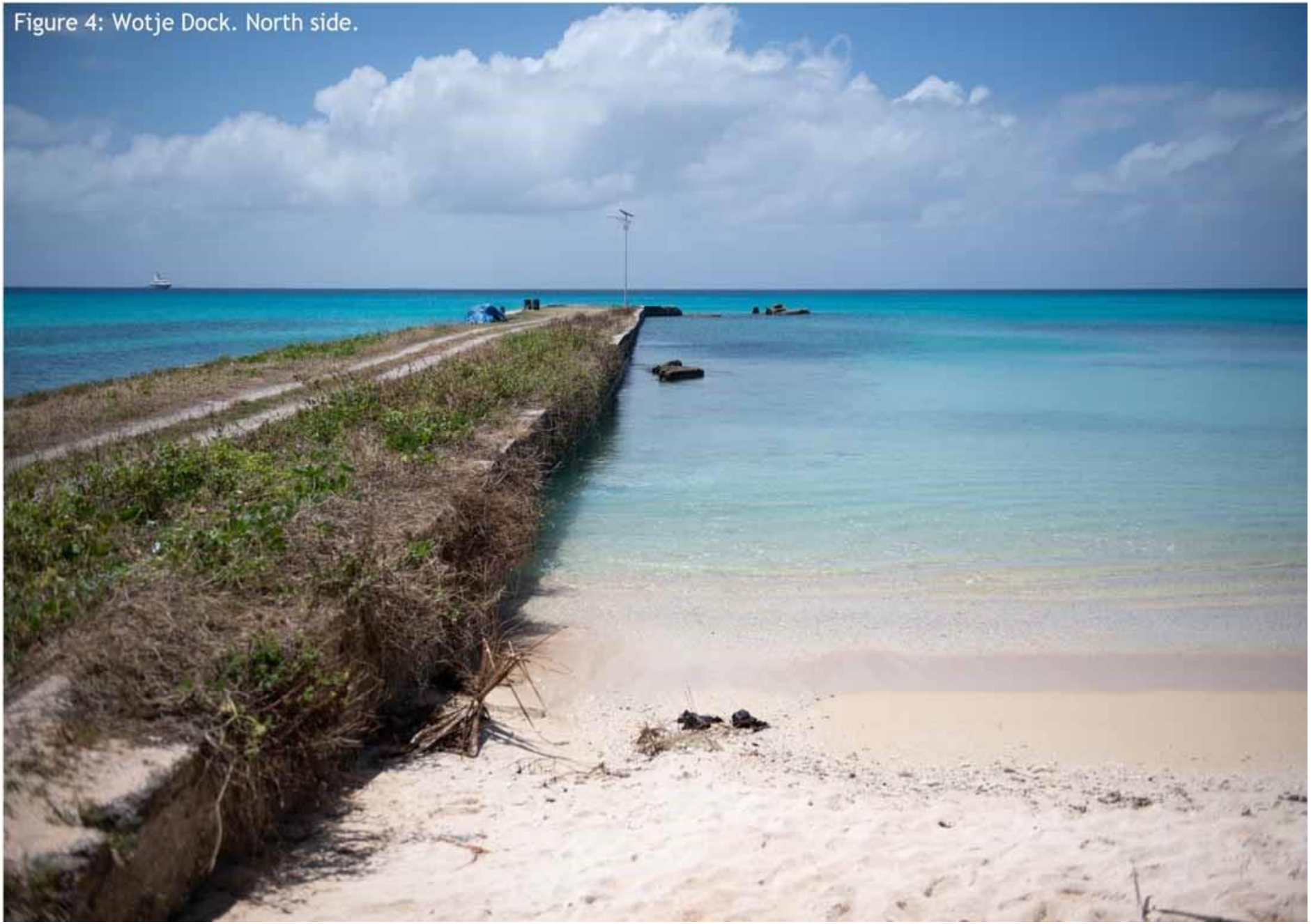


Figure 4: Wotje Dock. North side.

Figure 5: Wotje Dock. View to end of dock. Blue tarpaulin over shipping goods. Note lighting; and rubble used for fill adjacent to northern dock wall.

Figure 6: Wotje Dock. Towards end of dock. Blue tarpaulin over shipping goods. Note lighting.

Figure 7: Wotje Dock. Towards end of dock. Location of boat unloading area. Bollard pulled out.

Figure 8: Wotje Dock. Towards end of dock. Location of boat unloading area. Bollard.

Figure 9: Wotje Dock. Towards end of dock. Southern side.
Boat unloading area. Cargo storage in open.

Figure 10: Wotje Dock. Towards end of dock. Southern side. Boat unloading area. Corroded bollard

Figure 11: Wotje Dock. Boat unloading area. Cargo storage in open.

Figure 12: Wotje Dock. Towards end of dock. Northern side. Across from boat unloading area. Another bollard pulled out

Figure 13: Wotje Dock. From end facing inland

Figure 14: Wotje Dock. Towards end of dock. Northern side.
Across from boat unloading area. Cleat pulled out

Figure 15: Wotje Dock. End of dock. Showing bomb damage.

Wotje Ramp

Figure 1: Wotje Ramp. From end of dock.

Figure 2: Wotje Ramp. South Side looking shoreward

Figure 3: Wotje Ramp. North Side looking shoreward

Figure 4: Wotje Ramp. End of ramp showing hole and earthworks

Figure 5: Wotje Ramp. Southeast corner at end

Figure 6: Wotje Ramp. Southeast corner. Bollard

Figure 7: Wotje Ramp. MEC Fuel Pipeline Connection

Figure 8: Wotje Ramp. MEC Fuel Pipeline Connection

Figure 9: Wotje Ramp. Northern side facing shoreward

Annexure F: MIMIP ESMP

Marshall Islands Maritime Investment Project

Environment and Social Management Plan

1. INTRODUCTION

300. The Government of the Republic of Marshall Islands (RMI) is applying to the World Bank for grant financing to undertake the "*Marshall Islands Maritime Investment Project*" (MIMIP). The MIMIP will improve the safety, efficiency and climate resilience of maritime infrastructure and operations in the RMI in compliance with the International Ship and Port Facility Security (ISPS) Code to ensure safety and security arounds its port.

301. As part of the requirements of the submission to the World Bank, the Government of RMI is required to prepare environmental and social safeguards documentation as part of the Project Preparation Advance stage. The MIMIP has been categorized as a Category B (Moderate Risk) project consistent with World Bank Environmental and Social Safeguard protocols. To fulfil the requirements of the World Bank, the Government of RMI has prepared this Environmental and Social Management Plan (ESMP) in support of the MIMIP proposal.

302. The MIMIP consists of four components:

- Component 1: Maritime Infrastructure
- Component 2: Maritime Safety and Security
- Component 3: Technical Assistance for Port Planning and Project Management
- Component 4: Contingency Emergency Response

303. This ESMP is for the initial activities that will be undertaken for the project, which are described below. The ESMF applies to other activities and may require the development of additional ESMPs.

2. SUB-PROJECT DESCRIPTION

304. This ESMP is for the following activities:

- Component 2: Maritime Safety and Security
  - Repair quay wall structures, replace quay furniture (fenders, bollards, ladders, curbs) at Delap, Uliga and Ebeye Docks.
  - Upgrade/provide fencing, gates, terminal lighting, backup generators, and CCTV systems to comply with ISPS requirements.
  - Replace/upgrade Aids to Navigation for Majuro and Outer Islands (excludes Ebeye).
  - Backup generators for Delap Dock (50 kVa) and Ebeye Dock.
  - Spill Kits for Delap, Uliga, Ebeye, Arno, Jaluit and Wotje Docks, and 150m containment boom systems for Delap and Ebeye Docks.
  - TA to assess options for scanner, including objective, risks, requirements, fixed versus mobile systems, costing.
- Component 3: Technical Assistance for Port Planning and Project Management
  - Prepare designs and supervise maritime infrastructure works.
  - Review institutional and governance arrangements for port management.
  - Prepare strategic development plans, review port operations, including development of security, site safety, efficiency, waste management, and compliance requirements, and maintenance regimes for Delap, Uliga, and Ebeye Docks.
  - Capacity building initiatives to better operate and regulate the project docks (SAR awareness, ISPS training, use of spill kits & booms, etc.).
  - Registries Assessment and Options Analysis.

- Employment opportunities for women.
- Project management support.
- Project management support for DIDA's CIU.
- Incremental operating costs for Project-related travel and communications.

3. Environmental and Social Baseline

305. Detailed environmental and social baseline information is provided in the MIMIP ESMF.

306. The activities will be undertaken on existing port facilities: Delap, located on Majuro, is the main port for marine cargo in RMI; Uliga is the main port for local vessels in Majuro; Ebeye is the main port for marine cargo on Kwajalein atoll; Jaluit port is classified as an international port under RMI legislation; Wotje facilities consist of a finger wharf; as does Arno.

307. Land at the ports is flat. Drainage either passes directly into the coral soils or runs to marine environment. Operating port areas, both land and marine, are generally depauperate in terms of flora and fauna. Nearby habitats are less impacted, particularly in the outer islands.

308. Jaluit is a Ramsar wetland and therefore a critical habitat, however none of the works will adversely impact the protected habitats.

309. The principal beneficiaries include the populations of Majuro Atoll, Ebeye (civilian area of Kwajalein Atoll), and the outer islands of Arno, Jaluit and Wotje. The ports of Majuro and Ebeye are located within urban/industrial areas that are heavily disturbed and surrounding land users are already impacted by port operations. The ports in the outer islands are used less often and are located in less heavily urbanised environments.

4. Legislative Context

310. The ESMF contains a list legislation, policies and agreements that are relevant to environmental and social issues in RMI. Of particular relevance to the proposed activities are:

- Marshall Islands Legislation
  - National Environmental Protection Act (1984)
  - Earthmoving regulations (1988)
  - Solid Waste Regulations (1989)
- World Bank Safeguard Policies
  - OP4.01 Environmental Assessment
  - OP4.04 Natural Habitats
- International Agreements
  - 1971 Ramsar Convention on Wetlands of International Importance especially as Waterfowl Habitat

5. Occupational Health and Safety

19.1 Republic of the Marshall Islands

311. RMI joined the International Labour Organization (ILO) in July 2007 and has since ratified two ILO Conventions: The Maritime Labour Convention and the Seafarers' Identity Documents Convention. RMI does not currently have Occupational Health and Safety (OH&S) legislation; however, this is being drafted.

312. In the absence of local legislation, OH&S under this project will be regulated through the World Bank Group's Environmental, Health, and Safety Guidelines.

19.2 World Bank General Environmental, Health, and Safety Guidelines

313. The World Bank Group's General Environmental, Health, and Safety Guidelines (EHS Guidelines) (World Bank Group, 2007) represent good international practice for managing occupational health and safety (OH&S) risks. The EHS Guidelines contain the performance levels and measures that are generally considered to be achievable in new facilities

by existing technology at reasonable costs. The fundamental premise for OH&S under the EHS Guidelines is that "*Employers and supervisors are obliged to implement all reasonable precautions to protect the health and safety of workers" and that "Companies should hire contractors that have the technical capability to manage the occupational health and safety issues of their employees…"*

314. The overall OH&S philosophy embodied in the EHS Guidelines is as follows:

- Preventive and protective measures should be introduced according to the following order of priority:
- Eliminating the hazard by removing the activity from the work process. Examples include substitution with less hazardous chemicals, using different manufacturing processes, etc.;
- Controlling the hazard at its source through use of engineering controls. Examples include local exhaust ventilation, isolation rooms, machine guarding, acoustic insulating, etc.;
- Minimizing the hazard through design of safe work systems and administrative or institutional control measures. Examples include job rotation, training safe work procedures, lock-out and tag-out, workplace monitoring, limiting exposure or work duration, etc.
- Providing appropriate personal protective equipment (PPE) in conjunction with training, use, and maintenance of the PPE.

315. The EHS Guidelines also require that prevention and control measures to minimise occupational hazards should be based on comprehensive job safety analyses (JSA). The CIU Safeguards Advisor will assist the contractor in undertaking the JSA and preparing its Safety Management Plan.

6. Environmental and Social Management Roles and Responsibilities

316. Refer to the MIMIP ESMF (Section 8 and 11).

317. Environmental and social management capacity building (training) will be required.

7. Potential Environmental and Social Impacts and Risks

318. The MIMIP will undertake activities across five atolls (six ports) in RMI. The activities will be undertaken in locations that are already disturbed. The environmental and social impacts envisaged for the MIMIP are predominantly temporary in nature and are associated with construction and upgrading activities.

19.3 Land Access

319. There will be no land acquisition. No activities will be undertaken on private property.

19.4 Community and Occupational Health and Safety

19.4.1 Community health and safety

320. The potential risks to community health and safety are associated with the project's construction phase and would mainly comprise minor dust and noise impacts and pedestrian/traffic hazards.

321. The works proposed are unlikely to result in a significant influx of workers due to their limited scale, none the less, some off-island workers may be required. Materials will be required to be imported. The additional shipping movements, although not significant in number, still represent potential for illegal movement of people e.g. human trafficking and/or the contribution to prostitution, harassment and violence.

19.4.2 Occupational health and Safety

322. There are OHS hazards associated with construction work. Works over and around water increase hazards and construction methods, safety plans and training need to take this into consideration. The nature and duration of the works are such that OHS risks can be managed with good industry practices so that risks are minimized.

19.4.3 Asbestos containing material

323. No asbestos containing material is anticipated to be encountered during the activities covered by this ESMP, although it is likely that such material exists within some of the port facilities.

19.5 Waste Management

324. Any management of waste will need a specific waste management plan prepared, with minimization and recycling/reuse as well as treatment and disposal. This is for construction or for services where waste will be produced.

325. The quantities of waste generated from the MIMIP activities covered by this ESMP are likely to be small. There will be some packaging, small quantities of residual excavated material from fencing earthworks and possibly minor concrete removal, old quay furniture (bollards etc.) will also require disposing of. While the waste quantities are expected to be limited it is important that all waste is stored, handled and disposed of securely to ensure no leakage into the environment. No hazardous waste is anticipated

19.6 Spills and Emergency Incidents

326. Hydrocarbon (fuel, oil, grease) spills are a real threat in ports due to the volumes of fuel that are associated with shipping and the proximity of sensitive marine environments. The risk of spills as a result of the proposed project activities covered by this ESMP is small, however good industry practice should still be adhered to with respect to management and disposal of hydrocarbon products.

327. The project will be seeking to reduce the impacts of any spills through the development or updating of Port Master Plans, design of marine infrastructure (e.g. drainage systems that incorporate oil traps), waste management plans, oil spill contingency plans, training and the provision of oil spill kits.

19.7 Noise Impacts

328. Primarily associated with construction and expected to be of relatively short duration.

329. Selection and installation of generators needs to be mindful of nearby receptors.

19.8 Air Quality

330. Air quality is unlikely to be affected due to the limited exhaust emissions from construction vehicles and machinery. Installation of backup power generators should be such that exhaust emissions during operation do no cause nuisance to nearby receptors.

19.9 Water Quality Impacts

331. Water quality impacts are not expected as a result of the activities covered by this ESMP.

19.10 Flora and Fauna Impacts

332. There is unlikely to be any significant impacts on both terrestrial and marine ecology.

333. The MIMIP will involve the erection of security etc. lighting around the ports. Light pollution can effect wildlife e.g. turtles and birds. These effects may include adverse effects to marine zooplankton behavior, adverse effects from fish aggregations at artificial light sources, potential effects on invertebrate spawning behavior where lunar phase is used as a cue and displacement and/or disorientation of some marine wildlife (particularly marine turtles (hatchlings and adults) and marine birds).[15] Despite this, the impacts from the new lighting in the MIMIP are expected to be acceptable, particularly

[15] Davies, T.W., Duffy, J.P., Bennie, J. and Gaston, K.J., 2014. The nature, extent, and ecological implications of marine light pollution, *Frontiers in Ecology and the Environment*, 12(6), pp.347-355

given the existing artificial lighting already in the area, particularly at Majuro (Delap and Uliga) and Ebeye and the modified shorelines around the ports at Majuro, Ebeye and Jaluit (these shorelines are unlikely to be suitable as significant sea turtle or seabird nesting areas). None the less, lighting design should consider potential impacts to marine fauna and ensure that light 'spill' is to be minimized.

334. All materials imported into RMI are subject to biosecurity regulations. As such, the risk of invasive pest introduction is small.

19.11 CONTRACTOR BID DOCUMENTATION

335. Standard environmental and social contract clauses are to be used. See ESMF Annex I

8. Risk Assessment and Mitigation Plan

336. An impact risk assessment was undertaken to assess the probability (expected, highly likely, moderately likely, not likely) and the impact of the risk (critical, severe, moderate, minor, and negligible). From this, a significance value was attributed to the potential impact (negligible, low, medium, high).

Score	Rating
5	Expected
4	Highly Likely
3	Moderately likely
2	Not Likely
1	Slight

Table 27 Rating of impact of risk

Score	**Rating**	**Definition**
5	Critical	Significant adverse impacts on human populations and/or environment. Adverse impacts high in magnitude and/or spatial extent (e.g. large geographic area, large number of people, transboundary impacts, cumulative impacts) and duration (e.g. long-term, permanent and/or irreversible); areas impacted include areas of high value and sensitivity (e.g. valuable ecosystems, critical habitats); adverse impacts to rights, lands, resources and territories of indigenous peoples; involve significant displacement or resettlement; generates significant quantities of greenhouse gas emissions; impacts may give rise to significant social conflict
4	Severe	Adverse impacts on people and/or environment of medium to large magnitude, spatial extent and duration more limited than critical (e.g. predictable, mostly temporary, reversible). The potential risk impacts of projects that may affect the human rights, lands, natural resources, territories, and traditional livelihoods of indigenous peoples are to be considered at a minimum potentially severe.
3	Moderate	Impacts of low magnitude, limited in scale (site-specific) and duration (temporary), can be avoided, managed and/or mitigated with relatively uncomplicated accepted measures
2	Minor	Very limited impacts in terms of magnitude (e.g. small affected area, very low number of people affected) and duration (short), may be easily avoided, managed, mitigated
1	Negligible	Negligible or no adverse impacts on communities, individuals, and/or environment

Table 28 Rating of probability of risk

Impact						
	5	High	High	High	High	High
	4	Medium	Medium	High	High	High
	3	Low	Medium	Medium	Medium	Medium
	2	Low	Low	Medium	Medium	Medium
	1	Low	Low	Low	Low	Low

		1	2	3	4	5
	Probability					

Figure 16 Risk matrix

337. Table 29 lists the proposed activities by component, identifies potential impact, the phase, the pre-mitigation risk (based on Figure 16), proposed mitigation measures to manage the risk, the residual risk (post-mitigation) and who is responsible for implementing the mitigations.

338. Table 30 Monitoring PlanTable 30 provides a proposed monitoring plan. Both plans can be amended if required e.g. alternative responsible parties may be agreed upon.

Table 29 Mitigation Plan

Activity	Impact/s	Phase (design / construction / operation)	Pre-mitigation Risk	Mitigation Measure	Post-mitigation risk	Responsibility
Component 2: Maritime Safety and Security						
Repair quay wall structures, replace quay furniture (fenders, bollards, ladders, curbs) at Delap, Uliga and Ebeye Docks	Health and Safety	C	Medium	• All work shall be in accordance with the World Bank Environment, Health and Safety Guidelines for Occupational Health and Safety. • Contractors shall prepare and comply with an Occupational Health and Safety Plan, which will include a risk register and safe work method statements. • Site-specific training to workers. PPE to be provided. • Buoyance aids or life jackets to be available on vessels undertaking on and/or over water works. All workers to be aware of their location and trained in their use. Training attendance should be recorded. • Contractors will be required to implement safety measures around construction sites to protect the public and dock workers and staff, including warning signs and information disclosure on potential safety hazards, and barriers to prevent public access to construction sites. • Hindrance and obstacles for maintaining free access of the general public to local utilities, social gatherings and to public transport facilities will be minimized	Medium	Contractor
	Non-toxic solid wastes (metal, packing, etc.)	C	Low	• Solid Waste Management Plan will be fully implemented. • Where possible, purchase pre-fabricated goods to reduce waste • Metal, cardboard and plastic to be recycled, where local facilities exist. • Waste that cannot be recycled will be collected and securely stored prior to offshore disposal at a licensed facility.	Low	Contractor
	Concrete waste water and slurry	C	Medium	• Concrete will be prepared in bunded hard stand surface. Silt fences to be established • All waste water from concrete production will be collected and treated to lower the pH and allow particulates to settle out before being recycled for construction purposes or disposed of according to Solid Waste Management Plan.	Low	Contractor

				• Solid and cured concrete waste is considered safe to be reused by the community or the Government of RMI for infrastructure maintenance. • The Contractor's will have a spill response plan in place to manage accidental spills or leakages of concrete waste water or slurry.		
	Importation of aggregate	D / C	Medium	• All imported aggregate will be subject to customs and quarantine clearance by Government of RMI. • Additional treatment of aggregate will be undertaken should this be required by the Government of RMI. • Ballast water from any cargo vessel chartered by the Contractor will comply with IMO Convention and Protocols re ballast water	Low	Contractor and Government of RMI
	Construction impacts (noise, air, dust, etc)	C	Medium	• Contractor to develop a CEMP	Low	Contractor
	Laydown areas	C	Low	• Laydown areas will be sited on government leased land. • Areas will be securely fenced and security in place. • Machinery should be washed down off site within a bunded location • Run off from these bunded areas will be collected, treated and tested before being either reused for construction purposes or allowed to discharge into the environment, away from the marine environment. Discharge will be at a rate to allow absorption without causing surface flooding • Stockpiles of sand shall be no more than 2m high, shall be bunded at the base using sandbags or similar to prevent sediment laden run off and erosion of stock piled materials. Stockpiles should be covered • Segregated storage for solid waste will be provided. This area will be clearly marked and designed to ensure that as waste is secure. • Worker inductions will include a tour of the laydown area and required practices from workers. Full compliance with PPE • Spill response kits will be onsite, and workers trained in their use.	Low	Contractor
	Access to public areas during construction	C	Medium	• Contractor to develop a CEMP • Identify key user groups during Stakeholder Engagement. • Conduct consultation with user groups to provide advice of planned disruptions to access. • Ensure working areas are securely fenced and security on site during construction.	Low	Contractor

				• Display notifications of predicted duration of disturbance of access and contact details for Grievance Redress Mechanism		
	Restricted access to Port facilities during safety improvement works	C	Low	• Port Authority to issue Notice to Mariners, Port Operations, ferry operators, tourism operators, commercial fishing fleets, etc., advising of timing and extent of works. • Contractor to prepare work plan that enables Port access to be maintained • Implement Stakeholder Engagement Plan	Low	RMIPA
	Labour conditions	C	Low	• Employment conditons to comply with RMI law • Seek opportunities to increase employment of women	Low	Contractor
Upgrade/provide fencing, gates, terminal lighting, backup generators, and CCTV systems to comply with ISPS requirements.	Health and safety	All	Medium	• As above		
	Earthworks: Sediment runoff from stockpiled material on land to marine environment	C	Medium	• Obtain earthworks permit from RMI EPA • Contractor to ensure runoff from material stockpiles is contained and treated prior to any discharge. • Contractor to develop and apply an EDSC Plan and Contaminated Soil Disposal Management Plan	Medium	Contractor
	Disturbances to fauna	D/C	Low	• Ensure all lighting is established so as it does not impact marine communities	Low	Contractor
	Waste production	C	Medium	• Implement waste management plan	Low	Contractor
	Construction impacts (air, noise, dust etc)	C	Medium	• Contractor to Develop CEMP	Low	Contractor
	Labour conditions	C	Low	• Employment conditons to comply with RMI law • Seek opportunities to increase employment of women	Low	Contractor
	Access to public areas during construction	C	Medium	• As above	Low	Contractor / RMIPA
	Community complaints	C / O	Low	• Implement Stakeholder Engagement Plan • Implement GRM (ensure community aware of GRM)	Low	RMIP
	Failure to maintain infrastructure	O	Medium	• Develop O&M plan	Low	RMIPA

Replace/upgrade Aids to Navigation for Majuro and Outer Islands (excludes Ebeye)	Disturbances to reef and/or benthic communities	C	Medium	• Utilize existing infrastructure where possible to minimise new impacts • For the repair and upgrading of navigation aids including but not limited to the attachment of buoys and blocks to the deeper seabed in the anchorage, mitigation measures will be planned on a case-by-case basis - but will be either: o the temporary relocation of coral heads/benthos for replacement when work is completed, and propagation of corals that may be damaged for return to the environment when work is completed; and/or o removal of corals for later return, propagation of corals for later return and hardening of the impacted area to allow proper recolonization	Low	RMIPA
	Health and safety	C	High	• As above • Safety plans to include Work Over Water procedures	Medium	Contractor
	Coastal shipping – recreational boating and commercial shipping - disruption to shipping during project activities	C & O	Low	• Ensure Notice to Mariners and shipping notice are issued, advising of activities, dates, and safe clearance for other activities. • Port Authorities to advise local shipping of activities and avoidance measures. • Implement Stakeholder Engagement Plan • Contractors to provide written statement that marine navigation lights and other national maritime measures are closely followed by contractors' vessel at all times.	Low	RMIPA
	Construction impacts	C	Medium	• Contractor to prepare CEMP	Low	Contractor
Backup generators for Delap Dock (50 kVa) and Ebeye Dock.	Health and safety	C / O	Medium	• As above	medium	Contractor / RMIPA
	Noise	O	Medium	• Meets criteria – has appropriate muffling devices and/or acoustic shielding • Locate such that will not cause nuisance to sensitive receptors	Low	RMIPA
	Air quality - emissions	D	Low	• Ensure equipment selected is acceptable in terms of emissions • Ensure exhaust is located such that emissions do not cause nuisance	Low	RMIPA
	Air quality	O	Low	• Ensure machinery used is well maintained and services • All machinery to use low emission fuels	Low	RMIPA

Spill Kits for Delap, Uliga, Ebeye, Arno, Jaluit and Wotje Docks, and 150m containment boom systems for Delap and Ebeye Docks.	Lack of training	O		• Preparation and establishment of an emergency response plan following the template in the ESMF including but not limited to the Oil Spill Plan • Undertake training in emergency procedures		
	Storage and maintenance	O	Medium	• Appropriate locations and storage • Develop and implement an O&M plan	Low	RMIPA
	Contaminated waste (when used)	O	High	• Develop an contaminated waste plan • Train personnel in disposal	Medium	RMIPA
TA to assess options for scanner, including objective, risks, requirements, fixed versus mobile systems, costing.	Lack of environmental and social input	D	Low	• ToR to include ESMF • Implement Stakeholder Engagement Plan	Low	RMIPA
Component 3: Technical Assistance for Port Planning and Project Management						
Prepare designs and supervise maritime infrastructure works	Range of environmental and social issues not considered	D		• ToRs to include ESMF • Target sustainable design/materials		
	Climate change impacts	D		• Include climate change adaptation measures in the design of safety improvement works		
	Contaminated runoff	D		• Drainage design to include sediment/gross pollutant, oil and grease traps		
	OHS	D & O		• Comply with OHS requirements • Undertake Safety In Design reviews		
Review institutional and governance arrangements for port management	Lack of capacity within institutions			• Identify capacity deficiencies and provide training		
Prepare strategic development plans, review port operations, including development	Impacts multiple and diverse port users	O	Low	• Range of potential issues raised in ESMF to be considered in planning. • Consider existing, future port user (commercial and public) needs as well as climate change impacts in preparing Port Master Plans	Low	RMIPA

of security, site safety, efficiency, waste management, and compliance requirements, and maintenance regimes for Delap, Uliga, and Ebeye Docks				• Ensure stakeholder engagement during plan development • Gender Based Violence and Human Trafficking Code of Conduct training • Prepare oil spill contingency plans • Develop solid waste management plan recognizing limitations of waste disposal within RMI • Consider opportunities for increasing role of women within maritime sector		
	Failure to fully integrate port practices	D	Medium	• Implement Stakeholder Engagement Plan • Ensure plans consider existing and future needs • Incorporate climate change impacts into plans • Incorporate best practices from ports elsewhere • Review and update training programs		
	Critical issues missed	D / O	Low	• Engage appropriately skilled and experienced personnel to undertake studies • Consult widely – implement Stakeholder Engagement Plan • Draw on lessons learnt from existing and other ports • Independent technical review of plans	Low	RMIPA
Capacity building initiatives to better operate and regulate the project docks (SAR awareness, ISPS training, use of spill kits & booms, etc.).	Loss of skills through staff movement	O	High	• Diverse training – multi-level • Train-the-trainers to assist in sustainability of training • Implement mentoring system to build capacity and succession planning	Medium	RMIPA
	Training not targetted at correct people	O	Medium	• Undertake needs assessment • Ensure selection of trainees is appropriate and equitable • Train a diversified mix of personnel (age, sex, level of authority)	Low	RMIPA
	Failure to engage	O	Medium	• Implement Stakeholder Engagement Plan	Low	RMIPA
	Failue to continue to train / upskill staff	O	Medium	• Develop an ongoing training program • Undertake regular practice excercises eg spill scenario drills	Low	RMIPA
	Gender issues ignored	O	Medium	• Implement Gender Action Plan	Medium	RMIPA
Registries Assessment and Options Analysis	Difficulty obtaining information	D	Medium	• Identify information needs • Collaborate with various agencies to acquire data • Request data early • Implement Stakholder Engagement Plan	Low	RMIPA

	Lack of industry engagement	D	Medium	• Implement Stakeholder Engagement Plan • Consult widely – particularly with vessel owners	Low	RMIPA
	Lack of local experience	D	Medium	• Recruit suitable personnel to undertake review / options analysis	Low	RMIPA
Employment opportunities for women.	Lack of local capacity	D / C / O	Medium	• Engage with CBOs and NGOs • Develop gender sensitive training programs • Develop mentoring system • Set employment targets and encourage women to apply for roles	Low	RMIPA
	Sexual discrimination and bullying	O	High	• Implement Gender Action Plan	Medium	RMIPA
	Ingrained practices	O	Medium	• Engage with CBOs and NGOs • Implement Gender Action Plan	Medium	RMIPA
Project management support.	Lack of local skills	D / C/ O	Medium	• Recruit for required skills • Develop mentoring / training program to help build local skills	Low	CIU / RMIPA
	Lack of E&S skills	C / O	Medium	• Utilise CIU Safeguards Advisor to help build capacity	Low	CIU
Incremental operating costs for Project-related travel and communications.	Budget blowouts Corrupt practices	C /O	High	• Annual budget reviews • Plan travel to maximise shared transport or use of existing commercial travel • Implement cost control measures (approval processes etc)	Medium	RMIPA

9. PUBLIC CONSULTATION AND INFORMATION DISCLOSURE

19.12 STAKEHOLDER ENGAGEMENT PLAN

339. See ESMF Section 9

19.13 GRIEVANCE REDRESS MECHANISM

340. See ESMF Section 10

Table 30 Monitoring Plan

Issue	What parameter is to be monitored	Where is the parameter to be monitored	How is the parameter to be monitored/type of monitoring equipment	When is the parameter to be monitored – frequency of measurement or continuous	Responsibility
Design and Pre-Construction Phase					
Solid and hazardous waste	Approved Solid Waste Management Plan established		Audit	Prior to construction	Safeguards Advisor
Health and safety	Gender Based Violence and Human Trafficking Code of Conduct training and acknowledgements have been conducted		Review of records / audits	At time of training / audits	Safeguards Advisor
	Occupational Health and Safety Management Plan in place		Review of plan		RMIPA / Contractor
	All workers have undergone appropriate Occupational Health and Safety training		Review of records / Audit	Prior to construction	Contractor
Earthworks	EPA permit for installation works is approved		Issue of permit	Prior to construction commencing	Contractor
	EDSC and Contaminated Soil Disposal Management Plans established				Contractor
Soil and water pollution	Appropriate spill response plan in place				RMIPA
	EDSC and Contaminated Soil Disposal Management Plans established				RMIPA
Materials Supply	All imported materials to comply with appropriate biosecurity clearances				RMIPA

Laydown areas	Laydown areas established on pre-approved sites	On-site		Prior to construction	Contractor
	Bunding to be established (if required)	On-site			Contractor
	Fencing and/or appropriate signage in place to restrict access	Construction sites	Site inspection	Prior to construction	
Construction / Implementation Phase					
Health and Safety	OHS plans / JSAs complied with		Safety Audits	Quarterly	Safeguards Advisor
	Workers have access to, and using appropriate, PPE for the task.		Site inspections	Daily	Contractor
	All workers have undergone appropriate Occupational Health and Safety training. A register to be kept		Safety Audits	Quarterly	Contractor
	Proper briefing of staff before undertaking work activities		Safety Audits	Daily	Contractor
	Public notified of activities/closures that may affect use of port and surrounds				RMIPA
	Public signage of complaints procedure				RMIPA
	Signs and fences restrict or direct pedestrians and public where appropriate				Contractor
Soil and water pollution	Full compliance with EDSC Plan and Contaminated Soil Disposal Management Plan				
	Appropriate spill response plan/kit in place for waste area				RMIPA / contractor

	No visible spills on soil or uncovered ground. Any spills immediately reported and managed				Contractor
	Drainage, water treatment and soakage systems clear and fit for purpose				Contractor / RMIPA
Solid and hazardous waste	Approved Solid Waste Management Plan effectively implemented				Contractor
	Waste collection area is secure, well signed and clean				Contractor / RMIPA
	Hazardous waste is stored according to SWMP				Contractor
	Good housekeeping around MIMIP sites				Contractor / RMIPA
Operations Phase					
safety					
waste					
SEP					

Annexure G: Sub-project Screening Form

Safeguards Screening Form

This form is to be used by the Implementing Agency (IA) to screen potential environmental and social safeguards issues in subprojects, and determine which safeguard instrument/s is to be prepared prior to implementation.

Screening Questions	Answer			If 'Yes', WB policy triggered.	Documents required if 'Yes"
	Yes	No	N/A		
Are the project impacts likely to have significant adverse environmental impacts that are sensitive[16], diverse or unprecedented? [17] Please provide brief description.				*OP 4.01 Environmental Assessment* Category A	Not eligible for funding under MIMP
Do the impacts affect an area broader than the sites or facilities subject to physical works and are the significant adverse environmental impacts irreversible? Please provide brief description.				OP 4.01 Environmental Assessment Category A	Not eligible for funding under MIMIP
Is the proposed project likely to have no adverse environmental impacts? [18] Please provide brief justification.				OP 4.01 Environmental Assessment Category C	Nothing further required
Is the project neither a Category A nor Category C as defined by the Bank? [19] Please provide brief justification.				OP 4.01 Environmental Assessment Category B	EA or limited EA, and ESMP
Questions	**Answer**			**If 'Yes', WB policy triggered**	**Documents required if "Yes"**
	Yes	**No**	**N/A**		

[16] Sensitive (i.e., a potential impact is considered sensitive if it may be irreversible, e.g., lead to loss of a major natural habitat, or raise issues covered by OP 4.04, Natural Habitats; OP 4.36, Forests; OP 4.10, Indigenous Peoples; OP 4.11, Physical Cultural Resources; or OP 4.12, Involuntary Resettlement; or in the case of OP 4.09, when a project includes the manufacture, use, or disposal of environmentally significant quantities of pest control products).

[17] Examples of projects where the impacts are likely to have significant adverse environmental impacts that are sensitive, diverse or unprecedented are large scale infrastructure such as construction of new roads, railways, power plants, major urban development, water treatment, waste water treatment plants and solid waste collection and disposal, etc.

[18] Examples of projects likely to have minimal or no adverse environmental impacts are supply of goods and services, technical assistance, simple repair of damaged structures, etc.

[19] Projects that do not fall under Category A or Category C can be considered as Category B. Examples of Category B subprojects include small scale in-situ reconstruction of infrastructure projects such as road rehabilitation and rural water supply and sanitation, small schools, rural health clinics, etc.

Are the project impacts likely to have significant adverse social impacts that are sensitive, diverse or unprecedented?[20]Please provide brief description.				OP 4.01 Environmental Assessment Category A	Not eligible for funding under MIMIP
Will the project involve the discharge of pollutants into air, water, soil and/or storage of chemicals, hazardous materials, etc. that pose risks to environmental and public health?				OP 4.01 Environmental Assessment Category A/B	EA or Limited EA to determine risk level– only Cat B eligible for funding under MIMIP - ESMP with Waste / Hazardous Materials Management Plan
Will the project site be located near[21], waterways or water bodies/ponds?				OP 4.01 Environmental Assessment Category A/B	EA or Limited EA to determine level of risk/impact – only Cat B eligible for funding under MIMIP
Will the project adversely impact physical cultural resources?[22] Please provide brief justification.				OP 4.11 Physical Cultural Resources Category B	ESMP with PCR Management Plan and/or Chance Find Procedures (CFP)
Questions	**Answer**			**If 'Yes', WB policy triggered**	**Documents required if "Yes"**
	Yes	**No**	**N/A**		
Will any physical works be sited on private freehold (customary), Crown or state land? Will this be acquired through market-based lease, government lease or sublease, purchase, or voluntary donation? Please provide a brief explanation:				OP 4.12 Involuntary Resettlement Category C	Evidence of Land Title or Voluntary Land Donation Protocol

[20] Generally, subprojects with significant resettlement-related impacts should be classified as Category A. Application of judgment is necessary in assessing the potential significance of resettlement-related impacts, which vary in scope and scale from subproject to subproject. Subprojects that would require physical relocation of residents or businesses, as well as subprojects that would cause any individuals to lose more than 10 percent of their productive land area, often are classified as Category A. Scale may also be a factor, even when the significance of impacts is relatively minor. Subprojects affecting whole communities or relatively large numbers of persons (for example, more than 1,000 in total) may warrant Category A, especially for projects in which implementation capacity is likely to be weak. Subprojects that would require relocation of Indigenous Peoples, that would restrict their access to traditional lands or resources, or that would seek to impose changes to Indigenous Peoples' traditional institutions, are always likely to be classified in Category A.

[21] In the riparian zone or within 20 meters from a body of water.

[22] Examples of physical cultural resources are archaeological or historical sites, including historic urban areas, religious monuments, structures and/or cemeteries, particularly sites recognized by the government.

Will any physical works be sited on communal or collective land? If so, is the land more than 5% of the community's area, and/or do gardens, crops or fixed assets exist on the nominated land? Please provide a brief explanation.				OP 4.12 Involuntary Resettlement Category A/ B	Resettlement no acceptable under MIMIP
Does the project involve the donation of land (in-kind) from project-affected persons for facilities or investments that will be of benefit to the broader community? Please provide a brief explanation.				OP 4.12 Involuntary Resettlement Category C	No land acquisition proposed under MIMIP Obtain land use/voluntary donation agreement
Will any physical works be located on land that is used or occupied by persons?				OP 4.12 Involuntary Resettlement Category B	MIMIP proposed for government-leased land only. Land access agreement
Does the project involve large-scale[23] involuntary land acquisition or physical relocation of people? Please provide brief explanation				OP 4.12 Involuntary Resettlement Category A	Not eligible for financing under MIMIP
Does the project involve minor involuntary land acquisition, loss of assets or access to assets, or loss of income sources or means of livelihood? Please provide brief explanation				*OP 4.12 Involuntary Resettlement* Category B	No acquisition under MIMIP

[23] Physical and/or economic displacement of more than 200 affected people and/or more than 10% of productive assets are lost.

Annexure H: ESMP Template

ESIA Consult

Marshall Islands Maritime Investment Project

Environment and Social Management Plan Template

This template is relevant for any subproject under the MIMIP that requires a stand-alone ESMP (without an ESIA).

Use this as a guide for preparing an ESMP that will satisfy World Bank safeguards policy OP/BP4.01 Environmental Assessment. It should also be sufficient for RMI-EPA's requirements for EA under the EIA Regulation 1994.

1 INTRODUCTION

A brief overview of the project, environmental and social context and purpose of the ESMP.

2 SUB-PROJECT DESCRIPTION

A description of the investment, the location, the works required, what will happen during operation, and any important issues regarding decommissioning. Include project components that may have an environmental or social impact, such as:

- • Types of materials required (aggregates, fresh water)
- • Transportation of materials during construction
- • Waste management
- • Hazardous materials
- • Demolition of structures, removal of sand, soil or silt
- • Proposed improvements or benefits from upgrades to the local economy, culture, community

3 ENVIRONMENTAL AND SOCIAL BASELINE

Description of the land ownership and leasing arrangements, description of the locality and land use, closest dwelling(s), water body that will receive drainage, natural habitats, protected areas, significant or relevant ecosystems, flora and /or fauna in the area.

Describe the community, local social and governance or council structures. Describe the existing impacts and benefits of the facility/asset/site. The social context should also describe occupations and sources of livelihood, gender roles and issues, land tenure and connections to land, and the socio-economic conditions, including any commentary on poverty, vulnerability due to gender, ethnicity or culture group, age or disability in the community, resource allocation and access and income distribution, where relevant.

4 LEGISLATIVE CONTEXT

Provide an overview of the relevant laws, regulations and policies and how this document provides the relevant information for an environmental permit and other approvals.

Provide an overview of how the ESMP meets the requirements of the World Bank safeguard policies.

Provide commentary on any international environmental agreements that RMI is party to, relevant to the project.

Identify relevant legally protected areas and traditional or customary protected areas.

5 SIGNIFICANT IMPACTS AND MITIGATION PLAN

Provide a summary of significant environmental and social impacts and how the project will manage them to incorporate applicable safeguards policy and regulatory requirements. Table 31 can be used as a template for developing the impacts and mitigations matrix.

Table 32 provides a format for identifying monitoring requirements.

6 PUBLIC CONSULTATON AND INFORMATION DISCLOSURE

Follow stakeholde consultation plan

7 GREIVANCE REDRESS MECHANISM

Implement GRM

8 REFERENCES

9 ANNEXES

341. Any supporting information, design drawings, technical reports etc

Table 31 Impacts and Mitigations

Activity	Impact	Phase	Pre-mitigation Risk	Mitigation Measure	Post-mitigation risk	Responsibility
Design and Pre-construction Phase						
Construction / Implementation Phase						
Operational Phase						
Decommissioning Phase						

Table 32 Monitoring Plan

Issue	**What** parameter is to be monitored	**Where** is the parameter to be monitored	**How** is the parameter to be monitored/type of monitoring equipment	**When** is the parameter to be monitored – frequency of measurement or continuous	**Responsibility**
Design and Pre-Construction Phase					
Construction / Implementation Phase					
Operations Phase					

Annexure I: Standard Environmental and Social Contract Clause

Marshall Islands Maritime Investment Project

Standard General Environmental Contract Clauses

Generic contract clauses are provided in this annex to assist with environmental and social management works expected to have minor impacts. These mitigation measures are the core of a generic, standardized EMP (Environmental Management Plan) and the associated minor impacts typical of small works which can be routinely addressed with best industry practice. These clauses are general and may be modified to conform to applicable national laws, contract procedures and actual scope and nature of the works anticipated. These clauses are intended to be included as requirements in the works contract and shall remain in force throughout the contract period. These clauses represent the minimum standard of execution for environmental protection and include:

- Permits and Approvals
- Site Security
- Discovery of Antiquities
- Worker Occupational Health and Safety
- Noise Control
- Use and Management of Hazardous Materials, fuels, solvents and petroleum products
- Use and Management of Pesticides
- Use of Preservatives and Paint Substances
- Use of Explosives
- Site Stabilization and Erosion Control
- Traffic Management
- Management of Standing Water
- Management of Solid Wastes -trash and construction debris
- Management of Liquid Wastes

Contractor's Environmental and Social Management Plan (CESMP)

The Contractor is required to prepare and implement a CESMP. The Contractor is responsible for the implementation of construction and rehabilitation activities for the sites and for implementing the impact mitigation measures in the construction phase. The Contractors approach shall be detailed in the Construction Environmental Management Plan.

The Contractor shall include a suitably qualified and experienced Environmental, Occupational Health and Safety Officer (and other staff or consultants as necessary) staff to be specifically responsible for preparation and regular update and supervision of the CESMP The Environmental, Occupational Health and Safety Officer is responsible for the daily supervision and monitoring of the Contractors implementation of the Plan and compliance with the Project ESMP and ESMF for the duration of the contract.

The CESMP shall be approved by the Employer prior to the Contractor's mobilization to the site.

The Contractor will be required to report on the implementation status of the CESMP to the Employer. The damages due to the violation of the stipulations by the Contractor shall be compensated and/or restored by the Contractor at his or her own expense. Performance will be monitored by the Employer and will be enforced by withholding of payments (refer to relevant clause in the bid documents)

Principles

- • The CESMP is informed and based upon the RMI law, the MIMIP Project ESMP, EMSF and World Bank Group EHS Guidelines (including those for Ports and Harbours)
- • All commitments must be specific and auditable with measurable outcomes and clear timeframes.
- Include occupational and community health and safety
- • To ensure readability, write clearly and avoid long sentences with complex clauses.
- • Always use the terms 'will' and 'must', rather than 'should' or 'may' when committing to carry out management actions.
- • Avoid use of ambiguous terminology such as 'where possible', 'as required', 'to the greatest extent possible'. If it is necessary to include ambiguous terminology, it should be explained and examples given.
- • Clearly explain any technical terms or acronyms used, and/or define them in a glossary.
- • Commitments or statements within the management plan must be consistent with other relevant management plans or conditions of approval.

