Marshall Islands Maritime Investment Project

Wotje Site Inspection of Dock Facilities

2nd March 2019

Prepared by RMI Division of International Development Assistance

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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
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

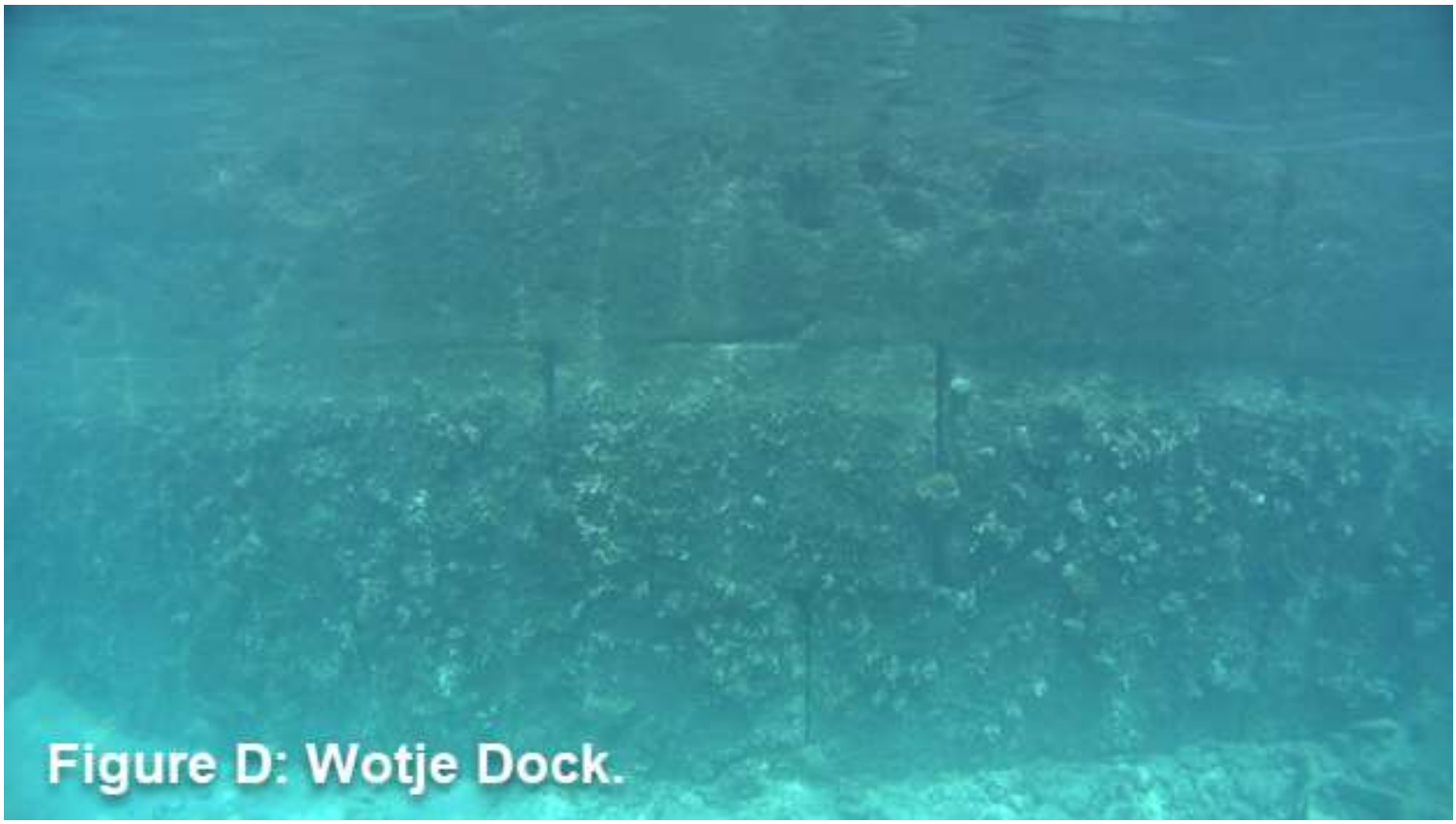


Figure D: Wotje Dock.

