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[1]

[1] Photo supplied by Garry Venus

Figure 2 Delap Port Layout

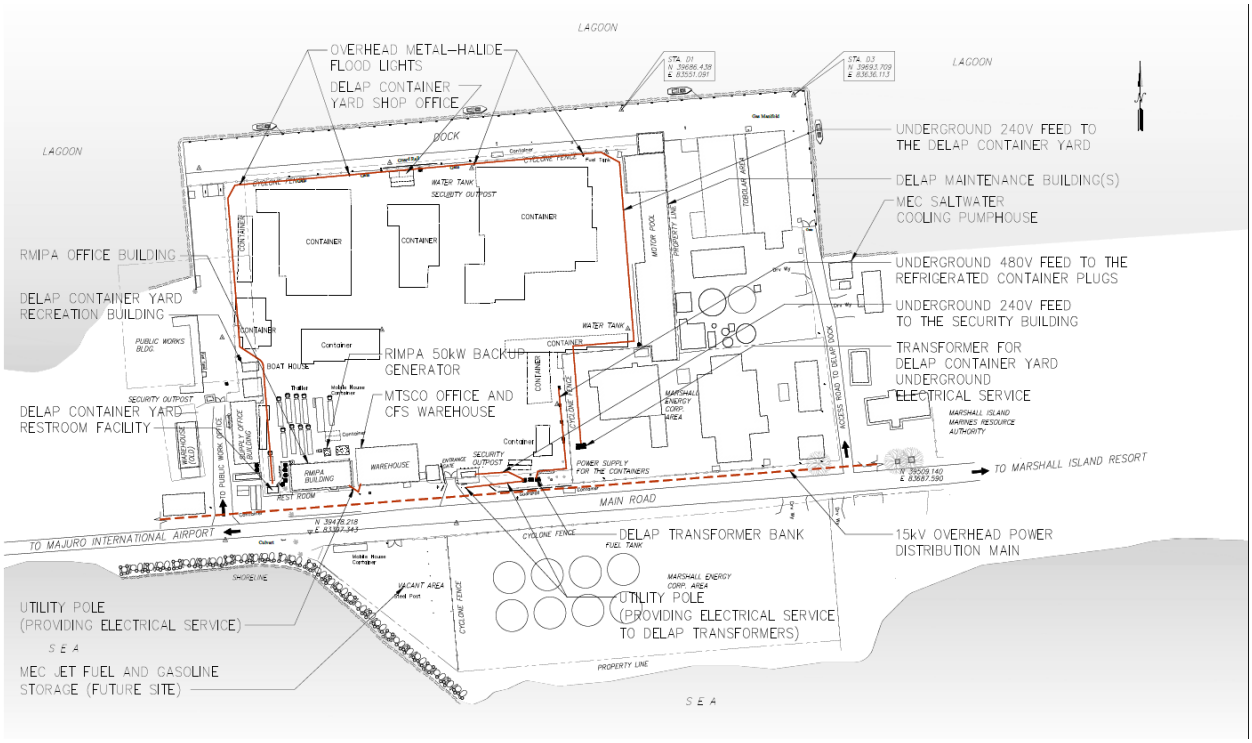


Figure 3 Delap Electrical Distribution Network