CESMP Content
1. Declaration and Document Version Control

• person accepting responsibility for the CESMP – signed declaration

• The document version control should be a simple system that ensures that details of all key changes to the document over time are properly recorded.

2. Table of Contents

3. Description of Works

The CESMP should provide a summary of the works, description of construction methodologies and identification of offsite areas such as source of materials, fumigation, laydown areas, workers accommodation, offshore waste disposal sites etc.

A schedule of intended commencement and completion dates should be provided. Projects undertaken in stages should identify each stage in the schedule.

Particular attention should be paid to the development of the construction methodology and how it will be staged to ensure continued operation of the dock during the construction phase.

4. Policies and Objectives
The company policies and environmental outcomes of the plan should be defined.

5. Environmental Management Roles and Responsibilities

The plan should define the roles and responsibilities of personnel in charge of the environmental management of the works. The roles and responsibilities of each relevant position should be documented, including the responsibilities of any subcontractors. The names of the responsible personnel do not need to be included. Identification of the position titles, roles and responsibilities is sufficient. If the roles and responsibilities are expected to change over time the long term variations should also be documented.

6. Reporting

The description of reporting requirements should include:

- • a list of required reports including where appropriate monitoring, environmental incidents, non-compliance, corrective action and auditing
- • a description of the standard report content
- • the schedule or triggers for preparing a report
- • who the report is provided to
- • document control procedures
- 7. Training

All people involved with the works should receive relevant environmental training to ensure they understand their responsibilities when implementing the CESMP. People to be trained include those at the site/s of all project activities and operations, including contractors, subcontractors and visitors. The training should be tailored to the role of the individual in the project.

The CESMP should describe the training to be implemented and could include:

- • site inductions
- • identification of key points of environmental value and any relevant matters of national environmental significance
- • understanding the requirements of the CESMP and the individual's role
- • environmental incident emergency response procedures
- • site environmental controls
- Cultural inductions, GBV, HIV Aids and communicable diseases
- • an outline of the potential consequences of not meeting their environmental responsibilities.

Records of all training conducted should be maintained and include:

- • the person receiving the training
- • the date the training was received
- • the name of the person conducting the training
- • a summary of the training.

8. Emergency Contacts and Procedures

The CESMP should identify the key emergency contacts responsible for managing environmental emergencies associated with the project and their contact details. These personnel should have the power to stop and direct works so that they can manage emergencies effectively. In addition, the plan should establish procedures for managing environmental emergencies and ensure that those procedures are implemented and maintained.

The C-ESMP should also detail the Contractors contingency plan for extreme weather events, medical emergencies and other rapid response situations.

8. Works Methodologies

The CESMP should clearly state the tools, strategies, mechanisms, construction methodologies etc. to meet the stipulations in the ESMP and ESMF and this information usually forms the bulk of the content of the plan. For each potential activity or impact the plan should address specific measures that will be taken including:

1. • Detailed methodologies as required, including diagrams where necessary, levels of compentency required, PPE and other details as related to the works and the stipulations of the ESMP

2. • Additional mitigation measures to be implemented specifically in relation to identified offsite locations

3. • supervision and monitoring procedures with trigger values for corrective actions

9 Sub-plans: The CESMP should also include all required sub-plans (SWMP, TMP, etc) as an annex to the CESMP.

10. Audit and updates

Environmental auditing

The CESMP should include the schedule or triggers for auditing the implementation and effectiveness of the plan. It should address both internal and external audit requirements including who is responsible for undertaking the audits and reporting the results.

CESMP update

The CESMP should specify the schedule or triggers for updates of the plan. An update is required whenever there is a change to the scope of the works or construction methodology that changes the projects area of impact or brings about a change that would be of public interest to know. The plan should also identify who will be responsible for undertaking the update.

Standard Contract Clauses

1. Permits and Approvals

The contractor shall be responsible for ensuring that he or she has all relevant legal approvals and permits required to commence works.

2. Site Security

The contractor shall be responsible for maintaining security over the construction site including the protection of stored materials and equipment. In the event of severe weather, the contractor shall secure the construction site and associated equipment in such a manner as to protect the site and adjacent areas from consequential damages. This includes the management of onsite, construction materials, construction and sanitary wastes, additional strengthening of erosion control and soil stabilization systems and other conditions resulting from contractor activities which may increase the potential for damages.

3. Discovery of Antiquities

If, during the execution of the activities contained in this contract, any material is discovered onsite which may be considered of historical or cultural interest, such as evidence of prior settlements, native or historical activities, evidence of any existence on a site which may be of cultural significance, all work shall stop and the supervising contracting officer shall be notified immediately. The area in which the material was discovered shall be secured, cordoned off, marked, and the evidence preserved for examination by the local archaeological or cultural authority. No item believed to be an artifact must be removed or disturbed by any of the workers. Work may resume, without penalty of prejudice to the contractor upon permission from the contracting officer with any restrictions offered to protect the site.

4. Worker Occupational Health and Safety

The contractor shall ensure that all workers operate within a safe environment. Sanitation facilities shall be provided for all site workers. All sanitary wastes generated as a result of MIMIP activities shall be managed in a manner approved by the contracting officer and the local authority responsible for public health. The contractor shall ensure that there are basic medical facilities on site and that there are staff trained in basic first aid. Workers must be provided with the necessary protective gear as per their specific tasks such as hard hats, overalls, gloves, goggles, boots, etc. The contractor shall provide the contracting officer with an occupational health and safety plan for approval prior to the commencement of site activities.

The contractor must ensure that all workers operate within a safe environment. All relevant Labor and Occupational Health and Safety regulations must be adhered to ensure worker safety. Sanitary facilities must be provided for all workers on site. Appropriate posting of information within the site must be done to inform workers of key rules and regulations to follow.

5. Noise Control

The contractor shall control noise emissions generated as a result of contracting activities to the extent possible. In the case of site locations where noise disturbance will be a concern, the contractor shall ensure that the equipment is in good working order with manufacturer supplied noise suppression (mufflers etc.) systems functioning and in good repair.

Where noise management is a concern, the contractor shall make reasonable efforts to schedule activities during normal working hours (between 8 am and 5 pm). Where noise is likely to pose a risk to the surrounding community either by normal works or working outside of normal working hours or on weekends, the contractor shall inform the contracting officer and shall develop a public notification and noise management plan for approval by the contracting officer.

6. Use and Management of Hazardous Materials, fuels, solvents and petroleum products

The use of any hazardous materials including pesticides, oils, fuels and petroleum products shall conform to the proper use recommendations of the product. Waste hazardous materials and their containers shall be disposed of in a manner approved by the contracting officer in accordance with national laws. A site management plan will be developed by the contractor if the operation involves the use of these materials to include estimated quantities to be consumed in the process, storage plans, spill control plans, and waste disposal practices to be followed. Any plans required shall be approved by the contracting officer.

Elements of the hazardous materials management shall include:

- Contractor must provide temporary storage on site of all hazardous or toxic substances in safe containers labeled with details of composition, properties and handling information;
- Hazardous substances shall be placed in a leak-proof container to prevent spillage and leaching
- Wastes shall be transported and disposed of in a manner approved by the contracting officer compliant with national laws and policies

7. Use and Management of Pesticides

Any use of pesticides shall be approved by the contracting officer and shall conform to the manufacturers' recommendations for use and application. Any person using pesticides shall demonstrate that they have read and understood these requirements and are capable of complying with the usage recommendations to the satisfaction of the contracting officer. All pesticides to be used shall conform to the list of acceptable pesticides that are not banned by the relevant local authority.

If termite treatment is to be utilized, ensure appropriate chemical management measures are implemented to prevent contamination of surrounding areas, and use only licensed and registered pest control professionals with training and knowledge of proper application methods and techniques.

8. Use of Preservatives and Paint Substances

All paints and preservatives shall only be used with the approval of the contracting officer. Information shall be provided to the contracting officer who describes the essential components of the materials to be used so that an informed determination can be made as to the potential for environmental effects and suitability can be made.

Storage, use, and disposal of excess paints and preservatives shall be managed in conformance with the manufacturers' recommendations and as approved by the contracting officer. The contractor shall provide the contracting officer with a list of materials and estimated quantities to be used, storage, spill control and waste disposal plans to be observed during the execution of the contract. This plan is subject to the approval of the contracting officer.

9. Use of Explosives

Use of explosives shall be at the approval of the relevant local authority and shall be supervised and undertaken by a qualified explosives technician. Blasting will be limited to between the hours of 9:00 am and 4:00 pm unless specifically approved by the local authority and the contracting officer. Any use of explosives shall be permitted only after an explosives management and blasting plan has been approved by the relevant local authority and the contracting officer.

This plan shall include:

1. Description of the explosive agent, charge description, intended use.
2. Site safety plan including:
    a. Storage of initiators, booster charges and principal blasting agents
    b. Handling precautions to be observed
    c. Transport to and from site
    d. Security of stored materials
    e. Disposal of excess or damaged explosive materials.
3. Analysis of risk to surrounding area and mitigation measures to be employed including:
    a. Over-pressure event
    b. Noise
    c. Flying debris
    d. Seismic transmission
    e. Accidental detonation
4. Name and qualifications for all persons responsible for handling explosive agents

10. Site Stabilization and Erosion Control

The Contractor shall implement measures at the site of operations to manage soil erosion through minimization of excavated area and time of exposure of excavated areas, preservation of existing ground cover to the extent possible, provision of approved ground cover and the use of traps and filtration systems. Where excavations are made, contractor shall implement appropriate stabilizing techniques to prevent cave-in or landslide. Measures shall be approved by the contracting officer.

The contractor must ensure that appropriate erosion control measures such as silt fences are installed. Proper site drainage must be implemented. Any drain clogged by construction material or sediment must be unclogged as soon as possible to prevent overflow and flooding. The use of retaining structures and planting with deep rooted grasses to retain soil during and after works must be considered. The use of bio-engineering methods must be considered as a measure to reduce erosion and land slippage. All slopes and excavated areas must be monitored for movement.

The contractor will establish appropriate erosion and sediment control measures such as hay bales, sedimentation basins, and / or silt fences and traps to prevent sediment from moving off site and causing excessive turbidity in nearby streams, rivers, wetlands, and coastal waters.

An erosion management plan will be required where the potential exists for significant sediment accumulation e in wetlands, lakes, rivers and marine systems. This plan shall include a description of the potential threat, mitigation measures to be applied, and consideration for the effects of severe weather and an emergency response plan.

If works are along coastal marine areas or near major steams and river, water quality monitoring must be done before construction, and at regular intervals to determine turbidity levels and other quality parameters.

Construction vehicles and machinery will be washed only in designated areas where runoff will not pollute natural surface water bodies.

11. Air Quality

When appropriate, the contractor shall provide an air quality management plan for contracting officer approval. This plan will include provisions for the management and control of dust and unnecessary emissions resulting from construction activities. The plan shall include control measures to be implemented including the management of dust generated from transportation and site construction activities as well as excess emissions from vehicles and equipment. Under no circumstances shall site or roadway dusts be managed using oil spray techniques.

12. Traffic Management

In the event that construction activities should result in the disruption of area transportation services, including temporary loss of roadways, blockages due to deliveries and site related activities, the contractor shall provide the contracting officer with a traffic management plan including a description of the anticipated service disruptions, community information plan, and traffic control strategy to be implemented so as to minimize the impact to the surrounding community. This plan shall consider time of day for planned disruptions, and shall include consideration for alternative access routes, access to essential services such as medical, disaster evacuation, and other critical services. The plan shall be approved by the contracting officer.

Elements of the traffic management plan to be developed and implemented by contractor shall include:

- Alternative routes will be identified in the instance of extended road works or road blockages;
- Public notification of all disturbance to their normal routes;
- Signage, barriers and traffic diversions must be clearly visible, and the public warned of all potential hazards;
- provision for safe passages and crossings for all pedestrians where construction traffic interferes with their normal route;
- Active traffic management by trained and visible staff at the site or along roadways as required to ensure safe and convenient passage for the vehicular and pedestrian public;
- Adjustment of working hours to local traffic patterns, e.g. avoiding major transport activities during rush hours or times of livestock movement.

13. Management of Standing Water

Under no circumstances shall the contractor permit the collection of standing water as a consequence of contractor activities without the approval of the contracting officer and consultation with the relevant local environmental health authority. Recommendations from that local authority on how to manage and treat the standing water must be implemented. The condition of the standing water must be monitored by the contractor to ensure that it does not present itself as a breeding ground for any pests such as mosquitoes.

14. Management of Solid Wastes and Construction Debris

The contractor shall provide a solid waste management plan that conforms to the national solid waste management policies and regulations for approval by the contracting officer. The site waste management plan shall include a description of waste handling procedures including collection, storage and disposal through the national waste management system. There will be no open burning of waste material and the contractor shall endeavor to recycle wastes as appropriate through the national waste management system.

Under no circumstances shall the contractor allow construction wastes to accumulate so as to cause a nuisance or health risk due to the propagation of pests and disease vectors.

15. Management of Liquid Wastes

The contractor shall provide the contracting officer with a liquid waste management plan as part of a site waste management plan that conforms to the waste management policies and regulations of the relevant Saint Vincent and the Grenadines authority. Under no circumstances shall the contractor allow construction related liquid wastes to accumulate on or off the site, or to flow over or from the site in an uncontrolled manner or to cause a nuisance or health risk due to its content. The site waste management plan shall include a description of how these wastes will be stored, collected and disposed of in accordance with current law. Additionally, the contractor shall provide for the regular removal and disposal of all site wastes and provide the contracting officer with a schedule for such removal.

Specific elements of the contractor's liquid waste management plan shall include: contractor to abide by all pertinent waste management and public health laws; waste collection and disposal pathways and sites will be identified for all major waste types expected from demolition and construction activities; construction and demolition wastes will be stored in appropriate bins; liquid and chemical wastes will be stored in appropriate containers separated from the general refuse; all waste will be collected and disposed of properly in approved landfills by licensed collectors; the records of waste disposal will be maintained as proof for proper management as designed; whenever feasible the contractor will reuse and recycle appropriate and viable materials (except asbestos); construction related liquid wastes must not be allowed to accumulate on or off the site, or to flow over or from the site in an uncontrolled manner or to cause a nuisance or health risk due to its contents.

16. Management of Workers

• The Contractor will prepare a specific Code of Conduct to describe the expected behaviours of their project worker in relation to the local communities and their social sensitivities. This is to avoid creating demand for illegal sex work, avoid gender-based violence and violence against children, manage alcohol consumption and avoid the use of illegal substances, and abide by cultural and social norms of the host community.

• The Contractor is to ensure that all overseas project staff undergo a cultural familiarisation session as part of their induction training. The purpose of this induction will be to introduce the project staff to the cultural sensitivities of the local communities and the expected behaviours of the staff in their interactions with these communities. Gender based violence and HIV Aids and communicable disease awareness raising and resources shall be provided to all workers. The client shall provide to the Contractor a list of approved service providers which shall include recognized NGOs and others for conducting this training.

• The Contractor is to stipulate the conditions under which visitors may attend the workers accommodation, including curfews.

• The Contractor shall ensure that basic social/collective rest and recreation spaces and activities within the Workers Accommodation to help minimise the impact that the workers would have on the leisure and recreational facilities of the nearby communities.

17. Enforcement

Annexure J: National Baseline Information

Marshall Islands Maritime Investment Project

Environmental and Social Baseline Information

1 DESCRIPTION OF EXISTING BIO-PHYSICAL ENVIRONMENT

1.1 GEOLOGY, TOPOGRAPHY AND SOILS

1. Atolls are geologic structures that rise from the ocean floor and enclose a shallow (less than 100 m) lagoon. The base of the atoll is a basaltic volcano that has subsided. The volcanoes that formed the Marshall Islands were active more than 150 million years ago. Reef growth during subsidence of the volcanoes results in a cap of calcium carbonate minerals that spans the distance from the top of the now-submerged volcano to the sea surface.
2. The shallow subsurface geology of atolls is determined by precipitation and deposition of carbonate minerals, the chemical alteration (diagenesis) of these minerals, and changes in sea level.
3. The RMI is made of 24 atolls and islands, of which the largest ten islands make up 74% (13,403 hectares) of the land area. The islands are low, generally flat bodies of land. On average, land mass in the Marshall Islands is 2 m above sea level.
4. The four atolls of interest for the MIMIP have the following characteristics:
    - Majuro consists of a series of islets connected by causeways on the south rim to form an almost continuous land mass. The atoll is elongated in shape and extends approximately 40km east to west. At the western end of Majuro atoll about 40km from the airport by road, is the highest elevation point on the atoll, estimated at less than 3m above sea level.
    - Kwajalein atoll, home of Ebeye Island, is one of the world's largest coral atolls. Comprising of 97 narrow islands and islets, it surrounds one of the largest lagoons in the world. The average height of above sea water for all of the islands in this atoll is about 1.8m.
    - Jaluit atoll is a large coral atoll of 91 islands with a total land area of 11.34 km^2, and it encloses a lagoon with an area of 690 km^2, which is shaped roughly like a kite. Most of the land area is on the largest island of Jaluit (10.4 km^2). Jaluit is approximately 220 km southwest of Majuro.
    - Wotje atoll comprises 72 islands with a total land area of 8.18km^2 and a total enclosed lagoon area of 624 km^2. Both in terms of land and lagoon area, Wotje ranks among the larger atolls of the Marshall Islands, while it has one of the lower lands to lagoon area ratios. The atoll is oriented east and west and measures approximately 45 km in greatest length (E-W) and about 18 km in greatest width (N-S).
5. Soils developed on the atolls are typically thin and poor. Atolls are generally composed of porous coral sediments. Drainage is generally not a major problem due to rapid percolation of liquids into the soil and substrate.
6. Soil erosion depends on several parameters such as type of soil, slope, vegetation, the nature of topography and rainfall intensity. The loss of soil stability and soil erosion can take place due to the removal of vegetation cover, and numerous construction activities. It can cause the loss of soil fertility and induce slope instability.
7. Rainfall can have a significant impact on the ability to manage environmental impacts, particularly in terms of managing drainage, erosion and sedimentation. Therefore, activities that involve significant disturbance of soil or operating within drainage lines should be planned to be undertaken during the driest months. It is also important to ensure that all required erosion and sediment control mechanisms are in place before the onset of the wet season.

SEISMIC ACTIVITY

8. The Republic of the Marshall Islands is situated along a relatively quiet seismic area but is surrounded by the Pacific "ring of fire," which aligns with the boundaries of the tectonic plates. These boundaries are extremely active seismic zones capable of generating large earthquakes and, in some cases, major tsunamis that can travel great distances. No significant earthquakes have been observed in recent history. However, in 1899, a large earthquake off the eastern coast of New Ireland, Papua New Guinea generated a tsunami that caused a considerable amount of damage in the Republic of the Marshall Islands.

9. Earthquake hazard in the Marshall Islands is classified as very low, there is reportedly less than a 2% chance of potentially-damaging earthquakes in the area in the next 50 years[24]. The Republic of the Marshall Islands has a 40% chance in the next 50 years of experiencing, at least once, very weak levels of ground shaking. These levels of shaking are not expected to cause any significant damage to well-engineered buildings[25].

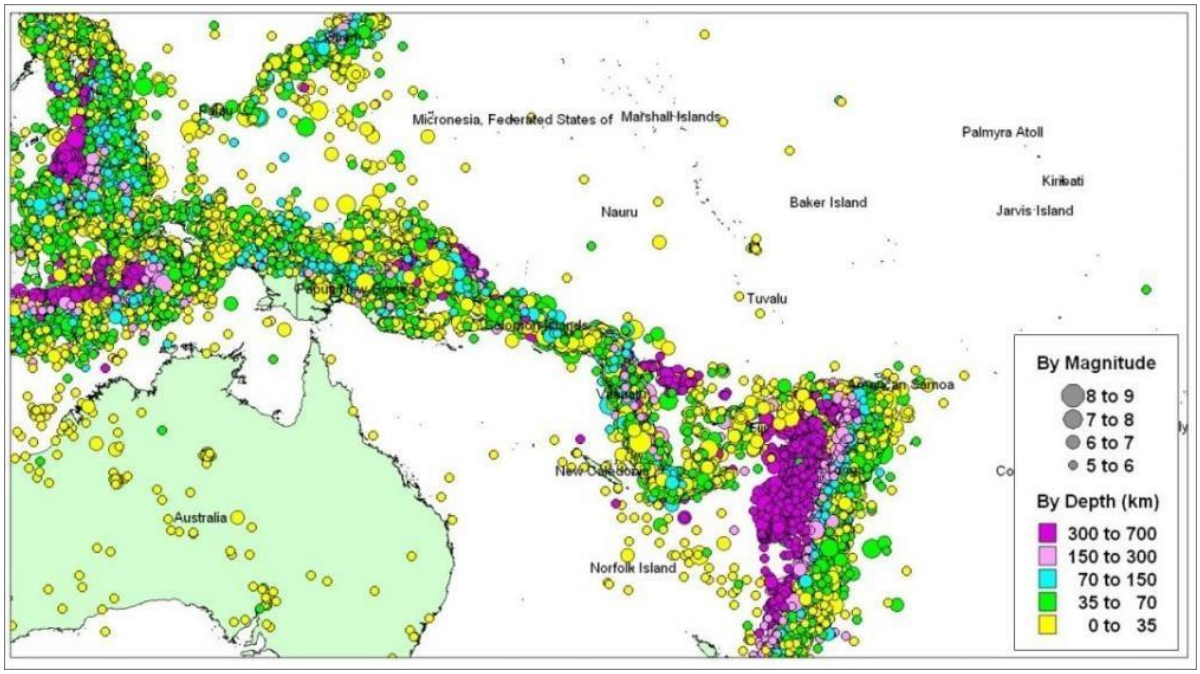


Figure 1 Epicenters of earthquakes in the west Pacific Islands region[26]

1.2 CLIMATE

10. The Climate of RMI is tropical throughout the year and is divided into two predominant seasons: a wet season from May to November and a dry season from December to April. Rainfall averages 300-380 mm per month with October and November the wettest and December to April the driest. Average rainfall increases from the north to the south: the northern atolls receive less than 1,250 mm annually and are very dry in the dry season, while atolls close to the equator in the south receive more than 2,500 mm of rain each year. Majuro itself is recorded as receiving an average of 3,200 mm of rain per year, while Ebeye has an average recording of 2,500 mm per year.

11. The general weather pattern is regularly influenced by the movement of the ITCZ (Inter Tropical Convergence Zone) as well as irregularly by the El Nino Southern Oscillation (ENSO). The Intertropical Convergence Zone brings rainfall to the RMI throughout the year. Rainfall is also sometimes influenced by the West Pacific Monsoon,

[24] http://thinkhazard.org/en/report/157-marshall-islands/EQ (accessed 11/1/19)
[25] http://siteresources.worldbank.org/EXTDISASTER/Resources/MarshallIslands.pdf
[26] Rong, Park, Duggan, Hahdyiar and Bauzzurro (2012) Probabilistic Seismic Hazard Assessment for Pacific Island Countries. 15 WCEE Lisboa 2012.

which brings wetter conditions when it is active over the country. Many Pacific typhoons begin as tropical storms in the RMI region and grow stronger as they move westwards.

12. The islands border the typhoon belt. Typhoons, droughts and storm waves are the main extreme events that impact the RMI. Typhoons affect the country late in the typhoon season, between September and November. They are usually weak when they pass through the region but are more intense in El Nino years.

13. Droughts generally occur in the first four to six month of the year following an El Nino when the rainfall can be reduced as much as 80%.

14. Across the RMI, the average temperatures is relatively constant year-round, averaging between 25°C and 30°C for Majuro and Ebeye across the year. Changes in temperature from season to season are relatively small (around 1°C) and strongly tied to changes in ocean temperature.

15. Rainfall on the islands mostly reflects seasonal variability of the northeast trade winds. Weaker trades, from April to October, coincide with greater rainfall in those months, while stronger trade winds from November to March coincide with decreasing rainfall.

16. On a spatial scale, there is a large spread between rainfall totals between the northern and southern area of RMI, with the northern areas (represented by Utrik and Wotje) being significantly dryer than the south (Majuro and Kwajalein). General rainfall patterns vary within RMI along three zones; Zone 1 with atolls/islands located above 8' N latitude, Zone 2 with islands between 6' and 8' N latitude and Zone 3 with atolls/islands below 6' N latitude. During the dry periods, island in the northern Zones 1 and 2 often experience prolonged days without rain, and therefore are more vulnerable to drought (Figure 2).

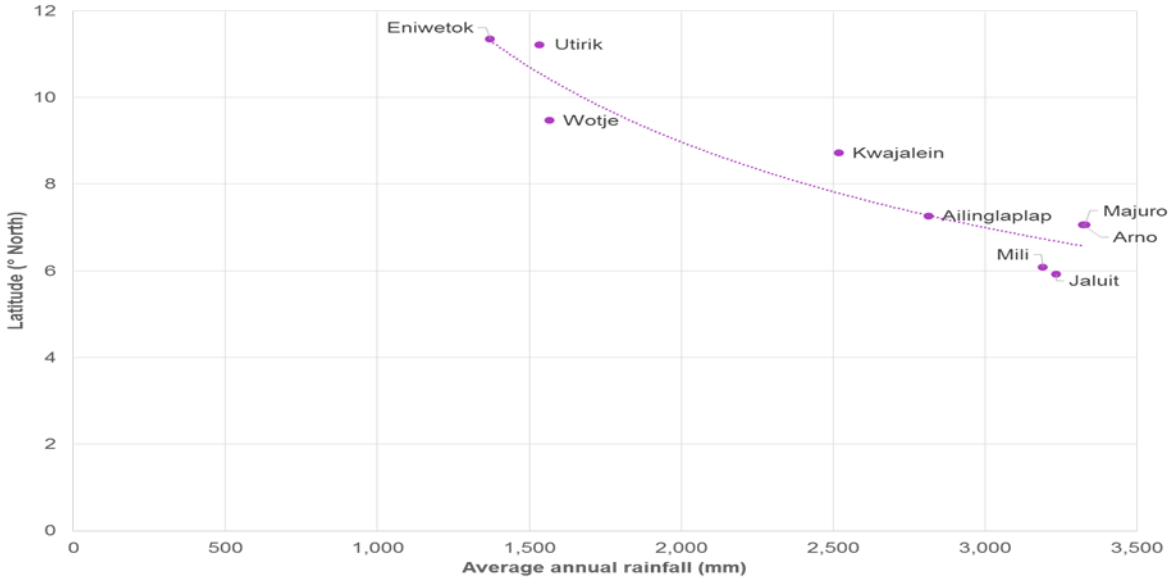


Figure 2 Annual rainfall patterns in RMI

1.3 UNEXPLODED ORDINANCE

17. During World War II the atolls and islands of Micronesia were the focus of military development, extensive fighting and bombardment. By the end of that war the islands were littered with unexpended Japanese ammunition and with US ordnance that had failed to explode on impact.

18. The Pacific War (1941-1945) saw the development of permanent and temporary military bases on several islands and atolls in the central and western Pacific Ocean by both Japanese and Allied forces. Vast quantities of ammunition, ranging from cartridges for small arms to high explosive shells for large coastal defense and naval guns, as well as aerial bombs were moved to the bases and stored in concrete bunkers or open bomb dumps.

Small quantities were stored in ammunition ready magazines at the gun emplacements, where they were needed. Some of the ammunition was used up by the Japanese defenders, but much remained unexpended as the guns for which it had been stored were destroyed and made inoperable by U.S. attacks.

19. In addition, enemy action delivered substantial quantities of ordnance on the Japanese bases. There is some data for ammunition used by the US Forces for the Marshall Islands. Table 1 compiles some of that information for the general bombardment, and Table 2 provides the data for the bombardment during the invasion of Kwajalein. It should be noted that the data presented there are near complete only for the atolls of Jaluit and Wotje, while figures are minimum figure only for Kwajalein and Majuro as data is incomplete.

	7th AAF	USN Carriers		USN Land	Fourth marine Air Wing			Naval	
Atoll	Bombs	Bombs	Napalm	Bombs	Bombs	Napalm	Rockets	Gunfire	Total
Wotje	1236.10	166.10		213.10	186.20	10.60	5.07	1016.53	4508.70
Jaluit	1374.00	49.50		232.20	1425.38	54.20	7.32	6.00	3148.60
Kwajalein	315.20	?	?	?	?	?	?	?	?
Majuro	15.00								

Table 1 Tonnage of high explosive bombs, naval shells, napalm and rockets directed by U.S. Army, Navy and Marine units against targets on the Project islands, February 1942-August 1945, (Invasion bombardment exclude)[27]

	7th AAF	US Navy		US Army
Kwajalein Atoll	Bombs	Bombs	Gunfire	Gunfire
Roi-	23	16+	1434.5	
Namur			1220.6	
Kwajalein Is	15		2656.5	1847.4
Northern small islands			2677.4	43+

[27] Spennemann, D.H.R. (2005). Is Unexploded World War II Ammunition Abandoned Property? Journal of South Pacific Law. Vol 9 Issue 2. [5] Spennemann, D.H.R. (2005). Is Unexploded World War II Ammunition Abandoned Property? Journal of South Pacific Law. Vol 9 Issue 2.

Southern small islands		33	3926.7	389.9+

Table 2 Tonnage of high explosive bombs, naval shells, napalm and rockets directed by U.S. Army, Navy and Marine units against targets on Kwajalein Atoll, during the invasion of these islands.[5]

20. Most of this ammunition was either expended during military action or was removed after the war. Whilst most of the bombs and shells exploded as intended, some did not. An US intelligence report following the capture of Kwajalein Atoll, Marshall Islands, by US forces indicates that approximately 50% of the naval shells failed to detonate on impact.

21. Multiple missions to remove the remaining ordinance were undertaken following the war. However, despite numerous efforts, not all ordinance has been discovered and removed. Discovery and clearance of ordinance in the Marshall Islands continues, for example in 2016 Golden West Humanitarian Foundation destroyed UXOs on Mili and Wotje in 2016[28].

1.4 MARINE ENVIRONMENT

22. The RMI is formed of coral atolls and as such are characterized by calmer sea conditions on the lagoon side shores and larger swells and rougher condition on the ocean side shore. The coastal marine environment in the Marshall Islands hosts a range of fauna ecosystems:

- Seagrass community and meadows
- Supratidal and intertidal
- Sandy areas of the intertidal and subtidal zones
- Coral reefs
- Reef holes, artificially quarried and bombed Sea surface, lagoon water column, open water
- Deep water.

23. The Marshall Islands has a total of 2,131,000 km^2 of Exclusive Economic Zone (EEZ), of which 0.009% is land. Marine species make up most of the biodiversity. The coastal marine environment has a diverse range of fauna species. There are over 1000 species of fish, 1600 of mollusc species, and more than 250 species of algae and stony coral and is home to endangered species including blue whales, sperm whales, leatherback turtles and the hawksbill turtle.

24. Five turtle species are known to occur in the Pacific region (Table 3).

Table 3 List of marine turtles (IUCN)

Common Name	**Scientific Name**	**Status**
Green	*Chelonia mydas*	Endangered
Hawksbill	*Eretmochelys imbicata*	Critically Endangered
Olive ridley	*Lepidochelys olivacea*	Vulnerable

[28] https://marshallislandsjournal.com/?p=3451

Leatherback	*Dermochelys coriacea*	Vulnerable
Loggerhead	*Caretta caretta*	Critically Endangered

25. Green turtles are the only common species of turtle which nests in RMI, while hawksbill turtles are considered rare.[29] Nesting season normally takes place from May to November. The main nesting sites are Bikar, Erikub and Jemo, with minor nesting sites in the atolls of Bokak, Ailinginae, Rongerik, Bikini, Wotje, and Taka.

26. Coral reef ecosystems in RMI provide key ecosystem services, including food, to the Marshallese people. The condition of the reefs, particularly in the less populated islands, has a major positive impact on sustainable livelihoods, including fisheries.

27. Live coral reef cover is a useful indicator of the overall state of the inshore ecosystems. Coral cover provides an indirect measure of land-use impacts and erosion, fishing pressure, relative sea surface temperature (SST), presence of disease and predators like the crown of thorns starfish, and mechanical damage from anthropogenic sources or natural phenomena like typhoons.

28. Variations in coral cover trends show higher coral cover in rural atolls, compared to urban atolls. However, overall coral cover in RMI is considered to be relatively healthy. High species diversity indicates the coral reef ecosystems are intact and healthy.

29. Fisheries play an important part in RMI's economy.

1.4.1 Marine Ecosystem Management

30. The Marshallese people are reliant on reef fishing for subsistence. Reef fisheries target both reef fish and invertebrates (e.g. crustaceans, clams, sea cucumbers and trochus). Thus, healthy reef systems are critical.

31. The Marshall Islands has a unique management regime where traditional and modern styles are integrated to manage and conserve the nation's marine resources. There are 63 marine managed areas covering about 70% of reef area in the RMI. Most of the areas are yet to have proper management plans. Integrated management of marine and terrestrial systems through a community-based approach implementing the Reimaanlok (National Framework for Conservation Area Planning), a framework developed in 2008

32. There are two designated Ramsar sites in RMI (Figure 3) - the Jaluit and Namdrik atolls, with a combined area of 11.38 km^2 and some of the most diverse wetland in RMI. These sites were declared Ramsar sites for a number of reasons, including hosting a breeding population of critically endangered hawksbill turtles, the coconut crab and other rare species. Namdrik Atoll is one of the smallest, with an enclosed lagoon that cannot be accessed by boats. It is one of a few atolls which support mangroves and other native endangered species, as well as the critically endangered hawksbill turtle. Jaluit Atoll also has mangrove systems and supports a range of endangered and critically endangered species.

33. Active management of the Ramsar sites is limited by distance and budget limitations. Both Ramsar sites have local management plans that are managed by the local government with support from the RMI EPA office.

[29] Maison, K.A., Kinan Kelly, I. and K.P. Frutchey. 2010. Green Turtle Nesting Sites and Sea Turtle Legislation throughout Oceania. U.S. Dept. Commerce, NOAA Technical Memorandum. NMFS-F/SPO-110, 52 pp

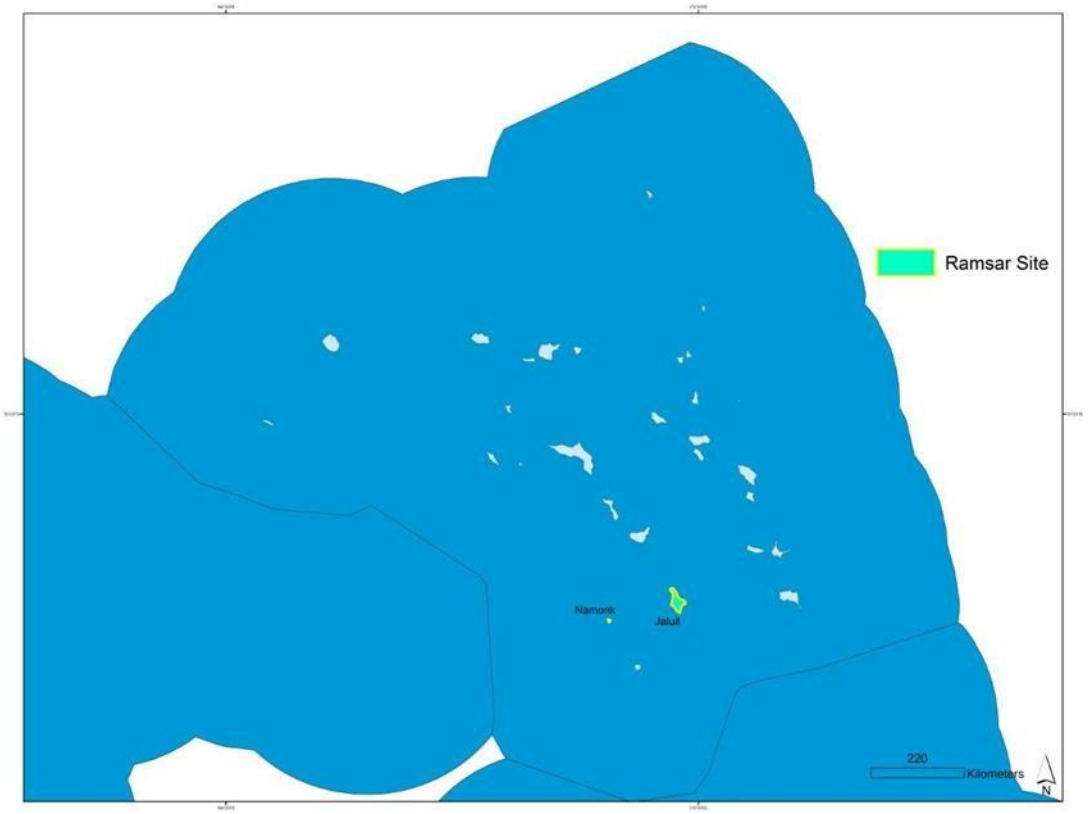


Figure 3 Ramsar wetlands in RMI

34. In 2011, the RMI declared its entire Exclusive Economic Zone a shark sanctuary, banning all activities associated in harvesting sharks and body parts for commercial purposes. The tuna fishery is overfished.

1.4.2 Marine Environment Proximate to Ports

35. The following provides an overview of the benthic ecology study undertaken as part of the work. Full details are included in Annexure C.

1.4.2.1.1 Methodology

36. A number of factors dictated the methods used to describe the benthic marine environment within and adjacent to the areas of the proposed physical investments.[30] Because of the extremely tight timelines for the work (both in terms of field work, and also reporting) and the fact that associates of various levels of professional ability were engaged locally, we employed a simple photographic technique to document benthic environments, that employs easy to use waterproof cameras (most GoPro Hero 7) taking unframed quadrat photographs along randomly placed 30m transects at within and adjacent to Ports. These photos are then analyzed using 'random point count' methodology, which is a common method to enumerate community/habitat statistics in a variety of fields of biology,[31] and is commonly used for coral reef habitats.[32] This method allowed many sites to be assessed using

[30] Hoek, Christiaan; Mann, David; Jahns, H.M. (1995), Algae: An Introduction to Phycology. *Cambridge University Press. p. 434.* ISBN 9780-521-31687-3
[31] Kohler, K.E. and Gill, S.M., 2006. Coral Point Count with Excel extensions (CPCe): A Visual Basic program for the determination of coral and substrate coverage using random point count methodology. *Computers & Geosciences*, 32(9), pp.1259-1269
[32] Carleton, J.H. and Done, T.J., 1995. Quantitative video sampling of coral reef benthos: large-scale application. *Coral Reefs*, 14(1), pp.3546

basic habitat descriptors. The broad overview of marine benthic habitats this method produces is by no means a comprehensive biological/ecological inventory and should only be used for semi-quantitative descriptive purposes rather than representing a current biological baseline dataset.

37. At Delap, Uliga, Ebeye and Jaluit the site was assessed both from satellite photographs and in situ. At each port the site was assessed both from satellite photographs and in situ. Survey sites were selected for data collection to assess the benthic environment based on both proximity to the physical investments (directly around ports) and adjacent to ports, based on the variety of habitats present (i.e. deep channels, fringing reef slopes, reef flats, intertidal areas etc.). At each site up to four divers (or a single snorkeler) were deployed. The diver/snorkeler randomly placed the start of a 50m surveyors measuring tape on the bottom and deployed 30m of tape in a random direction. The diver (or a second diver) then swam along the transect length, taking 8-15 photographs of the seafloor from directly above the transect tape with the transect tape in-shot. This was performed 4-8 times per site, depending on the number of personnel available. At Yap different cameras to the GoPro's were used, which resulted in higher resolution photography, but a more limited field of view. Hence at this site, more photos were taken and analyzed than at other sites, but ultimately less benthic habitat was sampling due to the field-of-view restriction.

38. Photos were analyzed using the program CPCe,[33] which allows users to correctly spatially scale photographs according to known measures (in this case the surveyors tape). The program then has an algorithm to place random points within a pre-defined area, and database functions that allow the user to catalog the benthic habitat category/taxonomic group under that data point. For this study, photographs had a quadrat (square area of predefined dimension) defined based on as large an area as practical given the field of view of the photograph (for YAP, usually around 40 – 70 cm2, for all other ports usually 1 m^2). Within each quadrat a point was placed at random in each 10cm column of the quadrat, and the user then recorded the benthic habitat category/taxonomic group at this point. Habitat categories and taxonomic groupings used to record data for this report are provided below in Appendix 1.

39. After data was collected for each site, data were summarized per transect such that descriptive statistics (means, standard deviations, standard errors) were generated across transects. Benthic habitat data is presented in graph and table form however all data (photographs, CPCe outputs) is available in electronic appendices.

Delap

40. Delap Port is on the leeward, southern lagoon shore of the large Island on the eastern corner of Majuro atoll. The benthic habitat is predominately macro-abiotic at the main operational area (the northern facing dock), consisting mostly of coarse sand, bare rubble and litter/refuse, with sparse visible epiflora or fauna. This area rapidly changes to deep lagoon habitat to the north via a sandy slope. The area immediately to the east of the port dock is also an operationally busy area with a shallow lagoon benthic habitat: abundant macroalgae (≈30% cover) sparse individual hard coral colonies, and coarse sand. To the west of the port the benthic habitat transitions from a deeper lagoon environment to a fringing reef flat environment, although mostly consisting of algal turf covered hard substrate with sparse hard coral cover. A quantitative description of the benthic habitats around and immediately adjacent to the port is presented in detail below. The port area appears to already be impacted by industrial activity, given the prevalence of industrial and domestic waste on the seafloor. The proposed project appears to pose little threat to the existing marine benthic environment, however some general recommendations, revolving around pollution management are provided considering the likely industrial operations associated with the project and as a result of potentially increased future port capacity and/or use. Uliga

41. Uliga port is situated on the leeward eastern lagoon shore of the large Island on the eastern corner of Majuro atoll. The benthic habitat around the north and west of the dock is predominately a mix of macroalgae beds on coarse sands with large sandy spaces and sparse visible epiflora or fauna, transitioning via a steep slope to deep lagoon habitat to the west. To the east of the dock, in-between the dock and land, the benthic environment consists of a small reef among coarse sand. To the south of the dock, the habitat transitions from deep lagoon to shallow lagoon

[33] Kohler, K.E. and Gill, S.M., 2006. Coral Point Count with Excel extensions (CPCe): A Visual Basic program for the determination of coral and substrate coverage using random point count methodology. *Computers & Geosciences*, 32(9), pp.1259-1269

abutting fringing reef slope and flat to the island shore. The shallow lagoon here is predominately biotic habitat consisting mostly of macroalgae and algal turf on hard substrate, with some in between coarse sand and sparse individual hard coral colonies. The reef slope to the south-east has relatively high coral cover in a small area (≈35% cover) and abundant algal turf on hard substrate. A quantitative description of the benthic habitats around and immediately adjacent to the port is presented in detail below. The port area appears to already be impacted by industrial activity, given the prevalence of industrial and domestic waste on the seafloor. The proposed project appears to pose little threat to the existing marine benthic environment, however some general recommendations, revolving around pollution management are provided considering the likely industrial operations associated with the project and as a result of potentially increased future port capacity and/or use.

Ebeye

42. The dock at Ebeye is on the leeward, lagoon shore of Ebeye Island on the southern corner of Kwajalein atoll. The depth around the main operational port area (the western side of the dock) is around 12-17m, which falls away rapidly to the west to deep lagoon, sandy bottom habitat. The existing benthic habitat at the main operational area and to the north of Ebeye port predominately consists of both macroalgae (*Halimdea* sp. meadows) and macro-abiotic substrate (mostly coarse sand, bare rubble and litter/refuse) with sparse visible epifauna. The area immediate south and SSE of the port is a shallow lagoon area abutting the western shore of Ebeye Island. The shallow lagoon area is where the substrate transitions to higher algal turf cover and there is also sparse hard coral cover of ≈<5%. A quantitative description of the benthic habitats around and immediately adjacent to the port is presented in detail below. The area appears to already be impacted by industrial activity, given the prevalence of industrial and domestic waste on the seafloor. The proposed project appears to pose little threat to the existing marine benthic environment, however some general recommendations, revolving around pollution management are provided considering the likely industrial operations associated with the project and as a result of potentially increased future port capacity and/or use.

Jaluit

43. The port at Jaluit is situated on the leeward, lagoon shore on the southern corner of Jaluit atoll. Excepting the fringing reef around 80m to the NNW of the port, its benthic habitat is predominately macro-abiotic, consisting mostly of coarse sand with sparse visible epiflora or fauna. The area immediately to the west of the port dock has < 10% biotic substrate cover and recedes westward into deeper lagoon habitat. The benthic habitat immediately north of the port consists of small sandy channel which meets a shallow fringing reef habitat abutting the western shoreline of Jaulit. The fringing reef slop is dominated hard substrate with algal turf and relatively high hard-coral cover (≈36%). The shallow lagoon to the south and east of the port dock consists mostly of coarse sand, however sparse hard coral colonies are present (≈10% cover). A quantitative description of the benthic habitats around and immediately adjacent to the port is presented in detail below. The port area appears to already be impacted by port and maritime activity, given the prevalence of industrial and domestic waste on the seafloor. The proposed project appears to pose little threat to the existing marine benthic environment, however some general recommendations, revolving around pollution management are provided considering the likely industrial operations associated with the project and as a result of potentially increased future port capacity and/or use.

Wotje

44. Wotje was not visited by the ESMF consultant team due to logistical issues (airstrip was closed and therefore no flights were possible). See Annexure D for overview information collected by DIDA surveillance visit in early March 2019.