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.

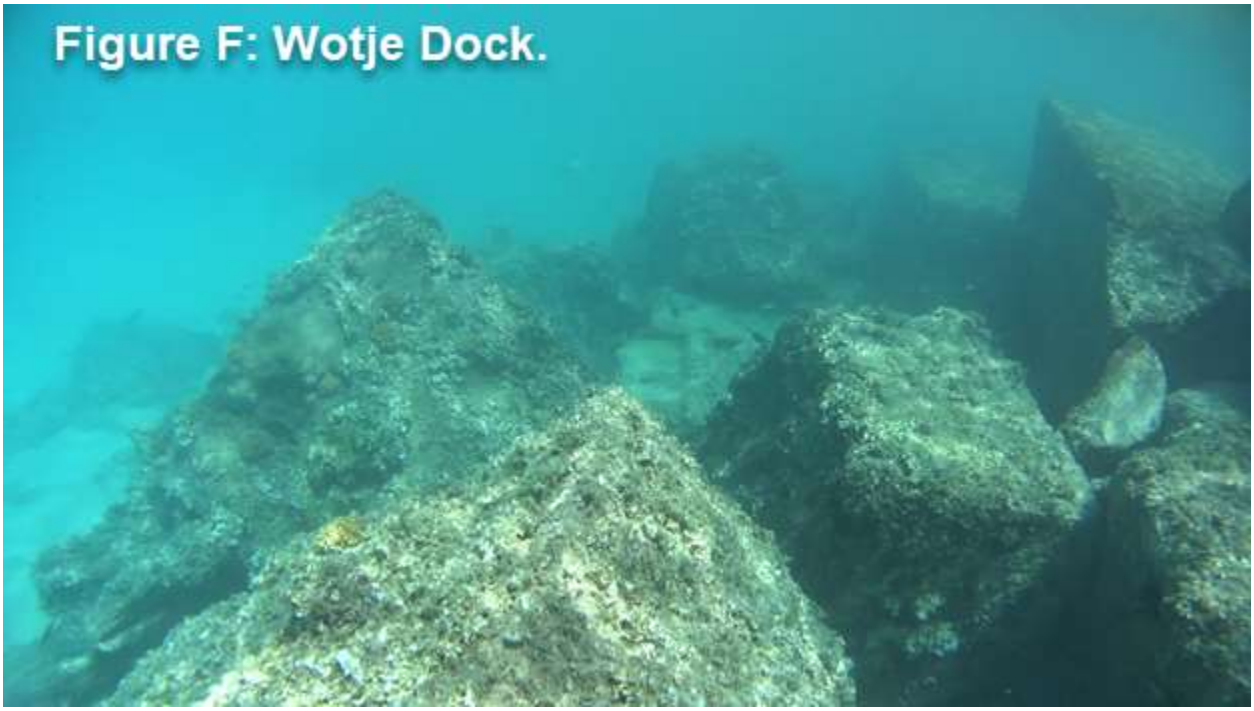


Figure F: Wotje Dock.

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.