Figure 4 Delap Fuel Distribution Network

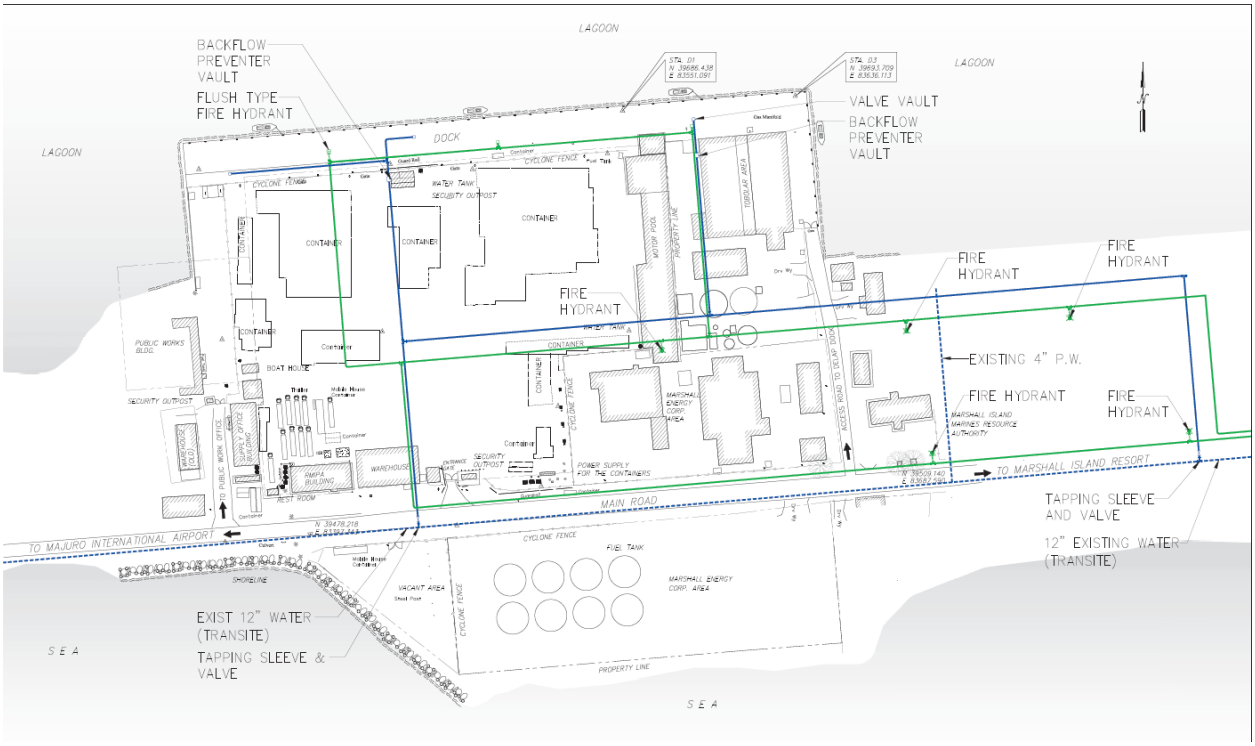


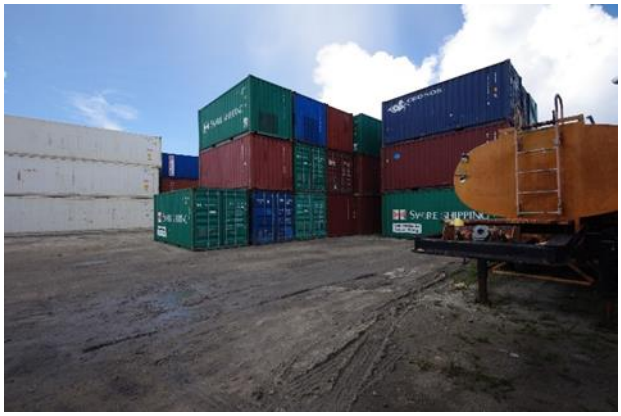
Figure 5 Delap Water Distribution Network

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[2]