Arno

45. Arno was not visited by the ESMF consultant team due its late inclusion in the project.

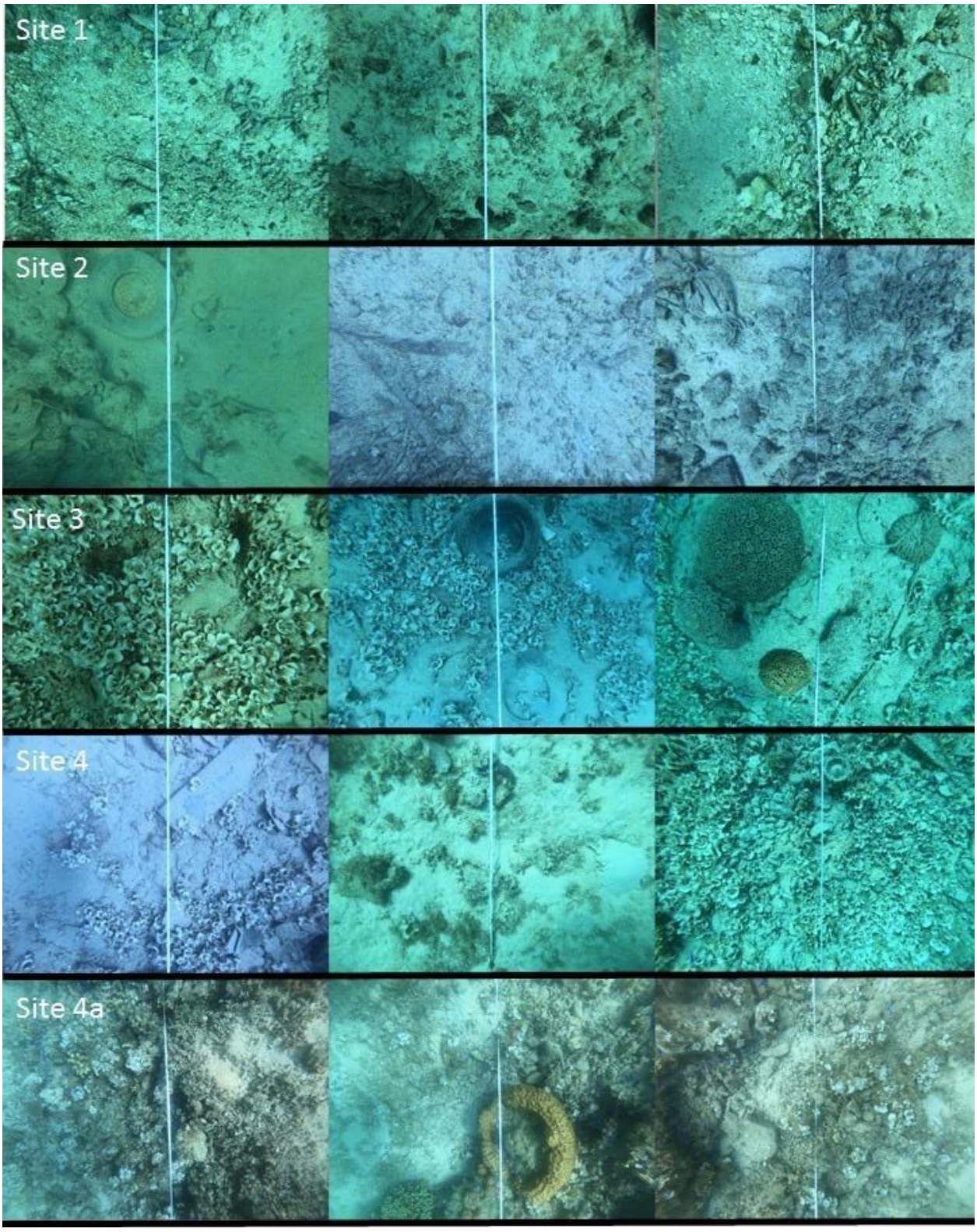


Figure 4 Representative photos of the benthic environment of each surveyed site at Delap Port

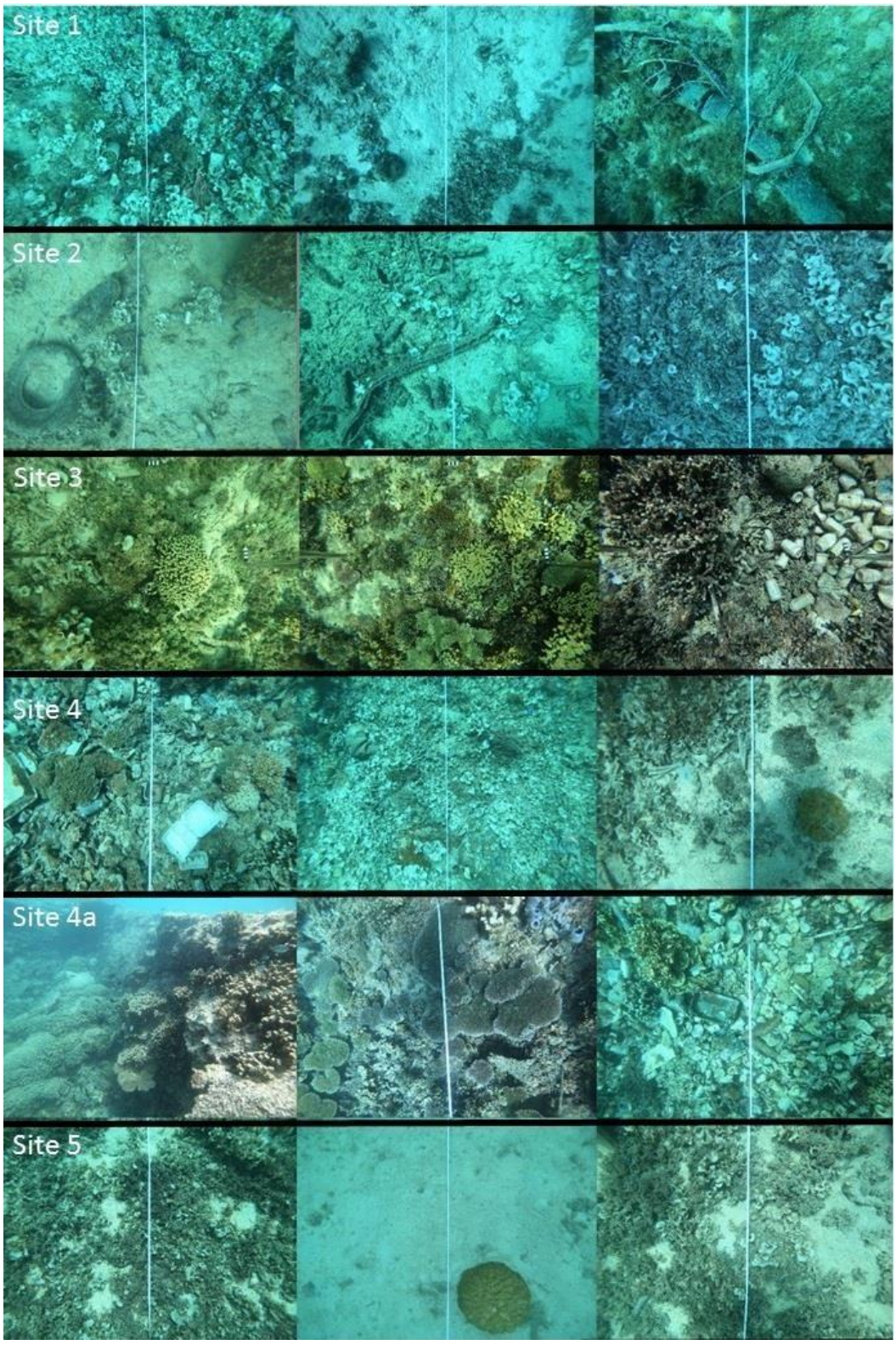


Figure 5 Some representative photos of the benthic environment of each surveyed site at Uliga Port.

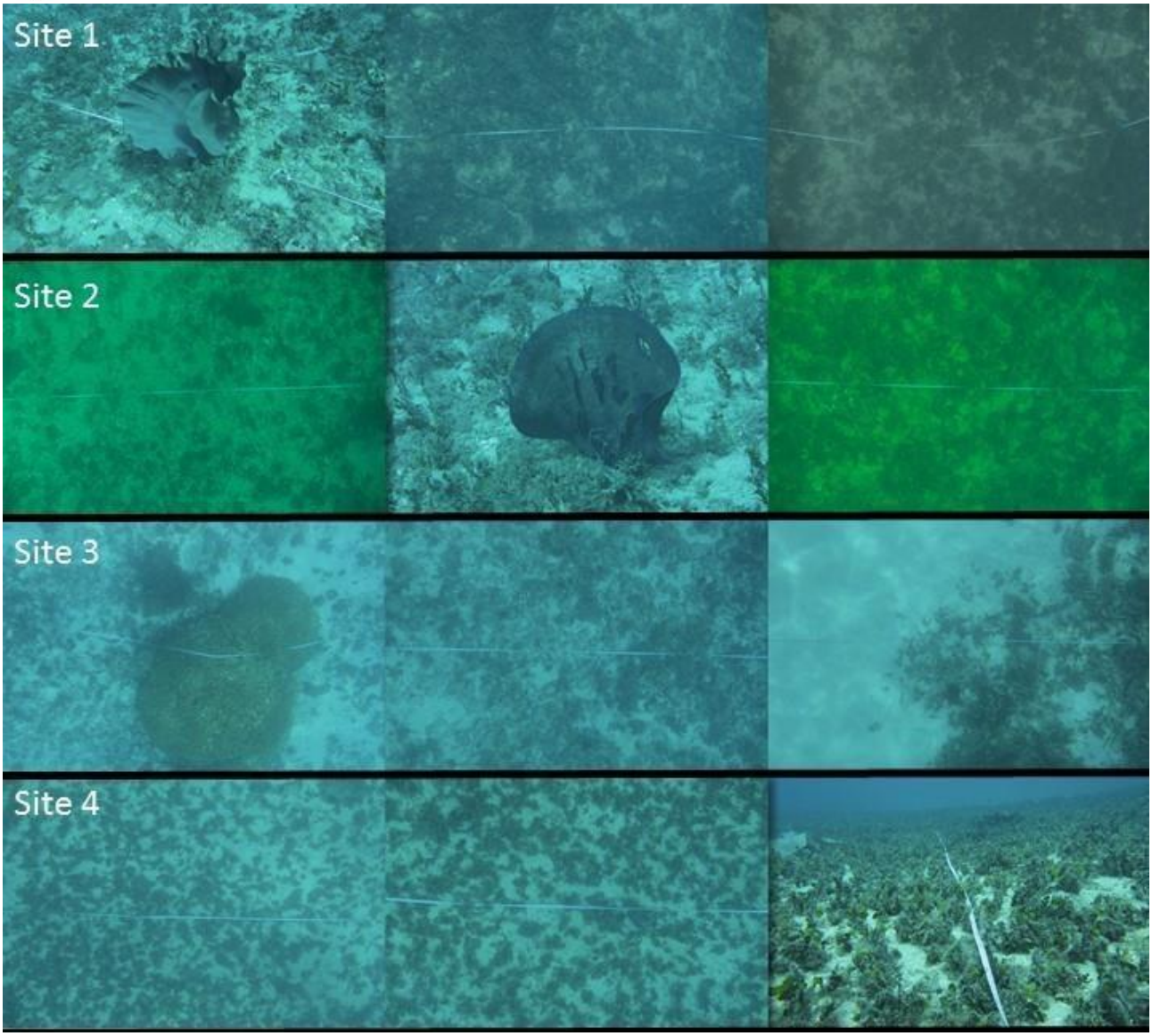


Figure 6 Representative photos of the benthic environment of each surveyed site at Ebeye Port

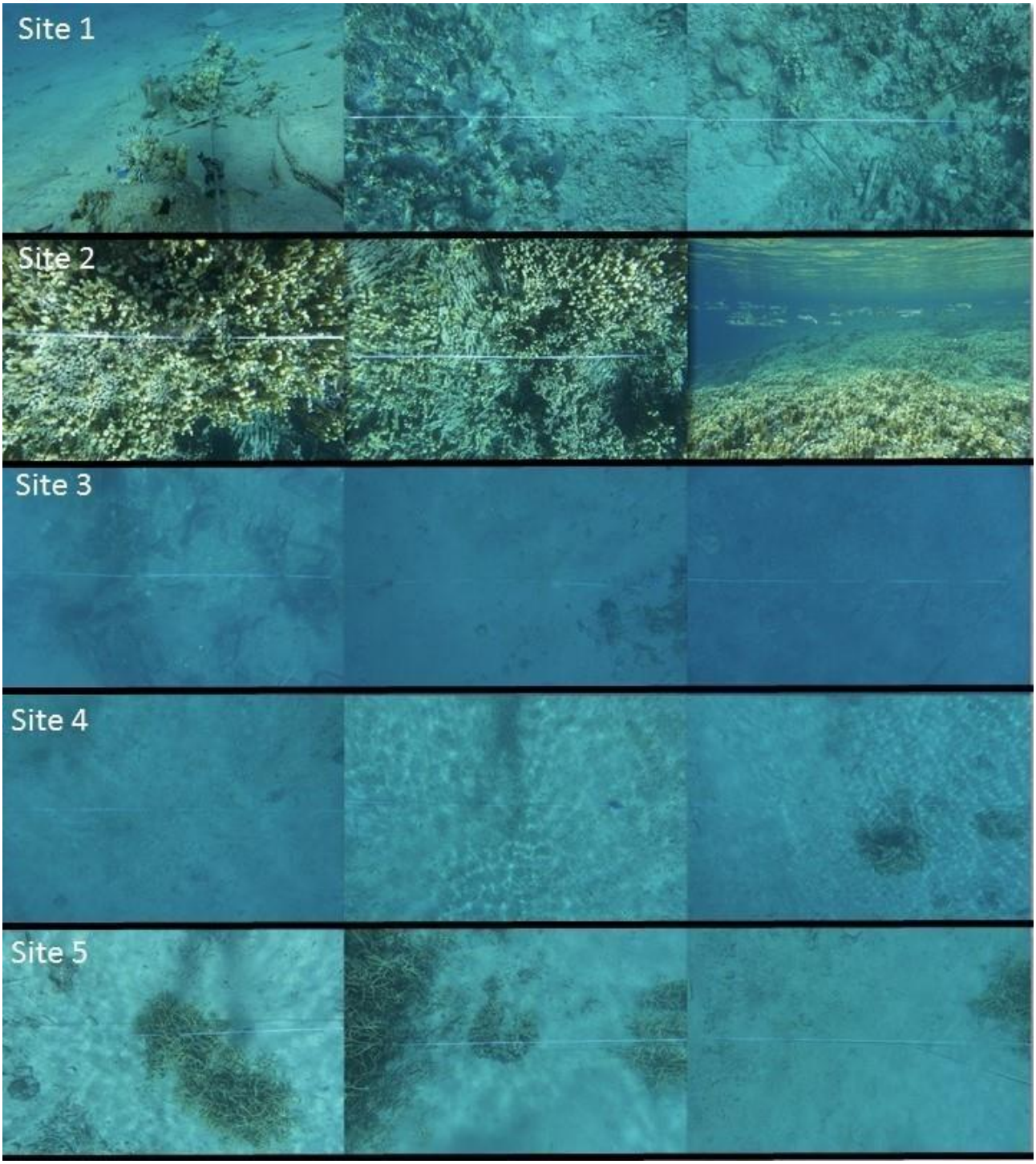


Figure 7 Representative photos of the benthic environment of each surveyed site at Jaluit Port

MARINE WATER QUALITY

Methodology

46. Water quality samples were collected at a range of sites for each port. A YSI Pro DSS unit was used to collect the samples. The water quality equipment located the site using GPS technology and collected the following parameters

    - Barometer (mmHg)
    - Temp (°C)
    - Cond (µS/cm)
    - Sp Cond (µS/cm)
    - Sal (psu)
    - nLFCond (µS/cm)
    - TDS (mg/L)
    - Resistivity (ohms-cm)
    - Sigma-T (s t)
    - Sigma (s)
    - ODO (% Sat)
    - ODO (mg/L)
    - ODO (ppm)
    - pH
    - pH (mV)
    - ORP (mV)
    - Turbidity (FNU).

47. All samples were taken at a depth of 6 meters for consistency.

48. Sample sites were as follows:

    - Majuro – fifteen (15) sites;
    - Ebeye – six (6) sites; and
    - Jaluit – fourteen (14) sites (north and south Jaluit).

49. Data was logged on the YSI Pro DSS and then transferred into an excel spreadsheet. Full data for all ports is contained within Annexure Two of the ESMF.

Majuro

50. Delap Port is located on an area of reclaimed land while Uliga is a concrete structure on the inside of the eastern side of the lagoon.

51. Water quality was sampled at fifteen (15) locations around Delap and Uliga as well as sampling near Kramer Port. Temperature was very consistent across the whole area and ranged from 28 ^{O}C to 28.2^{O}C. Conductivity was similar across all sites. Total dissolved solids was similar across sites with sites seven (7) and fifteen (15) being slightly elevated in comparison to the majority of sites (range between 0.67 and .75 FNU).

52. Oxidation-Reduction Potential (ORP), which is a measure of the cleanliness of the water and its ability to break down contaminants was significantly different across all sites. As an example, site 1, which was taken immediately behind a carrier vessel was -4.4. At one site in proximity to Kramer Port, the ORP was 29.1 (site four (4)). Around Delap port, the ORP was again low at 43.5 (sites seven (7) and eight (8)), while near Uliga, ORP was much higher range between 84.8 and 100.3. This could be explained as a result of the significant weather (winds of > 25 knots) and swells of up to three (3) meters during the sampling period.

53. Marine water quality sampling sites for Majuro are shown in Figure 10.

Ebeye

54. Water quality was sampled at nine (9) locations within the embayment. Water temperature varied across the nine sites sampled with site 1 having higher temperature (29.6^{O}C) while sites 3, 4 and 7 had water temperatures of 28.8^{O}C. Oxygen saturation was highest at sit 1 (108% and only 83% and site 8 which could be a result of water circulation. Sites 8 and 9 had much higher turbidity (5.07 and 5.42 FNU) in comparison to other sites, although site 6 immediately adjacent to the port had a turbidity reading of 3.51FNU. Other variables were similar across all sites.

55. Marine water quality sampling sites for Ebeye are shown in Figure 9.

Jaluit

56. Water quality was collected at both north and south Jaluit (fourteen (14) sites in total. A range of sites were surveyed as part of the water quality sampling, including what could be considered unimpacted sites versus sites in proximity to the port and small vessel area.

57. Water quality across the six sites in north Jaluit was sampled as the team was investigating a potential additional port that could have been included in the MIMIP. Temperature at the sites was fairly consistent (28.3 ^{O}C – 28.4 ^{O}C). Most parameters were fairly similar, although ORP at site one was significantly higher, while site 3 was significantly lower than the other four sites. Marine water quality sites for Majuro are shown in Figure 10.

58. With respect to South Jaluit, water quality samples were collected at eight sites. Temperature was consistent fairly consistent (28.5 ^{O}C – 28.7 ^{O}C). Likewise, conductivity was very similar across all sites as was oxygen saturation and availability. pH varied with a range between 8.06 and 8.23. Turbidity was slightly higher inshore which is to be expected, although it was still low at only 0.62 FNU.

59. ORP was significantly different across the sites. Site nine (9) had an ORP reading of -12.9mV and sites 8 (0.9mV) and 14 (17.4) were very low. By contract, site ten (101.6mV) and eleven (92.5mV) were very high. Marine water quality sites for south Jaluit are shown in Figure 11.

Figure 8 Marine Quality Sites in Majuro

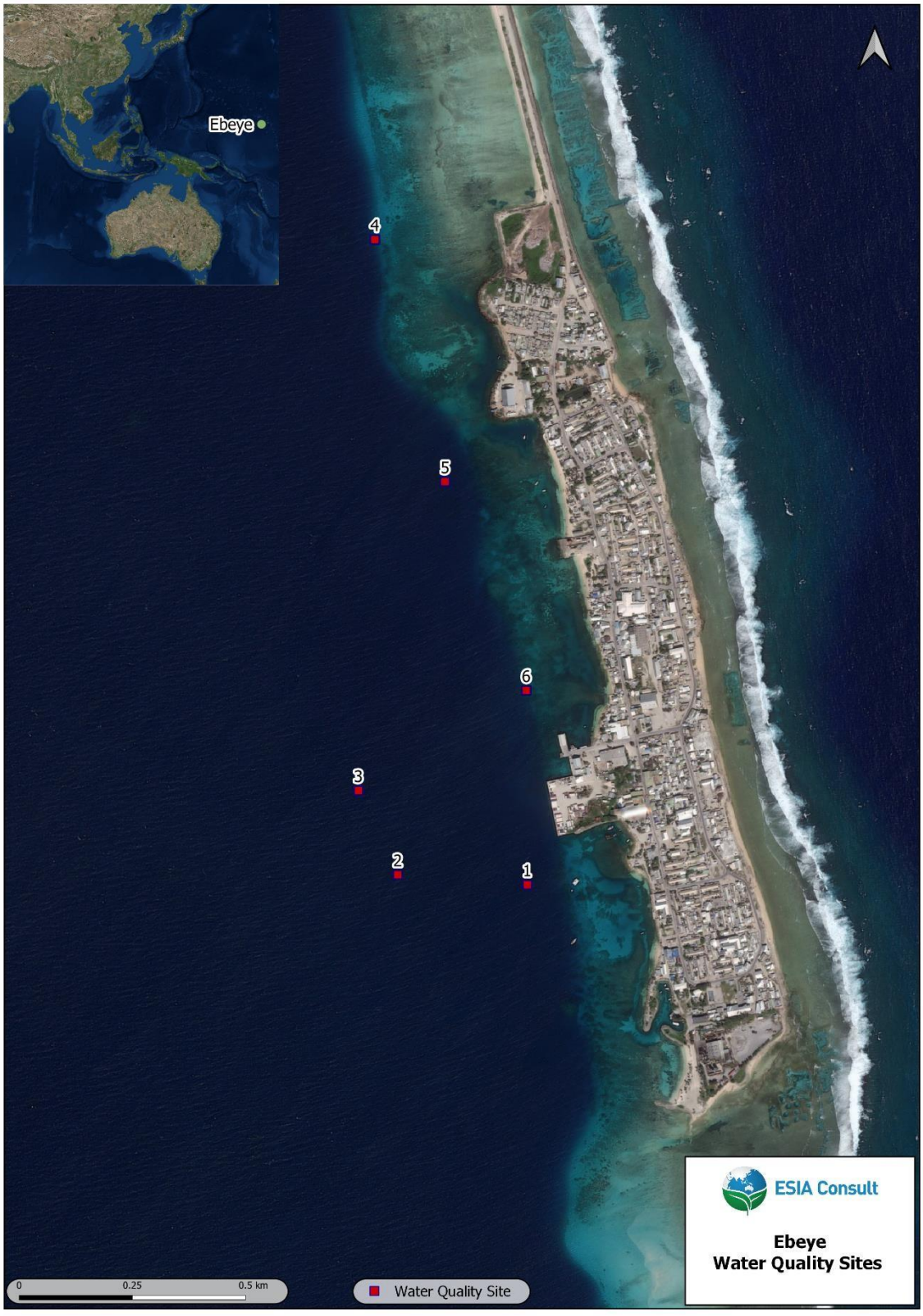


Figure 9 Marine Quality Sites in Ebeye

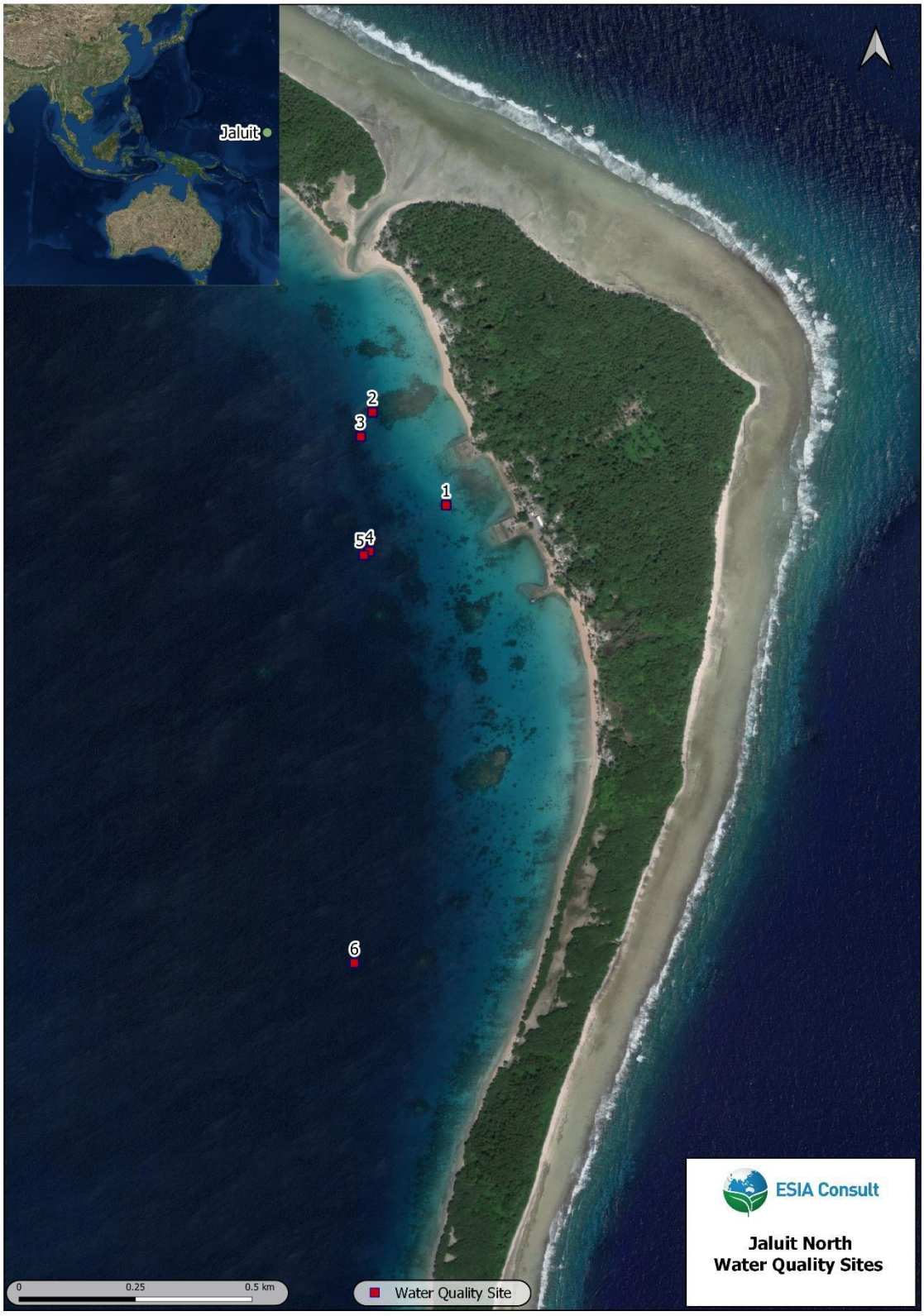


Figure 10 Marine Quality Sites in Jaluit North

Figure 11 Marine Quality Sites in Jaluit South

1.5 TERRESTRIAL ECOLOGY

1.5.1 Terrestrial

60. The land ecosystem of RMI is made up of forests, agriculture and wetlands which have been shaped by Marshallese land management practices.

61. RMI has about 70% total forest cover, which includes native forest, agro-forest, and coconut plantations[34]. The original forests have been replaced by agro-forestry to support human settlements. Today, the agro-forest is a mixt of trees, shrubs and herbaceous species such as coconuts, breadfruits, pandanus and bananas (Figure 12). Due to low soil fertility, there are few crops that can be grown in an atoll soil. Only a few atolls hold the last remaining native forest ecosystems. *Pisonia grandis* is one of the main forest ecosystems found throughout the Marshall Islands.

62. Land cover mapping has been carried out on the ten larger atolls. RMI is mainly covered by forest except in a few select locations where urban areas dominate (12%). These are Majuro (49% urban) and Kwajalein (30% urban). Barren land cover is the second most common land cover type (14%) - this is made up of sand and coral bars along and between islets. About four percent is non-forest vegetation including rangeland and agricultural lands

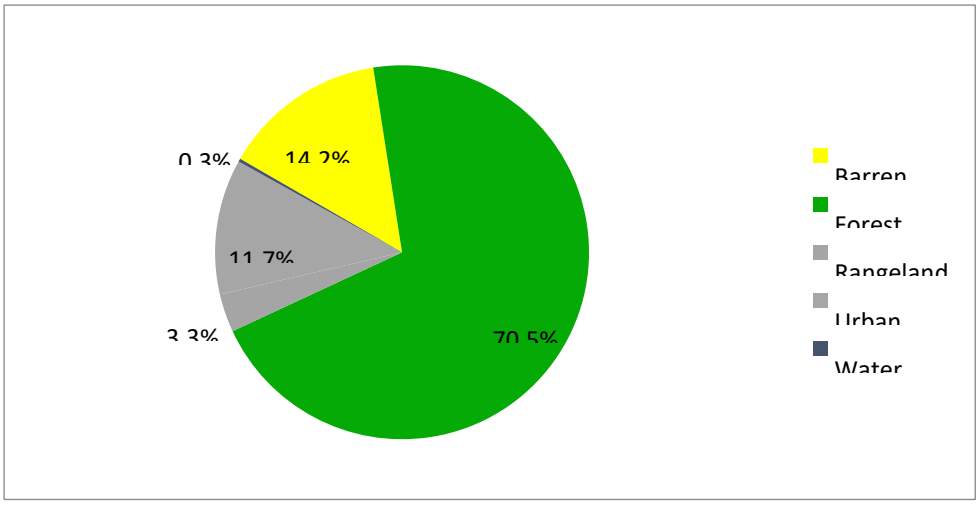


Figure 12 The graph represents the ten largest islands, seventy percent of which is estimated to be forested in a mixture of agro-forest and native species. Urban lands account for 12 percent of the land cover (Donnegan et al, 2008)

63. RMI has a limited number of terrestrial species which are endemic and a low number of terrestrial species. According to Fosberg "little or none of the true original vegetation remains of the Marshall Islands". The original ecological system was altered by the first Marshallese settlers and also during the colonial era.[35] A comprehensive study of botanicals has yet to be carried out although some atolls were studied. Figure 13 shows the average tree species mix on large atolls.

[34] State of Environment Report (2016) SREP
[35] Fosberg, R. F. (1990): "A Review of the Natural History of the Marshall Islands". National Museum of Natural History Smithsonian Institution, Washington,
D.C., USA

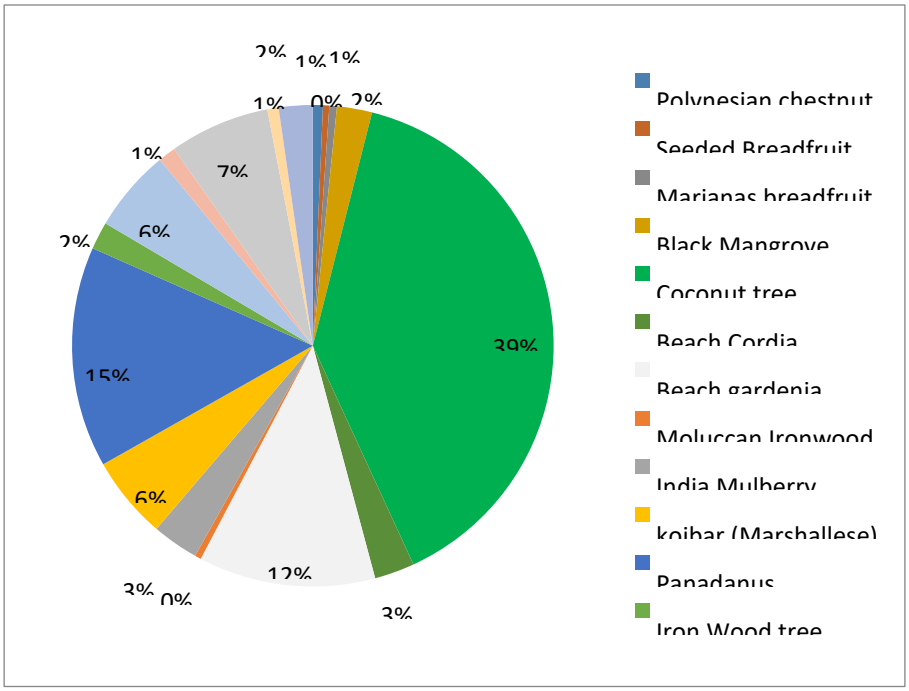


Figure 13 Average tree species mix based on sample plots on the ten largest islands. (Donnegan et al, 2008)

64. The ports are highly disturbed areas with little or no vegetation.

1.5.2 Invasive Species

65. Increased contact with the world brings more invasive species to RMI. However, the primary pathway for spread is infrastructure, related to development such as roads, urban expansion and agriculture. Invasive species compete with indigenous species and habitats with little or no natural predation.

66. A study conducted in RMI recorded 523 alien species that impact the environment, as invasive and potentially invasive species. Of the 523 alien species, 41 are animals, the remainder are plants.[36]

67. Many of the invasive species arrived over the past century and efforts are underway to prevent their spread. For example, the Mangrove Monitor lizard was introduced as a pet during the Japanese era of colonization and are known to prey on birds and their eggs. The most harmful ones to native flora and fauna are cats and rats. Many land and marine invasive species, plants or animals are threatening the biodiversity. Once an invasive species establishes itself, eradication and control can be extremely difficult and costly. The well-established merremia vine, the crazy ant and red-vented bulbul bird are already having negative impacts by taking over ecosystem niches.

68. Invasive species are unevenly distributed across the nation (Figure 14). Majuro and Kwajalein have the highest number of invasive species, 244 and 187 respectively, as the two atolls are the main ports of entry to the country.

[36] Pagad, S. (2015). Compile and Review Invasive Alien Species Information for the Republic of the Marshall Islands. Report for the Secretariat of the Pacific
Regional Environment Programme

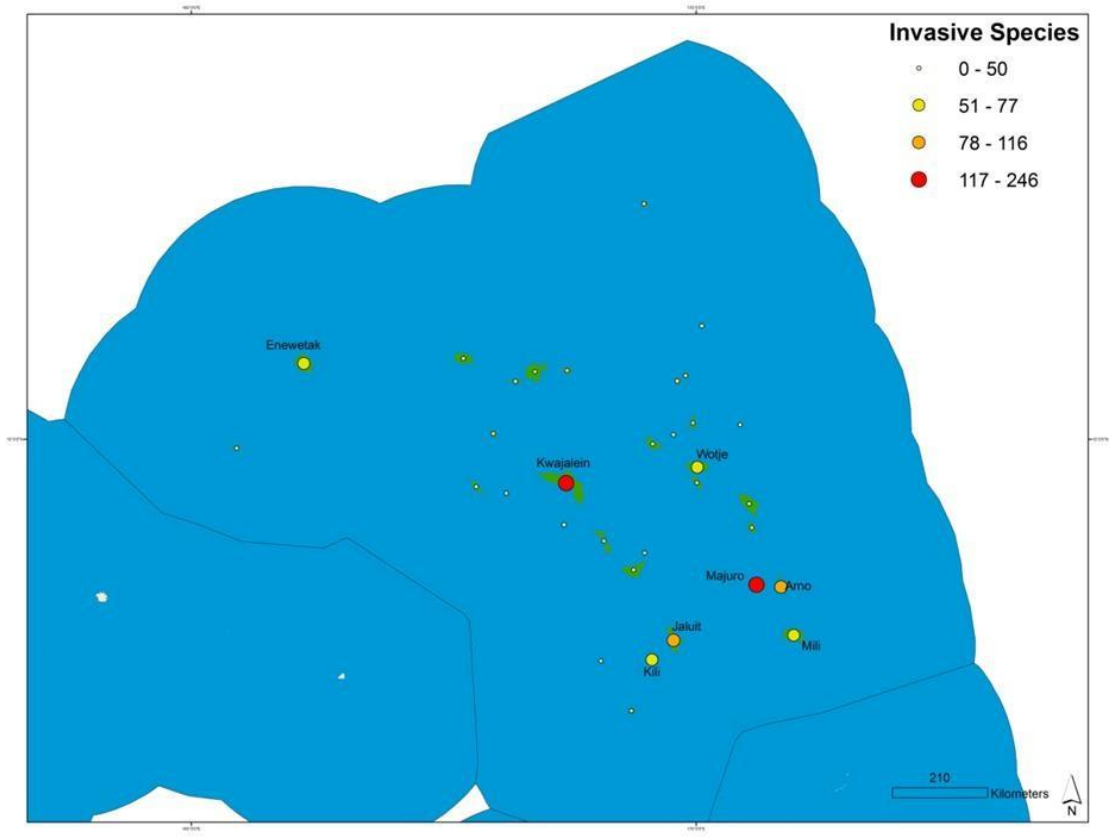


Figure 14 Map of Atolls with high invasive species presence. (SPREP, 2016)

69. RMI is a member of the Micronesia Regional Invasive Species Committee and joined with FSM and Hawaii to develop the Micronesia and Hawaii Regional Biosecurity plan. Invasive species are also costly to eradicate, control and monitor. In 2015, RMI approved its National Invasive Species Strategy and Action Plan. Biosecurity procedures exist at international ports of entry and there is capacity in Early Detection Rapid Response (EDRR). There are also weed management actions on Majuro, Bikini and Kili atolls.[37]

1.6 SURFACE WATER

70. Fresh water is a very scarce resource in the Marshall Islands. There are no rivers, streams or lakes on any of the atolls. One atoll, Lib Atoll, has a brackish lagoon. Due to the nature of surface substrates on coral atolls, water generally percolates quite quickly into the soil and through to the underlying substrate, often accumulating as a freshwater lens that floats on the underlying saline water.

71. On outer islands, household catchments are the main source of drinking water, usually water tanks. Testing by the RMI EPA has shown that many household tanks contain contaminated water (Figure 15). The scarcity of fresh water, the high and increasing demand for fresh water, as well as the water quality issues, put an increasing pressure on both the population and the environment.

[37] SREP (2016) The Republic of the Marshall Islands: State of the Environment Report 2016, Apia, Samoa

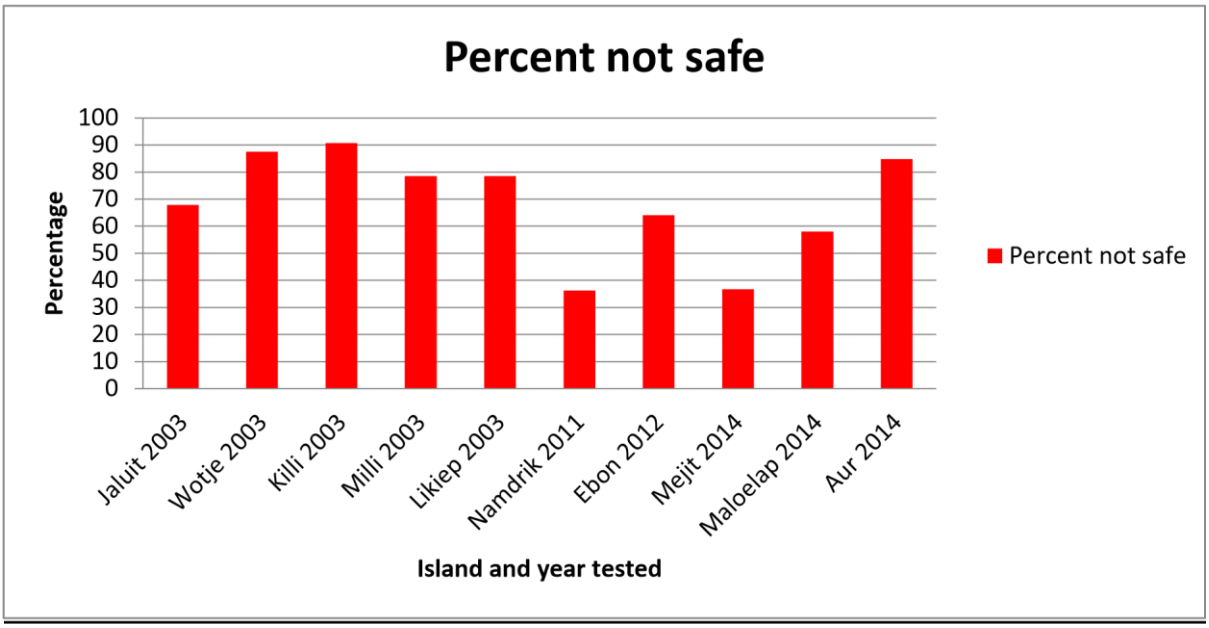


Figure 15 Percentage of unsafe water sampling in the outer islands. (RMI-EPA datasets, 2015)

1.6.1 Lagoon water quality

72. The lagoon ecosystems in the Marshall Islands are some of the most significant natural assets. They provide food, storm protection and habitats, and are one of the biggest attractions for tourist. These lagoon ecosystems are particularly sensitive to water quality impacts from land-based activities and waste disposal associated with recreational use and aquaculture. The impact of lagoon water quality plays an important role for local community incomes and daily subsistence.

73. Water quality monitoring started in 1984 when the Environmental Protection Act came into effect, which the Environmental Protection Authority was mandated to carry out. The monitoring sites are mainly in the urban areas of Majuro and Ebeye where coastal water quality checks are conducted quarterly. There are over 40 monitoring sites in the two populated centers.

74. Marine lagoon water quality has deteriorated mainly in the urban centers. The three most contaminated sites in 2014 were Alwal, Jenrok 2 and Small Island. Enterococci - a bacteria found in the intestines of humans and animals - is used as an indicator for fecal pollution in marine waters. Bacterial counts have been measured above safe recreational guideline of 104MPN/100ml (Figure 16).

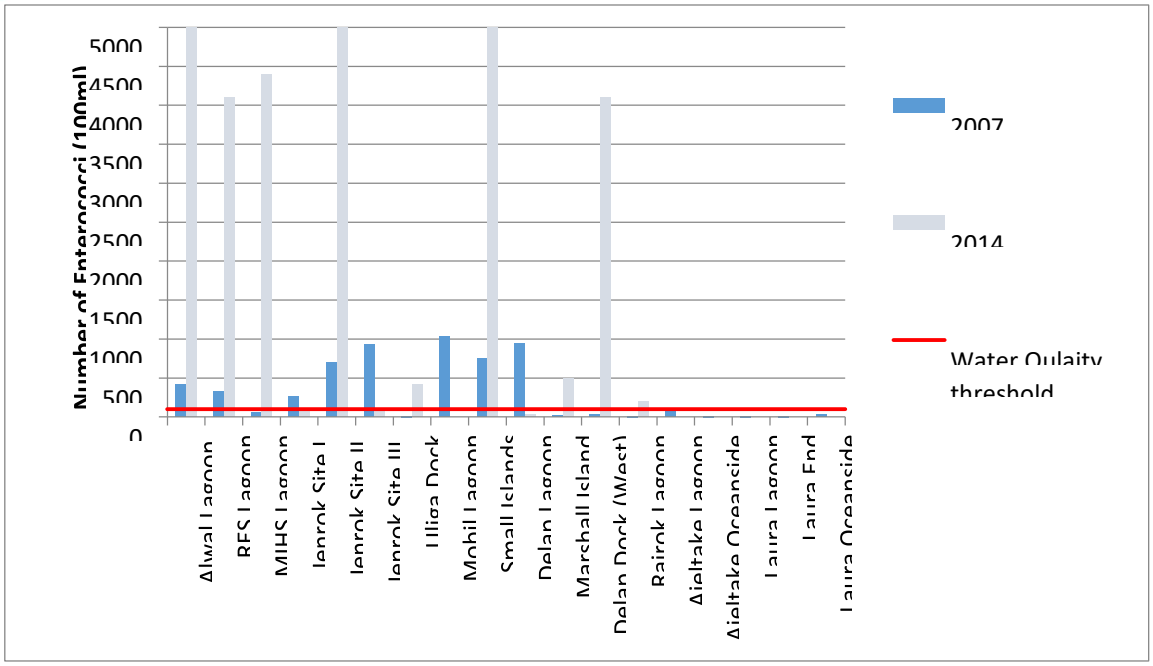


Figure 16 2007 and 2014 Majuro Lagoon Sampling sites (EPA Coastal water quality monitoring reports of 2007 and 2014)

75. Impacts from impaired lagoon water quality include environmental, social and economic factors. Poor water quality is a result of excessive nutrients, harmful bacteria and sedimentation which can accelerate algal bloom, leading to environmental and health issues. Reef habitats in lagoons are susceptible to smothering from algal growth, stimulated by excess organic and nutrient matter. Other factors contributing to lagoon pollution is runoff from residential areas, road drainage that links directly to the lagoon, discharge of RO brine, and continual use of lagoon or shoreline areas for defecation and dumping of domestic wastes. The degradation of lagoon habitats impacts on people who rely on inshore environment for subsistence, income and health.

1.7 GROUNDWATER

76. Atoll aquifers are recharged by rain infiltrating through a thin unsaturated zone. Recharge from rainfall typically forms a thin lens of freshwater that is buoyantly supported by dense saline water from the ocean. Mixing between the infiltrated rain and saltwater forms a zone of transitional salinity. The thickness of this transition zone is determined by the rate of recharge, tidal dynamics, and hydraulic properties of the carbonate aquifer.