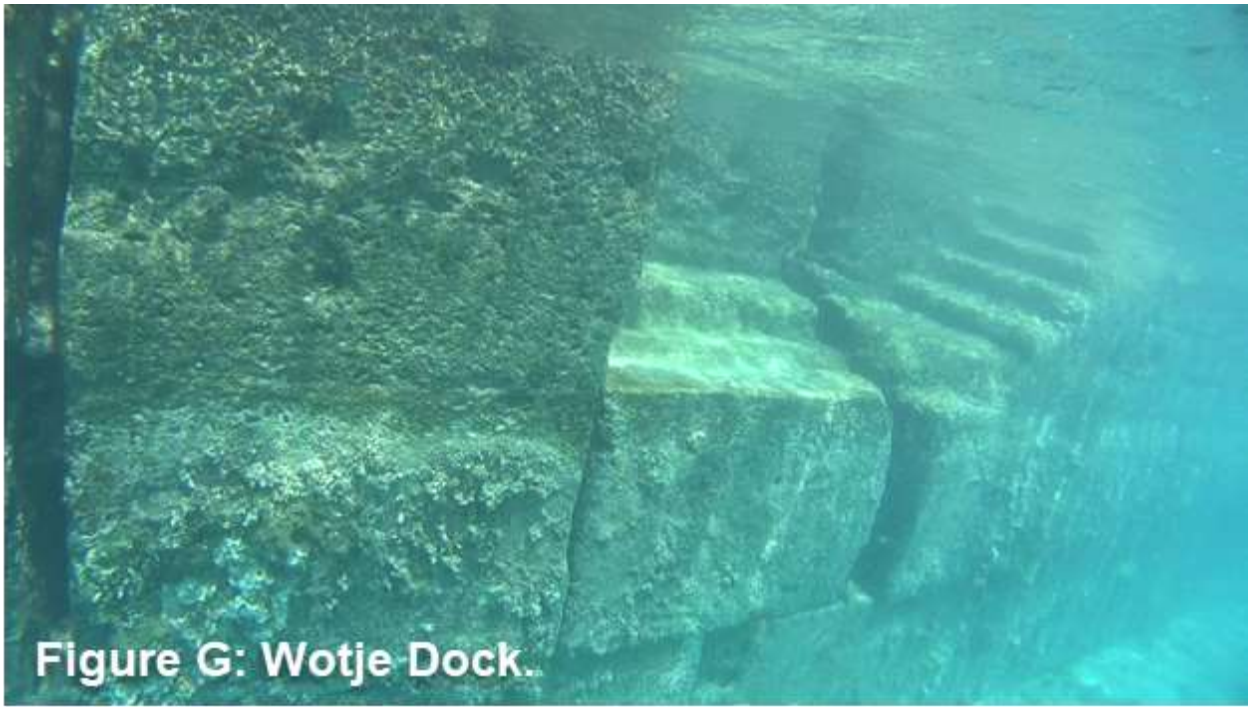


Figure G: Wotje Dock.

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.