[2] Photo courtesy of Garry Venus

Figure 8 Uliga Layout

Figure 9 Uliga Electrical Distribution Network

Figure 10 Uliga Fuel Distribution

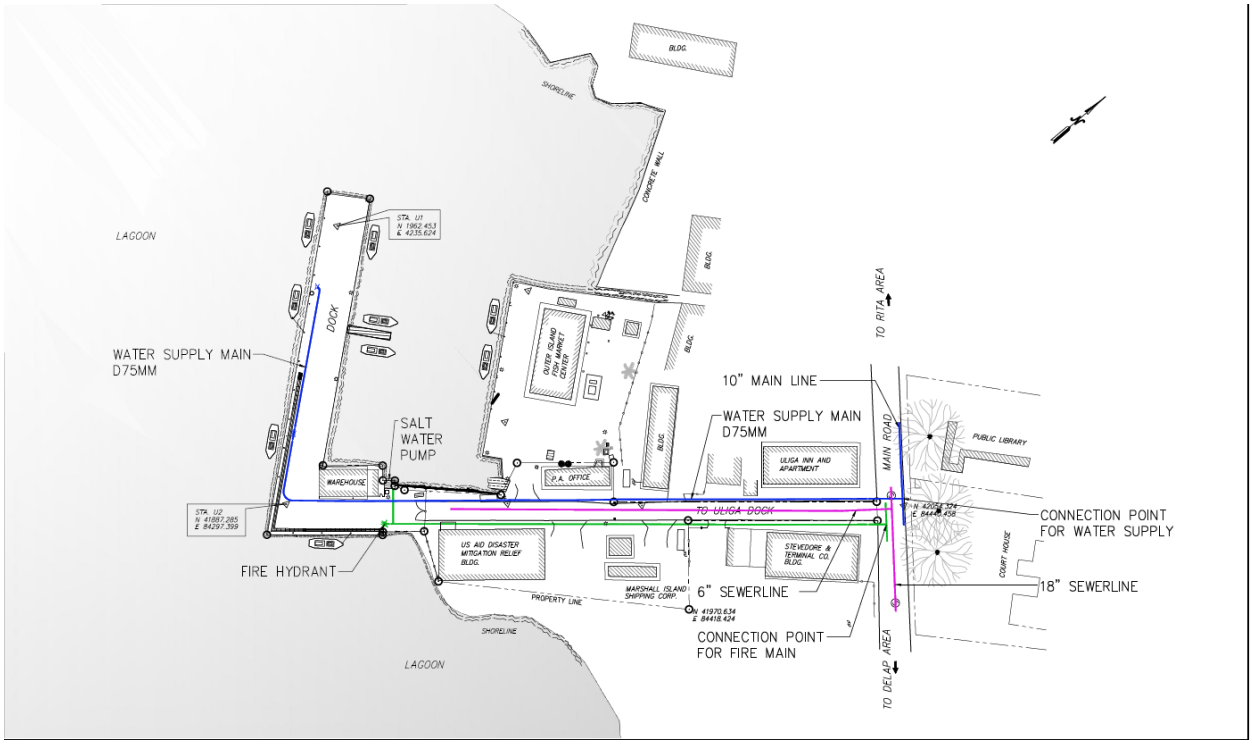


Figure 11 Uliga Water Distribution

Boat Ramp at Uliga Dock

Main Gate at Uliga Dock

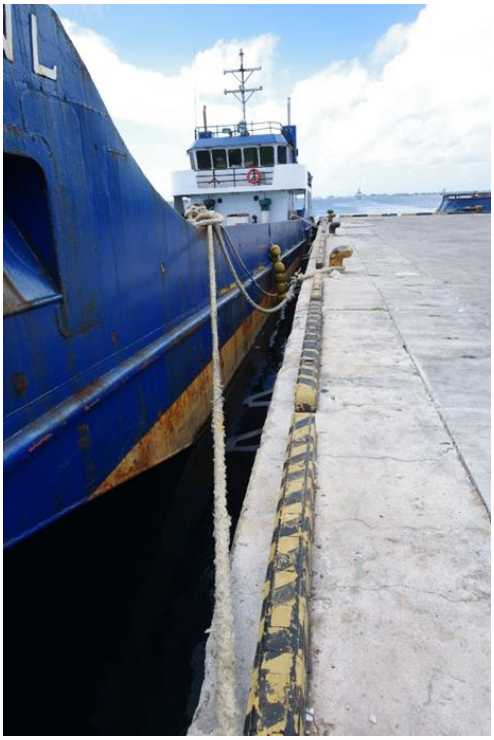
Vessel at berth at Uliga Dock

Infrastructure at Uliga Dock

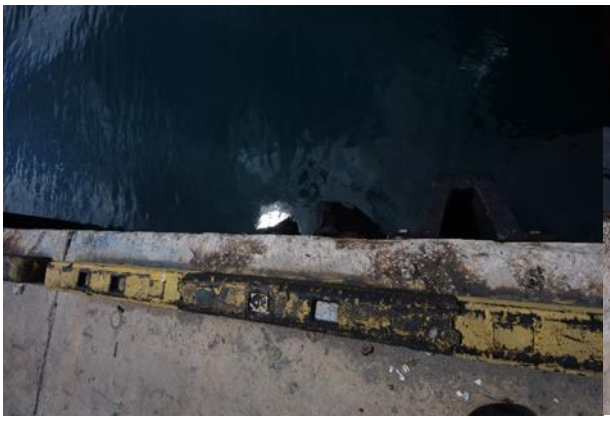
Fender at Uliga Dock