77. Uncontrolled and unmanaged land-based activities are known to have impacts on the groundwater quality resulting in contamination. RMI is no exception to this rule.

78. RMI EPA currently routinely monitors the quality of Majuro groundwater for fecal and nitrate contamination. Also, through contractual service by JIRCAS, Laura groundwater boreholes and some private wells are monitored for water levels, electrical conductivity, nitrate-nitrogen, COD, calcium, chloride, pH and turbidity.

79. Testing has revealed that groundwater on many of the atolls is contaminated, in particular by bacteria associated with human and animal faces, *E.coli*.

80. No groundwater bores or wells were observed at the ports.

1.8 AIR QUALITY

81. Outdoor air pollution is a mix of chemicals, particulate matter, and biological materials that react with each other to form tiny hazardous particles. It contributes to breathing problems, chronic diseases, increased hospitalization, and premature mortality.

82. The concentration of particulate matter (PM) is a key air quality indicator since it is the most common air pollutant that affects short term and long-term health. Two sizes of particulate matter are used to analyze air quality; fine particles with a diameter of less than 2.5 µm or PM2.5 and coarse particles with a diameter of less than 10 µm or PM10. PM2.5 particles are more concerning because their small size allows them to travel deeper into the cardiopulmonary system.

83. The World Health Organization's air quality guidelines recommend that the annual mean concentrations of PM2.5 should not exceed 10 µm/m3 and 20 µm/m3 for PM10.

84. Vessels and machinery operated at ports are a source of active emissions (exhaust), while fuel farms can be a source of fugitive emissions. Shipping currently contributes around three per cent of global GHG emissions. By 2050, greenhouse gas emissions from international shipping are expected to increase by up to 250 per cent, equivalent to between 6 and 14 per cent of total global emissions. RMI is currently the world's third largest shipping registry.[38]

85. The Majuro port is adjacent to the RMI power station, which is a major source of emissions in RMI.

86. As a nation with little heavy industry and flat topography that is subject to oceanic winds, the air quality in the Marshall Islands is generally considered to be high. Localized sources of pollution include power stations, shipping fleets, motor vehicles, air craft and industries, such as tuna processing facilities. However, the small size of the islands and prevalence of strong maritime winds ensure that any air emissions from vehicles, stationary sources or fires is quickly mixed with clean maritime air and no pockets of lower air quality are likely to exist.

1.9 AMBIENT NOISE

149. Due to the limited urban development and heavy industry, environmental noise is relatively low. However, the low topography and large expanses of water means that noise is readily transmitted across large distances. Sources of noise include aircraft (limited flights), motor vehicles, ships and boats utilizing the lagoons, generators and power stations and general urban noise.

87. Ports are industrial sites and therefore are a source of noise, particularly ship engine and operating machinery noise. Loading and unloading of cargo also creates some noise.

1.10 VISUAL AMENITY AND AMBIENT LIGHT

88. Being an island nation, with a history in seafaring, boats are part of the cultural landscape of RMI and a common visual presence. The major ports are industrial sites with large wharves, container yards, offices, and heavy machinery making up the visual landscape.

89. The islands of RMI are very low and flat, therefore viewsheds of the ports are extremely limited. Primary views are gained from the marine side of port areas.

90. Vessels moored in the lagoon can have a considerable impact to shoreline developments in terms of light emission from deck floodlights.

[38] http://www.airclim.org/acidnews/marshall-islands-calls-cuts-shipping-emissions

1.10.1 Majuro and Ebeye

Both Majuro and Ebeye are highly urbanized islands. The port areas are surrounded by development, including industrial development, therefore impact of security lighting general limited in terms of sensitive receptors. The area around the port at Jaluit is somewhat urbanized with low buildings close by and a modified shoreline.

1.10.2 Wotje

Wotje is far less developed that Majuro and Ebeye. The development at Wotje is set back somewhat from the shoreline, so that the port is set in a more natural appearing environment. The shoreline at Wotje is one of sandy beaches fringed with palm trees (Figure 17).

Figure 17 Beach adjacent to Wotje wharf

91. The ports are existing facilities and the proposed new or updated infrastructure is of a type and scale that is in keeping with that already in place (refer to Annexure A).

2 DESCRIPTION OF SOCIO-ECONOMIC ENVIRONMENT

92. The following section provides an overview of the bio-physical environment of RMI.

2.1 POPULATION

93. RMI's population totals about 53,125 (2017)[39], of which about 28,000 (53 percent) reside in Majuro (the country's capital) and about 9,600 (18 percent) in Ebeye. The migration from the outer islands to the urban centers of Majuro and Ebeye is primarily due to: (i) lack of employment opportunities in other locations; and, (ii) greater reliance on the cash economy as compared to a subsistence lifestyle. Concurrently, the combination of declining incomes and rising costs of living is causing Marshallese residents to leave the country for better jobs and educational opportunities abroad, mainly in Hawaii, United States mainland and Guam.

94. The Marshall Islands was one of the fastest growing island nations with an annual growth rate of 4.2 % from 1980 to 1988. This slowed to 0.4% in the last decade (SOE 2016).

95. Based on the census report 2011, 74% of the population live in urban areas, which is high on a world basis. Internal migration from rural areas to the urban centers continues. Majuro, the largest urban center, the next largest urban area is Ebeye. The remaining population is spread throughout the atolls.

96. The official language is Marshallese. English is widely used in business and Japanese spoken by a section of the population

97. The average Marshallese household comprises of 7.2 members. Most households are headed by men (76%). In urban areas, 33 percent of households have nine or more members, compared with 25 percent in rural areas, indicating a need for housing in urban areas. Large household sizes and limited land area make for dense living conditions, with one quarter of all households using only one room for sleeping.

98. Large household size is not just a reflection of a growing population but is also indicative of specific Marshallese cultural practices. Over 4 in 10 households included one or more children who stayed with neither their natural father nor their natural mother. The percentage is higher in rural areas (50% compared to 44%). Survey results (RMI DHS 2007) showed that almost one quarter (23.2%) of Marshallese children under 18 were not living with either parent.

99. The population of RMI is the second youngest in the Pacific Islands, with a median age of 19.2, with just over half of the country's population younger than 20 years of age.[40] The older age groups are very small in comparison, as can be seen in the population pyramid (Figure 18). There are only slightly more men (51%) than women (49%), which is the same for both urban and rural areas. This age structure means that when the young population eventually reaches reproductive age, the result will be a high population growth rate for some years to come.

[39] World Development Indicators database, last updated 9/21/2018.
[40] Republic of the Marshall Islands 2007 Demographic and Health Survey

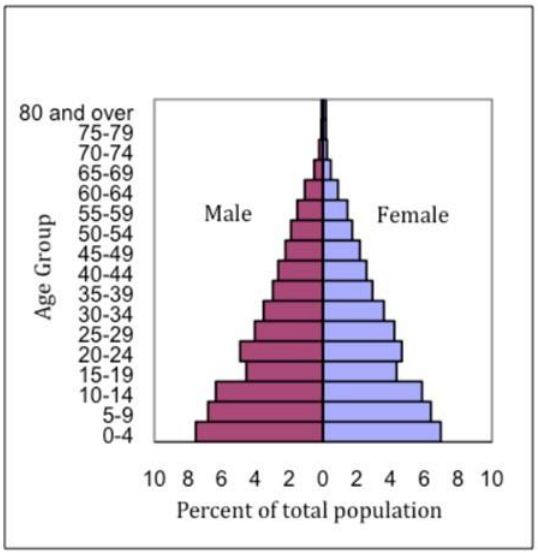


Figure 18 Population pyramid[41]

2.1.1 Health

100. The Ministry of Health works collaboratively with the Community Health Councils to provide health-care services. The Marshall Islands has two hospitals (one each in Majuro and Ebeye) and 56 health care centers in the outer atolls and islands. Both hospitals provide primary, secondary, and limited tertiary care.[42]

101. The Marshall Islands is burdened by high mortality and morbidity for both noncommunicable and communicable diseases. Diabetes-related diseases and cancer remain the leading causes of death. The high consumption of imported canned and instant food, lack of physical exercise and use of tobacco products are all associated with the high prevalence of noncommunicable diseases (NCDs) and obesity. Tuberculosis (TB) is also a leading cause of death, and the country has reported multidrug-resistant TB.

2.1.2 Education

102. The Ministry of Education provides for public education at the elementary, secondary, and higher education levels. Marshallese citizens have a compulsory primary education system but few options for tertiary education. That means most children only complete the eighth grade. Higher education in the Marshall Islands consists of vocational and tertiary instruction primarily at only two institutions. Still, only around 10%t of the population graduates from college.

103. The College of the Marshall Islands offers two associate degrees (sciences and liberal arts) and a variety of professional certificates. The regional University of the South Pacific's Marshall Islands campus has bachelor's degree programs and even a master's degree in business administration.

104. Marshallese students also have opportunities to pursue an education elsewhere. They can travel to the United States without a visa to study and work. Marshallese citizens can also earn education entitlements by joining the U.S. military

105. The College of the Marshall Islands also teaches adult education programs to allow students an opportunity to complete high school equivalency education.

[41] SREP (2016) The Republic of the Marshall Islands: state of the environment report 2016. Apia, Samoa.
[42] WHO (2018) Marshall Islands. Country Cooperation Strategy at a Glance

2.1.3 Religion

106. Religion in the Marshall Islands is dominated by major Christian faiths introduced by Western missionaries since around 1857, but indigenous interpretations of these beliefs differ substantially from common European and American significances.

107. The Constitution provides for freedom of religion, and the Government generally respects this right in practice. Major religions include the United Church of Christ (formerly Congregational); the Assembly of God; and the Roman Catholic Church. Also represented are Bukot Nan Jesus (also known as Assembly of God Part Two); the Church of Jesus Christ of the Latter-day Saints (Mormons); Seventh-Day Adventists; Full Gospel; and the Baha'i Faith.

2.1.4 Cultural Heritage

108. Cultural history, folklore, assets and places are important matters for future planning. There is a need to understand the implications of cultural heritage assets on affecting future urban structure and land uses. Cultural heritage sites, areas, places and practices should be protected and celebrated via subsequent planning tools as an important feature of local identity and sense of place.

109. The culture, history and natural environment of the Marshallese cannot be separated because specific places, rocks, trees and animals have powerful cultural meaning. With over 3000 years of human habitation there are some very significant prehistoric sites. These include battle sites, burial sites and others that are central to local myths and legends. The management of natural cultural sites is coordinated at the national level by the Historic Preservation Office

110. The Marshallese people have long been cultivating the land for food, medicinal and other traditional purposes. The cultural change over the past 100 years is evidenced by Marshallese food sources. In the early 1900s, the Marshallese depended on local sources for most of their carbohydrate needs. The consumption of local root and tree crops (taro, breadfruit, banana, pandanus and arrow roots) has declined since the early 1900s. Coconut consumption in urban centers has also decreased. These traditional food sources have been replaced by food imports.

111. While no cultural heritage places, buildings and monuments are known to exist in areas where the MIMIP will be undertaken, further investigation of places and practices of cultural and historic heritage significance should be undertaken as part of the preparation process.

112. In the past, the people of the Marshall Islands used many methods to sustainably harvest natural resources. One of the methods remaining in use in some areas is *mo* – the traditional system to designate all or part of an island, or a reef area, as a restricted site. Special permission from the Iroij was required to visit a *mo*. Harvesting from the *mo* was done for special occasions, or in times of famine. The rules and regulations for *mo* varied across the archipelago and often involved rituals and chants. There was a belief that failure to comply with the rules, rituals and chants could result in a bad storm for the homeward journey, or a tragic accident for a member of the visiting party.

113. Other methods for conserving natural resources included seasonal harvesting of different species, and other restrictions, such as those practiced on Wotje Atoll, where the size of coconut crabs was restricted and no females with eggs were to be taken. On some atolls *mo* are still known by the community and are respected. In other places (e.g. urban centers), the community has no living memory of *mo* and how this important method of conservation and sustainable use is being lost, along with the deep ecological understanding that accompanied it.

114. There are 118 prehistoric sites and 212 historic sites in RMI. Most have general management plans except for Jaluit

Atoll.

2.2 LAND USE, LAND OWNERSHIP AND CUSTOMARY TENURE

115. The following summary of land ownership and tenure is from de Bie (2004)[43].

116. Traditional Marshallese society was organized around matrilineal kin groups, with the ultimate control of land being held by chiefs. The society was also stratified, with individual rights and responsibilities differing based on whether one was of a royal or commoner lineage. The senior ranking member of a royal matrilineage was the paramount chief, or Iroijlaplap, and this person was considered the owner of the land and all the fixed and mobile property upon the land. During this time, all land in the Marshall Islands was controlled by only eighteen to twenty Iroijlaplap.

117. As with most of the original inhabitants of Micronesia, the Marshallese endured a long period of colonization by Spain,

Germany, Japan, and the United States. Spain was the first outside nation to claim the islands in 1565. In 1886, Germany purchased the islands outright from Spain and declared them a protectorate. Germany attempted to supplant the chiefs as the paramount authorities and to introduce western land ownership practices but had relatively little success in this area.

118. In 1914 during the First World War, Japan displaced Germany from the Marshall Islands; and in 1920, the League of Nations granted a mandate over the islands to Japan.18 In 1934, Japan withdrew from the League but retained possession of the islands and strategically fortified them for military purposes. In 1944 during World War II, the United States won a battle with Japan and took military control of the Marshall Islands. In 1947, the United Nations created a

Trusteeship Agreement which designated the Marshall Islands and the rest of Micronesia—except for Guam—as the Trust Territory of the Pacific Islands (TTPI), to be under the administration of the United States Navy. During the 1960s the U.S. began to encourage political developments based on the American model and contributed significant amounts of money to the TTPI to make this happen. Significantly, the Marshall Islands were closed to U.S. private investment until the mid-1960s and to private investment from other countries until the mid-1970s.

119. Regarding land ownership, the Navy civil administration completed a cadastral survey of most of the Marshall Islands in 1949 and 1950.32 The approximate locations (no surveying was done) of every land parcel, or weto, was recorded, along with the names of the associated Iroijlaplap, Iroijedrik, Alap, and Senior Dri Jerbal.33 The information was mimeographed for each atoll, but due to a lack of preservation measures only five or six of these atoll reports are still available today.

120. The RMI became self-governing in 1973. In order to gain true independence, however, the RMI and other Trust Territory nations signed Compacts of Free Association with the U.S. in 1982. In 1990, the United Nations Security Council belatedly approved the termination of the Trusteeship Agreement with respect to the RMI, so the RMI was at last internationally recognized as an independent nation.

121. During the long colonial period of the Marshall Islands, each successive occupying nation attempted—to some extent—to convert the land ownership practices of the Marshallese from customary group rights to individual freeholds; but because these attempts were never very advanced, most of the land owned by Marshallese today remains under customary tenure.

2.3 GENDER BASED VIOLENCE AND HUMAN TRAFFICKING

122. The MIMIP appraisal document[44] considered gender-based violence and human trafficking issues in RMI and noted the following.

123. RMI is a source of, and a destination for, human trafficking for commercial sexual exploitation linked to the fishing industry. Trafficking within RMI tends to be related to prostitution, including child prostitution, servicing

[43] .de Bie, G. (2004) Private Lands Conservation in the Republic of Marshall Islands. Natural Res. Law Ctr., Univ. of Colo. Sch. of Law

[44] World Bank (2018) IDA Project Appraisal Document for the Marshall Islands Iaritime Investment Project Report No. PAD2926

crew from international fishing boats. Women and girls represent the greater share of victims of human trafficking for commercial sexual exploitation and are therefore considered a particularly vulnerable group.

124. RMI's Systematic Country Diagnostic 2016 (SCD), Country Partnership Strategy FY13-FY16 (CPS), and Pacific Regional Strategy (May 2000) all identify Gender-based Violence (GBV) as an issue that needs addressing, and human trafficking for sexual exploitation is a form of GBV. Most abused women in the Pacific report that they have not sought help from either formal services or from people in positions of authority, such as police, non-government organizations, religious or local leaders. There are prevailing social and cultural attitudes and stigma that prevent reporting of violence against women. There also is a lack of safe houses/shelters and other services for victims.

125. RMI recognizes human trafficking as an issue of concern and has ratified the United Nations Convention against Transnational Organized Crime (UNTOC), which encompasses human trafficking, and has comprehensive national laws in terms of definitions and criminalization of all aspects of human trafficking. Furthermore, RMI has established a National Action Plan to Combat Trafficking and set a National Taskforce on Human Trafficking (NTHT).

126. Within this framework, several awareness campaigns and training programs have been provided to local authorities such as the police, Ports Authority, etc. Similarly, awareness campaigns have targeted vulnerable groups such as school children.

127. Additional analysis is required to improve RMI's understanding of the compound vulnerability associated with economic and social status, ethnicity or other factors. This information will help inform the identification of cases of human trafficking as well as the design of mitigation strategies and programs. Furthermore, there is a need to establish a systematized referral mechanism for victims of trafficking and to provide appropriate follow up even when victims are identified.

128. Gender. MIMIP has identified two key areas where it can address a gender gap in RMI:

- Gender Gap in Mobility. Given that women and children need safe facilities at the ports (e.g., better lighting, gender differentiated facilities, monitored or attended waiting areas, and information about where to report complaints), the MIMIP will support the security of women using maritime transport.
- Gender-Based Violence. The MIMIP will support awareness-raising on family and sexual violence, and on human trafficking for sexual exploitation (awareness, resources, where and how to report abuse, etc.).

129. A separate report on GBV and HT in the RMI has been prepared and is attached as Annexure N.

2.4 ECONOMIC ASPECTS AND LIVELIHOODS

2.4.1 Employment, Labour and Working Conditions

130. In 2007, the Marshall Islands joined the International Labor Organization, which means its labor laws will comply with international benchmarks.

131. In 2011, the labor force participation rate was 41.3% and the employment-to-population ratio was 39.3%. Both of those rates are more than 23 percentage points higher for men than for women. The total unemployment rate was 4.7%[45]. Employment is heavily reliant on services (Figure 19).

[45] ILO (2018) Marshall Islands Employment and Environmental Sustainability Fact Sheet 2017

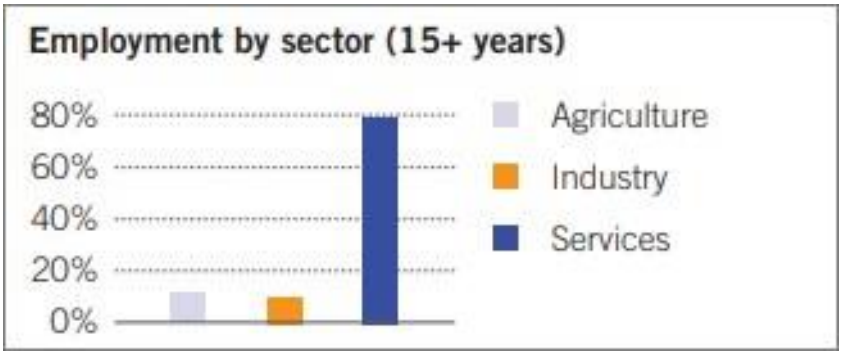


Figure 19 Employment by sector (ILO 2018)

2.4.2 Shipping

132. The Marshall Islands plays a vital role in the international shipping industry as a flag of convenience_for commercial vessels. The Marshallese registry began operations in 1990 and is managed through a joint venture with International Registries, Inc., a US-based corporation that has offices in major shipping centers worldwide. As of 2017, the Marshallese ship registry was the second largest in the world, after that of Panama.[46]

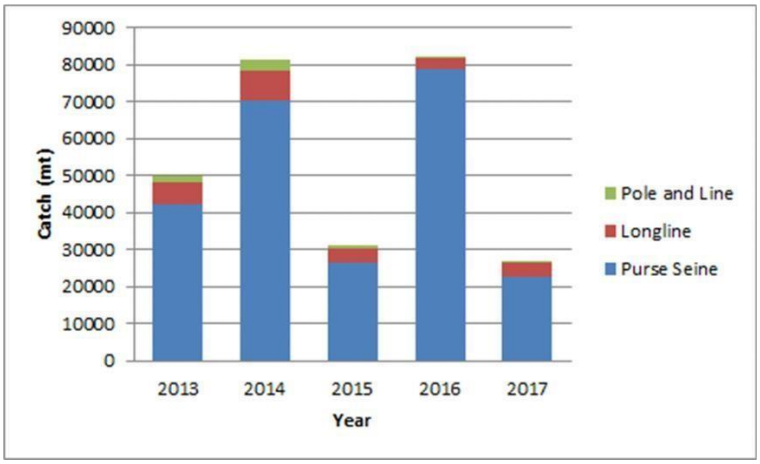
133. Unlike some flag countries, there is no requirement that a Marshallese flag vessel be owned by a Marshallese individual or corporation. Following the 2015 seizure of the *MV Maersk Tigris*, the United States announced that its treaty obligation to defend the Marshall Islands did not extend to foreign-owned Marshallese flag vessels.[47] at sea.

134. As a result of ship-to-ship transfers by Marshallese flag tanker vessels, the Marshall Islands have statistically been one of the largest importers of crude oil from the United States, despite the fact that the islands have no oil refining capacity.[48]

2.4.3 Fisheries

2.4.3.1 Main fisheries

135. The main commercial fisheries in the RMI Exclusive Economic Zone (EEZ) focus on targeting tropical tunas. Three main sectors exist, defined by the type of gear they use: purse seine, longline and pole and line. Catches are dominated by the purse seine sector, which primarily harvests skipjack tuna (*Katsowonus pelamis*) and yellowfin tuna (*Thunnus albacares*) for canning (Figure 20). The longline sector harvests the next highest volume, targeting bigeye tuna (*Thunnus obesus*) and yellowfin tuna for higher value sashimi markets. The pole and line sector targets skipjack tuna almost exclusively for canning, although has been largely inactive in recent years.



[46] https://en.wikipedia.org/wiki/Marshall_Islands#Government
[47] https://en.wikipedia.org/wiki/Marshall_Islands - cite_note-66
[48] https://en.wikipedia.org/wiki/Marshall_Islands - cite_note-66

Figure 20: Total catch by the different gears operating in the RMI EEZ[49]

136. Both the purse seine and longline sectors comprise both domestic-based and foreign vessels, while the pole and line fishery are comprised exclusively of Japanese flagged vessels.

137. In addition to oceanic fisheries targeting tunas, an active coastal fishery exists primarily targeting reef fish.

138. The sections below provide an overview of the characteristics of each main sector, including baseline figures on catch, effort and vessel numbers.

2.4.3.2 Purse seine

Domestic vessels

139. The domestic (RMI-flagged) purse seine fleet remained relatively stable at between ten to twelve vessels, each over 1001 GRT, during the 2013 to 2017 period (Table 4). RMI flagged purse seine vessels are typically licensed to fish in a number of EEZs within the Western and Central Pacific Fisheries Commission Convention Area (WCPFC-CA) (including the high seas), with most holding Regional Access Licenses (RALs) under the Party to the Nauru Agreement's (PNA) Federated States of Micronesia Arrangement (FMSA). RALs allow the vessel to fish within the EEZs of any one of the eight members of the PNA.[50]

140. Catch of RMI-flagged vessels varied during the period 2013 to 2017, ranging between 50,000 t and 90,000 t (Table 4). In 2017, the total catch was estimated at 64,527 t, dominated by skipjack which accounted for around 79% of the catch. Yellowfin comprised around 13% of the catch, while bigeye tuna accounted for 8%. All other species combined accounted for <1% of the total catch.

	Vessel size (GRT)			
Year	0-500	501-1000	1001-1500	1500+
2013	0	0	7	3
2014	0	0	7	5
2015	0	0	7	5
2016	0	0	7	3
2017	0	0	7	3

Table 4 RMI-flagged purse seine fleet by vessel seize, 2013-2017[51]

[49] MIMRA (2018). Annual Report to the Commission Part 1: Information on Fisheries, Research, and Statistics. Scientific Committee Fourteenth Regular

[50] Membership of the PNA includes the Federated States of Micronesia, Kiribati, Marshall Islands, Nauru, Palau, Papua New Guinea, Solomon Islands and Tuvalu.

[51] MIMRA (2018). Annual Report to the Commission Part 1: Information on Fisheries, Research, and Statistics. Scientific Committee Fourteenth Regular

Species	2013	2014	2015	2016		2017	
				Retain	Discard	Retain	Discard
SKIPJACK	60,645	62,182	77,021	50,522	355	50,936	195
YELLOWFIN	12,461	10,333	7,253	7,783	65	8,612	40
BIGEYE	4,528	3,381	2,595	1,749	6	4,971	31
BLUE SHARK	0	0	0	0	0	0	0
BLUE MARLIN	24	18	32	4	8	7	14
BLACK MARLIN	14	13	13	4	8	1	10
OCEANIC WHITETIP	0	0	0	0	0	0	1
STRIPED MARLIN	1	0	1	1	1	0	2
SWORDFISH	0	0	0	1	0	0	0
MAKO SHARK	0	0	0	0	0	0	0
SILKY SHARK	0	5	4	0	29	0	190
THRESHER SHARK	0	0	0	0	0	0	0.3
PORBEAGLE SHARK	0	0	0	0	0	0	0
HAMMERHEAD SHARK	0	0	0	0	0	0	0
WHALE SHARK	0	0	1	6	22	0	0

Table 5 Annual catch and effort estimates for the Marshall Islands purse seine vessels, by species and year, in the WCPFC Convention Area[52]

141. Trends in fishing effort largely mirrored total catches, with the number of fishing days ranging between 1,700 and 2,500 fishing days annually between 2013 and 2017.[53]

142. The distribution of catch and effort in the RMI EEZ is strongly influenced by prevailing environmental conditions, with higher catches recorded during or immediately following strong El Nino periods.[54] In 2017, the majority of fishing by domestic purse seine vessels occurred in EEZs adjacent to RMI, largely concentrated in the Kiribati (Gilbert) EEZ (Figure 21). Where purse seine fishing occurs in the RMI EEZ, it is largely concentrated in the southern part of the EEZ.

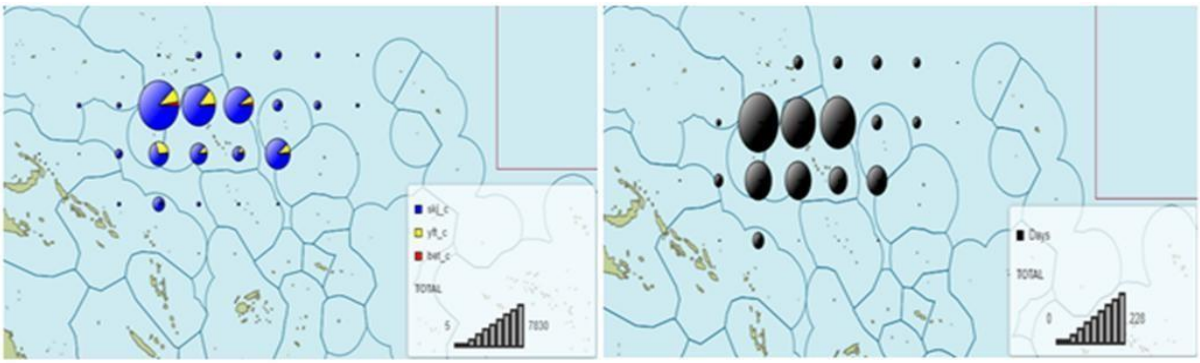


Figure 21: Catch composition (left panel) and effort distribution (right panel) of RMI-flagged purse seine vessels in the WCPFC Convention Area, 2017 (on the left panel, blue = Skipjack tuna; Yellow = yellowfin tuna; red = bigeye tuna)[55]

[52] MIMRA (2018). Annual Report to the Commission Part 1: Information on Fisheries, Research, and Statistics. Scientific Committee Fourteenth Regular Session. Busan, Republic of Korea 8-16 August 2018. WCPFC-SC14-AR/CCM-13
[53] MIMRA (2018). Annual Report to the Commission Part 1: Information on Fisheries, Research, and Statistics. Scientific Committee Fourteenth Regular Session. Busan, Republic of Korea 8-16 August 2018. WCPFC-SC14-AR/CCM-13
[54] MIMRA (2018). Annual Report to the Commission Part 1: Information on Fisheries, Research, and Statistics. Scientific Committee Fourteenth Regular Session. Busan, Republic of Korea 8-16 August 2018. WCPFC-SC14-AR/CCM-13
[55] MIMRA (2018). Annual Report to the Commission Part 1: Information on Fisheries, Research, and Statistics. Scientific Committee Fourteenth Regular

143. In addition to the domestic fleet, around 182 foreign flagged purse seine vessels were licensed to operate in RMI waters in 2017[56] (Table 6), although not all were active. The main foreign fleets included the FSMA fleet (essentially a Pacific domestic fleet, comprising vessels with a demonstrated economic connection to one of the PNA Parties), the US fleet (accessing the RMI EEZ under the terms of the US Treaty[57]) and the distant water fleets of China, Taiwan, Japan and Korea.

144. Like domestic catches, foreign purse seine catch and effort in the RMI EEZ is strongly influenced by prevailing climatic conditions. Much of the RMI EEZ is outside the 'core' skipjack fishing grounds (centered on latitudes between 5°N and 5°S), so foreign vessels will ramp up effort in RMI only when climatic conditions (and therefore distribution of stocks) is favorable. As a result, between 2013 and 2017 catches varied by 300%+, ranging from 15,544 t to 69,746 t. Skipjack dominates the catch, averaging around 92% of the catch between 2013 and 2017, with yellowfin accounting for 7% and bigeye 1%. For context, the total 2017, purse seine catch taken in the RMI EEZ (domestic + foreign vessels) represents around 1.3% of the WCPFC-CA wide purse seine catch of 1,812,474 t.[58]

145. The other key influence on the level of purse seine effort in the RMI EEZ is the availability of fishing days under the PNA's Vessel Days Scheme (VDS). Under the VDS, the total number of fishing days across all Parties' waters are capped (the 'Total Allowable Effort', or TAE), with each Party allocated a share of the TAE ('Party Allowable Effort', or PAE) expressed as a number of fishing days. Each Party is then free to distribute their PAE to domestic or foreign vessels, or trade days to other PNA Parties, as they see fit. Where days are sold to foreign vessels, the fee must meet a benchmark price agreed annually amongst Parties to avoid intra-Party competition and ensure a fair economic rent is received for access.

FLAG	GEAR	2013	2014	2015	2016	2017
CHINA	LL	23	26	26	27	30
	PS	2	6	7	0	6
FSM	LL	11	14	14	12	13
FSMA	PS	38	57	54	76	76
JAPAN	LL	1	8	8	2	6
	PL	15	20	13	11	16
	PS	24	28	29	30	25
KOREA	PS	27	26	5	25	26
NZ	PS	0	0	2	0	0
CH-TAIPEI	LL	2	2	2	0	0
	PS	6	25	25	26	27
TUVALU	PS	1	1	1	0	1
USA	PS	39	39	39	33	31
VANUATU	PS	3	3	0	0	0
TOTAL	LL	37	50	50	41	49
	PL	15	20	13	11	16
	PS	140	185	162	190	192

[56] Note that the RMI domestic fleet is included in the 'FSMA' figures in **Error! Reference source not found.**.

[57] Full name: The Multilateral Treaty on Fisheries Between Certain Governments of the Pacific Island States and the Government of the United States of America

[58] Williams, P. and Reid, C. (2018). Overview of Tuna Fisheries in the Western and Central Pacific Ocean, including Economic Conditions - 2017 Rev 1 (22 July 2018). Scientific Committee Fourteenth Regular Session. Busan, Republic of Korea 8-16 August 2018. GN-WP-01

Table 6 Number of foreign purse seine, longline and pole-and-line vessels licensed to fish in the RMI EEZ, by year and flag, 2013-2017.[59]

		Catches (metric tonnes)				
Flag	Year	SKJ	YFT	BET	OTH	TOTAL
China	2013	1,797	35	0	0	1,832
	2014	2,019	229	20	0	2,268
	2015	80	5	0	0	85
	2016	0	0	0	0	0
	2017	0	0	0	0	0
FSM	2013	316	28	14	0	358
	2014	2,536	247	47	0	2,830
	2015	812	275	26	0	1,113
	2016	1,665	142	56	0	1,863
	2017	5	5	0	2	12
Japan	2013	80	5	0	0	85
	2014	0	0	0	0	0
	2015	86	6	5	0	97
	2016	0	0	0	0	0
	2017	112	60	2	0	174
Kiribati	2013	60	0	0	0	60
	2014	243	126	6	0	375
	2015	435	80	0	0	515
	2016	4,078	632	31	0	4,741
	2017	649	118	14	0	781
Korea	2013	5,761	80	5	0	5,846
	2014	5,312	378	25	0	5,715
	2015	0	0	0	0	0
	2016	18,745	1,296	103	0	20,144
	2017	779	180	27	0	986
PNG	2013	3,093	90	5	0	3,188
	2014	10,997	528	44	0	11,569
	2015	2,845	537	30	0	3,412
	2016	11,232	1,159	42	0	12,433
	2017	2,564	360	178	2	3,104
Philippines	2013	0	0	0	0	0
	2014	770	14	0	0	784
	2015	93	0	0	0	93
	2016	1,850	248	10	0	2,108
	2017	0	0	0	0	0

		Catches (metric tonnes)				
Flag	Year	SKJ	YFT	BET	OTH	TOTAL
RMI	2,013	12,372	654	388	4	13,418
	2,014	16,268	1,043	401	18	17,730
	2,015	3,074	536	11	0	3,621
	2,016	8,737	170	114	0	9,021
	2,017	6,404	623	221	4	7,252
Solomon Is	2,013	0	0	0	0	0
	2,014	0	0	0	0	0
	2,015	0	0	0	0	0
	2,016	1,040	120	10	0	1,170
	2,017	0	0	0	0	0
Tuvalu	2,013	1,779	98	3	2	1,882
	2,014	213	2	0	0	215
	2,015	0	0	0	0	0
	2,016	0	0	0	0	0
	2,017	0	0	0	0	0
Chinese Taipei	2,013	1,779	98	3	0	1,880
	2,014	11,406	522	38	0	11,966
	2,015	3,363	1,033	14	0	4,410
	2,016	11,725	1,200	163	0	13,088
	2,017	5,808	803	138	10	6,759
USA	2,013	6,538	213	60	0	6,811
	2,014	15,697	378	87	0	16,162
	2,015	11,135	1,823	40	0	12,998
	2,016	13,257	823	119	0	14,199
	2,017	3,252	297	90	0	3,639
Vanuatu	2,013	6,538	213	60	0	6,811
	2,014	735	10	0	0	745
	2,015	0	0	0	0	0
	2,016	0	0	0	0	0
	2,017	0	0	0	0	0
TOTAL EEZ	2,013	40,113	1,514	538	6	42,171
	2,014	66,196	3,477	668	18	70,359
	2,015	21,923	4,295	126	0	26,344
	2,016	72,329	5,790	648	0	78,767
	2,017	19,573	2,446	670	18	22,707

Table 7 Annual catches of purse seine fleets operating in the RMI EEZ, by flag and species, 2013-2017 - unraised log sheet data[60]

2.4.3.3 Longline

146. A total of 49 longline vessels were licensed to fish in the RMI EEZ in 2017, flagged to China (30), FSM (13) and Japan (6) Table 8).

147. While there are currently no RMI-flagged longliners operating in the fishery, 31 of the China and FSM flagged longliners were chartered to the Marshall Islands Fishing Venture (MIFV) in 2017 (Table 8). This fleet is managed and operated by MIFV, a subsidiary of Luen Thai. The fleet is domestically-based and fishes almost exclusively in the RMI EEZ. Each of these chartered vessels was between 51-200 GRT (Table 8).

	Vessel size (GRT)

[59] MIMRA (2018). Annual Report to the Commission Part 1: Information on Fisheries, Research, and Statistics. Scientific Committee Fourteenth Regular

[60] MIMRA (2018). Annual Report to the Commission Part 1: Information on Fisheries, Research, and Statistics. Scientific Committee Fourteenth Regular

Year	0-50	51-200	201-500	500+
2013	0	0	3	0
2014	0	0	0	0
2015	0	0	0	0
2016	0	24	0	0
2017	0	31	0	0

Table 8 Numbers of chartered longline vessels, according to vessel size, 2013-2017[61] 148.

Catch estimates for the 2013-2017 period by vessel flag are provided in Table 5.

149. Vessels fishing under charter to MIFV ('RMI-flag' catches) have dominated catches in recent years, accounting for 66% of total catch. Bigeye tuna and yellowfin tuna are the main target species, comprising 53% and 39% of the retained catch between 2013 and 2017 respectively. The remainder of the retained catch is made up of other species (12%) and albacore tuna (*Thunnus alalunga*) (2%).

150. As with the purse seine fishery, longline fishing effort is concentrated in the southern areas of the RMI EEZ however effort is more widely distributed throughout the zone (Figure 22).

[61] MIMRA (2018). Annual Report to the Commission Part 1: Information on Fisheries, Research, and Statistics. Scientific Committee Fourteenth Regular

		Catch (metric tonnes)				
Flag	Year	ALB	BET	YFT	OTH	Total
China	2013	125	1,763	1,235	470	3,593
	2014	84	2,817	1,419	360	4,680
	2015	63	1,200	740	152	2,155
	2016	16	280	185	75	556
	2017	0	4	3	0	7
FSM	2013	84	1,001	665	217	1,967
	2014	49	1,445	738	258	2,490
	2015	56	953	529	178	1,716
	2016	26	475	338	150	989
	2017	16	440	350	116	921
Japan	2013	1	11	3	1	16
	2014	17	278	112	44	451
	2015	2	122	81	25	230
	2016	2	89	89	21	201
	2017	12	108	148	29	297
RMI	2013	7	80	47	10	144
	2014	0	0	0	0	0
	2015	0	0	0	0	0
	2016	23	678	515	174	1,390
	2017	43	1,147	888	299	2,379
CH-Taipei	2013	20	117	64	40	241
	2014	22	140	77	18	257
	2015	1	11	30	4	46
	2016	0	0	0	0	0
	2017	0	0	0	0	0
TOTAL EEZ	2013	237	2,972	2,014	738	5,961
	2014	172	4,680	2,346	680	7,878
	2015	122	2,286	1,380	359	4,147
	2016	67	1,522	1,127	420	3,136
	2017	71	1,698	1,389	445	3,604

Table 9 Annual catches of longline fleets operating in the RMI EEZ, by flag and species, 2013-2017 - unraised log sheet data[62]

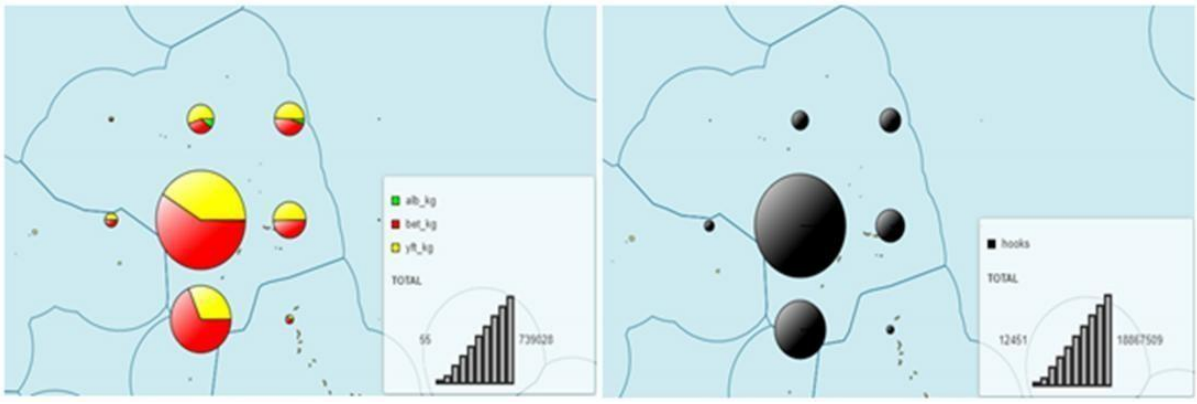


Figure 22: Catch composition (left panel) and effort distribution (right panel) of RMI-flagged longline vessels in the WCPFC Convention

[62] MIMRA (2018). Annual Report to the Commission Part 1: Information on Fisheries, Research, and Statistics. Scientific Committee Fourteenth Regular Session. Busan, Republic of Korea 8-16 August 2018. WCPFC-SC14-AR/CCM-13

Area, 2017 (on the left panel, yellow = yellowfin tuna; red = bigeye tuna; green = albacore tuna)[63]

[63] MIMRA (2018). Annual Report to the Commission Part 1: Information on Fisheries, Research, and Statistics. Scientific Committee Fourteenth Regular

2.4.3.4 Other sectors

151. The Japanese fleet has been the only fleet active in the pole and line fishery in the 2013 to 2017 period (Table 10). Numbers licensed vessels have ranged from 11 to 20, although catches over the period have declined. The total catch of 72t in 2017 was the lowest recorded (Table 10). The fishery is almost exclusively focused on skipjack, with very minor catches of yellowfin and bigeye tuna also retained.

		Catch (metric tonnes)			
Flag	Year	BET	SKJ	YFT	TOTAL
Japan	2013	3	1,719	4	1726
	2014	3	3,317	21	3341
	2015	0	615	2	617
	2016	0	429	1	430
	2017	0	72	0	72

Table 10 Annual catches of pole and line fleets operating in the RMI EEZ, by flag and species, 2013-2017 - unraised log sheet data[64]

152. The coastal fishery is almost exclusively undertaken by small local vessels undertaking short trips, with catch sold on local markets. Small collection fisheries for trochus and aquarium fish also exist.

153. Gillett (2016)[65] estimated the total coastal fisheries production in Marshall Islands in 2014 at 4,500 mt, of which the commercial fisheries component is 1,500 mt. Based on Marshall Islands Marine Resources Authority (MIMRA) buying prices in the outer islands and prices paid to fishers in Majuro, he estimated the dockside value of the 2014 coastal commercial catch at about US$4,350,000. Coastal subsistence catches (3,000t) were estimated to be US$6 million per year.

2.4.4 Transhipment and unloading

154. Majuro port is the only designated port for transshipment in the RMI, although under the Ports of Entry Act (PEA) foreign fishing vessels also have permission to enter Jabor Anchorage, Jaluit for the purpose of granting shore leave to crew members.

155. Majuro is a key transhipment for purse seine vessels operating in the Western and Central Pacific Ocean (WCPO), accounting for around 37% of all transhipments during 2015 to 2018 (Figure 23). In 2017, an estimated 423 transhipments occurred with a provisional total of 292,552 mt transhipped (Figure 23). The central location within the WCPO and relatively good access to logistics and support services (e.g. air networks to replace crew and reprovision vessels; net yard) means Majuro port is used by purse seine vessels flagged to a range of countries and fishing in a range of EEZs and high seas areas throughout the WCPO.

[64] MIMRA (2018). Annual Report to the Commission Part 1: Information on Fisheries, Research, and Statistics. Scientific Committee Fourteenth Regular Session. Busan, Republic of Korea 8-16 August 2018. WCPFC-SC14-AR/CCM-13

[65] Gillet, R. (2016). Fisheries in the Economies of the Pacific Island Countries and Territories. Philippines: Asian Development Bank.

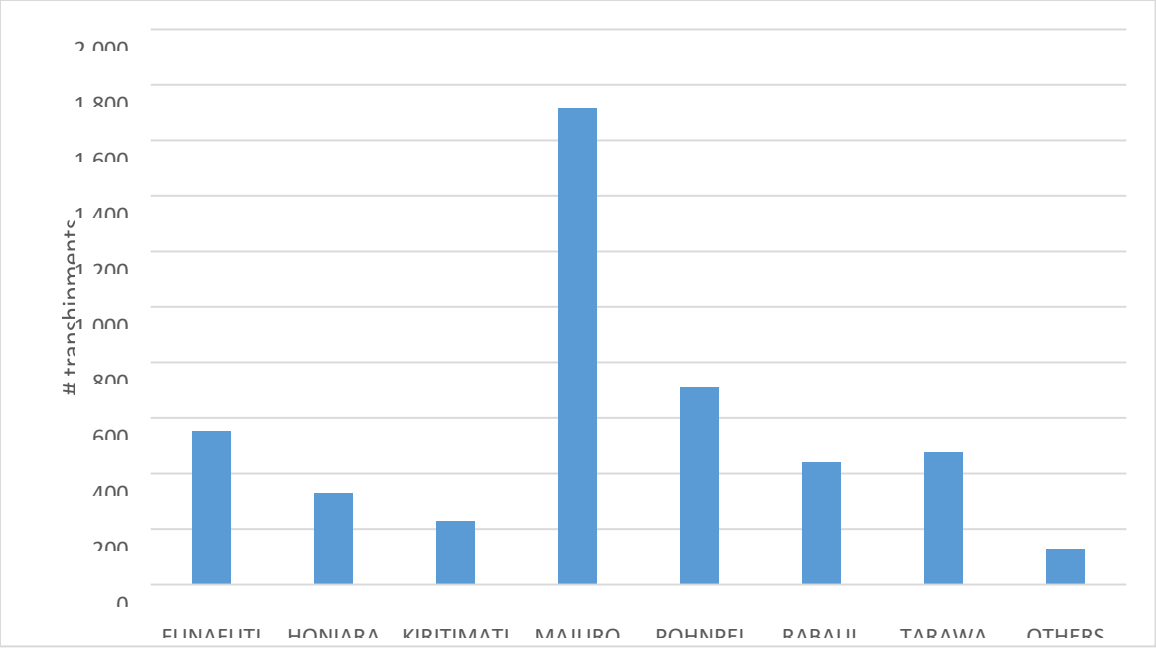


Figure 23: Estimated numbers of transhipments by port for purse seine vessels fishing within the WCPFC Convention Area, 2015-2018 combined. 'Others' includes around 26 other ports[66]

Flag	Number of PS Transshipment	SKJ	YFT	BET	TOTAL
China	72	37,460	9,815	784	48,059
FSM	25	12,159	3,473	223	15,855
Kiribati	8	4,795	426	10	5,231
Korea	5	3,055	646	434	4,135
RMI	44	29,555	3,970	124	33,649
PNG	48	25,293	8,930	1,146	35,369
Phillipines	5	2,580	1,393	567	4,540
Solomon Islands	14	6,635	2,355	48	9,038
Tuvalu	2	1,575	90	-	1,665
CH-Taipei	132	69,295	23,100	1,538	93,933
USA	60	28,916	8,490	1,023	38,429
Vanuatu	8	2,101	473	75	2,649
TOTAL	423	223,419	63,161	5,972	292,552

Table 11 Provisional purse seine transshipments in Majuro port in 2017[67]

156. MIFV operates the Longline Fish Base in Majuro port, unloading catch and reprovisioning vessels (e.g. bait, ice, food, crew) in the domestically-based foreign (chartered) fleet. In 2017, a provisional total of 4,067 mt of fish unloaded by the longline fleet, with almost all bound for export markets.