Main Entrance at Uliga Dock

Oil drums at Uliga Dock



Vessel at berth at Uliga Dock



Fender at Uliga Dock

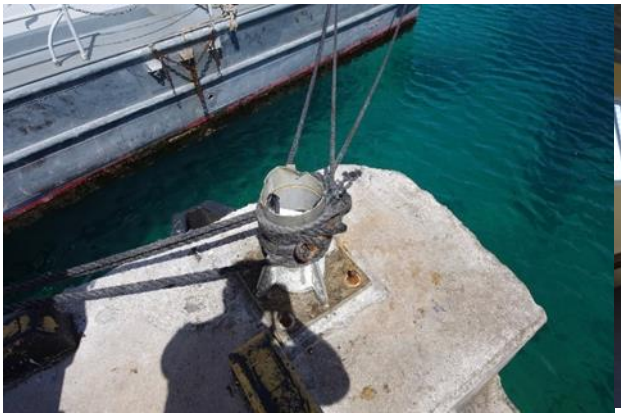
Fender at Uliga Dock

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.

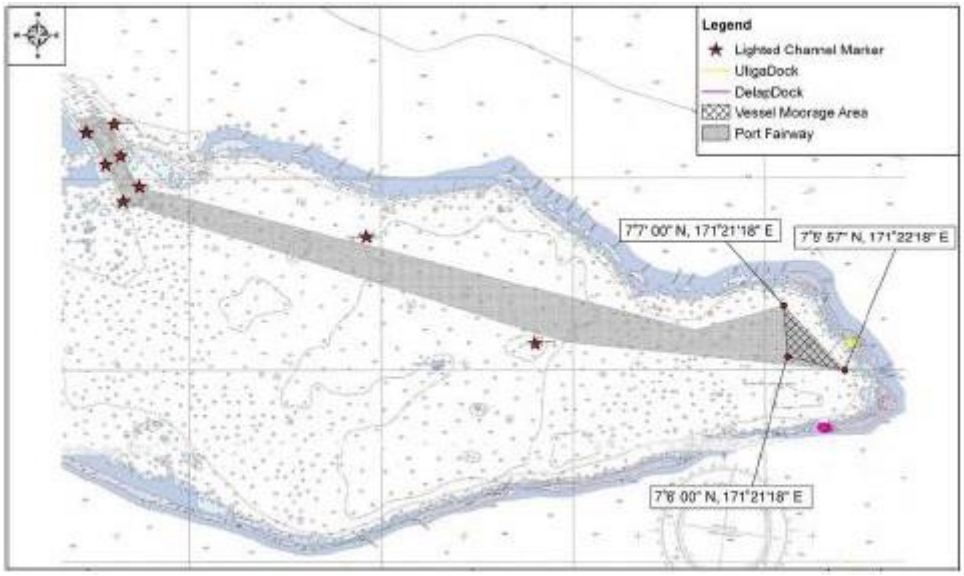


Figure 12 Majuro channel and navigation aid locations

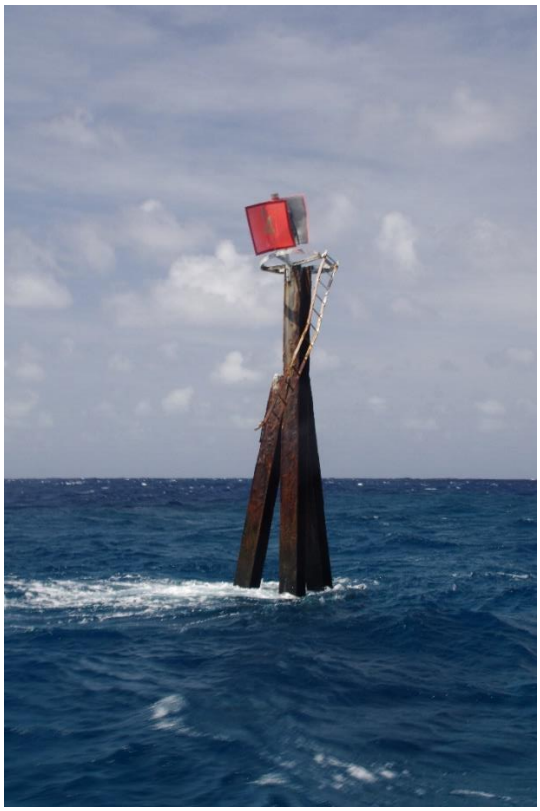
Majuro Channel Navigation Aids

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.