[66] SPC

[67] MIMRA (2018). Annual Report to the Commission Part 1: Information on Fisheries, Research, and Statistics. Scientific Committee Fourteenth Regular Session. Busan, Republic of Korea 8-16 August 2018. WCPFC-SC14-AR/CCM-13

157. MIFV exports mainly fresh chilled tuna species to markets in the US, China and Canada.[68] Frozen fish (rejects and bycatch) are shipped to Asia via transport containers and/or sold locally. In 2017, MIFV also purchased purse seinecaught fish, mostly whole frozen skipjack (1,777 mt), which were included with container shipments destined for Asian markets.

Species	Export	Local	TOTAL
Albacore	0	34	34
Bigeye	2,088	66	2,154
Blue Marlin	14	264	278
Opah	2	0	2
Mahi Mahi	5	23	28
Sailfish	0	7	7
Swordfish	6	21	27
Wahoo	7	35	42
Yellowfin	1,288	207	1,495
TOTAL	3,410	657	4,067

Table 12 Total unloaded catch (mt) for domestically-based longline vessels in 2017[69]

2.4.5 Onshore processing

158. Pan Pacific Foods (PPF) operates a loining plant in Majuro, supported by ongoing hiring and recruitment of local Marshallese employees. The company also operates three RMI-flagged and two chartered purse seine vessels which supply the plant with raw materials. Total exports, as reported by the company in 2017, were 2,398 mt.

	Product (mt)		
Destination	Loin (SKJ)	Whole (SKJ&YFT)	Fishmeal
China	0	44	0
CH-Taipei	0	49	40
Fiji	130	52	0
Japan	0	196	0
Korea	0	99	0
Philippines	0	248	0
Thailand	223	828	0
Vietnam	0	1,666	0
TOTAL	353	3,182	40

Table 13 Total Purse Seine exports (mt) in 2017, by product and destination

[68] MIMRA (2018). Annual Report to the Commission Part 1: Information on Fisheries, Research, and Statistics. Scientific Committee Fourteenth Regular
Session. Busan, Republic of Korea 8-16 August 2018. WCPFC-SC14-AR/CCM-13

[69] MIMRA (2018). Annual Report to the Commission Part 1: Information on Fisheries, Research, and Statistics. Scientific Committee Fourteenth Regular Session. Busan, Republic of Korea 8-16 August 2018. WCPFC-SC14-AR/CCM-13

2.4.6 Governance and port state controls

159. The MIMRA has day-to-day responsibility for the management of fisheries, including compliance. The main piece of fisheries legislation is Title 51 – Management of Marine Resources and the various chapters therein.

160. Entry into Majuro port is controlled by the RMIPA, established under the *RMI Ports Authority Act 2003*. The RMIPA is responsible for the development, maintenance and operations of all sea ports, including Uliga and Delap in Majuro and reports to the MoTC.[70] The Authority is governed by a seven-member Board of Directors appointed by the Cabinet and day-to-day operations are managed by a Director and staff of 60.

[70] http://rmipa.com/about-us/

Annexure K: ESDC Plan Outline

Marshall Islands Maritime Investment Project

Erosion, Drainage and Sediment Control Management Plan and Contaminated Soil Disposal Management Plan Outline

1. The following is the proposed outline for preparing an Erosion, Drainage and Sediment Control Plan.

9.1 Project Description

- Provide a comprehensive description of the project; and
- Include an overview of the pre-construction, construction, and operational phases of the project.

9.2 Purpose, Scope and Objective

2. The section should include:
   - Scope of the Erosion, Drainage and Sediment Control Management Plan (EDSCP) and Contaminated Soil Disposal Management Plan (CSDMP);
   - Establish objectives for general EDSCP and CSDMP;
   - Establish specific objectives for site specific EDSCP and CSDMP;
   - Relationship to specific mitigation measures

9.3 Statutory and Regulatory Requirements

- Legislative requirements as prescribed in the Project Environmental and Social Management Framework (ESMF) and Environmental and Social Management Plan (ESMP)

9.4 Potential Impacts

- Provide overview of impacts identified in ESMF and ESMP.
- Develop an impacts and mitigations matrix (Table 33).

9.5 Project Implementation

- Describe human resources for implementation of the plan and component programs/interventions;
- Clearly define roles and responsibilities and organizational structure;
- Discuss training that will be provided; and
- Describe potential partners (NGOs, government, etc.) and their respective roles and responsibilities.

9.6 Resources

- Equipment requirements including erosion and sediment control devices (sediment fencing, silt curtains, etc.) water quality monitoring equipment; and on-site weather monitoring station;

- Staff involved including Construction Environmental Officer; Environmental Coordinator; Monitoring Officer; Environmental and Regulatory Manager; and
- Registers including water quality monitoring record; and non-conformance register.

9.7 SCHEDULE

- Multi-year schedule of implementation for the component programs/ interventions and the overall plan.

9.8 MONITORING AND EVALUATION

- Overall monitoring and evaluation framework that integrates the monitoring and evaluation requirements for the component programs/ interventions.

9.9 REPORTING AND NOTIFICATION

- Contractor's monthly report including results of the surveys and inspections; and number and results of verification inspections, including but not limited to landform stability inspections, sediment control structure and stockpile inspections and control measures implemented to manage failing sediment control structures and stockpiles.

9.10 BUDGET

- Budgets for the component programs/ interventions and the total cost of the plan.

Table 33 Impacts and Mitigations

Source of Impact	Potential Impact and Relevant Management Plan Objective	Mitigation and Management (Design Feature/ Specific Measure)	Mitigation Measure	Activity/ Monitoring	Frequency	Duration	Responsibility	Evidence

Annexure L: Oil Spill Contingency Plans

Marshall Islands Maritime Investment Project

Oil Spill Contingency Plans

The proposed activities do not represent major spill risks; however, the possibility of spills still exists. Each port should have a spill management plan that should cover a variety of types of spills. If the port does not have a Port Spill Contingency Plan, then consideration should be given to the preparation of one as ports represent high spill risk operations and a major spill in the marine environment can have devastating impacts. An outline of a typical oil spill contingency plan for a port is provided in Annexure L.2.

In the absence of an overarching Port Spill Contingency Plan, the following Spill Management Procedure (Annexure 9.1) should be adopted as the minimum for the MIMIP.

L.1 - Spill Management Procedure

1 Distribution

This management Procedure is to be available to all workers, site supervisors and management staff working on the MIMIP.

2 Scope

This management procedure relates to the MIMIP only. It is to be read in conjunction with the 'MIMIP ESMF and ESMP.

3 Purpose

To ensure construction activities meet the MIMIPs environmental management obligations to:

a. Protect the health and safety of all employees and ensuring that activities are not harmful to the environment and the greater community.

b. Comply with 'general environmental duty' and not cause 'Environmental Harm' or 'Environmental Nuisance' in accordance with the *Environmental Protection Act*.

4 Performance Criteria

a. All spills are reported to BLC Environment Staff within one hour of occurrence;

b. No spills enter the local stormwater system or marine environment; and

c. No occurrence of Class 1 or 2 incidents (refer below) as a result of a spill.

Category	Description
Class 1:	Potential breaches of legislation or failure of process that result in actual off-site environmental harm, or residual on-site environmental harm; or Works undertaken outside approved areas, without required approval or without environmental assessment; or Any Material Harm pollutions incident as defined by the law.

Class 2	Failures of process or events that do not result in off-site environmental harm, or residual on-site environmental harm. These incidents may result in temporary on-site environmental harm that can be rectified to pre-existing conditions
Reportable Event	An event or unexpected find that occurs outside the scope of reasonable environmental controls and mitigation measures

5 Management Measures

5.1 General Procedure

1. Notice spill

↓

2. Inform

Immediately notify the Site Supervisor. The Site Supervisor is to immediately inform Safeguards Specialist.

↓

3. Assess risk

Assess your safety and that of others, e.g. overwhelming odour, flammable liquids, etc. Take appropriate precautions (e.g. evacuate, utilise personal protective equipment). Seek advice from Port Manager. Locate any drains or waterways near the spill site that the contaminant is likely to enter.

↓

Safety concerns cannot be managed by Site Staff.

Contact emergency services. Follow their instructions.

Source of leak or spill unable to be controlled by Site Staff.

Safety concerns can be managed by Site Staff.

↓

4. Control

Find the source of leak or spill. Check if it is still occurring. If safe, stop the leak/spill, e.g. by closing valve, plugging leak. If not safe, do not attempt to stop the leak until further help is sort.

↓

Leak or spill unable to be contained by Site Staff.

5. Contain

Do not spread or dilute spills with degreasers, detergents or water. Coordinate all containment actions through Safeguards Specialist. High priority is to be given to those spills which have the potential to enter the marine environment. See Section 5.2 for specific methodologies.

↓

Spill site unable to be cleaned-up by Site Staff.

HSE staff to liaise with EPA & coordinate clean-up with external contractors.

6. Clean-up

Clean spill site with absorbent material e.g. peat, pads and booms found in spill kits. See Section 5.2 for specific methodologies. Dispose used absorbents into contaminant disposal bags within spill kits. Wash down non-disposable equipment in a bunded vehicle wash-down area. Supervisor to organise replacement spill kit.

↓

8. Notification

Depending on the severity of the spill, the EPA or other regulating agencies are to be notified of the incident by Safeguards Specialist. Any directives given by the EPA or other regulating agency are to be recorded and followed.

↓

7. Rectification

Safeguards Specialist to inspect spill site and ensure clean-up is satisfactory. Site Supervisor to monitor source or activity that caused leak and improve equipment or process to prevent future occurrence of leak. If required, Plant Supervisor is to be notified of faulty equipment and maintenance undertaken to fix the source. Safeguards Specialist to review spill details and complete an Incident Report in conjunction with those involved. Report to be reviewed and signed by the Project Manager.

5.2 Specific Methodologies

	Spills on Water	Spills on Land
Hydrocarbons	**Contain** Obtain booms from hydrocarbon spill kits. Position booms in waterbody at a 45° angle to direction of flow. Take care to place booms in slow-moving water at a point where the oil/fuel has settled to the surface. Ensure booms are overlapped when tied together. Position a back-up boom 1-2 m downstream of the first boom. **Clean-up** Apply peat and/or pads from hydrocarbon spill kits across surface of contained spill. Wait for oil/fuel to be adsorbed/absorbed (a few minutes). Remove peat and/or pads by skimming water surface. Repeat as necessary until all oil/fuel is removed. Remove booms. Place all contaminated materials in plastic contaminant bags, tie-off bags, clearly label & arrange for disposal.	**Contain** Contain spill to immediate area by placing booms from hydrocarbon spill kits around the spill site. Place absorbent pads behind booms in places where seepage is likely to occur. If no booms or pads are available, use earth mounds to contain spill. **Clean-up** If on gravel or soil, apply peat to spill area, wait for adsorption to take place (a few minutes) and then excavate all contaminated material. Replace with clean fill. If on a hardstand area, apply peat or pads, wait for adsorption/absorption to take place (a few minutes) and then brush up material into plastic contaminant bags. Place all contaminated materials in plastic contaminant bags, tie-off bags, clearly label & arrange for disposal.
Chemical	Methodology dependent on chemical type and amount spilled. Refer to MSDS sheet and consult the Port Manager	As per methodology for a hydrocarbon spill on land, except use chemical spill kits (materials within these kits are hydrophilic as opposed to hydrophobic). Refer to MSDS sheet and consult HSE staff

5.3 Spill Kits

Spill kits are to be available at the port site office and in the supervisors', foremen, environment and safety staff vehicles. The spill kits should be contained within yellow bags or similar labelled, "Spill Kit".

Each kit should contain:

- 2 x 2.4m x 75mm mini booms;
- 12 x absorbent pads;
- 2 x absorbent pillows;
- 1 x Global Peat 6-liter bags;
- 2 x disposal bags; and
- 1 x instruction sheet laminated.

5.4 Staff Training

Safeguard Specialist is to ensure that all site staff know where to access a spill kit and what to do in the event of a spill. This is to be achieved through:

- Signage for locations of spill kits;
- Specific spill training workshops;
- Site inductions;
- Work Activity Briefings (including JSEAs); and
- Toolbox talks.

6 Roles and Responsibilities

All Staff

All staff have an immediate duty to report actual or potential/near-miss spills to their respective supervisor.

Site Supervisors, Foremen and Leading Hands

- To report all spills to Safeguards Specialist within one hour of occurrence.
- To assist Safeguards Specialist with any inquiries when undertaking incident investigations, including suggestions to improve equipment or process to prevent future occurrence of leak.
- To have a spill kit readily available at all times when conducting works and know how to use the kit effectively.
- To ensure used absorbent material is taken for disposal by a licensed waste contractor.
- To ensure used spill kits are replaced as soon as practical after use.

Health and Safety Staff

- To ensure an adequately stocked spill kit is available on their vehicle at all times.
- To advise of any health and safety considerations when treating or cleaning up a spill.

Safeguards Specialist

- To inspect the availability of spill kits around site during weekly site inspections.
- To conduct or organize staff spill training.
- In the event of a spill:

To inspect the spill site and ensure the cleanup is satisfactory;

To review spill details and complete an Incident Report; and

To liaise with the EPA and/or other regulating agencies.

7 Monitoring and Compliance

The occurrence of spills and conformance to this procedure will be monitored by BLC Environment Staff through weekly site inspections, water quality testing (BLC-PR-00104) and incident reporting (PRG-FM-00010-02) and summarized in the Monthly Environmental Report. Corrective actions may include further training (e.g. toolbox talks), the issue of a Site Instruction or disciplinary action, depending on the severity of the non-conformance.

Any directives given by the EPA or other regulating agency are to be recorded and followed in the event of a spill.

8 Reference Documentation

MIMIP ESMF and ESMP

9 Key Contacts

List key contacts as appropriate e.g.:

Port General Manager –

Seaport Manager –

Safeguards Specialist –

HSE staff –

EPA -

L.2: Sample Table of Contents for Port Oil Spill Contingency Plan

1. Introduction

1.1 Authority for the plan's aims and objectives of the plan

1.2 Geographical scope of the plan

1.3 Integration with other plans

2. Notification and Evaluation

2.1 Reporting and notification procedures

2.2 Initiation of response

2.3 Spill response teams

2.4 Advanced operations center

2.5 Estimate of risk

2.6 Tiered response (small, medium and large spills)

2.7 Movement and fate of oil on the water

2.8 Incident scenarios

3. Oil Spill Response

3.1 Response options

3.2 Monitor the oil slick

3.3 Contain and recover the oil from the sea surface

3.4 Apply oil spill dispersants

3.5 Physical breakup of oil using surface craft

3.6 In-situ burning

3.7 Physical protection of the area and its resources

3.8 Cleanup of oiled foreshores

3.9 Bioremediation

3.10 Oiled waste management

3.11 Environmental sensitivity

3.12 Coastal bird populations

3.13 Oiled wildlife operations

3.14 On-scene liaison

3.15 Recording and cost recovery

3.16 Termination of clean up

3.17 Clean down and restoration of equipment

3.18 Post-spill damage assessment and monitoring

3.19 Post-spill restoration and rehabilitation

4. Supporting Information

4.1 Relevant legislation

4.2 Roles of authorities

4.3 Description of port and adjacent area

4.4 Seasonal conditions affecting the response

4.5 Oil spill trajectory modelling

4.6 Equipment maintenance and storage

4.7 Health and safety considerations

4.8 Training

4.9 Maintenance of the plan

Annexure M: Chance Finds Procedure

ESIA Consult

Marshall Islands Maritime Investment Project

Chance Finds Procedure

10 INTRODUCTION

342. Cultural property includes monuments, structures, works of art, or sites of significance points of view, and are defined as sites and structures having archaeological, historical, architectural, or religious significance, and natural sites with cultural values. This includes cemeteries, graveyards and graves.

343. Screening for the MIMIP indicated that Cultural Physical Resources were unlikely to be at risk as a result of the projects. Therefore WB OP/BP4.11 was not triggered. Nonetheless, there is the possibility that unexpected cultural heritage items could be discovered during works – 'Chance Finds.

11 CHANCE FINDS PROCEDURE

344. This procedure is to be followed in the event of a Chance Find:

- Stop the construction activities in the area of the chance find
- Delineate the discovered site or area;
- Secure the site to prevent any damage or loss of removable objects.
- Notify the supervisory Engineer who in turn will notify the responsible local authorities;
- Responsible local authorities and the Ministry of Culture and Internal Affairs (RMI Historic Preservation Office (HPO)) would be in charge of protecting and preserving the site before deciding on subsequent appropriate procedures.
- Decisions on how to handle the finding shall be taken by the responsible authorities and the HPO. This could include changes in the layout (such as when finding an irremovable remain of cultural or archeological importance) conservation, preservation, restoration and salvage.
- Implementation for the authority decision concerning the management of the finding shall be communicated in writing by the HPO.
- Construction work could resume only after permission is given from the responsible local authorities and the HPO concerning safeguard of the heritage.

345. These procedures must be referred to as standard provisions in construction contracts.

12 REPORTING

346. During project supervision, the Site Supervisor shall monitor the above regulations relating to the treatment of any chance find encountered are observed. Relevant findings will be recorded in World Bank Supervision Reports and Implementation Completion Reports will assess the overall effectiveness of the project's cultural property mitigation, management, and activities, as appropriate.

Annexure N: Gender and Human Trafficking Assessment

ESIA Consult

Republic of Marshall Islands Maritime Investment Project

Gender and Human Trafficking Report

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13 ACRONYMS AND ABBREVIATIONS

CEDAW	Convention of the Elimination of All Forms of Discrimination Against Women
DIDA	Ministry of Finance Division of International Development Assistance
HT	Human Trafficking
IMO	International Maritime Organization
IOM	International Organization for Migration
MOHHS	Ministry of Health and Human Services
NGMP	National Gender Mainstreaming Policy
NGO	Non-Governmental Organization
PMU	Project Management Unit
PPA	Project Preparation Advance
RMI	Republic of Marshall Islands
RMIMIP	Republic of Marshall Islands Maritime Investment Project
SDG	Sustainable Development Goal
STDs	Sexually Transmitted Diseases
NTHT	National Taskforce against Human Trafficking
WB	World Bank
WUTMI	Women United Together Marshall Islands

14 INTRODUCTION

14.1 1.1 BACKGROUND AND CONTEXT

The Government of the Republic of the Marshall Islands (RMI) has received a Project Preparation Advance (PPA) from the World Bank to assist in the preparation of the proposed RMI Maritime Investment Project (RMIMIP). The PPA will be used to fund the preparation of the necessary technical, economic, design, environmental and social studies for the projects, as well as establishing the operational framework within which the projects will be implemented.

Imported and transient workforces such as the fishing industry and construction industry are known to contribute to issues of human trafficking, prostitution, harassment and violence [71]. Insuring that this project does not exacerbate any of these issues, and where deemed appropriate, provides education and awareness on the issues, will therefore be an integral part of the project implementation. Principles of gender mainstreaming will also be followed.

14.2 1.2 PROJECT DESCRIPTION

The RMI is located approximately midway between Hawaii and the Philippines and consists of 29 atolls, 5 islands and numerous small islets. The country covers an area of 1.9 million km^2; but has just 181 km^2 in land area. The overall population is about 55,000, but 75 percent live in Majuro (the capital) and Ebeye. RMI has a young population, majority of which is under the age of 15. The population is sparsely distributed, but there is growing in-migration from the outer islands due, primarily, to a lack of employment opportunities and increased reliance on the cash economy, as compared to a subsistence lifestyle. At the same time, lower incomes and a rising cost of living is causing Marshallese residents to leave the country for better jobs and educational opportunities abroad, mainly in Hawaii, the United States mainland, and Guam.

Given the country's geographic characteristics and distant outer islands, the provision of efficient, reliable and affordable sea transport services is considered essential for the country's basic economic and social functions, and to achieving RMI's national development plans. Therefore, ports at Ebeye, Wotje and Jaluit Atolls are proposed to be included in this project. The main national port of Majuro is regularly served by international cargo services from the United States, Asia and Australia. It is also the largest regional tuna transhipment port and transhipped 600,000 metric tons of tuna in 2016. Fishing vessels make-up as much as 75 percent of vessel traffic calling at Majuro. There are two principal docks (ports) at Majuro: (i) Delap Dock for international cargo; and (ii) Uliga Dock for domestic passengers and cargo, and tenders from international vessels.

14.3 1.3 POTENTIAL FOR GENDERED IMPACTS AND HUMAN TRAFFICKING CONSIDERATIONS

Given the nature of the project activities, which essentially consist of maintenance and upgrades to existing port infrastructure, there are unlikely to be significant environmental and social impacts[1]. However, influx of foreign workforce during the implementation phase; and the potential increase in visiting fishing fleets during post-implementation, have a potential to cause harm or harassment to host communities, including incidents of human trafficking.

14.4 1.4 GATHERING INFORMATION OF RELEVANCE TO THIS REPORT

Information summarized in this report was gathered during the scoping field visit to RMI in February 2019, and as a desk-top activity between December and February 2019.

[71] World Bank: Project Information Document/Integrated Safeguards Data Sheet (PID/ISDS) Concept Stage Document of February 12, 2018

Consultations were held with the relevant stakeholders and special interest groups at each port location except Wotje. A comprehensive record of all meetings and interviews held can be found in RMIMIP Stakeholder Engagement Plan Update 1.0 of February 2019 (Annex G Consultation records). Organizations consulted include:

- IOM - International Office for Migrations
- NTHT – National Taskforce against Human Trafficking
- Ministry of Justice, Immigration and Labor, Division of Immigration
- MOHHS – Ministry of Health and Human Services
- WUTMI - Women United Together Marshall Islands
- WIJ Chapters
- School counsellors / Secretaries

Available policy and operational documents relevant to both gender and human trafficking (HT) were reviewed for the purpose of this report and the review summaries are presented in the next section.

15 POLICY ENVIRONMENT

Gender

15.1 2.1. NATIONAL GENDER MAINSTREAMING POLICY OF THE REPUBLIC OF THE MARSHALL ISLAND

The RMI has committed to achieve gender equality through international and regional conventions and instruments, which include the Universal Declaration of Human Rights, the Convention for the Elimination of All Forms of Discrimination against Women (CEDAW), the Convention of the Rights of the Child (CRC), the Millennium Development Goals and Pacific Plan, the Beijing Platform for Action, the Revised Pacific Platform for Action for the Advancement of Women and Gender Equality, and the 2012 Forum Leaders Gender Equality Declaration.

The operating principles, which form the foundation of the National Gender Mainstreaming Policy (NGMP), are defined as follows:

- Gender equality is enshrined and included in traditional and cultural practices of the Marshallese people.
- Understanding and acknowledging basic human rights is the primary guiding principle for the NGMP.
- Women and men are equal partners in all development areas of our country and therefore gender equality and the participation of women at all levels and in all sectors is fundamental to the progress and advancement of RMI.
- Women in the outer islands need to be given special consideration in all Policy outcomes and actions.
- Policy-makers and managers need to develop their capacity to mainstream gender equality and address women's human rights into their sectoral programs and services and establish an accountability mechanism for monitoring progress within their sector.
- Strong partnerships and coordination mechanisms need to be in place between all line and sectoral ministries, outer islands governance mechanisms, and civil society organizations.

15.1.1.1 The goal of the National Gender Mainstreaming Policy is

15. 1. 1. 2 'To progress gender equality and the empowerment of women in the RMI with the meaningful involvement and contributions of all development sectors and civil society, and women and men from all spheres, and at all levels of development and decision-making, from the Council of Iroij, the Nitijela, and in local governments in the outer islands.'

The NGMP aims at addressing gender inequality for the overall population and to benefit all women living in RMI, however, it also acknowledges inter-sectionalities of vulnerability, such as women facing additional disadvantages due to their physical and mental conditions (women living with disabilities), their location (women living in remote areas), their age (adolescents and elderly), or their limited assets (unemployed women and heads of household); and prioritizes the needs of women facing greater disadvantages.

NGMP sets out five priority outcomes:

1. Strengthened capacity across government to deliver gender-responsive programs and services.
2. Secure family wellbeing.
3. Elimination of gender-based violence and protection and care of survivors.
4. Enabling environment for equitable participation in, and benefit from, economic development.
5. Equitable participation of women and men in decision-making.

Priority outcomes 1 and 5 are deemed applicable to this project, with the priority outcome 3 applicable in its reference to the human trafficking and priority outcome 4 relevant to a limited extent.

Priority Outcome 1: Strengthened capacity across the government to deliver gender responsive programs and services

The Policy indicates that gender issues are rarely mentioned in high-level discussions; very few sectors use sex-disaggregated data; gender analysis is not used in the policy and program development process; and the technical capacity, accountability, reporting and resources to conduct gender analysis and support the gender mainstreaming approach are limited. Therefore, the enabling environment for mainstreaming gender in both central and local level government, including increase in capacity and improved coordination across all sectors, was identified as the key to effective delivery of gender-responsive programs and services.

Priority Outcome 3: Elimination of gender-based violence and protection and care of survivors

Gender-based violence is a challenge in RMI. Although this project does not specifically deal with the violence prevention aspects, the principle of 'do no harm' – ensuring that project activities do not have a potential to precipitate or potentiate domestic violence - will be adhered to in all project activities.

Further, this Priority Outcome makes a reference to human trafficking and states that

"(the Government) also acknowledge the growing global trends around trafficking and the risk to RMI and will put in place mechanisms to monitor the situation and adopt measures for the protection of women and girls who are being trafficked on our territory."

Priority Outcome 4: Enabling environment for equitable participation in, and benefit from, economic development

The Policy acknowledges that women's economic empowerment remains a key challenge, as women continue to face limited job opportunities and remain under-represented in management positions. The Policy also calls for an enabling environment for an equitable participation in and benefit from economic development thought equal employment opportunities, improving working conditions, creating a good balance between family and work-related responsibilities for both women and men, increased access to education, etc; but stops short of promoting measures that would increase women's vertical progressions into executive and positions of power within businesses and organizations outside of the political representation (addressed to limited extent in outcome 5).

Priority Outcome 5: Equitable participation of women and men in decision-making

Participation of women at the national decision-making level remains limited, with women being under-represented in the legislative and executive branches of government and the leadership still thought of as men's role. The Policy acknowledges that participation of women alongside man in decision-making creates a stronger platform to address a broader range of concerns and needs. To support the equitable participation of women and men in decision-making, the Policy proposes to undertake more civic education, encourage political leaders to be more supportive of female candidates, further develop women's leadership and communication skills, build the capacity of the media to promote a positive image of female leaders, discuss the adoption of temporary special measures, and – as a final recommendation - promote more women in decision-making and senior management positions in both the public and private sectors.

Further, the Policy specifies five strategic areas (identified by RMI's National Strategic Plan 2015–2017) to be coordinated and to work in synergy with NGMP to achieve the Priority Outcomes. Infrastructure developments (transportation) is one of the strategic areas identified. The official gender focal point of the government is the Gender and Development Office, under the Ministry of Internal Affairs.

15.2 2.2 The World Bank Group Gender Strategy

At the center of the World Bank (WB) agenda on gender equality, poverty reduction and inclusive growth is the achievement of the Sustainable Development Goal (SDG) 5 on gender equality and empowerment of all women and girls. The WB Strategy[72] focuses on four objectives:

1. Improving human endowments - health, education and social protection
2. Removing constraints for more and better jobs
3. Removing barriers to women's ownership of and control over assets

[72] World Bank Group Gender Strategy 2016-2023: Gender equality, poverty reduction and inclusive growth

4. Enhancing women's voice and agency and engaging men and boys

This Project is well placed to provide support for improvements under Objective 2, which is similar in nature to the RMI Priority Outcome 4 of increasing women's benefits from economic development; and the Objectives 4, similar in nature to the Priority Outcome 5: Equitable participation of women and men in decision-making.

Given that WB Group gives strong emphasis on strengthening country-driven approaches, Objectives of the World Bank Group Gender Strategy will be addressed in this document as they relate to RMI NGMP Priority Outcomes.

15.3 2.3 International Maritime Organization (IMO)

IMO is the United Nations specialized agency with responsibility for the safety and security of shipping and the prevention of marine and atmospheric pollution by ships. Its main role is to create a regulatory framework for the shipping industry that is fair and effective, universally adopted and universally implemented. IMO has in 2019 launched a new campaign for its Women in Maritime program as a part of its mission to support Sustainable Development Goal number 5.

Human Trafficking

15.4 2.4 RMI Prohibition of Trafficking in Persons Act 2017

The purpose of the Act is stated as the prevention and combat of trafficking in persons in the RMI; protection and assistance to victims; ensuring just and effective investigation and prosecution; and promoting and facilitating national and international cooperation in order to meet these objectives. "Child" is defined as any person under the age of 18; and the definitions of the forced labor, debt bondage; prostitution and sexual exploitation, are also provided in the Act.

Of relevance here is Paragraph 104 (b) of the Act, specifying that the Act shall apply to any offense committed on board a vessel or aircraft that is registered under the laws of the RMI at the time the offence is committed.

The law proceeds to set maximum jail sentences and penalties for associated crimes and the victim protection provisions.

15.5 2.5 The World Bank Group Social Development Note on Human Trafficking

Social Development Note 122 from 2009[73] provides an overview of the World Bank approach to human trafficking, based on the principles of prevention. The following specific actions are listed as the key to preventing human trafficking:

- Social protection: Enhancing a safety net system to target those who are vulnerable to trafficking in the project area.
- Employment: Providing job training and creating more jobs in the community at risk of trafficking so that vulnerable populations do not necessarily need to go to the city or abroad to obtain a job.
- Labor safeguards: Ensuring labor safeguards that include an anti-trafficking component in development projects for the following sectors that are particularly common for labor trafficking – mining, fisheries, agriculture, logging, and construction.
- Education: Incorporating information on human trafficking, child labor, migration, and skill development into school curricula and training programs to educate children and young adults about the danger of human trafficking and their human/labor rights, and also to develop useful skills to have sustainable employment.
- Health: Improving access to healthcare for vulnerable groups of human trafficking (such as sex workers and illegal migrant workers) and educating on HIV/AIDS and sexually transmitted diseases.
- Migration: Raising awareness about human trafficking and informing about the risks and consequences of work abroad and their labor rights.
- Access to law and justice: The Access to Justice for the Poor strategies empowers the vulnerable people to assert, enforce and access their individual and property rights. Most trafficking victims are not aware of their rights, and even if they know their rights, they are afraid of testifying against traffickers who might threaten and harass them and their family. The Global

[73] Makisaka, Megumi. 2009. Human trafficking: a brief overview. Social Development Notes; no. 122. Conflict, crime and violence. Washington, DC: World Bank

Alliance Against Traffic in Women (GAATW) points out two important components of access to justice for trafficked victims: the right to information and victim protection.

15.6 2.6 International Organization for Migration (IOM)

The IOM is an intergovernmental organization that provides services and advice concerning migration to governments and migrants, including internally displaced persons, refugees, and migrant workers. In September 2016, it became a related organization of the United Nations. IOM is committed to the principle that humane and orderly migration benefits migrants and society, and acts with its partners in the international community to:

- Assist in meeting the growing operational challenges of migration management.
- Advance understanding of migration issues.
- Encourage social and economic development through migration.
- Uphold the human dignity and well-being of migrants.

United Nationals Office for drugs and crimes (UNODC)[74] differentiates three types of human trafficking activities as occurring in the Pacific:

Sexual exploitation: There are indications that trafficking in persons for sexual exploitation possibly occurs in parts of the Pacific region, including in the Republic of the Marshall Islands. Such activities reportedly have close links to local and regional commercial and extractive industries, including fishing, logging and mining. According to reports, trafficking for sexual exploitation is prevalent in key port cities, where crews from foreign fishing vessels allegedly exploit both local and girls and women from East Asia (Chinese, Pilipino and more recently, Thai).

Labor exploitation: There have been reports of widespread labor exploitation of individuals from the Pacific region by distant water operators licensed to fish within the Pacific waters. Such activities possibly have links to human trafficking in and through the Pacific. In addition to workers from the Pacific region, there are reports of fishermen from Asian countries including China, Indonesia, the Philippines and Viet Nam being exploited in the Pacific region on fishing vessels originating from East Asia.

Migrant smuggling: Most recorded cases of migrant smuggling in the Pacific have been large numbers of people travelling via boat, with individuals from South and East Asia paying for transit to the United States.

This differentiation was used when discussing human trafficking with the stakeholders.

[74] The United Nations Office on Drugs and Crime (UNODC) Transnational Organised Crime in the Pacific: A Threat Assessment from September 2016

16 FINDINGS OF THE PRIMARY AND SECONDARY DATA COLLECTION

16.1 3.1 GENDER

The Family Health and Safety Study[75], conducted in 2013/14, reveals that 48% of ever-partnered women reported having experienced physical violence in their lifetime, and 21% had experienced at least one act of sexual violence in their lifetime. Furthermore, the issue of teenage pregnancies is significant, at the rate of over 20 percent of total live births and is higher than in most other Pacific Island countries[76]. In other words, 8.5% of all girls under age of 19 give birth[77].

Stakeholders reported that Domestic Violence Prevention and Protection Act 2012 is not being implemented. Victim protection facilities are non-existent and protection processes are unclear. Also commonly reported during consultations was issue of teenage pregnancies and the age consent issue, as age of consent regulations are not enforced. The youngest person to give birth in the last year, in the villages consulted for the purpose of this project, was 12 years of age (legal age for consensual sex is 15, and 'child' for purpose of human trafficking act is under 18).

High incidence of gender based violence combine with and exacerbate conditions of gender inequality and mean that women are severely constrained in their ability to negotiate a life free of coercion. Many women live under the threat of violence and this restricts their ability to move freely in the community or to access health and education services. The normalisation of violence has specific implications for women's trafficking risk: with limited sexual agency and high dependency on families, young women are acutely vulnerable to sexual coercion and trafficking.

Sexual awareness is reported as very low or nonexistent, and the need for general sexual education and awareness, including awareness of sexually transmitted diseases (STDs), is perceived to be of high importance. "Culture" was often stated as a reason why gender and sexual exploitation issues are not talked about, however, when the potential benefits are well explained to traditional leaders and they support them, that support is very important as traditional leaders are highly influential in the communities. This is an important consideration for any project proposing to commence work in this space.

Women's economic empowerment remains a key challenge, as women continue to face limited job opportunities and remain underrepresented in management positions. Women in the workplace also face weak protection mechanisms and laws, particularly in the private sector[6]. The reported rate of men to women in labor force was 54% to 30% in 2011[78]. However, the key issue in terms of employment appears to be very low total labor participation rates, mainly due to high unemployment of youth. It is therefore youth unemployment (of both sexes) and not women's lack of employment opportunities that is the key issue in RMI - a very common occurrence in the Pacific, indeed. With 43% of population aged under 15 in 2010, the youth unemployment trend is unfortunately likely to persist. The resulting national total dependency was reported at 82, indicating that a high proportion of the population is dependent on a much smaller proportion of working-age people (who may or may not be employed).[79]

Although numbers of women in the public service are growing, men dominate most senior positions. In addition, the situation in private business sector is unclear as most of the reporting and policy instruments are related to the public sector employment and statistics. Importantly, legislative mechanisms to protect the employment and labor rights of workers do not appear to be established, such as anti-discrimination provisions, sexual harassment protections, maternity leave provisions, and protections for dismissal because of pregnancy[6].

The Port Authority Human Resources documents and employment policy were not available for review. However, the maritime sector is traditionally a male dominated sector and improvement of image and 'visibility' of women working in the sector might be beneficial. Ensuring inclusion of provisions for equal employment opportunities or similar in nature; and a commitment to

[75] Republic of the Marshall Islands. Ministry of Internal Affairs. 2014. Family Health and Safety Survey.
[76] Republic of the Marshall Islands. 2014. Review of progress in implementing the Beijing Platform for Action in Republic of Marshall Islands. National Review
[77] Asian Development Bank ADB 2016. Gender Statistics: The Pacific and Timor-Leste
[78] RMI Census of Population and Housing 2011 Summary Report (Numbers derived from pie charts in Figure 2.1)
[79] Braun, T (Ed): Stocktake of the gender mainstreaming capacity of Pacific island governments: Republic of the Marshall Islands, Secretariat of the Pacific Community (SPC) 2012

employment and career progression based on merit, is essential. In addition, provisions for maternity leave and continuation of employment after the maternity leave and the protection from sexual harassment, should also be promoted by this project in all policy, sectoral and planning documents.

The highest level of concern voiced by stakeholders was in relation to implementation/construction phase workforce. Stakeholders suggested that project provides preference for local companies and local labor to be engaged during the implantation and in construction activities, or alternatively providing strong measures to mitigate potential negative impacts of foreign workforce. Benefits of preferential local employment/tendering of local firms is perceived as twofold, (a) providing an employment but also skills development opportunity to high numbers of local unemployed youth; and (b) minimizing social impacts likely to result from the influx of foreign workforce, including introduction of sexually transmitted diseases (STDs), harassment and potential increase in disorderly behaviors. The issue was most strongly voiced on Ebeye, where negative social impacts of the contractor workforce in the US Base are already felt. In addition, there are several upcoming construction projects proposed for Ebeye, thus potential magnifying the issue and warranting a Cumulative Impact Assessment of the Foreign Workforce Impacts in Ebeye.

16.2 3.2 HUMAN TRAFFICKING

Consultations with relevant stakeholders confirmed presence or anecdotal presence of sexual exploitation and labor exploitation, both of the foreigners and of RMI nationals. The presence of migrant smuggling was not evident, however, cannot be excluded.

The issues related to maritime industry are strongest felt in Majuro[80]. Majuro port is the largest regional tuna transhipment port and fishing vessels make-up as much as 75 percent of vessel traffic. Involvement in sex trade related to tuna industry, and resulting exposure to abuse and sexually transmitted diseases (STDs), have been previously reported[81]. Stakeholders reported current social impacts from shipping including prostitutions, border control not enforced properly, and poor enforcement of existing laws and policies in general. For example, there is a 10pm curfew for seafarers in Majuro, but there is no control over compliance. Implementing 'safety station' at Uliga dock and providing immigration/police presence is strongly supported as this is seen as an important safety issue, one that would also raise public confidence.

Stakeholders also voiced the opinion that a lot of new learning related to human trafficking (HT) has occurred over the last few years, so instead of conducting HT assessment project should move towards implementation (of capacity building and awareness campaigns). If a HT assessment is to be done, it should be conducted by local organizations – provide training to local staff on islands on how to do it and have it as a long-term activity. Maybe also conduct a training needs assessment for agencies: not just of immigration and police but also health, education etc.

Youth, and in particular boarding school students, were identified as very vulnerable with the need to raise their awareness. For this there is a need to go through Ministry of Education to provide awareness campaigns in boarding schools on outer islands. Training of officers (immigration and police) on victim identification; procedures and mechanisms in place; also, capacity building in associated agencies such as health and education, is also important, as well as work with taxi drivers who are sometimes facilitators. It was suggested that the project could assist with lobbing for inclusion of HIV/STD testing as a part of hiring process for maritime workers, increasing corporate social responsibility of vessel owners, and raising awareness of mariners/ship workers. It was further suggested to develop materials as hand-outs to the ships – so mariners are aware of laws, rights and responsibilities in general and while in RMI; but also, about their rights as workers and rights to complain in cases or labor exploitation or processes to be followed. Potential use of Fishing Registry for rising of awareness of HT issues for all RMI registered vessels was also discussed - as mentioned previously, there is a provision in Human Trafficking Act (Paragraph 104b) that specifies Act shall apply to any offense committed on board a vessel or aircraft that is registered under the laws of the RMI at the time the offence is committed.

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[80] Human trafficking and sexual exploitation in Ebeye was reported as high however it was not linked by stakeholders to maritime sector but to contractors from the US Base. There is a reported good collaboration between immigration, police, government agencies and other organisations dealing with the subject on the island, and the development of "Ebeye Pass" (for the staff from the base) was discussed.

[81] Demmke, P.T. Gender issues in the Pacific Islands Tuna Industry. Suva, Fiji: Forum Fisheries Agency and Pacific Islands Forum Secretariat, 2006

Further, stakeholders pointed that there is never any resistance to capacity building so this is a good avenue for furthering gender and HT discussions. Need for any training to be continuous and to use training and materials that exists rather than creating new modules was indicated. Also, the need for resources, assets and people for monitoring of mariner's behavior was discussed.

17 RECOMMENDATIONS FOR PROJECT ENGAGEMENT

Potential areas, in terms of policy, legal reform, or program interventions in the maritime transport sector to address the gaps identified during the gender and human trafficking scoping analysis are discussed below. The measures proposed were identified based on consultation with government authorities and local stakeholders and are prioritized based on[82]:

a) where interventions can be most strategic, considering level of impacts in terms or number of people reached;

b) where there is interest and ownership from the government side to bring about change; and

c) where there is capacity and resources to bring about change.

Indicators that could be used to monitor progress of potential activities addressing the gender gaps and HT issues identified, are also proposed. Final set of indicators selected for the project (once all the interventions are agreed upon) will need to show clear results' chain between analysis, action and evaluation; in other words, for all actions selected to be implemented, an indicator to monitor the results of the action in terms of addressing the gap should be set. Indicators can be at the process, output or outcome levels and baseline data should be collected and indicator target agreed with government counterpart. Indicators should be developed through consultations with local and national stakeholders, who will be responsible for monitoring and evaluating the project.

17.1 4.1 GENDER

Recommendation G1: Preferential employment of local labor and contracting of local and national firms for project implementation

Preference for local companies and local labor to be engaged during the implantation, to minimize potential social impacts, was voiced by stakeholders during the consultation. In addition to the provision of much needed employment and skills development for local youth; preferential treatment was also seen as a mitigation measure for potentially negative social impacts of foreign workforce. Presence of foreign workforce would disproportionally negatively impact on women, in terms of harassment and the introduction of STDs. It would also have a potential to increase sexual exploitation.

Community concerns about labour influx and a possible rise in harassment and STDs require dedicated response in Control Activities, including comprehensive training of key staff and contractors, regarding the likelihood, significance and management of these and other influx-related issues, and regular monitoring.

Contributing to RMI National Gender Mainstreaming Policy:

Priority Outcome 3. Elimination of gender-based violence and protection and care of survivors

(also contributing to HT Action Area Labor Safeguard)

Prioritization based on:

a) intervention is strategic, with potentially high-level impact in terms of number of people reached;

b) there is interest and ownership from the government side and the communities;

c) capacity and resources to bring about change are most likely available; however, special provision would need to be included in the contract bidding process.

Potential indicator: number/% of local/national companies contracted; number/% of local/national workforce; numbers disintegrated by sex.

Recommendation G2: Incorporate 'equal employment opportunity' and in particular 'equal career progression' statements in sectoral strategies and policies.

[82] FSM and RMI Maritime Investment Project Request for Proposals (RFP) of 12 October 2018

It is strongly recommended that such provisions be promoted for strategic documents of all project partners, not only government ones (for example, for Port Authorities, port users, and constructions firms engaged for implementation). In addition, promotion of implementation and enforcement of such policies should be an integral part of the capacity building with the partners, as well as an integral principle of the Master Plans.

Contributing to RMI National Gender Mainstreaming Policy:

Priority Outcome 1: Strengthened capacity across government to deliver gender-responsive programs and services

Priority Outcome 4: Enabling environment for equitable participation in, and benefit from, economic development

Prioritization based on:

a) intervention is strategic, with potential for a transformational change;

b) there is interest from the government side to bring about change; need to rise ownership of private firms;

c) capacity and resources to bring about change are available.

Potential indicator: number of strategic documents that include statements; percentage increase to baseline.

Recommendation G3: Rise the profile and visibility of women employed in maritime sector.

There is a number of women already employed in various agencies related to maritime sector in RMI, as well as at the Port Authority. However, perceptions of maritime sector remain as of 'male dominated' sector. It is therefore important to work with the agencies and businesses involved to increase the awareness of women already working in the sector; the careers they have in the sectors; and the openness of the sector to engage women in new careers in the future. This could be initiated in collaboration with the 'Women in Maritime' initiative of the UN IMO. The use of media to promote women role models within RMI will be essential.

Contributing to RMI National Gender Mainstreaming Policy:

Priority Outcome 1: Strengthened capacity across government to deliver gender-responsive programs and services

Priority Outcome 4. Enabling environment for equitable participation in, and benefit from, economic development

Priority Outcome 5. Equitable participation of women and men in decision-making

Prioritization based on:

a) intervention is strategic, with potentially high-level impact in terms or number of people reached;

b) there is interest and ownership from the government side to bring about change; need to rise ownership of private firms;

c) capacity and resources to bring about change are available.

Potential indicator: number of campaigns to raise visibility of women in maritime conducted; number to baseline of 0.

Recommendation G4. Increase numbers of women in decision making positions within the maritime sector and related government agencies

This recommendation deals with the opportunities for vertical progression of women in their chosen careers within the maritime sector or related agencies. There is a need to challenge situation in which women mainly occupy lower administrative positions and to work with the agencies and businesses involved to broaden the acceptance of 'employment based on merit' to also include higher positions (such as Board membership) and executive and decision-making positions. This recommendation could also include setting of firm targets for women at different technical and management levels. Recommendations could be initiated in collaboration with the National Gender Office to conduct a workshop on Strengthening Women's access to employment and skills in Non-Traditional Areas, or similar; and with the 'Women in Maritime' initiative of the UN IMO. The key target audience for creation of this transformative change are males in high level positions.

Contributing to RMI National Gender Mainstreaming Policy:

Priority Outcome 5: Equitable participation of women and men in decision-making

Prioritization based on:

a) intervention is strategic, and potentially transformative;

b) there is interest and ownership from the government side to bring about change; need to rise ownership of private firms;

c) capacity and resources to bring about change are available.

Potential indicator: number of women in high level or executive positions; % increase to baseline or related to target set.

Workshop on Strengthening Women's access to employment and skills in Non-Traditional Areas, or similar, conmpleted.

17.2 4.2 HUMAN TRAFFICKING

Recommendation HT1: Ensure there are Immigration/Customs/Police facilities and presence at main Ports and I/C/P can patrol anchorage areas. Provide fencing and adequate lighting at the ports.

Facilities for immigration/customs officers and the police are essential in particular at Uliga Dock. During the discussions it was recommended that port upgrades should include a provision of an office for the Immigration/Customs/Police officers. It was also recommended by stakeholders that Port Authority should have a boat and trained personnel (or involved Immigration and Police officers) to conduct inspections at the anchorage area. Fencing and provision of adequate lighting at the ports were highly commended as both deterrents but also having a role in raising community perception of safety.

Contribution to Action Area:

- Social protection.
- Access to law and justice.

Prioritization based on:

a) intervention is strategic, with potentially high-level impact in terms of number of people reached as it raises confidence of community members;

b) there is interest and strong ownership from the government side and the communities;

c) capacity and resources to bring about change are available**.**

Potential indicators: I/C/P infrastructure and presence provided at Majuro Ports; numbers compared to baseline. Fencing and lighting provided in each project Port; numbers compared to baseline.

Recommendation HT2: Raise HT awareness in the communities

Possible mitigation of issues related to human trafficking (HT) and gender in general are seen mainly through awareness and education of the general population and at schools - the largest population group in the country is 14-21 years of age. Any successful community awareness campaign must be culturally sensitive and presented not as punishment but as protection measure for youth and children. Use of culturally appropriate methods as well as context is crucial (cultural literacy). Work in communities also needs to be done through culturally appropriate channels, and preferably should start by popularizing cases of local people exploited by 'outside world'. This would get everyone on board, and once the subject is socialized and talked about, it can be broadened to include exploitation of locals by other locals/ RMI nationals.

Awareness work with schools would need to be done through Department of Education, and a possible approach is to provide training and a range of materials to a number of educators (several from each target atoll), who then return to their schools with the resource kits (campaign materials) and roll out programs. This is a particularly good approach in terms of sustainability of it, where each new generation of students coming through school go through awareness campaign. Providing unified training, campaign materials and resource kits also ensures that a unified message is delivered throughout the country. Boarding school students are perceived as particularly at risk and the programs could start with the outer islands boarding schools.

The project should also include resourcing for relevant national actions (eg., service support under the National Task Force) as well as commitment to coordinate RMIMIP actions and policy with IOM, MOCIA and DoJ.

Contribution to Action Area:

- Education.
- Migration.
- Access to law and justice.

Prioritization based on:

a) intervention is strategic, with potentially high-level impact in terms of number of people;

b) there is very high interest and strong ownership from the government and the communities;

c) capacity and resources to bring about change are available.

Potential indicators: number of training/capacity building session provided; numbers of people attending; numbers disintegrated by sex.

Recommendation HT3: Raise the capacity of agencies to deal with the HT issues and to collaborate

The capacity or relevant agencies would also need to rise. Immigration officers at Ports and Airports receive training on the procedural requirements in dealing with illegal matters, however, it was suggested that such training should be in a form of a regular capacity building, and more comprehensive in content. Furthermore, it was noted that the training needs to be provided not just to enforcement agencies, but also to staff from health and education, as they are the ones at the frontlines of the issues.

Weak collaboration of relevant agencies was noted in Majuro, and hence the project should include funding for avenues and the systems for improving collaboration between immigration, police, government agencies and other organizations dealing with the subject, such as IMO and the Taskforce. Any such collaboration should also include departments of health and education.

Contribution to Action Area:

- Social protection.
- Education.
- Migration.
- Health.
- Access to law and justice.

Prioritization based on:

a) intervention is strategic, with potentially high-level impact in terms of number of people reached in both agencies and the communities;

b) there is interest and strong ownership from the government and the communities;

c) capacity and resources to bring about change can be available and can be combined with other activities.

Potential indicators: number of training/capacity building sessions provided; numbers of people attending; numbers disintegrated by sex.

Recommendation HT4: Raise the awareness of mariners and build capacity of vessel owners on issues related to human trafficking.

The need to work with the vessels, both the mariners and vessel owners, was also discussed with the stakeholders. Vessel Registry was seen as one potential avenue, as the registry could potentiate legal issues of trafficking and provide an overview of other legal frameworks in RMI (i.e. in relation to legal consent age and prostitution). Similar information could be provided as leaflets/booklets that could be distributed to visiting mariners in order to raise their awareness about (a) their rights as laborer and (b) their obligations towards the communities they visit. Any such activity should be developed in collaboration with both IOM and IMO.

Contribution to Action Area:

- Social protection.
- Labor safeguards.
- Education.
- Migration.
- Access to law and justice.

Prioritization based on:

a) intervention is strategic, with potentially high-level impact in terms of number of people reached in both maritime industry and the host communities;

b) there is interest and strong ownership from the government side and the communities, and the willingness of vessel owners to engage; willingness of vessel owners to engage and modes of engagement would need to be further explored.

c) capacity and resources to contribute to change together with other initiatives are available**.**

Potential indicators: number of vessel owners agreeing on the initiative; numbers compared to baseline.

Recommendation HT5: Set up processes and train potential enumerators for the ongoing Human Trafficking Assessment

Participants were of opinion that conducting a Human Trafficking Assessment is not a priority activity. However, should it be initiated, it would need to be done by local entities, such as Taskforce members in cooperation with women's and youth organizations or similar. This would both build local capacity, but also ensure that all contacts and explorations are done in culturally sensitive way and over a longer period of time (3-6months), so that trust can be established.

Action Area:

- Work on establishing baseline.

Prioritization based on:

a) intervention is important as it informs human trafficking baseline across RMI;

b) some interest from the government;

c) capacity and resources to initiate an assessment / train the enumerators might be available.

Potential indicator: number of enumerators trained; numbers disintegrated by sex; numbers of cases recorded; numbers compared to baseline.

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Annexure O: Sample OHS Plan

Location: Project No:

Project Manager: Date:

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Client Details: Government of Republic of Marshall Company:

Islands and the World Bank Group

Client Representative / Project Manager:

Description of Works: Republic of Marshall Islands Maritime Investment Project

Site History:

Site) tick if applicable				
	☐ Ocean/ Lake /Water Course	☐ Underground pipelines sewerage, potable water)	☐ Remote site work	
	☐ Natural Disasters (flooding, cyclone, fire, etc)	☐ Impact from or to neighboring properties	☐ Public Access to site	
	☐ Overhead power lines, underground service cables (electrical / telephone)	☐ Subsidence / soil stability	☐ Construction	
		☐ Amenities/Toilets	☐ Working machinery	
	Frst aid	☐ on site	☐ in vehicle	☐ on vessel
	☐ Other (specify)			

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Occupational, Health and Safety Plan

Hazard Type	Risk: H - High M - Med L - Low	Control Measures: Refer to SWMS where appropriate. Specific site hazards to be detailed on this form.
Physical Hazards		
Noise (do you need to shout at 1m distance)		
Vibration		
Dust		
Lighting		
Electrical sources / electrical tags up to date		
Sharp objects		
Hot works being conducted (welding, grinding)		
Trenches / Excavations – do you need to do work in or near a trench or excavated area, or near a shored area)		
Confined spaces (tanks, silos, basements, service pits and trenches)		
Work at Elevation - Risk of falling from an elevated height (opening, roof, scaffolding, structure)		
Falling objects (potential for)		
Stationary / fixed plant items		
Service locating		
Soil sampling (inhalation of dirt, contaminated soil, blisters from auger)		
Vibration Exposure		
Compliance with Port Authority requirements		

Manual Handling (do you need to lift obscure shaped or heavy items)		
Inadequate safety controls		
Fuel / chemical spillage / Leakage		
Disturbance to contaminated land		
Waste Disposal		
Thievery / illegal activity.		
Driver Fatigue/ Car Accident		
Vehicle breakdown		
Hazardous road conditions		
Reduced visibility while driving		
Vehicle accident / equipment damage		
Vehicle stranding / vehicle damage		
Working near roadsides		

Boating hazards		
Underwater work		
Weather conditions		
Smoking		
Dangerous fauna / hazardous flora / vectors / bacteria		
Bites and scratches		
Marine creature attack.		
Spikes and scratches from plants		
UXO		
Slips / trips / falls		
Dehydration and sunstroke		
Hypothermia		

Working in wet conditions with inappropriate work PPE		
Working in extreme weather conditions		
Lack of communication in the ev emergency; communication probl		
Working at night time		
Weed spread		
Inadequate first aid equipment / knowledge.		
Bushfire		
Working near water		
Manual handling		
Lack of communication to relevant parties		
Muscle strains		
Destruction to local environment caused by sampling/surveying activities		
Infrastructure damage		
Problems securing accommodation.		
Other (please specify)		

Biological Hazards:		
Exposure to zoonotic diseases through contact with faeces, urine, blood and saliva		

Snake or spider bites; insect stings; reactions to stinging plants; allergic reactions.		
Vector borne diseases eg Malaria		

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Personal Protection Equipment (PPE)		
Level D equipment is standard and should be readily available. Assess job and PPE Level - tick appropriate PPE from within that level. Higher levels include the items in the levels below.		
☐ Level D (modify to suit project) ☐ Coveralls / cotton shirt (long sleeved) and pants ☐ Safety boots ☐ Safety glasses ☐ Hard hat / shade protector ☐ Dust mask ☐ Hearing protection ☐ Gloves (cotton, latex) ☐ High visibility vest ☐ Sunscreen ☐ Water ☐ Remote location communication ☐ Gattors ☐ Other	☐ Level C ☐ Coveralls / Tyvek suits (chemical resistant) ☐ ½ face or full faced respirator + cartridges ☐ Face shield ☐ Inner and outer gloves (Nitrile, PVC, cotton, latex)	☐ Level A or B ☐ Pressure demand full face-piece SCUBA – air supplied ☐ Chemical resistant clothing (level B), fully encapsulated suit. Inner and outer gloves (Nitrile PVC, cotton, latex)

** Remember – incidents and accidents need to be reported within 24 hours of occurrence ** **Emergency Planning & Contacts**
Emergency and Decontamination Plan *(Fire equipment, spill equipment, personal protective equipment, fire extinguisher, shower, eye-wash, decontamination equipment, mobile phone coverage, media coverage etc)*
Safety Equipment:
Additional Site Requirements *(E.g., site inductions, work permits, licenses /certificates, audits, inspections, reporting mechanisms (made by client)*

Contact Phone Numbers	
Police, Fire Brigade and Ambulance	
Hospital	
Port Authorities	
Accommodation	

Field Schedule				
Date	Activity	**Personnel**	**Travel**	**Accommodation**

List the qualifications required to complete the works:	
List the training required by workers to complete the works:	
List the permits, certificates, working approvals required to complete the works:	
List the codes of practice, legislation and any applicable standards which pertain to the work:	
List the plant / equipment that will be used on site:	

List the maintenance checks for plant and equipment and the frequency of site/workplace inspections (and who will undertake the inspections):	

19 ATTACHMENTS

Attachment 1 – Standard Operating Procedures: Marine Operations / Working on or Near Water

Attachment 2 – Job Hazard Analysis Form

Attachment 3 – Pre-Start Meeting

Attachment 4 – Incident / Accident Report Form

Attachment 5 – First Aid Register

Attachment 6 – Check in Procedure

Attachment 7 – Diver Checklist

Republic of Marshall Islands Maritime Investment Project Occupational, Health and Safety Plan

Roles and Responsibilities			
Personnel	**Responsibilities**	**Signature / Date**	
Project Manager or Site Supervisor	• Responsible for the day to day implementation of the health and safety plan in all phases of work. • Ensure that the project site is inspected daily and that any required modifications to the project H&S Plan are noted, communicated to all project staff and are implemented. • Ensure that onsite daily Toolbox meetings are held with all site staff (including staff and subcontractors)		
ESIA Consult Field Personnel	• Ensure the on-site activities and deliverables conform to this H&S Plan. • Ensure that appropriate PPE is worn. • Report any incidents or accidents as soon as possible. • Ensure that Site Supervisor or delegate conducts an onsite daily Toolbox meeting.		
Contractors	• Responsible for abiding by ESIA Consult H&S plan. • Provide H&S Plans and/ or SWMS's for work to be undertaken. • Ensure the on-site activities and deliverables conform to this H&S Plan. • Ensure that appropriate PPE is worn, and site areas are mapped out containing safety factors. • Report any incidents or accidents to the ESIA Consult Field Staff / Site HSO as soon as possible. • Contractors should demonstrate to ESIA Consult appropriate OHS knowledge and performance, be able to identify risks associated with the work they are doing and provide suitable work methods to minimize the risks to themselves and others.	Sign induction log	

Republic of Marshall Islands Maritime Investment Project Occupational, Health and Safety Plan

The amount of detail provided in each HASP will vary with complexity of the project and degree of hazard involved. As a minimum, each HASP must address the following topics, where appropriate:

☐	Site Description and Site Background
☐	Scope of Work
☐	Potential Hazards and Hazard Assessment for Each Task & Operation
☐	Organization and Responsibilities
☐	Ambient Air Monitoring and Personal Monitoring
☐	Noise, Heat/Cold, Radiological, etc. Stress Monitoring
☐	Respiratory Protection
☐	Personnel Protective Clothing and Equipment for Each Task
☐	Action Levels for Upgrades/Downgrades of PPE
☐	Site Control and Decontamination

☐	
☐	Personnel Hygiene and Decontamination Facilities & Procedures
☐	Site Specific Medical Surveillance Parameters
☐	Training, Initial and Site Specific
☐	Emergency Response Plan and Contingency Procedures
☐	Emergency References
☐	Hospital Location Map
☐	On-site First Aid and Emergency Equipment
☐	Accident Reporting, Investigation, and Recordkeeping
☐	Confined Space Entry
☐	Trenching and Excavation

☐	
☐	Hot Work in Potentially Flammable/Combustible Environments
☐	Special Protective Measures
☐	Ability to Stop Works if unsafe practices are observed

Health and Safety Plan Approved: ☐Yes ☐No By:.....(Name)

☐Project Manager ☐Project Director.....(Title).....(Date)

Potential Consequences or Impacts				Likelihood				
	Keyword			**Almost Certain**	**Highly Likely**	**Likely**	**Possible**	**V Unlikely**
Hazard		**Severity**	**Indicative Damage**	A Several times/ month	B Once per month	C Once per year	D Once every 10 –20 years	E Once every 100 years
	1 Minor	Near miss with minor potential consequence or first aid injury	<$5,000	Medium	Medium	Low	Low	Low
	2 Significant	Doctor treatment injury.	*$5,000 to* <$25,000	High/Med.	Medium	Medium	Low)	Low
	3 Serious	Lost Time injury or non-life threatening health issue (e.g. hearing loss)	$25,000 to < $250,000	**High**	High/Med.	Medium	Medium	Low
	4 Major	Extreme injury or permanent health issue (e.g. silicosis, asbestosis)	$250,000 to <$2.5 mill	**High**	**High**	High/Med	Medium	Medium

	5 Catastrophic	Fatality, High level prosecution expected	≥ $2.5 million	**High**	**High**	**High**	High/Med	Medium

Log of inducted project personnel

20 All Personnel, Visitors and Contractor to Sign Once Inducted into the Contents of This Plan

Date	Name	Position	Company Name	Signature

Attachment 1 – Standard Operating Procedures: Marine Operations / Working on or Near Water

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22 PURPOSE

Establishes the minimum requirements and guidance for ESIA Consult personnel assigned to projects that place them at risk of falling into water, including working ashore near to or over water, on water operations with unpowered craft, small boat operations, and work aboard coastal and offshore vessels.

23 DEFINITIONS

A glossary of standard nautical terms used in this SOP is provided as Attachment 1.

24 ROLES AND RESPONSIBILITIES

24.1 PROJECT MANAGER

The Project Manager (PM) is responsible for the overall success of a project and the performance of employees engaged in project activities.

The PM shall ensure that all appropriate Safety, Health and Environmental (SH&E) procedures are identified and implemented:

- Determining the applicability of this SOP during the planning stage of the field investigation projects
- Confirming that the marine subcontractor selected to support project operations is appropriately qualified and has been approved by the client
- Allocating appropriate resources to implement the required measures
- Designating a field team member to implement and maintain these measures, maintain related documentation, and to communicate with appropriate parties as necessary

- Ensuring that the project is properly staffed with trained employees
- Ensuring that a float plan (refer to Section 4.1.3.7) is filed and executed properly.

24.2 FIELD TASK MANAGER/SUPERVISOR

The Field Task Manager (FTM) is responsible for training and equipping field staff for the work at hand. The FTM is also responsible for conducting daily safety meetings, performing field safety audits, ensuring that all safety issues and equipment deficiencies are properly corrected, and that the proper equipment is available to the field staff to safely meet the goals and quality objectives of the project. Where project / team is small, the PM may also be the FTM.

24.3 FIELD STAFF

Employees are responsible for complying with the safe work practices specified in this policy and all other applicable policies and reporting all unsafe working conditions.

- Ensuring that their training is up to date
- Ensuring that equipment is properly maintained and functioning
- Following safe boating and near-water safety procedures
- Reporting incidents and near misses when they occur

25 PROCEDURE

Any project that involves marine on-water operations or near/over-water activities must prepare a sites-specific Health and Safety Plan (HASP). All field staff will be required to read and understand the principles of the HASP and review and be familiar with the requirements of this SOP. The HASP must include identification of all hazards associated with the project and the protective measures needed to minimize risks (illnesses and injuries). This SOP describes the safety principles/procedures that shall be implemented by ESIA Consult employees engaged in working ashore near to or over water or conducting any on-water operations on behalf of ESIA Consult.

25.1 OVERALL REQUIREMENTS

Pertinent general requirements for the various field activities covered by this SOP are discussed in Section 3.2. The general safety considerations which apply to all on-water or near-water field projects are listed below.

25.2 General Safety Considerations

- Personal protective equipment (PPE) specified in the project-specific HASP is to be worn at all times.
- Whenever there exists the possibility of falling into water, personnel should be attired in a USCG approved Type III or Type V work vest. The vest must be properly sized for the individual and should be secured at all times.
- Swimming is prohibited, unless that being conducted by certified divers in the completion of their assigned task, or to prevent a serious injury or loss of life in a person in water/person overboard emergency.
- The consumption of alcohol is strictly forbidden while aboard any vessel or on any job site.
- The buddy system should be utilized whenever there is the possibility of falling into water, in which two persons operate as a single unit in order to monitor and assist each other in performing tasks.
- Single-handed vessel operations or conducting shoreline work alone should be avoided, unless constant communications is maintained between personnel and prior approval by the Project Manager is granted. For operations on offshore vessels, personnel are not permitted to work on deck alone, unless they are in a clear line of sight by another member of the ship's crew monitoring their activity from within the pilothouse. A throwable rescue device (Type IV flotation aid) along with whatever equipment (i.e., ladders, lifting gear, or rescue boat) necessary shall be immediately available to recover an individual from the water.
- A float plan should be filed prior to departure (refer to Section 4.3.1.7) and included in the HASP.
- When working with potentially hazardous materials or situations, follow safety procedures as defined by the Job Hazard Analysis (JHA) provided in the HASP, which must be prepared prior to any activities.
- All gear and personnel effects shall be properly stowed to prevent shifting and coming adrift while at sea.
- All deck equipment shall be properly secured to prevent shifting. Heavy equipment and portable machinery loaded on deck shall be secured with properly sized lashings while in transit.
- Equipment shall be secured on deck in a manner that retains a clear and safe walkway. Personnel shall not be permitted to pass fore and aft, over or around gear unless the proper means has been established to do so safely.
- All passengers in small boats shall remain properly seated at all times while the boat is underway. Standing at the edge of open transoms whenever the boat is underway or preparing to maneuver is not permitted.
- Moving and carrying gear aboard a boat shall be conducted in a fashion which provides one free hand to hold onto railings whenever using stairwells. Heavy and bulky items shall be separated out or broken down into smaller more manageable lifts or a teaming arrangement with another crew member should be made to facilitate safe handling.

25.3 SUMMARY REQUIREMENTS

25.3.1 Land-based (shoreline/bridge/pier – includes wading)

Definition: Work that includes shoreline surveys, working along river banks, working over water (such as on bridges and piers), and field surveys in shallow waters where personnel are attired in waders and boat support is not required.

ESIA Consult Policy: Under these conditions, ESIA Consult requires that whenever there exists the possibility of falling into water, personnel should have access to a USCG approved Type III or Type V work vest. The vest must be properly sized for the individual. A Type IV throwable rescue device shall be immediately available to the field crew

General Notes: In certain situations, the safety hazards working along the waterfront can be significant, especially if the rescue of an individual from the water is challenged by shoreline topography or accessibility, an elevation above the water (or height of a possible fall) or river or tidal currents. Consideration of these hazards should be included in emergency response planning.

25.3.2 Small Boat Operations (<5m in length)

Definition: Operations including canoes, kayaks, coring rafts, and small dinghies/dories with either electric or gas-powered outboards.

ESIA Consult Policy: General safe boating guidelines to be considered in developing a project-specific HASP. Personnel should have access to a USCG approved Type III or Type V work vest. The vest must be properly sized for the individual. ESIA Consult marine personnel, if operating the vessel, are required to hold an appropriate boat license for the vessel being used. Vessel operators must have prior experience and/or complete competency training. Singlehanded vessel operations are not permitted.

General Notes:

Small boats must be loaded in a fashion so that the boat is trimmed (or balanced side-to-side and slightly lower at the stern). In addition, the vessel shall be loaded and operated within its limits as instructed by the capacity plate affixed to the boat by the manufacturer. This capacity plate sets the allowable maximum number of people, maximum weight of all passengers, maximum weight of all passengers and equipment, and the maximum horsepower for the engine.

Use only approved fuel containers. Refuel portable fuel containers off the vessel. When filling up portable fuel containers, extinguish all smoking materials, turn off engines, and all electrical equipment and other appliances that could cause a spark (including cell phones).

Keep fuel containers well grounded (do not fill the container in the truck bed – place it on the ground) and keep nozzle in contact with container during filling. Wipe up any spilled fuel.

25.3.3 Mid-sized Boat Operations (open platforms 5m-8m in length)

Definition: Vessels that are gas powered and may be either single hull boats or pontoon coring barges; the coring barges may also be equipped with A-frames, winches, and anchor handling systems for vessel positioning.

ESIA Consult Policy: General safe boating guidelines to be considered in developing a project-specific HASP.ESIA Consult marine personnel, if operating the vessel, are required to hold an appropriate boat license for the vessel being used.

Complete competency training is suggested for those who may not have experience with the size and type of vessel being operated. Singlehanded vessel operations are not permitted.

ESIA Consult employees are not permitted to operate hydraulic deck machinery.

General Notes: All vessels equipped with propulsion machinery must be registered in the state of principal use. A certificate number will be issued upon registering the vessel. These numbers must be clearly displayed on each side of the forward half of the vessel.

ESIA Consult does not own boats or watercraft in this size class. Therefore, activities that require their use will require either the rental of an appropriate craft or the subcontracting of these services to a qualified vendor, especially in situations requiring hydraulic handling systems such as coring barges or vessels equipped with A-frames. If a boat/watercraft rental is considered, the vessel must be obtained from an authorized location and the leasing facility must have documented licenses for the rental/lease of boats/watercraft and equipment and must provide liability insurance, maintenance logs, and orientation programs.

25.3.4 Training

Operating instructions will vary from vessel to vessel. Therefore, operators should read the vessel specific operations manuals, orient themselves to the vessel they are about operate, and consult with vendors or lessors who have specific operational knowledge in order to have questions answered.

The following are general operational instructions to be incorporated into field plans:

- Only qualified marine personnel shall be permitted to operate hydraulic machinery (winches, A-frames, etc.) for the deployment and recovery of scientific gear or surveying equipment.
- All personnel shall be advised of the inherent risks of prolonged exposure to the elements, such as direct sun, solar glare, wind, heat, cold, inclement weather, and vessel motion. Appropriate breaks should be implemented to limit exposure to the elements when working in extreme hot or cold environments. The use of sunscreen is required. Plenty of liquids, food and/or snacks should be made available on-board for the expected duration on the water
- Vessel operations should be limited to 12 hours (dock to dock) to minimize fatigue.
- On-water personnel involved in sampling contaminated sediments or surface waters may be required to have a Hepatitis A vaccination depending on site conditions and are advised to consult with their Health and Safety Manager prior to the start of field activities.

- All on-water personnel should be competent swimmers.

25.4 PLANNING AND NOTIFICATIONS

25.4.1 Project Assessment

The project assessment should include an evaluation of the required tasks, the number and qualifications of field staff needed to effectively and safely perform the tasks, the types of gear needed, the required handling systems and available deck space needed to support the project, and the worst-case sea conditions that may be encountered in the survey area. This information will determine the best suited vessel (overall size, gear outfitting, and sea-keeping qualities) and whether appropriate professional licensure is required.

The project assessment is an essential part of project planning to ensure that the correct platform, staffing, and logistical details have been assigned to the project. As part of the assessment, an evaluation of the immediate survey area should be done to determine if survey operations will impact other marine traffic. Some of the details that go into a project assessment include:

25.4.1.1 Nautical Charts

Consult up-to-date charts (NOAA/NOS, NIMA, CHS, Admiralty, etc.) before leaving the dock to understand the conditions in your survey area, including water depths, navigation aids, underwater danger areas (pipeline and cable crossings), shoreline features, and major landmarks.

25.4.1.2 Site-Specific Water Conditions

Consult up-to-date tide charts, current conditions (river, longshore, rip tides, etc.), swell and surf conditions, and other water level/condition information available prior to initiating on water or near water operations.

25.4.1.3 Communication Plan

A communications list shall be drafted prior to departure that includes emergency contact information for all ESIA Consult staff on board, including the names of personal physicians if required for medical reasons. If someone is injured in the course of performing work, field staff must follow the in the project-specific Health and Safety Plan – including the completion of an incident report and a first aid record.

All on-water project planning must include a communications list which includes a designated emergency contact for each person aboard, phone numbers for medical facilities and emergency responders, local authorities, including police, USCG, marine patrol, harbormasters, and a local Sea Tow service. Contact information for personal physicians is suggested for all personnel with voluntarily reported medical conditions that may require special attention.

25.4.1.4 Security

Since the events of September 11, 2001, many ports and harbors have established security zones around bridges, industrial facilities, marine terminals, power plants, and Navy vessels. If field survey activities are planned within 100 m of any of these critical infrastructure features, the USCG or local equivalent and local port authorities must be notified, and proper authorizations must be granted beforehand. Once authorization has been granted, work must be conducted within the permitted

start and end dates. It is also recommended that the local pilots association be consulted prior to initiating in water activities in or near commercial ports.

For inland waters, lakes, and rivers, local law enforcement authorities must be notified whenever working near bridges, drinking water reservoirs, power plants, or dams.

25.4.1.5 Hazardous Weather Planning

Local marine forecasts should be checked in advance of any planned on-water operation to ensure that an adequate safe weather window exists to support the expected field schedule.

Never leave the dock or safe anchorage without first checking the local marine forecast.

Operations being conducted in exposed marine environments shall monitor marine weather broadcasts for the latest forecasts and marine advisories.

25.4.1.6 River Conditions / Dam Releases

Where applicable, you need to understand the conditions of the river in which you are working. If the river stage and flow is controlled by a hydropower dam, then it is imperative that you contact the local river, lake, or waterway systems management office for information on release quantities, schedules, and audible alarms. River conditions can turn hazardous almost immediately if caught unprepared by an unexpected release from an upstream dam.

There are some special concerns when working in rivers as discussed below:

- Know the waters to be navigated. Utilize river guide books and/or topographic maps for trip planning. Define locations for put-ins and take-outs along the survey route and for possible lunch break stops. A shore side person monitoring on-water activities is strongly recommended for safety considerations and to serve as a shuttle back to the put-in location at the end of the day.
- Because these river hazards are not readily apparent until you are actually upon them, and you may not have enough time to take evasive action, it is recommended that you review waterway system information or guidebooks before heading out on the water. Once identified, personnel must incorporate portaging of gear around these structures into their overall field logistics. A field reconnaissance level survey is suggested to identify suitable locations and routes for portaging and obtain the proper permissions from businesses and landowners if needed.
- Reschedule field surveys if conditions are simply too dangerous; for instance, during high stage high flow events, extreme cold, or windows of time where upstream dam releases may be possible.
- Never attempt to navigate over a low head dam. Fixed-crest low head dams have dangerous currents on the down-current side of the dam. These orbital re-circulating currents create a hydraulic effect that can actually hold or draw even a motorized boat into danger; the entrained air bubbles will render propellers useless and escape nearly impossible. Rescue is very difficult and the risk of serious injury or a fatality is very real. In the event of an unintentional over-turning incident, personnel should stay with their craft – they float. The craft should then be maneuvered to the nearest shore.

- Beware of strainers! Strainers are fallen trees, bridge pilings, undercut rocks or anything else that allows current to flow through it while holding you or capsizing your boat. Learn re-entry techniques into your boat. Stay with boat if possible.
- In shallow swift water, if separated from the boat assume a defensive position by lying on your back, legs pointing downstream. Arch your back to stay close as possible to the surface to avoid bumping the bottom. Keep your feet on the surface; this helps you avoid one the most common river hazards – foot entrapment. This is caused by standing in a swift current and having your foot pushed into a crevice or snarled root, etc. Maneuver to the nearest shore and stand only when the water is knee deep or less. It is always advisable to wear proper foot protection (boat shoes) so that you are prepared to deal with just such an emergency.

25.4.1.7 Float Plan

Float plans shall be prepared for all vessel operations to document vessel information (make/model, hull color, and other distinguishing features), personnel on board, description of activities being performed, expected time of departure, planned time and location for arrival, course being travelled, and pertinent contact calling information for reaching the vessel. This information shall be submitted to a competent individual on-shore who assumes the responsibility of initiating emergency response procedures if the vessel does not check in at the designated time.

In the event the return is delayed, and it is not an emergency, the boat crew must inform those holding the float plan, and subsequently notify them upon returning to the dock so that the float plan can be closed out – avoiding an unnecessary and costly search.

If the vessel was trailered to a public ramp, then vehicle information (make/model and license), ramp location, and contact information for the local police department should be included in the float plan.

A sample float plan can be found in Attachment 2.

25.4.1.8 Utility Notifications

Marine projects that include activities such as anchoring, coring, grab sampling, spud positioning, or any activity with the potential to damage sub-bottom utilities or underwater structures must conduct a presurvey utility clearance. Local utility companies (electric, phone, gas, cable networks) and/or the local Dial before you dig, DIG SAFE, ONE CALL, or equivalent office shall be consulted prior to the commencement of field activities to ensure that proper clearances are defined around these marked-out corridors to prevent the interference or damage of these utilities. If there are any uncertainties involved in locating underwater utilities, a sub-bottom and/or magnetometer survey shall be conducted to identify utilities or structures in the work area.

A check of published nautical charts will generally indicate the location of defined utility corridors, but these typically show major utility crossings such as gas pipelines and major electrical distribution cables.

These utility crossings are generally marked on each bank on either side of the utility right-of-way with a sign board reading “CABLE CROSSING - DO NOT DREDGE – DO NOT ANCHOR.

25.5 SAFETY PREPAREDENESS

25.5.1 Required Safety Gear

Work clothing must be suitable for the anticipated weather and working conditions. Deck shoes are permitted unless the project requires the lifting or the handling of gear, at which times steel-toed shoes are required. Safety glasses (tinted as necessary) should be worn at all times. Hard hats shall be worn during the deployment and retrieval of gear and at any time where there is the overhead transfer of equipment or gear, either aboard the vessel or dockside.

Vests shall be outfitted with reflective tape and further equipped with a rescue light if operations are expected at night, or during low light, or heavy weather conditions.

A life jacket or personal flotation device (PFD) is the most important piece of safety gear and may in fact make the difference between life and death for anyone experiencing an on-water emergency. One USCG approved wearable Type I, II, III, or V PFD must be carried for each person aboard. Vessels greater than 5 m are required to also carry at least one Type IV rescue aid.

Appropriate hearing protection equipment should be made available when working in close quarters to heavy or loud equipment (dredge machinery, winches, air compressors, generators, etc.).

Harnesses/safety lines may be required for those personnel while working at an unprotected deck edge performing the over boarding or recovering of gear in a rolling sea.

Latex or Nitrile gloves and eye protection are required during the handling of any contaminated material or in any situation that poses an exposure risk to hazardous materials, including handling of hazardous chemicals such as Formalin (used in the preservation of benthic community samples), or acids (used in the preservation of aqueous samples). A copy of all pertinent Material Safety Data Sheets (MSDS) shall be immediately available to field personnel on site.

Beyond all the required safety gear specified herein, vessels providing berthing or enclosed occupied spaces should provide the following:

- Emergency lighting – Battery powered flood lighting shall be installed to illuminate walkways, stairwells, and emergency exits in the event of power failure.
- CO detectors/Smoke detectors – These protective devices of marine quality shall be required for all living quarters, enclosed occupied spaces, and pilot houses.

25.5.2 Development of Job Hazard Analysis (JHA)

The preparation of a project-specific health and safety plan should include a Job Hazard Analysis (JHA). This hazard analysis examines each basic step in a job task, identifies the potential hazards and determines measures to protect workers from these hazards. The task hazard analysis process is designed to help prevent accidents and injuries by identifying job hazards and providing recommendations to either removing them or incorporate control strategies and protective equipment. Hazards that

should be addressed may include falling into water, gear deployment or overhead lifting, sediment contamination, shoreline risks (debris, blood-borne pathogens, encountering vagrants, etc.), dam releases, foul weather, etc.

One common hazard that is universal to most all field programs is the risk of back injuries from lifting gear incorrectly. This important consideration should not be overlooked.

25.5.3 Pre-Departure Briefing

Each day prior to departure, the designated ESIA Consult Safety Officer or Field Team Leader shall conduct a safety briefing (pre-start meeting) to review the activities being performed and identify the proper work sequences, the specific anticipated hazards, site conditions, equipment, materials, and the control measures to be implemented to eliminate hazards or minimize risks associated with each hazard, and applicable emergency response procedures.

25.6 EMERGENCY PROCEDURES

25.6.1 Stop Work Authority

The safety and health of all hands aboard will take precedence over cost and schedule considerations for all project work. All ESIA Consult personnel have the authority to STOP WORK if they see a potential or actual hazard that may threaten the safety of people or the environment. Upon stopping work, the designated ESIA Consult safety officer must be immediately notified and provided with information regarding the nature of the safety, health or environmental concern. Once the concerns are resolved to everyone's satisfaction, work can proceed.

If the concerns are not resolved to the satisfaction of the worker and/or the field safety officer, work does not proceed. The ESIA Consult project manager will be contacted to obtain assistance in resolving the concerns. The ESIA Consult PM will attempt to resolve the matter with all parties involved and work will not resume until this criterion is met.

25.6.2 Site Evacuation

Under certain conditions, field operations may be conducted on a working site managed by an Operating company or Agency, or as part of a larger site investigation managed by another firm and generally in accordance with the additional policies and procedures of an overarching Site Safety and Health Plan (SSHP). If applicable, ESIA Consult may need to be briefed on the notification protocols for a site emergency and the specific muster location in the event of a site evacuation before the commencement of field operations.

25.6.3 Incident Reporting

In the event of any on-water incident resulting in personal injury or vessel damage, render all necessary aid and assistance without creating or exposing yourself or your crew to further risk. Do not leave the scene of incident without providing the other party or the appropriate law enforcement officer with the following information – Some states require the completion and submission of an incident form: • Name of address of boat operator

- Boat registration number • Driver's license number

You are required to contact a local boating enforcement agency (USCG, Marine Patrol, or local Harbor Master) immediately if:

- There has been a fatality or if a person is missing and cannot be accounted for.
- The injury results in a person losing consciousness or requires medical treatment beyond first aid.

26 ANNEX 1 – NAUTICAL DEFINITIONS

Abeam – At right angles to the keel of the boat, but not on the boat.

Aboard – On or within the boat.

Above Deck – On the deck (not over it - see Aloft).

Aft – Toward the stern of the boat.

Aground – Touching or fast to the bottom.

Ahead – In a forward direction.

Aloft – Above the upper deck of the boat.

Amidships – In or toward the center of the boat.

Anchor – A heavy metal device, fastened to a chain or line, to hold a vessel in position, partly because of its weight, but chiefly because the designed shape digs into the bottom.

Astern – In back of the boat, opposite of ahead.

Bearing – The direction of an object expressed either as a true bearing as shown on the chart, or as a bearing relative to the heading of the boat.

Bight – Any curved section, slack part, or loop formed in a rope or line.

Boat – A vessel for transport by water. Constructed to provide buoyancy by excluding water and shaped to give stability and permit propulsion.

Bow – The forward end of the boat.

Bulkhead - Wall-like constructions inside a vessel, as for forming watertight compartments, subdividing space, or strengthening the structure **Buoy** – An anchored float used for marking a position on the water, a hazard, or a shoal. A surface marker float for a mooring.

Captain – A person who is at the head of or in authority of all others aboard a vessel.

Cleat – A fitting to which lines are made fast. The classic cleat to which lines are belayed is approximately anvil-shaped.

Cockpit – A sunken, open area, generally in the after part of a small vessel, provides space for part or all of the crew.

Dock – A protected water area in which vessels are secured to a pier or a wharf.

EPIRB – Emergency Position Indicating Radio Beacon – transmits a signal that allows rescue personnel to determine a vessels position at sea once it is activated in the event of an emergency.

Fathom – A depth increment of 6 feet.

Fender – A cushion, placed between boats, or between a boat and a pier, to prevent damage.

Float Plan – A document prepared by the boat crew and left with a competent person shore side that defines the itinerary and particulars of the vessel and crew, serving as an informational resource for emergency responders in the event the boat does not return at the appointed time.

Freeboard – The portion of the side of a hull that is above the water.

Gunwales - The widened edge at the top of the side rail of the boat, where the edge is reinforced

Knot – A measure of speed equal to one nautical mile per hour or 1.852 km/hr.

Knot – A fastening made by interweaving rope to form a stopper, to enclose or bind an object, to form a loop or a noose, to tie a small rope to an object, or to tie the ends of two small ropes together.

Leeward – The direction away from the wind.

Life-line – A line secured along the deck to lay hold of in heavy weather

Mooring – An arrangement for securing a boat to a mooring buoy or a

pier.

Overboard – Over the side or out of the boat.

Personal Flotation Device (PFD) – PFD is official terminology for life jacket.

Port – The left side of the boat when looking forward (toward the bow).

Running Lights – Navigation lights required to be shown on boats underway between dusk and dawn.

Starboard – The right side of the boat when looking forward (toward the bow).

Stem – The forward most part of the bow.

Stern – The after part (back) of the boat.

Transom – The aft face or back board of the boat.

Wake – Moving waves, track or path that a boat leaves

Windward – Toward the direction from which the wind is coming (a.k.a. weather side) - Opposite of leeward.

27 ANNEX 2 – SAMPLE FLOAT PLANS

These Float Plans can be downloaded at:

- http://floatplancentral.cgaux.org/download/USCGFloatPlan.pdf
- https://azureblob.faecdn.com/cdn/d/bex/pdf/2017-bex-us-float-plan-dept-checklist.pdf

Hierarchy of Controls

Attachment 2 – Job Hazard Analysis Form

1. Eliminate hazard/s
2. Substitute hazard/s
3. Isolate hazard/s
4. Use engineering means
5. Use administrative means
6. Use Personal Protective Equipment

Each member is to sign off to indicate consultation and training in the contents of the Job Hazard Analysis (JHA). Further, workers must only sign if they understand and agree to work in accordance with the additional procedures.

27.1 NAME OF SUPERVISOR FOR JOB ACTIVITY

NAME (please print)	SIGNATURE

---------- ----------

Signature of supervisor Date

Important Note: Remember to transfer this information into your Work Method Statement (WMS).

Date			**Name of Person completing JHA**				
Job task and location							
Is there a WMS for this task?	☐ **YES**	☐ **NO**	If **YES**, has your crew been tool boxed in the WM S?	☐	**YES**	☐	**NO**
If YES, is there anything different about the task or the work area? Please describe.							

Are there new hazard/s present that have the potential to cause harm?	**# Risk Ranking** (use Hierarchy of Controls)

WHAT ARE THE BASIC STEPS?	**POTENTIAL HAZARDS**	**RISK RANKING** (without control measures)	**HAZARD CONTROLS** (what controls can be put in place to make the job safe and minimize the risk)	**WHO WILL ENSURE THAT THIS IS DONE**?

TAKE FIVE –

1. **Stop and Look**
2. **Think through the task**
3. **Identify hazard/s**
4. **Control hazard/s and communicate to supervisor**
5. **Do the job safely**

LEVEL OF RISK (RISK RATING)

Likelihood	Consequence				
	1-Catast	2-Major	3-Mod	4-Minor	5.Insignif
A -Almost certain	High 1	High 2	High 4	Med 7	Med 11
B - Likely	High 3	High 5	Med 8	Med 12	Med 16
C - Possible	High 6	Med 9	Med 13	Med 17	Low 20
D - Unlikely	Med 10	Med 14	Low 18	Low 21	Low 23

Risk Between	Category
1-6	High Risk
7-17	Medium Risk
18-25	Low Risk

E - Rare	Med 15	Low 19	Low 22	Low 24	Low 25	

Personal Protective Equipment (PPE): Standard PPE must be worn at all times.

27.2 ATTACHMENT 3 – PRE-START MEETING

Name				Position	
Job Description					
Location				Date	
Weather	☐	Fine	☐ Cloudy	☐	Wet
Risks – identify any risks involved with the job Double-click the box for type of incident	☐	Burns	☐ Collapse	☐	Electrical Equipment
	☐	Electrical Shock	☐ Environmental Spill	☐	Excavation
	☐	Fire / Explosion	☐ Gas Escape	☐	Hand Injuries
	☐	Hard Hats	☐ Heat Stress	☐	Hazardous Substances
	☐	Ignition Sources	☐ Lifting Equipment	☐	Manual Handling
	☐	Overhead Obstructions	☐ Pneumatic Tools	☐	Public Safety
	☐	Rotating Equipment	☐ Slips / Trips / Falls	☐	Snakes / Vermin
	☐	Supply Loss	☐ Traffic	☐	Underground Utilities
	☐	UV Exposure	☐ Working in Isolation	☐	
Controls – identify any controls to be applied on the job Double-click the box for type of incident	☐	Barricading	☐ Communication	☐	Containment
	☐	Cross Bonding	☐ Depressurize	☐	Eye Protection
	☐	Fire Extinguisher	☐ First Aid Kits	☐	Gas Detection
	☐	Gloves	☐ Hand Protection	☐	Head / Face Protection
	☐	Hearing Protection	☐ Hi-Vis Vest	☐	Isolations
	☐	Locating Equipment	☐ Lockout & Tag	☐	Machinery Guarding
	☐	Observer / Spotter	☐ Potholing Procedures	☐	Protective Clothing
	☐	Rest Periods	☐ Respiratory Protect	☐	Restrictions
	☐	Safety Harness	☐ Screens	☐	Services Located/Mark

	☐ Signage	☐ Speed Restrictions	☐ Step Back
	☐ Traffic	☐ Trainee	☐ Training
	☐ UV	☐ JSEA	☐

LIST OF WORK SAFETY INSTRUCTIONS REQUIRED	LIST OF JOB HAZARD ANALYSIS REQUIRED

NAME	SIGNATURE	NAME	SIGNATURE

ADDITIONAL ITEMS NOTED DURING REST PERIODS, NEW HAZARDS, NEW CONTROLS

27.3 ATTACHMENT 4 – INCIDENT / ACCIDENT REPORT FORM

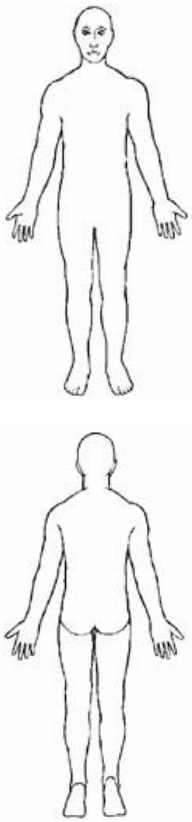
Double-click the box for type of incident	☐ **HAZARD**	☐ **NEAR MISS**	☐ **INCIDENT**	
Name				
Date of Incident		**Time of Incident**		
Project Name (if applicable)				
Project No.		**Report No**		
Type of Incident Double-click the box for type of incident	☐ **Competency & Training**	☐ **Electrical**	☐ **Environmental Incident**	
	☐ **Ergonomics**	☐ **Health & Hygiene**	☐ **Injury**	
	☐ **Material Handling**	☐ **Personal Attributes**	☐ **Plant & Equipment**	
	☐ **PPE**	☐ **Vehicle Incident**	☐ **Other**	
Actual Severity Level (1, 2 or 3):				
Potential Severity Level (1,2, or 3)				
Location of Incident				
Description of Location				
Incident Description / Contributing Factors / Summary of Events				
Immediate Action				
Corrective Actions				

Additional Actions (if required)	**Person Responsible**	**Close-out Date**

27.4 ATTACHMENT 5 – FIRST AID REGISTER

This form is to be completed as a quick record of the Injury/Illness **whenever first aid is administered to an employee of contractor**. The form is to be completed by the team member who administered First Aid. It is not a medical assessment, but simply a brief summary of the event, observations and management.