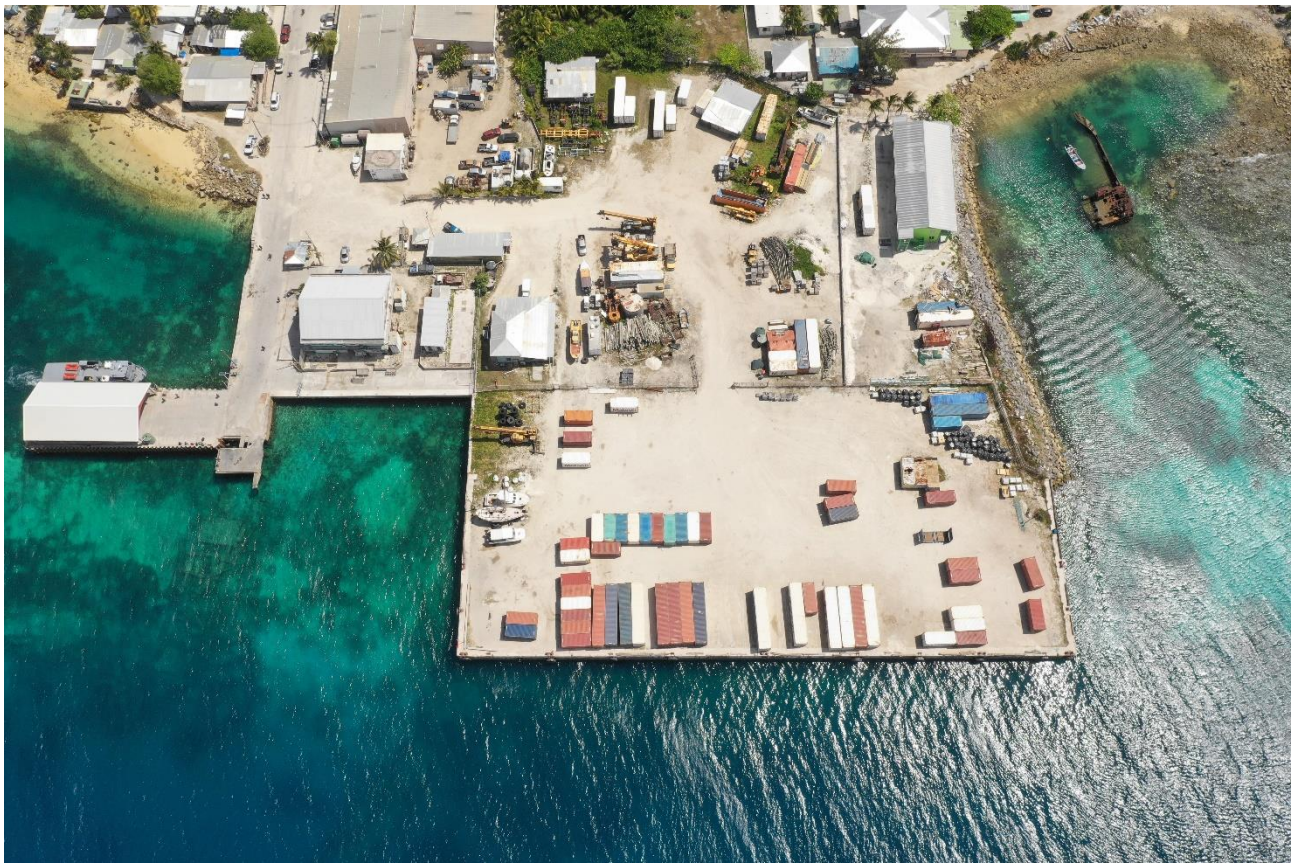


Figure 14 Aerial of Ebeye Port[3]