Date		**Time**	
Patient Name			
Date of Birth		**Gender**	**Male / Female**
Address			
Location			
Incident Description of illness / injury			

Observations	**Please circle location of injury/illness** 

Treatment	
Follow-up	
Ambulance **Health Service** **Own Doctor**	YES / NO YES / NO YES / NO

Attachment 6 – Check in Procedure

27.5 ATTACHMENT 7 – DIVER CHECKLIST

Date: _____ **Project Name:** _____

Location: _____ _____

Divers: _____

_____

27.5.1 Person Conducting Assessment: _____

Issues	Yes / no	Comments - action taken
Medical fitness to dive • Do all divers have a current (12 months) certificate of medical fitness to dive? • Is the certificate kept for one year after work has finished?		

Competency • Are written records demonstrating the diver's competence kept for one year after work has finished? **General diving work** • Does each diver hold a statement of attainment for the general diving work to be carried out? **Or** • Does each diver hold a certificate covering the subject areas (e.g. PADI divemaster, NAUI, SSI diving control specialist)? **And** • Does each diver have, through training, qualifications or experience, sound knowledge and skills in relation to (*competency checklist*): ○ The application of diving physics ○ The use, inspection and maintenance of diving equipment (including emergency equipment) and air supply of the type to be used in the proposed general diving work ○ The use of decompression tables or dive computers ○ Dive planning ○ Ways of communicating with another diver and with persons at the surface during general diving work		

○ How to safely carry out general diving work of the type proposed to be carried out ○ Diving physiology and first aid. **Dive supervisor**		

• Does the appointed dive supervisor hold qualifications to do the general diving work? **And** • Have experience in that type of work? **Incidental diving work (general diving work)** (only applicable for work that is incidental to the business.) • Does the incidental diver have adequate training, qualifications or experience for the work in accordance with the *competency checklist* (see above)? **And** • Have 15 hours dive experience (depth restrictions apply)? • Does the diver only undertake *limited diving* which does not involve? ○ Diving to a depth below 30 meters ○ The need for a decompression stops ○ The use of mechanical lifting equipment or a buoyancy lifting device ○ Diving beneath anything that would require the diver to move sideways before being able to ascend ○ The use of plant that is powered from the surface		

○ Diving for no more than 28 days during a period of six months. • Is the diver accompanied and supervised in the water on each dive by a diver competent to undertake general diving work? **Limited scientific diving work (general diving work)** (only for non-resident divers undertaking scientific diving work.) • Does the limited scientific diver have adequate training, qualifications or experience for the work in accordance with the *competency checklist*? **And** • Have 60 hours dive experience (depth restrictions apply)? • Does the diver only undertake *limited diving* (see above)?		

Risk assessment • Has risk management been carried out to: ○ Identify all hazards ○ Eliminate or minimize all risks ○ Minimize all risks using the hierarchy of controls ○ Maintain selected control measures ○ Review control measures. • Has a risk assessment been conducted by a competent person?		

• Has a written record been kept of the risk assessment that is accessible to all relevant workers and available for inspection? • Has the risk assessment been kept for 28 days after the relevant work finishes? **Or** • For two years if a notifiable incident has occurred?		
Dive supervisor • Has a dive supervisor been appointed? • Does the dive supervisor supervise the work undertaken?		

Dive plan • Has a dive plan been prepared by the dive supervisor for the dive? • Does the dive plan state: ○ The method of carrying out the work ○ Tasks and duties of each person ○ Equipment, gases and procedure to be used ○ As applicable, dive time, bottom times and decompression profiles ○ Specific hazards and control measures ○ Emergency procedures (may be a separate document). • Is the dive plan complied with, as far as is reasonably practicable? • Does the dive supervisor provide instruction to workers about the dive plan? • Is the dive plan kept until the work to which it relates is completed or for two years if a notifiable incident has occurred?		

Dive safety log • Is a dive safety log kept for every dive containing: ○ Name of each diver ○ Names of other persons in the dive team, including the dive supervisor ○ Date and location ○ Time in and out ○ Maximum depths ○ Incidents and injuries ○ Dive or bottom time ○ If not using a dive computer, repetitive groups, surface intervals and repetitive factors ○ If using eanx-O_2 content and maximum operating depth ○ If using mixed gas- O_2 and N_2 contents, maximum operating depth and minimum operating depths of the bottom mix.		

• Is the entry for each dive signed by the diver and dive supervisor as soon as practicable after each dive? • Does the dive supervisor count and record all persons on board any vessel before diving commences and before the vessel departs after the diving work is completed? • Has the dive safety log been kept for 28 days after the relevant work finishes? **Or**		

• For two years if a notifiable incident has occurred?		
Specific risks • Are suitable controls in place for divers diving from vessels that are underway? (e.g. Propeller guards, lookouts, emergency breathing supply, marker buoys) • Is the equipment being used by divers suitable for the work? Is it cleaned, checked and in working order before work starts? • Are compressed air cylinders filled, tested and maintained according to international standards? • Has air quality been tested in the last six months? • Have appropriate standards been used to manage decompression? Are they being used consistently and conservatively? • Does the dive site have a written emergency plan, including first aid? Is it available to all workers? • Have effective rescue procedures been developed? Are workers trained in these procedures? • Do workers hold current first aid and O_2 resuscitation certificates?		

Other regulatory considerations • Are notifiable incidents reported to WSHQ as required? • Has information, training and instruction been provided for workers to ensure health and safety? Including tool box talks, site and dive briefings. • Is a safe and healthy general working environment provided? Including housekeeping, temperature, drinking water, lighting, accommodation. • Is personal protective equipment provided, maintained and used? • Are risks from working in remote or isolated places managed? • Are electrical risks controlled? • Are risks from falls and falling objects controlled? • Are risks from noise controlled?		
• Are risks from hazardous manual tasks controlled? • Are risks from entry to confined spaces controlled? • Is work associated with demolition, construction and asbestos controlled as required? • Are risks from plant and structures controlled? • Are risks from mobile plant controlled? • Are risks from hazardous chemicals and lead controlled?		

Annexure P: Waste Code of Conduct Requirements

Marshall Islands Maritime Investment Project

Solid Waste Code of Conduct Requirements

These requirements will form the basis for the development of the MIMIP Code of Practices for MIMIP Solid Waste Management. The key objectives of these requirements are to assist the CIU Safeguard Specialist to develop a sector-based code of practice for waste management. The requirements for the Code of Practice are:

1. Compliance with GoRMI Solid Waste Management Regulations.

2. Satisfies the requirements of the ESMP

3. Satisfies the requirements of the World Bank

4. Meets the following minimum standards:

- No RMI landfills are to be used for any waste. All waste is to be recycled or disposed of offshore at a permitted facility.
- No dumping of any waste in RMI
- Compliance with Waigani Convention and any other relevant international conventions for export of hazardous and non-hazardous waste
- Identify and utilize suitable local recycling and reuse options

5. Implements the usual good practice of solid waste management, including:

- Segregation of waste
- Secure storage for waste
- Adopting the waste hierarchy: (i) avoid; (ii) reduce; (iii) reuse; (iv) recycle
- Collaborating with other sectors, waste generators and government initiatives for cumulative benefits
- Build capacity and sustainability within the maritime sector in the approach to waste management through MIMIP implementation.

When developing, and implementing the Code of Practice, the Safeguard Specialist will consider:

- **Waste streams:** identify which waste streams are likely to be generated and estimate the approximate amounts of materials (Table A7.1)
    - Undertake inventory of materials that can be reused, recycled or recovered from the project:
    - Specific types of materials
    - Amount of material expected
    - Possible contamination by hazardous materials like asbestos or lead: these materials will limit reuse/recycling options and require special disposal.

    Collection and Storage: How and where will the difference waste streams be collected and stored prior to their disposal offshore. Detail the types of containers to be used and the storage areas that will be created for this waste. Differentiate between regular, bulk and hazardous waste. This must be compliant with the minimum standards detailed in the ESMP:

    - Hazardous wastes shall be collected and stored in water tight containers, Containers shall be stored in a bunded and covered area prior to export for disposal.
    - Difficult waste such as appliances and building cladding shall be stored in a secure fenced and covered area.
    - Non-hazardous wastes shall be stored in a way that prevents their uncontrolled movement, this may be containerized or fenced and/or covered stockpiles. Where appropriate, silt fences, drains and traps or other movement prevention mechanisms should be put in place.

    On-site: understand how the waste management system (housekeeping, sorting and storage) will work on-site, including bin placement and access.

    Determine storage requirements (separate bins or co-mingled), things to consider include:

- Ease of use: ensure that containers are easily accessible by workers and that storage areas are clearly sign posted
- Safety: ensure that the containers and storage can be managed safely, including limiting public access to the storage areas
- Hazardous waste materials storage
- Aesthetics: ensure that the MIMIP sites and storage area appears orderly and will not raise concern from local residents or businesses – for example screening for dust and litter containment and daily collection of windblown material
- Establish a collection/delivery plan in collaboration with waste contractors for waste and recyclable materials generated on-site.

Clearly assign and communicate responsibilities: ensure those involved in the MIMIP are aware of their responsibilities in relation to the Codes of Practice.

Training: be clear about how the various elements of the Codes of Practice will be implemented.

Monitor: to ensure the plan is being implemented, monitor on-site as per the ESMP monitoring plan.

Table A7.1: Waste Stream Inventory

Waste and/or Recyclable Materials		**Destination**		
		Reuse and Recycling		**Disposal**
Possible Materials Generated (add or delete as needed)	**Estimated volume (m3) or area (m2) or weight (t)**	**On-site** (how will materials be reused and/or recycled on-site)	**Off-site** (Specify the proposed destination and/or recycling facility)	**Specify the off-island disposal site and the process for collection, storage and eventual disposal**
Wood waste				
Cardboard and paper				
Ferrous metals				
Non-ferrous metals				
Concrete				
Gravel				
Sand/soil				
Asphalt				
Green waste				
Asbestos				
Fluorescent light bulbs				
Glass				
Hydrocarbons				
Plastics				
PVC				
General waste (e.g. food waste, contaminated food packaging, non-recyclable plastics)				

Annexure Q: Stakeholder Engagement Plan

Republic of Marshall Islands Maritime Investment Project

Stakeholder Engagement Plan

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28 INTRODUCTION

28.1 1.1 BACKGROUND AND CONTEXT

The Government of the Republic of the Marshall Islands (RMI) has received a Project Preparation Advance (PPA) from the World Bank to assist in the preparation of the proposed RMI Maritime Investment Project (RMIMIP). The PPA will be used to fund the preparation of the necessary technical, economic, design, environmental and social studies for the projects, as well as establishing the operational framework within which the projects will be implemented.

An essential part of project preparation is the consultative process with stakeholders and the development of safeguards instruments. The project requires an assessment of environmental and social issues and impacts and the subsequent preparation of safeguards instruments in compliance with World Bank safeguards policies for Category B projects and the relevant national laws and regulations. Therefore, a Stakeholder Engagement Plan (SEP) has been developed in accordance with the World Bank (WB) requirements.

The objective of this SEP is to assist the Ministry of Transport and Communications (MTC) to consult broadly and to effectively engage with all stakeholders who have an interest in, or will be affected by, the project components. This SEP describes the planned stakeholder consultation and engagement process for the project. It outlines a systematic approach to stakeholder engagement that will assist MTC and Port Authorities develop and maintain over time, a constructive relationship with their stakeholders throughout the duration of the project. The document also includes a grievance redress mechanism for stakeholders to raise their concerns about the project with the Port Authorities, MTC and World Bank. This SEP was reviewed and agreed upon by MTC, the Port Authorities and the World Bank.

This iteration of the Stakeholder Engagement Plan (SEP) is updated as to include records of stakeholder engagement activities completed under scoping phase of the project in February 2019 (Chapter 6 and Annex G).

28.2 1.2 PROJECT DESCRIPTION

The RMI is located approximately midway between Hawaii and the Philippines and consists of 29 atolls, 5 islands and numerous small islets. The country covers an area of 1.9 million km^2; but has just 181 km^2 in land area. The overall population is about 55,000, but 75 percent live in Majuro (the capital) and Ebeye. RMI has a young population, 40 percent of which is under the age of 15. The population is sparsely distributed, but there is growing in-migration from the outer islands due, primarily, to a lack of employment opportunities and increased reliance on the cash economy, as compared to a subsistence lifestyle. At the same time, lower incomes and a rising cost of living is causing Marshallese residents to leave the country for better jobs and educational opportunities abroad, mainly in Hawaii, the United States mainland, and Guam.

Given the country's geographic characteristics and distant outer islands, the provision of efficient, reliable and affordable sea transport services is considered essential for the country's basic economic and social functions, and to achieving RMI's national development plans. Therefore, ports at Ebeye, Wotje and Jaluit Atolls are proposed to be included in this project.

Majuro is regularly served by international cargo services from the United States, Asia and Australia. It is also the largest regional tuna transhipment port and transhipped 600,000 metric tons of tuna in 2016. Fishing vessels make-up as much as 75 percent of vessel traffic calling at Majuro. There are two principal docks (ports) at Majuro: (i) Delap Dock for international cargo; and (ii) Uliga Dock for domestic passengers and cargo, and tenders from international vessels.

At the time of preparing this SEP, specific project components at each port location have not been finalized and agreed upon. A current list of likely interventions includes:

a. Reconstruction of key building and facilities in the primary handling area, such as Customs Office, inspection facilities, fuel station, reefer connections, water and power supply, at Majuro Delap Dock;

b. Port control, tower, communications tools and equipment, hoist system and four passenger pontoons, at Majuro Uliga Dock;

c. Cargo handling equipment for both Majuro docks;

d. Repairs to port facilities structures at Jaluit and Wotje;

e. Repairs and improvements to existing quay structures at Delap, Uliga and Ebeye docks;

f. Levelling, subbase and pavement works at container storage areas;

g. Rehabilitation of terminal lighting and other utilities, as needed;

h. Improvements to fencing, gates and lighting to enable compliance with International Ship and Port Facility Security Code requirements;

i. Developing waste management arrangements;

j. Upgrading Aids to Navigation; and

k. Assess options and measures to counter trafficking in persons.

In undertaking the assessment, technical assistance will be provided in relations to:

- Enhancing Search and Rescue Awareness;
- Capacity Building; and
- Human Trafficking and Gender-Based Violence (GBV).

This section of the SEP should be updated once list of project components is agreed upon and finalized.

28.3 1.3 SUMMARY OF EXPECTED IMPACTS

Given the known nature of the project activities, there are unlikely to be significant environmental and social impacts. Maintenance and upgrades will be carried out at primary ports across the four islands. Screening[83] has identified the following potential negative social and environmental impacts from construction:

- seabed disturbances where aids for navigation are installed,
- health and safety of port users and workers, and
- influx of foreign workers with the increased fishing fleets, potentially causing harm or harassment (including gender-based violence) to host communities.

Potential positive impacts include:

- improvements to safety of passengers and workers following dock upgrades;
- increased security and safety for port users and the public;
- reduced water quality issues from the maintenance of waste water from port facilities; and
- improvements to spill and waste management.

[83] World Bank: Project Information Document/Integrated Safeguards Data Sheet (PID/ISDS) Concept Stage Document of February 12, 2018

28.4 1.4 REGULATORY REQUIREMENTS

National Environmental Protection Act 1984 provides a suite of regulations that might be applicable to infrastructure projects. Environmental Impact Assessment Regulation of 1994 prescribed a two-step approach to determining if an EIA is required: Step 1 initial evaluation; and if deemed required, Step 2 EIA for proposals with potential significant impacts. Copies of an environmental impact statement and of the comments and views of the appropriate Ministries, Departments, offices and agencies of the Government of the Marshall Islands shall be made available to the Authority, and to the public for inspection and copying, and the public shall be notified of the existence and availability of the statement a reasonable time before the completion of the Government of the Marshall Islands decision making process. Potential applicability of other regulations such as Marine Water Quality Regulation 1992, Solid Waste Regulation 1989, Coast Preservation Act, Historic Preservation Act etc., shall be determined once the design and description of each project activity are finalized.

World Bank Project Information Document/Integrated Safeguards Data Sheet (PID/ISDS) Concept Stage Document of February 12, 2018 classifies the proposed project as a Category B, where the impacts are considered moderate and readily prevented and mitigated. The assessment identified the following policies might apply:

Environmental Assessment OP/BP 4.01: An ESMF and ESMP will be prepared to document the assessment (commensurate with the nature and scale of impacts) to cover all components, including physical investments and technical assistance activities. Social impacts will be a key focus; the ESMF and ESMP will include a Stakeholder Engagement Plan, social assessment and a baseline assessment of social issues such as gender-based violence and human trafficking issues.

Natural habitats OP/BP 4.04: An assessment of the impact of upgrades on the marine ecosystem is required. The ESMF and ESMP will confirm the presence of natural habitats and the potential for impacts from physical works or future operations as a result of this project. Appropriate mitigation measures will be included in the ESMP.

Indigenous Peoples OP/BP 4.10: Almost the entire population of the country are indigenous Marshallese and their rights are represented through administrative system of the country. Municipal Council is the key administrative body for representation at the local level and therefore consultations with the Council members should be included at each project development step.

Physical Cultural Resources OP/BP 4.11: The physical investments will all be carried out within the footprints of Government owned lands which are already highly modified environments, where impacts on physical cultural resources are not anticipated.

29 STAKEHOLDER ENGAGEMENT ACTIVITIES PRIOR TO DEVELOPMENT OF SEP

A number of consultations, information disclosure and planning meetings have been completed during the RMIMIP initial project design stages and in development of environmental and social scope of works. The entities that oversee maritime operations in RMI are:

a. MTC, responsible for policymaking and some regulatory oversight, management and development of the maritime sector in RMI.

b. Republic of the Marshall Islands Ports Authority (RMIPA), a state-owned entity responsible for operating RMI's publicly-owned ports, as well as all facilities and structures situated within the public ports and airport areas.

c. Majuro Stevedore and Terminal Company, a private company and the terminal operator at Delap Dock. It is a private company operating under a 10-year concession agreement with the RMIPA which will end in 2023.

d. Marshall Islands Shipping Corporation, a quasi-public corporation that provides cargo and passenger services to the outer islands from Uliga Dock.

e. RMI Environmental Protection Authority (RMIEPA) is responsible for nature conservation, solid waste disposal, public sanitation, public and marine water quality monitoring, and environmental education. The capacity of RMIEPA to address marine pollution is limited, as the required equipment and technical capacity is not in place to enable responses to spills or to clean-up contaminated sites. RMIEPA is also responsible for issuing environmental permits and supervising environmental aspects of construction works in RMI.

f. Marshall Islands Marine Resources Authority (RMIRA) manages fishing in RMI and has an oceanic division, which focuses on tuna, and a coastal fisheries division. The oceanic division monitors local and international fishing vessels for illegal fishing, and issues licenses.

30 STAKEHOLDER IDENTIFICATION AND ANALYSIS

Stakeholder analysis determines the likely relationship between stakeholders and the project and helps to identify the appropriate consultation methods for each stakeholder group during the life of the project. The following four groups of stakeholders are identified for this project:

a. project partners;

b. people or groups likely to be affected by the project (project-affected parties);

c. other interested parties that may have an interest in the project; and

d. vulnerable segments of population.

Each of the groups specified here is further described in the following sections. Stakeholder identification and analysis will continue throughout the Project cycles and will remain dynamic.

30.1 3.1 PROJECT PARTNERS

Project partners are defined as stakeholders that contribute to the execution and implementation of the Project. Project partners as identified for the Project Preparation stage are:

a. MTC;

b. RMIPA;

c. DIDA

d. RMIEPA;

e. Customs and Immigration;

f. The World Bank Regional Office; and

g. ESIA Team (ESIA Consult)

As suggested in the introduction, the list of partners will likely change over the project life cycle and hence will be updated accordingly.

30.2 3.2 PROJECT AFFECTED PARTIES (PAPS)

Individuals, groups, local communities, and other stakeholders that may be directly or indirectly affected by the project, positively or negatively, will be identified during the stakeholder identification and analysis stage of the SEP development.

As the project component designs progress, impact zones will be mapped against local communities in order to refine the project's area of influence and hence the potentially affected parties (PAPs). The PAPs are not limited to the land owners and land occupiers, but also include people with the small businesses or livelihoods at or near the ports, dock / transport users, and customary (traditional) or legal rights holders to foreshore and seabed. Groups of PAPs identified to date are listed in Annex B. The list of PAPs will be continuously updated as it is likely to change as new groups become identified or the activities or designs change.

30.3 3.3 OTHER INTERESTED PARTIES

Other interested parties include a wide range of broader stakeholders who may be interested in the project because of its location, its proximity to natural or other resources, or because of the sector or parties involved in the project. These may be local government

officials, community leaders, civil society organizations (particularly those who work in or with the affected communities), private sector, development agencies, and media.

Moreover, civil society and nongovernmental organizations may have in-depth knowledge about the environmental and social characteristics of the project area and the nearby populations, and can help play a role in identifying risks, potential impacts, and opportunities to consider and address in the assessment process.

Broader stakeholders (other interested parties) identified for this project to date are listed in Annex B. The list of other interested parties is likely to be expanded as new groups become identified and hence will be continuously updated.

30.4 3.4 DISADVANTAGED/VULNERABLE INDIVIDUALS OR GROUPS

This project has a strong gender component and will aim at achieving gender mainstreaming in its design, management and implementation. Gender-based violence rates are high in RMI and women are vulnerable to trafficking, illegal sex work, unwanted pregnancies, harassment and violence. Imported and transient workforces such as the fishing industry and construction industry are known to contribute to these issues. Gender analyses will be conducted during the project design stage, and the findings will be incorporated into action planning for implementation stage. Other vulnerable groups, such as elderly and disabled, will also be consulted. Attention will be paid to specific vulnerabilities as well as specific benefits that projects can bring to women and other vulnerable members of society. Specifically, the project will continue identifying vulnerable or disadvantaged individuals or groups and the limitations they may have in participating and/or in understanding the project information. Additional support or resources needed to enable these people to participate in the consultation process will be provided.

In addition to gender analysis, an analysis of the potential for human trafficking will also be conducted. According to UNODC[84], three types of human trafficking activities are occurring in the Pacific:

> **Sexual exploitation:** There are indications that trafficking in persons for sexual exploitation possibly occurs in parts of the Pacific region, including in the Federated States of Micronesia and the Republic of the Marshall Islands. Such activities reportedly have close links to local and regional commercial and extractive industries, including fishing, logging and mining. According to reports, trafficking for sexual exploitation is prevalent in key port cities, where crews from foreign fishing vessels allegedly exploit both local and girls and women from East Asia (Chinese, Pilipino and more recently, Thai).
>
> **Labor exploitation:** There have been reports of widespread labor exploitation of individuals from the Pacific region by distant water operators licensed to fish within the Pacific waters. Such activities possibly have links to human trafficking in and through the Pacific. In addition to workers from the Pacific region, there are reports of fishermen from Asian countries including China, Indonesia, the Philippines and Viet Nam being exploited in the Pacific region on fishing vessels originating from East Asia.
>
> **Migrant smuggling:** Most recorded cases of migrant smuggling in the Pacific have been large numbers of people travelling via boat, with individuals from South and East Asia paying for transit to the United States.

Currently identified representatives of vulnerable people and groups are listed in Annex B. The list will be expanded and updated as new groups are identified.

[84] The United Nations Office on Drugs and Crime (UNODC) Transnational Organised Crime in the Pacific: A Threat Assessment from September 2016

31 STAKEHOLDER ENGAGEMENT APPROACH

31.1 4.1 PRINCIPLES

This SEP has been developed in accordance with the World Bank (WB) requirements. The objectives of participation in this project are thus not only to disseminate information about the project, but also to elicit input and advice from a range of stakeholders who might be affected by the project or might have specific expertise in the subject area, consequently:

- creating confidence and trust;
- ensuring local ownership;
- including different types of stakeholder groups in participation processes and benefit distribution;
- providing avenues for conflict resolution by consensus;
- disseminating results and lessons learned to the wider community, including both government and non-government; and
- generating, and responding to, feedback.

Box 1. RMIMIP Good Engagement Practice Principles

Working closely with partners, ensure all are committed to a participatory approach; and roles and financial accountability for implementing the SEP are well understood.

Identify stakeholders from wide range of areas ensuring diversity and representativeness and identify and highlight key stakeholder interests.

Combine a range of consultation methods, procedures and mechanisms (including specific methods for women and vulnerable groups), in a timely, understandable, accessible and appropriate manner and format.

Plan carefully, ensuring opportunities for consultation in the key steps of the design, implementation and review process.

Set clear objectives for consultation and be clear what project and partners can influence.

Enable two-way engagement by taking stakeholders' views into account in project design and environmental and social performance.

Clarify how the Grievance Redress Mechanism will be integrated.

Maximize transparency, follow up and keep process dynamic.

Participation is expected to allow the Project to:

- relate better to the local context;
- provide technical excellence;
- follow international good practice;
- harmonies with other development partners; and
- reflect a broad range of information and perspectives.

Principles of good engagement practice will be observed in RMIMIP (Box 1). Mechanisms for consultation will to take into account local values, traditions and culture.

Participation is central to the World Bank Environmental and Social Standards. There is no expected land acquisition or economic resettlement associated with this project, but this aspect will be confirmed during the ESMF and ESMP process. Participation will be gender inclusive and responsive, and tailored to the needs of disadvantaged and vulnerable groups, and good practice in engagement principles will also be observed in relation to development of social and gender action plans.

31.2 4.2 TECHNIQUES

A critical element in planning a participation and consultation strategy is selection of participation techniques to meet desired objectives. Considering wide geographic spread of the interventions selected for implementation, and potential resource constraints, the following participation techniques might be used:

Information Dissemination and Information Sharing: this technique can be used to inform the stakeholders on the Project and Project status, action taken, results of Project activities and similar. This technique can use either written (emails, fact sheets, newsletter, website) or face to face methods (meetings, workshops etc). For information dissemination to community representatives, use culturally appropriate techniques and local language;

Information Gathering: quantitative and qualitative information about projects, needs, best practices, lessons learnt, potential synergies etc., can be gathered either in written form (i.e. questionnaire surveys) or in face to face interactions (meetings, focus group discussions). When dealing with information elicited from community representatives, use culturally appropriate techniques such as focus group discussions; women's gatherings etc., in local language; and ensure that information is collected separately from different segments of community (elders, youth, women etc.);

Awareness techniques: awareness, particularly of communities, about the forthcoming implementation process and projects can be raised using oral and culturally appropriate techniques in local language (including information boards);

Two-way knowledge and information exchange should be applied throughout the Project with all key stakeholder representatives and potentially affected or involved communities.

Specific engagement techniques proposed for this Project are listed in Annex C.

Particular attention will be towards identification and engagement with the vulnerable groups. Additional support or resources that might be needed to enable vulnerable people to participate in the consultation process will be identified (such as translation, choosing accessible venues for events, providing transportation, choosing appropriate time of the day, having small, focused meetings where vulnerable stakeholders are more comfortable asking questions or raising concerns).

31.3 4.3 ACTION PLAN

For the continuation of the PPA phase, engagement activities with stakeholder representatives will continue in order to:

- Further identify stakeholders related to the Project;
- Introduce the project and ESIA process to key stakeholders;
- Consult with communities and their representatives;
- Ensure that views and needs of vulnerable segments of communities, including but not limited to poor, women, elderly; are addressed by projects;
- Gather stakeholder opinions on the proposed project and impacts and proposed management and mitigation measures. Ensure that these opinions are fed into the assessment process;
- Gather stakeholder feedback on the development of management and mitigation measures; and
- Identify and gain access to relevant data for the baseline.

Specific details for each activity listed above, including methods; frequency timelines; roles and responsibilities; and reporting requirements, can be found in Annex D.

At the completion of the PPA phase, the objective of engagement will be to provide feedback to the stakeholders on the draft impact assessment and associated management/mitigation measures (disclosure); and to gather their input on the initial impact assessment and identified mitigation and enhancement measures (consultation).

Engagement activities during the implementation phase of the project will include:

- Maintaining effective communication between project management unit and agencies/ organizations implementing project components;
- Raising awareness of project activities among potential beneficiaries;
- Maintaining consultation processes with all potentially affected communities and beneficiaries;
- Monitoring, evaluating and reporting on community involvement; and
- Agreeing on operations and maintenance systems.

31.4 4.4 REVIEW OF COMMENTS

At the end of each engagement activity specified in the Action Plan stakeholder (written and oral) suggestions, comments, requests for clarification, etc. will be gathered, reviewed and actioned; and the action will be reported in the Consultation Records attached to this SEP. At the next engagement opportunity, the decision and a summary of how comments were taken into account will be reported back to the stakeholder group initiating the original action.

In its final form, this SEP for the PPA phase will provide details of consultation, communications, attendee's details, key discussion points and outcomes, stakeholder requests actioned, photos and compendium of consultation materials. It will become an integral part of the ESMP and ESMF.

Concerns voiced by the stakeholders and commitments consequently made by the project during the implementation stage will be recorded in the projects' Complaints and Commitments Register.

32 IMPLEMENTATION OF SEP

32.1 5.1 ROLES AND RESPONSIBILITIES

During the PPA phase of the project SEP implementation by MTC and RMIPA will be assisted by ESIA Consult, with ESIA Consult responsible for carrying out, recording and reporting each of the stakeholder engagement activities. ESIA Consult will also record details of participating stakeholders and will contribute this information to DIDA stakeholder database. An adequate budget has been allocated toward stakeholder engagement during the PPA phase.

During the implementation phase, Mr Garry C Venus, the safeguards officer will oversee each activity. In addition, a safeguards specialist has been engaged by the MTC to further assist with institutional capacity building and will undertake the safeguards responsibilities for the project during project implementation. This position will act as a coordinating role for safeguards across the various stakeholders and components which will provide consistency and cohesion.

32.2 5.2 COMPLAINTS REGISTER AND GRIEVANCE REDRESS MECHANISM

During the construction and implementation phases of any project, a person or group of people can be adversely affected, directly or indirectly due to the project activities. The grievances that may arise can be related to social issues such as eligibility criteria and entitlements, disruption of services, temporary or permanent loss of livelihoods and other social and cultural issues. Grievances may also be related to environmental issues such as excessive dust generation, damages to infrastructure due to construction related vibrations or transportation of raw material, noise, traffic congestions, decrease in quality or quantity of private/ public surface/ ground water resources during irrigation rehabilitation, damage to home gardens and agricultural lands etc.

Should such a situation arise, there must be a mechanism through which affected parties can resolve such issues in a cordial manner with the project personnel in an efficient, unbiased, transparent, timely and cost-effective manner. To achieve this objective, a grievance redress mechanism has been included in SEP and ESMF/ESMP for this project.

The project allows those that have a compliant or that feel aggrieved by the project to be able to communicate their concerns and/or grievances through an appropriate process. The Complaints Register and Grievance Redress Mechanism set out in ESMF/ESMP are to be used as part of the project and will provide an accessible, rapid, fair and effective response to concerned stakeholders, especially any vulnerable group who often lack access to formal legal regimes.

While recognizing that many complaints may be resolved immediately, the Complaints and Commitments Register and Grievance Redress Mechanism presented here and set out in detail in ESMF/ESMP encourages mutually acceptable resolution of issues as they arise. The Complaints Register and Grievance Redress Mechanism set out in this SEP and ESMF/ESMP has been designed to:

- be a legitimate process that allows for trust to be built between stakeholder groups and assures stakeholders that their concerns will be assessed in a fair and transparent manner;
- allow simple and streamlined access to the Complaints Register and Grievance Redress Mechanism for all stakeholders and provide adequate assistance for those that may have faced barriers in the past to be able to raise their concerns;
- provide clear and known procedures for each stage of the Grievance Redress Mechanism process, and provides clarity on the types of outcomes available to individuals and groups;
- ensure equitable treatment to all concerned and aggrieved individuals and groups through a consistent, formal approach that, is fair, informed and respectful to a complaint and/or concern;
- provide a transparent approach, by keeping any aggrieved individual/group informed of the progress of their complaint, the information that was used when assessing their complaint and information about the mechanisms that will be used to address it; and

- enable continuous learning and improvements to the Grievance Redress Mechanism. Through continued assessment, the learnings may reduce potential complaints and grievances.

Eligibility criteria for the Grievance Redress Mechanism include:

- Perceived negative economic, social or environmental impact on an individual and/or group, or concern about the potential to cause an impact;
- clearly specified kind of impact that has occurred or has the potential to occur; and explanation of how the project caused or may cause such impact; and
- individual and/or group filing of a complaint and/or grievance is impacted, or at risk of being impacted; or the individual and/or group filing a complaint and/or grievance demonstrates that it has authority from an individual and or group that have been or may potentially be impacted on to represent their interest.

Local communities and other interested stakeholders may raise a grievance/complaint at all times to the Office of Public Protector. Affected local communities should be informed about the SEP and ESMF/ESMP provisions, including its grievance mechanism and how to make a complaint.

32.2.1 Complaints and commitments register

A complaints register will be established as part of the project to record any concerns raised by the community during construction. Any complaint will be advised to the World Bank and DIDA within 24 hours of receiving the complaint. The complaint will be screened. Following the screening, complaints regarding corrupt practices will be referred to the World Bank for commentary and/or advice along with the RMI's Office of Public Protector.

Information about the mechanisms that will be used to address the complaint will be recorded in the Complains and Commitments Register (example of a possible template for the register is presented in Annex E).

Wherever possible, the project team will seek to resolve the complaint as soon as possible, and thus avoid escalation of issues. However, where a complaint cannot be readily resolved, then it must be escalated.

A summary list of complaints received and their disposition, including resulting commitments made, must be published in a report produced every six months by DIDA, MTC and RMIPA.

32.2.2 Grievance mechanism

The Grievance Redress Mechanism has been designed to be problem-solving mechanism with voluntary good-faith efforts. The Grievance Redress Mechanism is not a substitute for the legal process. The Grievance Redress Mechanism will as far as practicable, try to resolve complaints and/or grievances on terms that are mutually acceptable to all parties. When making a complaint and/or grievance, all parties must act at all times, in good faith and should not attempt to delay and or hinder any mutually acceptable resolution.

The process for the Grievance Redress Mechanism is as follows:

a. The Aggrieved Party takes their grievance to the CIU, relevant Port Authority of Contractor. In the pre-construction period, there will be no contractor and the CIU is the appropriate entity. Once construction commences, the contractor becomes the initial focal point for information;

b. During both pre and post-construction period, CIU and/or relevant Port Authority will endeavor to resolve it immediately. Where the Aggrieved Person is not satisfied, the CIU and/or relevant Port Authority will refer the Aggrieved Person to the MIMIP Project Manager. For complaints that were satisfactorily resolved by the Aggrieved Person, the incident and resultant resolution will be logged and reported to the MIMIP Project Manager. For complaints that were satisfactorily resolved by the contractor, the incident and resultant resolution will be logged and reported to the MIMIP Project Manager;

c. If unsuccessful, the CIU and/or relevant Port Authority, and/or contractor notifies the MIMIP Project Manager;

d. The MIMIP Project Manager endeavors to address and resolve the complaint and inform the Aggrieved Party. For complaints that were satisfactorily resolved by the MIIMIP Project Manager, the incident and resultant resolution will be logged by the MIIMIP Project Manager. Where the complaint has not been resolved, the MIMIP Project Manager will refer to the relevant Port Authority General Manager and Secretary of MoTC for his/her action/resolution;

e. If the matter remains unresolved, or the Aggrieved Person is not satisfied with the outcome, the Secretary of MoTC refers the matter to the Project Steering Committee for a resolution. The MIMIP Project Manager will log details of issue and resultant resolution status; and

f. If it remains unresolved or the complainant is dissatisfied with the outcome proposed by the Project Steering Committee, the Aggrieved Person may refer the matter to the appropriate legal or judicial authority. A decision of the Court will be final.

g. Steps a through e should be undertaken immediately. Where the matter is referred to the MIMIP Project Manager, a resolution should be sought within two weeks. If unsuccessful and the matter is referred to the Project Steering Committee, this should occur within a month

h. Each record is allocated a unique number reflecting year and sequence of received complaint (for example 2019-01, 2019-02 etc.). Complaint records (letter, email, record of conversation) should be stored together, electronically or in hard copy.

i. Any grievance related to corruption or any unethical practice should be referred immediately to the DIDA.

In addition to the project-level and national grievance redress mechanisms, complainants have the option to access the World Bank's Grievance Redress Service, with both compliance and grievance functions. Communities and individuals may request a Grievance Redress Service process when they have used standard channels for project management and quality assurance and are not satisfied with the response (in this case the project level grievance redress mechanism). Information can be found at http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service for more details. For information on how to submit complaints to the World Bank Inspection Panel, visit www.inspectionpanel.org.

32.3 5.3 MONITORING AND REPORTING

Procedures to monitor the progress of implementation of the environmental and social management plans, and relevant social safeguards, will be established and maintained throughout the Project. These will include, but not be limited to, monitoring of engagement outcomes related to gender.

During PPA phase, performance will be evaluated against activities specified in the Action Plan (Annex D).

Recording and monitoring of the engagement in the implementation phase of the projects should be carried out by the agencies involved in implementation, in collaboration with Central Implementation Unit (CIU), and should occur at regular intervals. Regular reporting of such information to other Project partners should also be established, including to people in the project areas. DIDA, MTC and RMIPA will be responsible for this.

Conduct of these tasks needs to involve qualified and experienced national experts, with the potential assistance from NGOs and international consultants. No involvement of potentially affected communities is planned.

The CIU will maintain an activity file detailing all public consultation, disclosure information, grievances collected, and commitments made throughout the project, which will be available for public review on request. Stakeholder engagement should be periodically evaluated by senior management of DIDA, MTC and RMIPA, assisted by the Community Liaison person. Project-level monitoring and evaluation also includes:

- Cargo vessel turnaround times at Delap Dock reduced (minutes);
- Reduced damage to vessels and maritime infrastructure at project ports (percentage);
- Strengthened maritime institutional and regulatory arrangements; and

- Grievances registered related to delivery of project benefits that are addressed (percentage).

Six-monthly reporting back to stakeholder groups identified during consultation should continue throughput the implementation stage. Stakeholders should always be reminded of the availability of the grievance mechanism.

33 RECORD OF STAKEHOLDER ENGAGEMENT ACTIVITIES UNDER THIS SEP

33.1 6.1 SCOPING MISSION

A range of stakeholder meetings were held in February 2019 with the objective of identifying and documenting any major risks, as well as stakeholders' attitudes towards the project. In total, stakeholders from 14 organization/agencies and special interests' groups (including those related to gender and human trafficking) were consulted. Details of the meetings, including records of the discussions, agenda, presentation and the lists of attendees, can be found in Annex G. All participants voiced their consent with the project, with the perception that the project is going to bring benefits far greater than potential negative impacts.

The issues discussed included current existing issues and general suggestions and concerns for future; and the suggestions and concerns related specifically to the proposed project. Findings of the scoping mission are summarized in sections below, and are also incorporated into relevant documents, namely, Environmental Assessment, Social Assessment, and the Gender and Human Trafficking Report.

The proposed grievance mechanism was also discussed and agreed in principle. It was however noted by participants that grievances (if any) are likely to be reported through their existing social networks, i.e. umbrella associations (such as women's council for women's issues) and/or through complaints to Council members and the Mayer.

33.1.1 Existing issues and general suggestions and concerns for future

Cross-cutting concerns voiced relevant to all ports:

- Institutional arrangements around port facilities and longer-term maintenance of the docks and facilities: in the past there was a disconnect between Municipality and the Port Authority over who 'owns' the dock and related infrastructure and who should be responsible for the maintenance. This issue needs to be clarified in the future, as it is currently unclear to stakeholders 'where the Port Authority areas start and end'. Also, impacts of 2023 change in funding on Ports operations needs planning for. In outer islands, this is managed by the Local Government
- Gender and youth: Gender discrimination is prevalent. Incidence of young people living together and having children, underage and without being married, is common. Although legal age for consensual sex is 15, many of the girls in such arrangements are younger. Sexual awareness is very low or nonexistent, and there is no enforcement of the age of consent laws. There is a need for general sexual education and awareness. The prevalence of tuberculosis and hepatitis; and also, of sexually transmitted diseases (STDs), is very high.
- Possible mitigation of issues to related port related to human trafficking (HT) and gender in general are seen mainly through awareness and education of the general population and at schools - the largest population group in the country is 14-21 years of age and the main need is to educate them; and building of capacity of government agencies including health and education.

Port specific concerns:

- Jaluit - Cruise ship visits: Discomfort with the visiting cruise ships. No knowledge of and no procedure in place to inform villagers when the ship will be coming. They just all of a sudden have people walking around the village. They are concerned for safety; and also feel hassled. Visitors were not interested in purchasing handicrafts and shells.

- Ebeye - Human trafficking and sexual exploitation: A survey of sex workers was conducted in 2004 but perception is that the issue has increased since; and it is unclear what percentage of girls involved are under age. The risks on the island are however not linked to maritime sector but to contractors from the US Base. There is a good collaboration between immigration, police, government agencies and other organizations dealing with the subject on the island, and the development of "Ebeye Pass" (for the staff from the base) was discussed.
- Uliga and Majuro - Current social impacts form shipping includes prostitutions; border control not enforced properly, and poor enforcement of existing laws and policies. There is a 10pm curfew for seafarers, but there is no control over compliance.

33.1.2 Suggestions and concerns related specifically to the proposed project

Cross-cutting:

- Clarification that no dragging or removal of wrecks will take place as a part of this project.
- Construction/rehabilitation works need to be staged so that ports remain open and functional throughout the construction period; so that supplies can reach communities.
- Participants supported proposed improvements to safety (fencing, lights) as there is currently a perceived risk to people during port operations.
- Poor capacity to deal with fire, for example Uliga dock has a sea hydrant which is not working and at Delap Port there is a freshwater hydrant only - noting that city water is not available 24/7. Strong support for installation of new hydrants and provision of oil spill kits, oil boom, etc.
- Opinion that a lot of new learning related to human trafficking (HT) has occurred over the last few years, so instead of conducting HT assessment project should move towards implementation (of capacity building and awareness campaigns). If a HT assessment is to be done, it should be conducted by local organizations – provide training to local staff on islands on how to do it and have it as a long-term activity. Maybe also conduct a training needs assessment for agencies: not just of immigration and police but also health, education etc.
- Youth, and in particular boarding school students, were identified as very vulnerable with the need to raise their awareness. Need go through Ministry of Education to provide awareness campaigns in boarding schools on outer islands. Training of officers (immigration and police) on victim identification; procedures and mechanisms in place; also, capacity building in associated agencies such as health and education. Also, need to work with taxi drivers who are sometimes facilitators. There is never any resistance to capacity building so this is a good avenue for furthering gender and HT discussions. Need for any training to be continuous and to use training and materials that exists rather than creating new modules. Also, the need for resources, assets and people for monitoring of mariner's behavior.
- Project could assist with lobbing for inclusion of HIV/STD testing as a part of hiring process for maritime workers; increasing corporate social responsibility of vessel owners. Need to raise awareness of ship workers, so they know what is illegal behavior in the countries they visit; their rights to complain in cases or labor exploitation or processes to be followed. Suggestion to develop materials as hand-outs to the ships – so mariners are aware of laws, rights and responsibilities in general and while in RMI. Potential use of Fishing Registry for rising of awareness of HT issues for all RMI registered vessels was also discussed.
-

Port specific

Jaluit:

- Navigational aids: upgrades to existing navigational aids most welcome as there are currently concerns for safety of residents and 530 students travelling to the boarding school on the island. Participants also asked about possibility of installation of the additional markers and lights in the lagoon, especially for the second (western) pass. This is a commonly used route in the lagoon and currently has no navigational aids, making it extremely dangerous at nights and during the bed weather. Participants noted that the seascape of the lagoon beyond Port Authority jurisdiction is owned by the Municipality and thus installation of additional lights would not be a problem from the institutional point of view, as both community and Council members present indicated their agreement with the proposed. The repair of existing markers and lights, and installation of additional markers and lights was perceived by all stakeholder groups consulted as of utmost importance for maintaining safety of the fishermen, students, and the communities in general.
- Enquiries about cutting of the rusty rods on the dock for the safety of the users.
- Fencing and closing of the dock: The idea of closing the dock while in use (2-3days when ship is in port) was seen as a very good safety measure. However, it was noted that women and children use dock for fishing and that closing the access to the dock at all times, would negatively impact them by preventing engagement in this activity.