[3] Photo courtesy of Garry Venus

Cargo at Ebeye Port

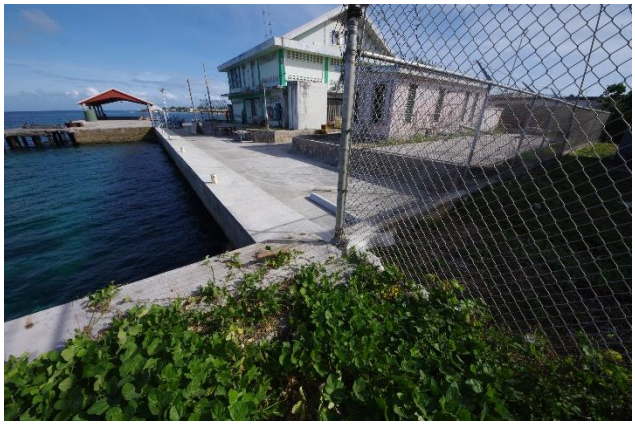
Old Machinery at Ebeye Port

Three vessels on the hard at Ebeye

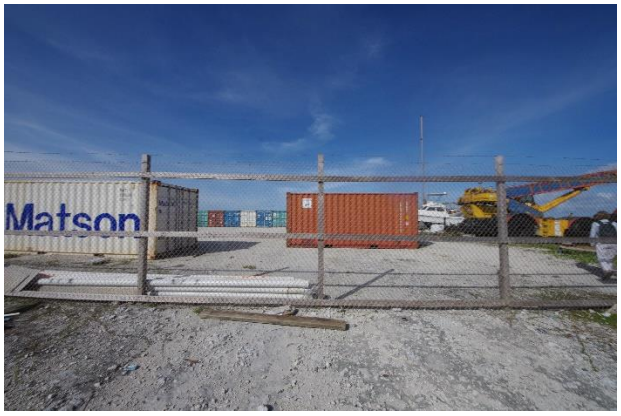
Supposed Bollard on Ferry Terminal - Ebeye

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

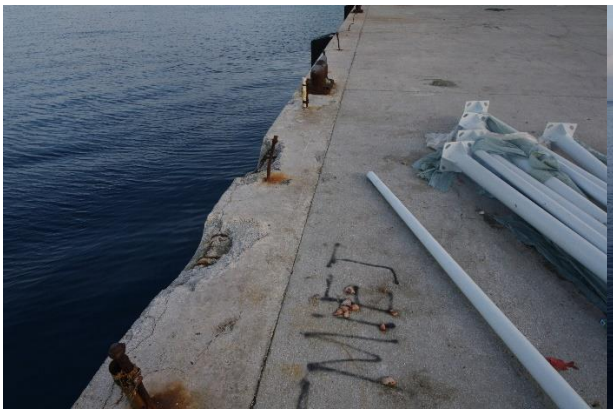
21. Jaluit port is classified as an international port under RMI legislation. The port has one single berth for a ship and a roll on roll off facility on the northern side. The port services on Government vessel along with private vessels bring food, fuel and school students.
22. Based on Google Earth 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[4]

[4] Photo courtesy of Garry Venus

Landward Side Access - Jaluit

Dock with to be installed light towers - Jaluit



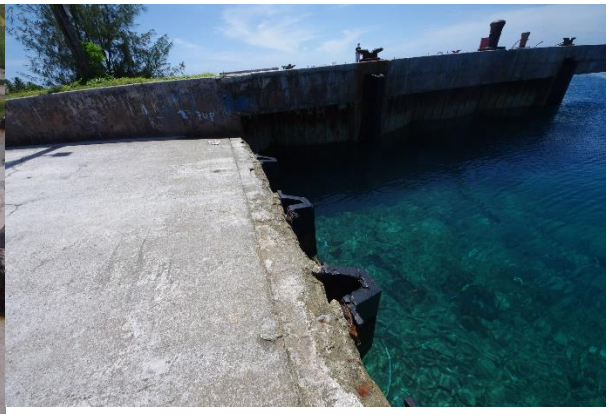
Corrosion of Dock - Jaluit

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

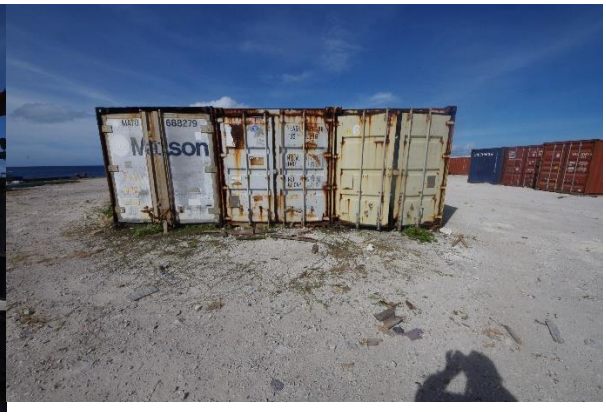
Old trucks at Delap Port

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 [5].

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 [6]. 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[7]. 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

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

[6] 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.

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