Ebeye:

- Waste management: Port and stevedoring areas currently used as 'secondary rubbish areas'. Participants would like to see these areas cleaned but there was a concern of where those items could be moved to – need to move them away from island as they would create environmental impacts wherever they are dumped.
- The need to relocate the main point of entry to the port to outside stevedoring area near the fish market and restrict access from there on, as stevedoring area is very dangerous for public.
- Current practice of bringing the fuel for the power plant, which is bunkered into trucks and then driven through the settlement to the power plant, is very dangerous for the community. In addition, they have no spill prevention kits, and no capacity to deal even with the smallest spills at the moment; and no firefighting equipment. Supply of both spill kits and firefighting equipment was strongly supported (this is an issue at all ports but particularly at Ebeye due to bunkering); also, a feasibility study of mooring options outside of the power plant so that fuel can be pumped directly.
- Ships are not serviced on Ebeye at the moment, but it would be good to bring servicing capacity back to the island.
- Need for comprehensive Master Plan that would cover all of the docking areas (fisheries and ferry dock) not just the part administered by PA.
- Claims that passenger ferry dock is used as a dolphin (secondary lines are tied to it) while larger container ships are in commercial port. This claim would need to be investigated and if correct, safety measures need to be taken to ensure safety of the public at the ferry port during this period. Further, this would mean that there is no sea access to fishing dock while containerships are unloading (about 24hours twice a month)?
- Discussion on project bringing in work force during constructions: this could exacerbate current situation (existing prostitution with the US Base contractors, discussed above) and is a possible negative impact of the project. Prevalence of HIV and STDs is very high on the island and this needs to be noted in OH&S plans for construction companies; including understanding that infecting others with the HIV/STDs knowingly is a criminal offence under RMI law. In addition, there is a possibility that several construction projects will be happening on the island at the same time (several funded by the World Bank). Thus, a comprehensive management plans and cumulative impact assessment should be conducted in regard to foreign workforce.

Wotje:

- Passengers and goods at Wotje are trans-shipped as dock is too shallow to receive cargo vessels. Trans-shipment with tenders is a big issue for users with disabilities, illness, old people. Also, Wotje has a boarding school and students are also trans-shipped by tenders, so this is an additional safety issue. Better access for tenders at the existing docks - as it is currently very difficult to board, and lightening at the docks, were therefore strongly supported.
- DIDA will expand on this during consultation when available.

Uliga:

- Implementing 'safety station' at Uliga dock and providing immigration/police presence is strongly supported as this is seen as an important safety issue; this would raise public confidence.
- A need to mitigate current safety issue for officers: boarding parties use pilot boat to reach the newly arriving ship for clearance; this means that usually they board ship before it enters lagoon, which is a dangerous practice (due to high seas outside the lagoon). There is a need for a separate boat to take boarding party to the vessels once they are at anchor.
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Delap:

- Flooding: dock area slopes towards the road and during rain events office and the road are flooded, resulting in disruption of the traffic on the road. Drainage system would thus need to be improved as a part of the dock paving activities.

34 ANNEX A. PROJECT DETAILS

35 ANNEX B. RMIMIP PROJECT STAKEHOLDERS:

NOTE: This Annex is completed the extent possible and will be continuously updated with the new information throughout the ESMF and ESMP phases.

Project Stakeholders identified will be added to DIDA Stakeholder Database, a central stakeholder database that covers all DIDA projects, as many of the SH overlap with other projects under consideration and/or implementation.

Project Partners:

MTC

RMIPA

DIDA

Department of Immigration

Ministry of Cultural and Internal Affairs

Marine Resources Authority

Environmental Protection Authority

The World Bank Regional Office

ESIA Team (ESIA Consult)

Project Affected Parties PAP:

Communities:	Island Councils and Mayor of Jaluit Island Councils and Mayor of Wotje MIMA Mayors association Senators for the relevant islands KAL Government
Traditional resource users and rights holders:	
Other natural resources users	
Dock/transport users	
Businesses	Marshall Islands Shipping Corporation Kwajalein Atoll Port Authority PII Port Chamber of commerce

	Stevedores Matson lines (Ebeye)
Stevedores	Majuro Stevedore and Terminal Company

Other Interested Parties:

Chief Secretaries office

MIMRA

CMAC s umbrella organization for coastal managements includes EPA

Representatives of vulnerable and disadvantaged groups:

Municipal church groups

Country Manager, International Organization for Migration (IOM)

Women United Together Marshall Islands (WUTMI)

36 ANNEX C: PROPOSED SPECIFIC ENGAGEMENT TECHNIQUES

Information Boards	Establish Information Boards in each Project activity area
Correspondence by phone/email/messaging	Distribute project information to government officials, organizations, agencies and companies Invite stakeholders to meetings
Print, media and radio announcements	Disseminate project information to large audiences, and stakeholders with limited literacy /time Inform stakeholders about consultation meetings
One-on-one interviews	Solicit views and opinions Enable stakeholders to speak freely and confidentially about controversial and sensitive issues Build personal relations with stakeholders Recording of interviews
Formal meetings	Present project information to a group of stakeholders Allow the group of stakeholders to provide their views/opinions Build impersonal relations with high level stakeholders Distribute technical documents Facilitate meetings using PowerPoint presentations Record discussions, comments/questions raised and responses
Public meetings	Present project information to a large audience of stakeholders, and in particular communities Allow the group of stakeholders to provide their views and opinions Build relationships with neighboring communities Distribute non-technical project information Facilitate meetings using PowerPoint presentations, posters, models, videos and pamphlets or project information documents Record discussions, comments/questions raised and responses
Workshops	Present project information to a group of stakeholders Allow the group of stakeholders to provide their views and opinions Use participatory exercises to facilitate group discussions, brainstorm issues, analyses information, and develop recommendations and strategies Recording of responses
Focus group meetings	Allow a smaller group of between 8 and 15 people to provide their views and opinions of targeted information Build relationships with neighboring communities Use a focus group interview guideline to facilitate discussions Record responses
Surveys	Gather opinions and views from individual stakeholders

	Gather baseline data

37 ANNEX D. STAKEHOLDERS ENGAGEMENT ACTION PLAN

Session. Busan, Republic of Korea 8-16 August 2018. WCPFC-SC14-AR/CCM-13

Objective	Method	Frequency	Timelines	Responsibility	Target group	Completed, recorded?
PPA Stage of the Project						
Identify stakeholders related to the Project	One on one interviews Formal meetings Workshops during January and February 2019 mission	Commencement of the project and throughout	November 2018, February 2019	ESIA Consult	All SH	Yes Nov 2018 Feb 2019
Introduce the project and safeguards process to stakeholders	One on one interviews Formal meetings Focus group discussions	At the start of the project	November 2018, February 2019	ESIA Consult	All SH	Yes Nov 2018 Feb 2019
Consult with communities and their representatives	Face to face meetings with community representatives Focus group discussions	At the start of the project	November 2018, February 2019	ESIA Consult	Potentially Affected People	Yes Feb 2019
Ensure that views and needs of vulnerable segments of communities, including but not limited to the poor, women and the elderly, are addressed by projects	Face to face meetings with representatives Focus group discussion with vulnerable people	At the start of the project and throughout	November 2018, February 2019	ESIA Consult	Vulnerable groups and their representatives	Yes Feb 2019

Gather stakeholder opinions on the proposed project and impacts and proposed management and mitigation measures. Ensure that these opinions are fed into the assessment process	Correspondence One on one interviews Formal meetings Public meetings Focus group discussions	Field mission and design Consultation stage	February 2019 March 2019	ESIA Consult	All SH	Yes Feb 2019
Identify and gain access to relevant data for the baseline	Correspondence One on one meetings Formal meetings	Preparation for field mission Field mission and design	Throughout project	ESIA Consult	Government agencies Institutes	Yes Feb 2019
Implementation Stage of the Project						
Maintaining effective communication between project management unit and agencies/ organizations implementing project components	Electronic and face-to-face communication with representatives of relevant agencies/ organizations	Minimum monthly for the duration of each project		CIU	Project partners	
Raising awareness of project activities among potential beneficiaries	Media advertising and targeted campaigns	Throughout, during main project activities, as required		CIU	All SH	
Maintaining consultation processes with all potentially affected communities, vulnerable groups and beneficiaries	Face to face meetings with PAPs representatives (including town officers, women's representatives etc); where appropriate, surveys and analysis of project's	Minimum biannual meetings with PAPs		CIU	PAP Vulnerable groups Beneficiaries	

	impacts on vulnerable populations					
Monitoring, evaluating and reporting on community involvement	Collation of progress reports; Updates to this document; Self-evaluation by project team	Annually throughout the Project		CIU	Project Partners	
Agreeing on operations and maintenance systems	Electronic or face to face communication	Minimum one meeting with each relevant SH group		CIU	Project Partners Key NGO and government agencies PAP representatives	

39 ANNEX E. AN EXAMPLE OF A PROJECT CONCERNS AND COMMITMENT REGISTRAR (TEMPLATE)

Date	Contact person details	Concern voiced	Recipient community /group	Related Documents & location	Further background	Related risks	Commitment by project	Project cost	Follow up action, date & task owner	Outcome	Signed Off	Comments

40 ANNEX G. CONSULTATION RECORDS

Stakeholder Engagement Meetings during scoping stage February 2019

Stakeholder engagement meetings were held in Jaluit, Ebeye and Majuro during the week of 4-8 February 2019. The main goals of the meetings were to provide stakeholders with the outline of the proposed project activities and timelines; and to elicit and collate their opinions, concerns and suggestions. A sample of the invitation letter and the agendas disseminated to the stakeholders are provided in Appendix 1. Example of the presentation (similar presentation was used at each Port, with the change to relevant Port details) can be found in Appendix 2. Engagement techniques included public meetings; formal meetings; focus group meetings and face-to-face interviews.

Records of the engagement activities at each location are presented below.

Jaluit Atoll

- **Public meeting with the community members**

Meeting was held on Jaluit at the Catholic School Hall on the 5th of February 2019 and was attended by 26 community members, including Jaluit Senator and representatives from the Council, National and Local Police, Ministry of Justice, Education, MEC and the Jaluit WIJ Chapter. The meeting was held in local language, with translations to and from English.

The meeting started with welcome by the Senator, who also noted on limited participation of women in the meeting (five out of 26 attendees, including the senator, were females) and the need to encourage women of RMI to participate in the public life of the community. Welcome was followed by introduction of the project overall, specific proposed interventions for Jaluit Port, potential positive and negative impacts of such interventions, and the expected timelines. Open discussion followed, and the questions raised by stakeholder and discussed included:

- Navigational aids: proposed upgrades to existing navigational aids (two existing markers from Japanese times) were discussed, in particular the fact that they currently have no lights making navigation into lagoon specifically dangerous during bad weather and at night. Participants pointed that in addition to Jaluit residents, there are currently 530 students enrolled at the boarding school on the island, coming from eight neighboring islands. Safety at sea of the students and their visiting families is in addition to the safety of the local community on Jaluit.
- Participants also asked about possibility of installation of the additional markers and lights in the lagoon, especially for the second (western) pass. This is a commonly used route in the lagoon and currently has no navigational aids, making it extremely dangerous at nights and during the bed weather. In total, there are five channels used to enter lagoon with only one having markers/lights.
- Team members clarified that current project is proposing only repairs and upgrades and not installation of new aids; however, the participants noted that the seascape of the lagoon beyond port authority jurisdiction is owned by the Municipality and thus installation of additional lights would not be a problem from the institutional point of view, as Council members present indicated their agreement with the proposed.
- It was suggested that planning and preparation for additional navigational aids could be conducted as a part of this project (as a component of the Master Plan), with actual installation taking place at the later stage.
- Clarification that no dragging and no removal of wrecks will take place as a part of this project.
- Enquiries about cutting of the rusty rods on the dock for the safety of the users.
- Clarification on the scope of work, with international and commercial ports being the main target; hence smaller ports on the outer islands are not included in the scope of this project.
- Clarification by participants on the current use of the port facilities: government ship comes every 6 weeks to 3 months; intermittent supplies are provided by private ships that deliver supplies for both the community and the school (fuel and food). Supply ships take about 2-3 days to unload.
- In addition, there were two instances of a cruise ship visiting the lagoon; the ship stayed at anchor while tourists visited island using tenders. The ship carried around 150 passengers who were cleared by immigration party that arrived at the island for this purpose. The tenders transferring passengers used the main dock.

- Discussion on the use of the dock during the construction/ rehabilitation stage how is it going to be managed and how are supplies going to reach the community if the dock is not operational. The need for the dock to remain operational throughout the construction phase was reiterated.
- Discussion on longer-term maintenance of the dock and facilities: in the past there was a disconnect between Municipality and the Port Authority over who 'owns' the dock and who should be responsible for the maintenance. This issue needs to be clarified in the future.

- **Focus Group Discussion (FGD) with fishermen (PAPs)**

A focus group discussion was held with 7 potentially affected people, fishermen and small boat owners. They were of opinion that proposed project activities will bring benefits to the island. In terms of direct benefits to fishermen and boat owners, upgrades to the dock were not perceived as of much relevance as they do not use the main port dock as their landing site. However, they were very interested in proposed upgrades to navigational aids as their main current concern is in regard to safety while at sea. They also discussed the need for installation of the additional markers and lights in the lagoon, especially for the second (western) pass. This is a commonly used route in the lagoon and currently has no navigational aids, making it extremely dangerous at nights and during the bed weather, both for Jaluit community members and boarding school students and their families. The repair of existing markers and lights, and installation of additional markers and lights was therefore perceived by this stakeholder group as of utmost importance for maintaining safety of the fishermen and the communities in general.

The proposed grievance mechanism was also discussed and agreed in principle. In closing, all participants voiced their consent with the project, with the perception that the project is going to bring benefits far greater than potential negative impacts.

- **FGD with the Municipal Council Members**

Principles of stakeholder engagement and grievance mechanisms were presented first before moving to a general discussion. A concern additional to those voiced during the main meeting was put forward by this group. It related to potential fencing and closing of the dock. It was noted that women and children use dock for fishing and that closing the access to it would prevent them from engaging in this activity. On the other hand, the idea of closing the dock while in use (2-3days when ship is in port) was seen as a very good safety measure.

Past occasions of a cruise ship visit were also discussed. The assumption was that the executive council collects some sort of a fee from the visiting ship. As far as the village was concerned, they had no benefit from the visitors: they came ashore in tenders, walked around the village and then left.

- **FGD with the Women's Group (Jaluit WIJ Chapter)**

Nine participants attended this meeting. In addition to proposed project components, principles of stakeholder engagement and grievance mechanisms were explained. The participants reported they would most likely use either Councilors or Group's links to the National Women's Council to voice their concerns, if they had any.

There was some discussion on how the fencing and gate would function. Again, participants noticed that having a fence and gate in place would be; and that closing the gate while ship is approaching and while at dock would be improve safety of children. However, they reiterated that they use the dock for fishing and that they would want to have a gate open while at other times, so they can continue to access and fish.

Participants then voiced their discomfort with the visiting cruise ships. They reported no knowledge of and no procedure in place to inform them when the ship will be coming. They just all of sudden have people walking around the village. They are concerned of safety; and also feel hassled. Women were additionally disappointed as they and children brought some shells and handicrafts for sale, but visitors were not interested to purchase (they noted that whenever US navy vessels visited in the past, they always purchased shells and handicraft from locals).

The groups were unsure even who approved the vessels to come, and how is the fee handled.

The use of the dock was discussed next. Participants clarified that private supply ship comes about once a month; while the government sheep might come once every 3-6 months. At least once a year this results in situations of having no food at the sand – the last incident occurred last month. Villagers do grow breadfruit, taro, pumpkin (depending on the season) and also have chicken. High school has a vegetable garden where they grow vegetables for their own consumption but also for sale – although reportedly there are only a few families on the island that use vegetables.

It was also clarified that fuel for the power plant comes on a different ship and is tanked; while normal supply ship brings only fuel or village car and boat consumption, in barrels.

Further it was noted that families do visit relatives on other islands and travel for other social occasions, however, have to return to the village well before dark due to lack of lights/navigational aids in the lagoon. The need for additional navigational aids for the safety of all was reiterated.

Participants were not aware of any cases of human trafficking (sexual or labor exploitations) occurring on the island or reported back by islanders living elsewhere. Discussion them moved to more general issues of gender discrimination on the island. Increasing incidence of young people living together and having children, underage and without being married, was discussed. Although legal age for consensual sex is 15, many of the girls in such arrangements are younger.

Further, increasing incidence of beetle-nut chewing (in both men and women with almost everyone on the island now reported to chew) and increasing use of kava on everyday bases were also discussed.

- **Interview with the boarding school staff**

Project, stakeholder engagement principles and the grievance mechanism were explained. In addition to already discussed, concerns over common pregnancies at the boarding school were voiced. It was noted that, for example, seven girls (mainly underage) came back to school pregnant after the last school holidays. Sexual awareness is very low or nonexistent, and there is no enforcement of the age of consent laws. The need for general sexual education, as well as rising awareness of students of ways in which sexual and labor exploitation might occur, was iterated. It was noted that any anti-trafficking capacity building for school staff or awareness training for students would be welcome.

- **Interview with the medical staff**

High prevalence of tuberculosis and hepatitis on the island, and common dengue fever outbreaks, were discussed, together with the need for rising hygiene levels and disease awareness.

Concern over incidences of early teenage pregnancies was voiced, noting that the youngest girl to give birth last year was 12. For safety, the standard practice was to have girls under 15 giving birth to the first child transferred to Majuro hospital; however, girls older than 15 or those having second or third child while still under 15 are giving birth on the island. Susceptibility and vulnerability of girls to human trafficking was noted. The need for education, awareness, but also law enforcement, was discussed.

Photos: Public meeting at Jaluit (left) and formal meeting at Ebeye (right)

Ebeye

- **Interview with the Port Manager**

Traffic in the port typically consists of international container ships (twice a month with 24hour unloading period); domestic privately-owned ship that brings supply twice a month (with 2-3days unloading time); government ship that comes less than once a month; and occasional contractors' vessels. Fishing fleet does not visit the lagoon and sailing boats are managed by municipality.

Port Authority is administering commercial port only, with stevedoring are privately owned and fishing dock and ferry dock owned by other government agencies.

There is no specific large anchorage area in the lagoon. Waters are very deep and there are only two channel markers at the lagoon entrance and no navigational aids inside the lagoon.

The port is closed to civilians while ship is at the dock and operations do not interfere with fishing or ferry dock operations.

- **Formal Project Information Dissemination and Consultations Meeting with the Key Stakeholders**

The meeting was attended by 13 people from 10 stakeholder organizations (Appendix 3) and started with welcome from Deputy Chief Secretary from the Office of the Chief Secretary, Ms Abacca Anjain-Maddison. The welcome was followed by presentation of the project overall, specific proposed interventions for Ebeye Port, potential positive and negative impacts of such interventions, and the expected timelines. Questions raised by stakeholder and discussed included:

- Participants supported proposed improvements to safety as there is currently a perceived risk to people during port operation.
- Getting 'good marks' for port operations from the coastguard was also important
- Perception on the island that the port and stevedoring areas are 'secondary rubbish areas' with large items brought there and left for years. It would be very important to clean the area but where could those items be moved to? They would create environmental impacts wherever they are dumped? Also, stevedoring area is used as storage for large items such as constructions materials as there is no other space on the island.
- The need to relocate the main point of entry to the port outside stevedoring area to near the fish market and restrict access from there on, as stevedoring area is very dangerous for public.
- Utility company representative explained the process of bringing the fuel for the power plant, which is bunkered into truck and then driven through the settlement to the power plant. They have no spill prevention kits, and no capacity to deal even with the smallest spills at the moment. In addition, there is no firefighting equipment; and there are considerable safety issues to the community as the truck drive the oil through the settlement. It would be good to have a feasibility study of mooring options outside of the power plant so that fuel can be pumped directly.
- Ships are not serviced on Ebeye at the moment, but it would be good to bring servicing capacity back to the island
- Question on how project moneys will be divides among the ports, with the opinion that Ebeye should receive 40% of the total funds.
- Discussions of fisheries and ferry terminals which also need upgrades, however, are managed by local government and not Port Authority (PA) and are not part of this project.
- Need for comprehensive Master Plan that would cover all of the docking areas not just the part administered by PA.
- Claims that passenger ferry dock is used as a dolphin (secondary lines are tied to it) while larger container ships are in commercial port. This claim would need to be investigated and if correct, safety measures need to be taken to ensure safety of the public at the ferry port during this period. Further, this would mean that there is no sea access to fishing dock while containerships are unloading (about 24hours twice a month)?
- Currently Police is present while ships are at dock to ensure safety, in particular to prevent children from accessing working areas.

- It was clarified that passenger ferry dock is used on the daily basis by 10-12 private boats plus the ferry; and the rescue boat.
- Discussion on development of sectoral plans and the new Strategic Plan by the Ministry

The meeting proceeded with the introduction of the safeguards process, Stakeholder Engagement Plan, human trafficking issues in the context of maritime interventions, and the stakeholders' rights (including grievance mechanism). Discussion followed, and the questions raised by stakeholder and discussed included:

- There is limited information on what happens on the island regarding human trafficking (HT), a survey of sex workers was conducted in 2004 but perception is that the issue has increased since.
- There is a good collaboration between immigration, police, government agencies and other organizations dealing with the subject on the island.
- The biggest perceived risks for prostitutions and HT on the island are not linked to maritime sector but to contractors from the US Base. Prostitution is seen as wide spread on the island; and it is unclear what percentage of girls involved are under age.
- Discussion on current programs and education campaign on what sexual exploitation is, assisted by IOM.
- Discussion on project bringing in work force during constructions: this could exacerbate the situation and is a possible negative impact of the project.
- In particular there is a possibility that several construction project will be happening on the island at the same time (several funded by the World Bank). Thus, a comprehensive management plans and cumulative impact assessment should be conducted in regard to foreign workforce.
- Prevalence of HIV and STDs is very high on the island and this needs to be noted in OH&S plans for construction companies; understanding that infecting other with the HIV/STDs knowingly is a criminal offence under RMI law.
- Possible mitigations of issues related to HT and gender in general are seen mainly through awareness and education of the general population and at schools; and building of capacity of government agencies including health and education. The largest population group on island is 14-21 years of age and the main need is to educate them.
- Opportunity to get all parties engaged in this work to work together (similar to what happens for disaster management) with joint training and processes of potential victim identification, reporting etc. in place.
- Mitigation related to service users were also discussed, including possibility to including HIV/STD testing as a part of hiring process for workers; increasing corporate social responsibility of vessel owners;

Majuro

- **Formal Project Information Dissemination and Consultations Meeting with the Key Stakeholders**

The meeting was attended by six people from five stakeholder organizations (Appendix 3). During this meeting potential activities in all ports were presented, and the following was discussed:

- Delineation between port areas and port operated areas and other areas – it is very unclear to stakeholders where the Port Authority areas start and end
- There are recent works in Jaluit, with new lights waiting to be installed – it is not even clear who is financing this activity
- Wotje does trans-shipment as dock is too shallow to receive cargo vessels. It was cleared that there is no dredging planned for this project. Trans-shipment with tenders is a big issue for users with disabilities, illness, old people. Wotje also has a boarding school and kinds are also trans-shipped by tenders, so this is additional safety issue. The dock needs better access for tenders as it is currently very difficult to board, and lightening.
- Discussion on expansion of port – not planned for this project.
- Issue of safety due to fuel shipped through town in Ebeye; also, environmental issues of potential for spills. There is no firefighting equipment nor spill containment equipment at the moment.
- After 2023 change in funding, how will Ports operate? - this needs planning for

The meeting proceeded with the introduction of the safeguards process, Stakeholder Engagement Plan, additional stakeholders to be included, human trafficking issues in the context of maritime interventions, and the stakeholders' rights (including grievance mechanism). Discussion followed, and the questions raised by stakeholder and discussed included:

- Implementing safety station at Uliga dock for Immigration presence -request was already submitted to the port as this is an important safety issue.
- Training of officers (immigration and police) on victim identification; procedures and mechanisms in place.
- Human Trafficking (HT) capacity building in agencies is needed, collaborations and support structures are in place. It was iterated that capacity building for the agencies should not be as one off but a continuous effort. Port security training needs to be inter-agency and reoccurring for at least 3 years. There was some training in the past assisted by US coastguard.
- There was discussion on some of the previous cases, for example of a n RMI national being forced to work on the ship in conditions differing from those he signed for and he left the ship in Hawaii; this however is not an option for most Asian forced laborer as they are scared of reporting themselves. For example, one Indonesian national found information about IOM on Facebook and used that opportunity to complain about his working condition
- Discussion on need to raise awareness of ship workers: how are they to know about their rights to complain and processes to be followed?
- Clarification of current immigration processes: Once ships are in Majuro lagoon immigration boarding party goes out to vessels for clearance. However as there is only one pilot boat in reality boarding party goes with the pilot and usually boards ship before it enters lagoon. This is safety issue for officers. There is a need for a separate vessel to take boarding party to the vessels.
- In general, cruise ships, military vessels, sailing boats and fishing boats are cleared at anchor; Container ships come to dock and are cleared there.
- Need for comprehensive border control presence at the docks was discussed.
- Current social impacts form shipping includes prostitutions; border control not enforced properly, and poor enforcement of existing laws and policies
- There is a 10pm curfew for seafarers, they cannot stay on land overnight. But how is immigration to know who returned to the ship and who has not when they have no presence at Uliga dock? So, the curfew is just in theory, and breach is reported only if the person is spotted or reported to police.
- Shipping agents is responsible for covering all the fines and resolving the issues. There was recent increase in fines for breach of conduct for example breach of curfew is now 1,000$. In addition, once there is a breach the entire vessel goes on alert list and no one receives port passes next time they arrive.
- There would also be an added benefits of increased community confidence if there is presence of officials at the Uliga dock in particular – positive benefit for communities.

- However, it was also noted that, as the control in Uliga increases, it can be expected that small vessels will be landing on alternative locations along the shore.
- The need for resources, assets and people for monitoring to be increased was reiterated.
- Suggestion to develop materials as hand-outs to the ships – so mariners are aware of laws, rights and responsibilities while in RMI.
- Opinion that the Port Authority in Majuro is not very supportive of the new immigration systems and that they need to be more proactive and collaborative
- Situation at Ebeye appears better, where Ebeye has a working group and presence form Taskforce, with the Deputy Chie Secretary leading the taskforce
- Recent development of a policy that would allow to monitor arrivals and departures from "Ebeye Pass".
- In terms of potential HT assessment, the stakeholder was of opinion that a lot of new learning occurred over the last few years, so the opinion is that instead of conducting assessment project should move towards implementation (of capacity building and awareness campaigns)
- Boarding school students were identified as very vulnerable with the need to rise their awareness

- **Interview with IOM and Taskforce staff**

As IOM staff have previously attended project information dissemination meeting, general information about project was not repeated, rather, discussion concentrated on gender and issues of human trafficking:

- National legislation on victim protection was passed, with 30day decision time, victim protection visa stay for 3rd country national etc. – a good development
- Agency coordination in RMI could work better and needs further strengthening. Also, Taskforce is a bit weak with no one 'high up' is pushing it; there is a need for a strong 'champion'
- Brothels locations are known but there is no action against them
- There are reported cases on teacher abuse in outer islands; and alcohol coming to islands and increasing violence
- In terms of human trafficking, labor exploitation of RMI nationals but RMI nationals is not uncommon (when they come to Majuro or in US). Sometimes this might also be sexual exploitation.
- Numbers of irregular immigrants on RMI are limited, and these are mainly tourist visa overstays. Smuggling is not a big use, and there were no reports that fishing vessels are used for migrant smuggling - although they could come of fishing vessel and use fake IDs to enter USA via airport
-

The following needs areas / potential interventions and activities were discussed:

- Strong need for awareness rising in the community
- There are powerful public figures who could prevent implementation of gender and HT awareness projects: this has not been an issue so far as culturally appropriate channels were sued, but could be a problem for a program that does not follow the protocol
- Rising awareness of taxi drivers who sometimes act as 'pimps'; also need to rise their awareness that that 'facilitating' is also illegal, what the fines are etc.
- Handouts at ports and at the airport (booklet of sorts) with what is legal and what is not in RMI
- Business to enforce zero tolerance to sexual and labor exploitation cases
- Use of Compliance Program for fish on boats, and awareness of observer programs about issues of HT and signs that might indicate victims
- Potential use of Fishing Registry for rising of awareness for all RMI registered vessels was also discussed
- If a HT assessment is to be done, it should be conducted by local organizations – provide training to local staff on islands on how to do it and have it as a long-term activity. Maybe also conduct a training needs assessment for agencies: not just of immigration and police but also health, education etc.
- Also need go through Ministry of Education to provide awareness campaigns in boarding schools on outer islands.
- Need for any training to be continuous and to use training and materials that exists rather than creating new modules
- Also, there is never any resistance to capacity building so this is a good avenue for furthering gender and HT discussions
- Need for improving institutions and processes

-
- **Interview with the Port Manager**

This meeting provided clarifications on several issues raised during the visit, in particular in terms of institutional arrangement around Port operations, as well as further clarification of works proposed and likely impacts.

- Both Ebeye and Jaluit are controlled by PA and are international ports. PA administers docks; channels and anchorage areas at those ports. Wotje and Arno are not controlled by PA and are not international ports.
- However, institutional arrangements between PA and others (in particular other agencies and Municipalities) are not entirely clear and would need to be resolved, this issue should receive forthcoming attention.
- Clarification that there is room for immigration offices at each Delap and Uliga docks in existing buildings, they would need to be fitted up.
- Regarding fire control, Uliga dock has a sea hydrant; which is not working at Delap Port they have freshwater hydrant but noting that city water is not available 24/7.
- Request for new hydrants, oil spill kits, oil boom, etc.
- Discussion over the paving: dock area slopes towards the road and during the train office and the road are flooded. Disruption of traffic on the road as a current social impact
- Uliga dock is used by both domestic and international vessels; as a result, the dock is closed to domestic transport when international vessels are arriving (24 hour prior to arrival).

Appendix 1. Invitations and proposed agenda (example from Ebeye meeting)

RMI Maritime Investment Project

Date: 6 February 2019

Department/Agency/NGO/CBO Name:

_____

The RMI Ministry of Finance Division of International Development Assistance and the RMI Port Authority cordially invite you (or your delegate) to the Stakeholder Consultation Meeting for a proposed World Bank RMI Maritime Investment Project.

- **Date**: Wednesday 6 February 2019
- **Venue**: Ebeye Hotel Conference Room, Ebeye
- **Time**: 1:00am to 4:00pm

Please see the attached Agenda.

Note: *Coffee and Refreshment Served*

RMI Maritime Investment Project

Project Overview and Stakeholder Meeting Agenda

Goal:

The goal of this meeting is to provide stakeholders (SH) with the outline of the proposed project activities and timelines; and elicit and collate their opinions, concerns and suggestions.

Objectives:

- Consult with SH on the proposed project activities and timelines;
- Agree on the general content of the Stakeholder Engagement Plan (SEP), including SH lists and grievance process;
- Collated input on project design and SEP; and
- Consult on potential project progress indicators.

This meeting is expected to last about 3 hours, as per agenda below:

1300-1315	Welcome and introductions – DIDA and RMI Port Authority
1315-1400	Project overview – DIDA / RMI Port Authority with support from Mr Peter Wulf, ESIA Consult • Overview presentation of proposed project activities • Potential impacts (positive and negative) of each proposed activity • Project timelines and next steps
1400-1415	Project overview discussion – Led by Government / RMI Port Authority with ESIA Consult support
1415-1430	Break
1430-1500	Stakeholder Engagement – Led by Dr Silva Larson, ESIA Consult • Draft Plan overview • Stakeholder identification activity • Discussion of proposed Grievance Mechanism

1500-1600	Discussion – Led by Government / RMI Port Authority with ESIA Consult mediating • How can this project support your work – how can you support the project • How can the project be designed to be of grates value to you and others? • How would you like to be involved/ informed in the future? • Potential indicators of project success • Wrap up
Closing	Thank you and closing – DIDA and RMIPA

Appendix 2. Stakeholder meetings attendees

Date: 6th February 2019

Location: Ebeye

Project Information Dissemination and Consultation Meeting Participant List

No	First Name	Last Name	Role	Organization	Sex
1	Sonia	Tagoilelagi	Sr Project Assistant	IOM	F
2	Malyia	Rudolph	Sr Project Assistant	IOM	F
3	Anastasia	Dujmovic	Aid Coordinator	DIDA	F
4	Daphine	Wase	Aid Coordinator	DIDA	F
5	Harden	Lelet	GM Stevedore	KASCO	M
6	Ben	Jacklick	Seaport Manager	RMIPA Ebeye	M
7	Anram	Kemem	Deputy Director	RMIPA	M
8	Scott	Paul	City Manager	KAL Gov	M
9	Abacca	Maddison	DCS	OCS	F
10	Romeo	Alfred	General Manager	KAJUR (utility company)	M
11	Mailynn	Konelios-Lang	Deputy Secretary	MOHHS	F
12	Kitlang	Kabua	Ebeye Project Rep	PREP II	F
13	Alosiana	Abner	MOCIA Rep	WUTMI / MOCIA	F

Date: 7th February 2019

Location: Majuro

Project Information Dissemination and Consultation Meeting Participant List

No	First Name	Last Name	Role	Organization	Sex
1	Katherine	Walkiewicz	Project Manager	IOM	F
2	Damien	Jackuuk	Director	Immigration	M
3	Phil	Philippo	Secretary	MOTC&IT	F
4	Ange	Saunders	Head of office	IOM and NTHT secretary	F
5	Jashua	Larkabuy	Acting Director	MOTC& IT	M
6	James	Bing	Director	RMIPA	M

Project team members present at each meeting:

	Garry	Venus	Safeguards	DIDA	M
	Silva	Larson	Social safeguards	ESIA Consult	F
	Peter	Wulf	Managing Director	ESIA Consult	M

41 ANNEX H. GRIEVANCE REDRESS MECHANISM

Annexure R: Grievance Redress Mechanism

Republic of the Marshall Islands

Marshall Islands Maritime Investment Project

Grievance Redress Mechanism

January 2019

Prepared by
RMI Ministry of Finance
Division of International Development Assistance.

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1. INTRODUCTION

The Complaints process set out in this Grievance Redress Mechanism ("**GRM**") has been set up for people seeking satisfactory resolution of their complaints on the environmental and social performance of the Republic of the Marshall Islands Maritime Investment Project ("**MIMIP**" or the "**Project**").

This Process has been developed around relevant elements of the Project's ESMF, and is intended to ensure the following:

- That the basic rights and interests of every person affected by poor environmental performance or social management of the project are protected; and
- That their concerns arising from the poor performance of the project during the phases of design, construction and operation activities are effectively and timely addressed.

2. OVERVIEW

This GRM covers the entire Project, not just the construction phase. It is recognized that complaints can come at any time, including predesign, design and post construction.

Figure 1 sets out an overview of the Project's GRM, showing involvement of all relevant parties. The MIMIP Project Manager [when appointed] will be involved at each stage in a coordination and liaison role to help facilitate resolution where possible.

For the purposes of this GRM, prior to appointment of the MIMIP Project Manager the Designated

Contact Person ("**DCP**") is the DIDA Safeguards Specialist. Following the appointment of the MIMIP Project Manager, this DCP role will be reviewed.

Table 1 explains the relevant roles and responsibilities associated with the Grievance Redress Process.

Table 1: Grievance Redress Process

Stage	Process	Duration
1	Aggrieved Party (AP) takes their grievance to either Construction Site Supervisor (CSS) or Designated Contact Person (DCP) – obviously in the pre-construction period there will be no CSS and the DCP is the appropriate person. Once construction commences, the CSS becomes the initial focal point for information. If the AP contacts any of the Project Representatives set out in Section 3, those Project Representatives will communicate the grievance to the DCP or CSS. **Pre- and post-construction –** DCP endeavours to resolve it immediately. Where AP is not satisfied, the DCP will refer the AP to the MIMIP Project Manager.	Any time.

	For complaints that were satisfactorily resolved by the DCP, the incident and resultant resolution will be logged and reported to the MIMIP Project Manager. **Post-construction commencing –** CSS endeavours to resolve issue immediately. Where AP is not satisfied, the CSS will refer the AP to the DCP.	
	For complaints that were satisfactorily resolved by the CSS, the incident and resultant resolution will be logged and reported to the MIMIP Project Manager.: Complaints records (letter, email, record of conversation) are stored together, electronically or in hard copy. Each record is allocated a unique number reflecting year and sequence of received complaint (i.e. 2018-01, 2018-02 etc.).	
2	On receipt of the complaint, the Project DCP endeavours to resolve it immediately. For complaints that were satisfactorily resolved by the DCP, the incident and resultant resolution will be logged by the DCP and reported to the MIMIP Project Manager. If unsuccessful, DCP then notifies MIMIP Project Manager.	Immediately after logging of grievance.

3	The MIMIP Project Manager endeavours to address and resolve the complaint and inform the aggrieved party. For complaints that were satisfactorily resolved by the MIMIP Project Manager, the incident and resultant resolution will be logged by the MIMIP Project Manager. The MIMIP Project Manager will refer to the RMIPA General Manager and Transport Secretary other unresolved grievances for his/her action/resolution.	2 weeks.
If the matter remains unresolved, or complainant is not satisfied with the outcome:		
4	The Transport Secretary will then refer to matter to the Project Steering Committee (PSC) for a resolution. The MIMIP Project Manager will log details of issue and resultant resolution status.	1 month.
5	If it remains unresolved or the complainant is dissatisfied with the outcome proposed by the PSC, he/she is free to refer the matter to the appropriate legal or judicial authority. A decision of the Court will be final.	Anytime.

Grievance Redress Mechanism for MIMIP

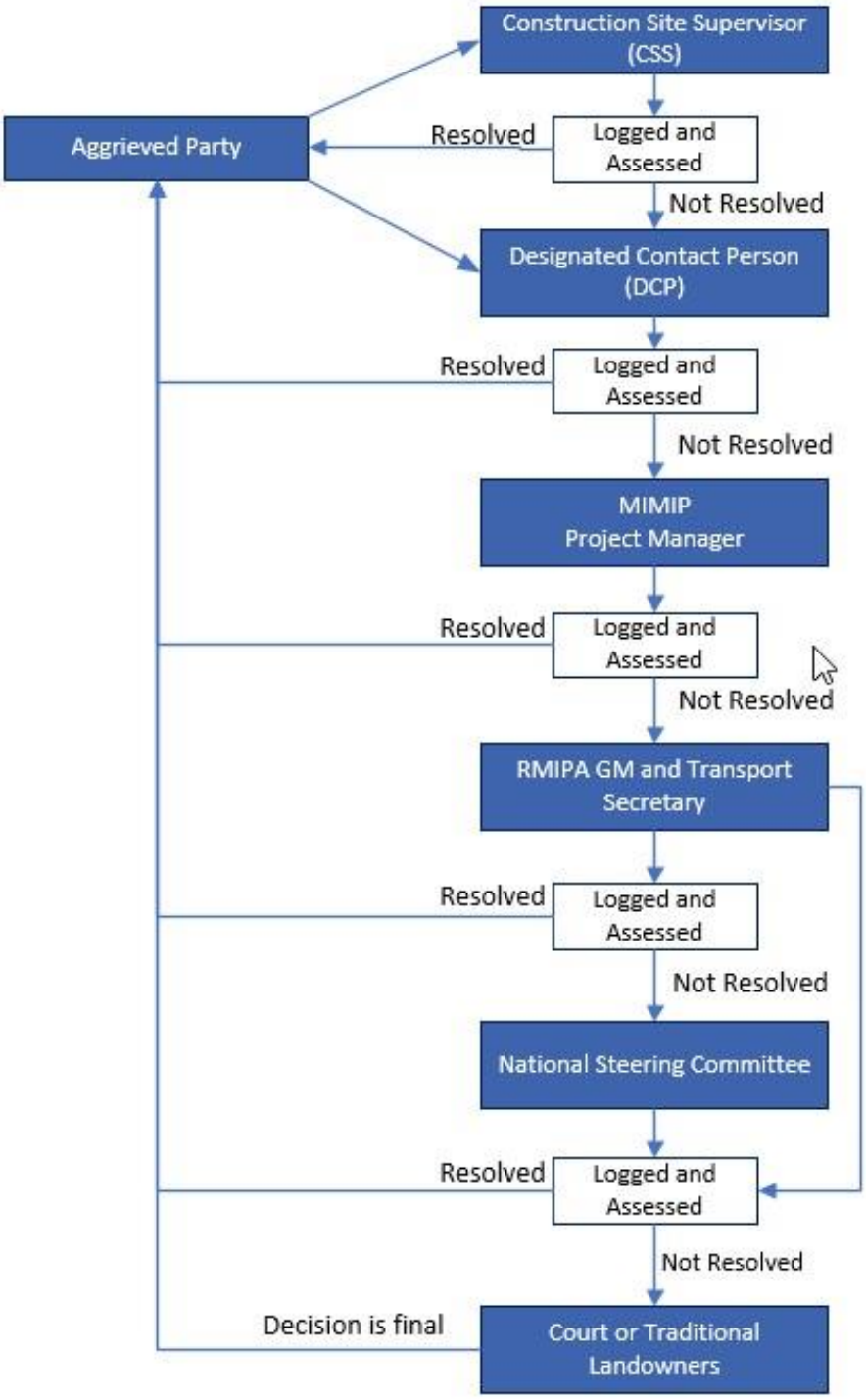

Figure 1: MIMIP *Grievance Redress Mechanism*

3. How to Get in Touch

Anyone can make a complaint, raise a grievance, ask for information on the project or get in touch for any reason. Complaints can be anonymous. The various ways to get in touch are:

In person:

Jaluit - [To come]

Wotje - [To come]

Ebeye- - [To come]

Majuro – DIDA Safeguards Specialist MIDB Building, Level 4, Room #405 Delap Village, Majuro MH 96960 or

MIMIP PM – RMIPA Building XXX

By Phone:

Construction Site Supervisor	XXXXX [To Come]
DIDA Office, Majuro	(692) 625 5968
MIMIP Project Manager, XXX,	XXXXX
MIMIP Project Engineer, XXXXX	XXXXX
DIDA Safeguards Advisor, Garry Venus	(692) 455 3648
RMIPA General Manager XXXXX	XXXXX

By email:

CSS	email address XXXX [to Come]
MIMIP Project Manager, XXX,	XXXXX
MIMIP Project Engineer, XXXXX	XXXXX
DIDA Safeguards Advisor	gazza700@gmail.com
RMIPA General Manager XXXXX	XXXXX

where possible copy to XXX [World Bank Program Manager in RMI – position not yet appointed]

By mail:

Jaluit - [To come]

Wotje - [To come]

Ebeye- - [To come]

Majuro – DIDA, P.O. Box D Majuro, MH 96960

Website: rmi-mof.com/division-of-international-development-assistance/news-and-updates/

This information, and a brief summary of the process for answering queries and managing grievances, will be published on the DIDA website, and in consultation discussions particularly when involving the RMI and other Stakeholders.

4. COMPLAINT/GRIEVANCE REPORT FORM

Complaints may be received in any form, from anyone, including anonymous. Anyone in the team may receive a complaint at any time, including Contractors. All complaints shall be immediately forwarded to the DCP or to the CSS once construction has commenced. All such contacts will be recorded and screened.

The following template is for recording grievance complaints. Each incident should be recorded and the forms filed appropriately by the DCP/MIMIP Project Manager as appropriate. Screening will determine whether the complaint is project related. If the complaint is not project-related then it is closed (or referred to the correct agency).

41.1 GRIEVANCE REPORT FORM

Grievance Information: Summarise Details		
Name of Complainant (or anonymous), and gender	**Employee ID (If Employee)**	**Telephone** **Email**
Date of Complaint	**Date of 2 week deadline for resolution or escalation:**	**Actual date of close out:**
Date, time, and location of Event leading to Grievance:		
Detailed account of Grievance (Include names of persons involved) if known:		
Are there any policies, procedures, guidelines that may have been violated:		
Proposed solution or sought remedy:		

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Outcome of Grievance:
Date and Signature of Entry into Record: **Date and Signature of Close-out:**

5. COMMUNICATING THE GRM WITH STAKEHOLDERS

During all Stakeholder Engagement Activities, there will be a statement announcing that there is a Grievance Redress Mechanism where Stakeholders can raise complaints and have them processed. Moreover, the DCP will provide contact information during all activities, and provide a location where stakeholders can log their complaints.

There will also be a notice at the Majuro RMIPA and DIDA offices and a notice on the website at all times explaining the complaints procedure and providing the contact details.