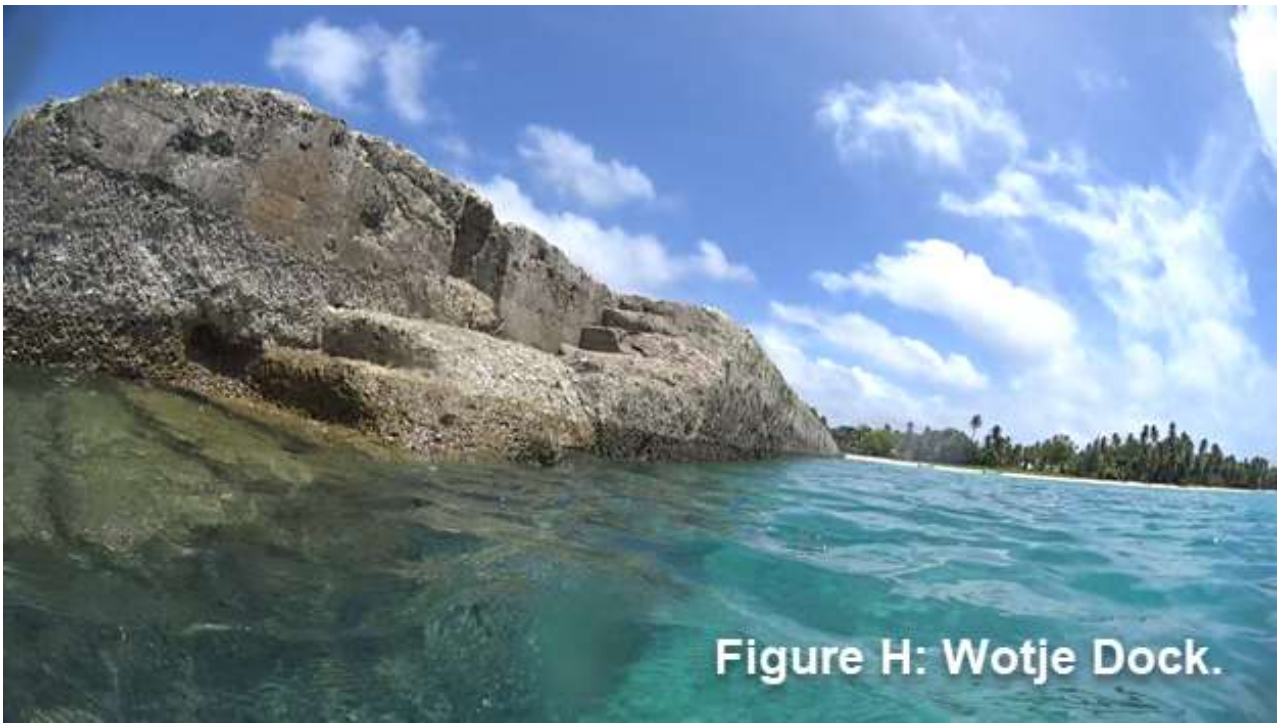


Figure H: Wotje Dock.

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.

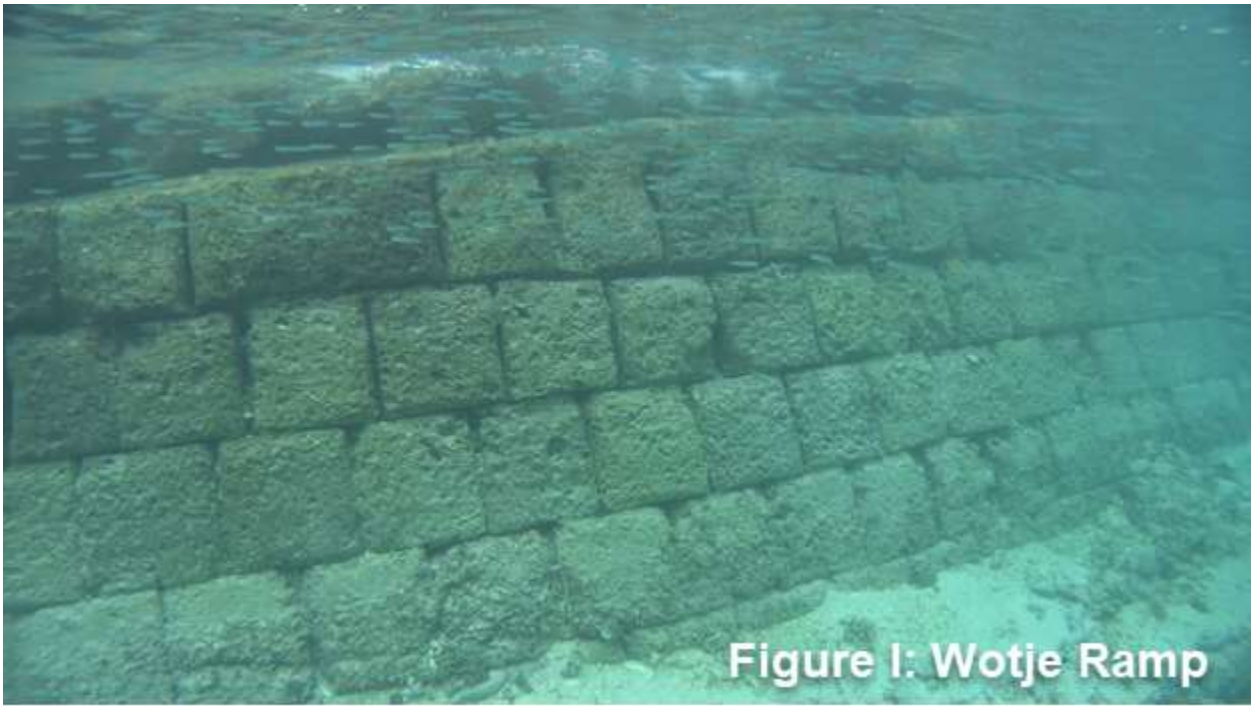
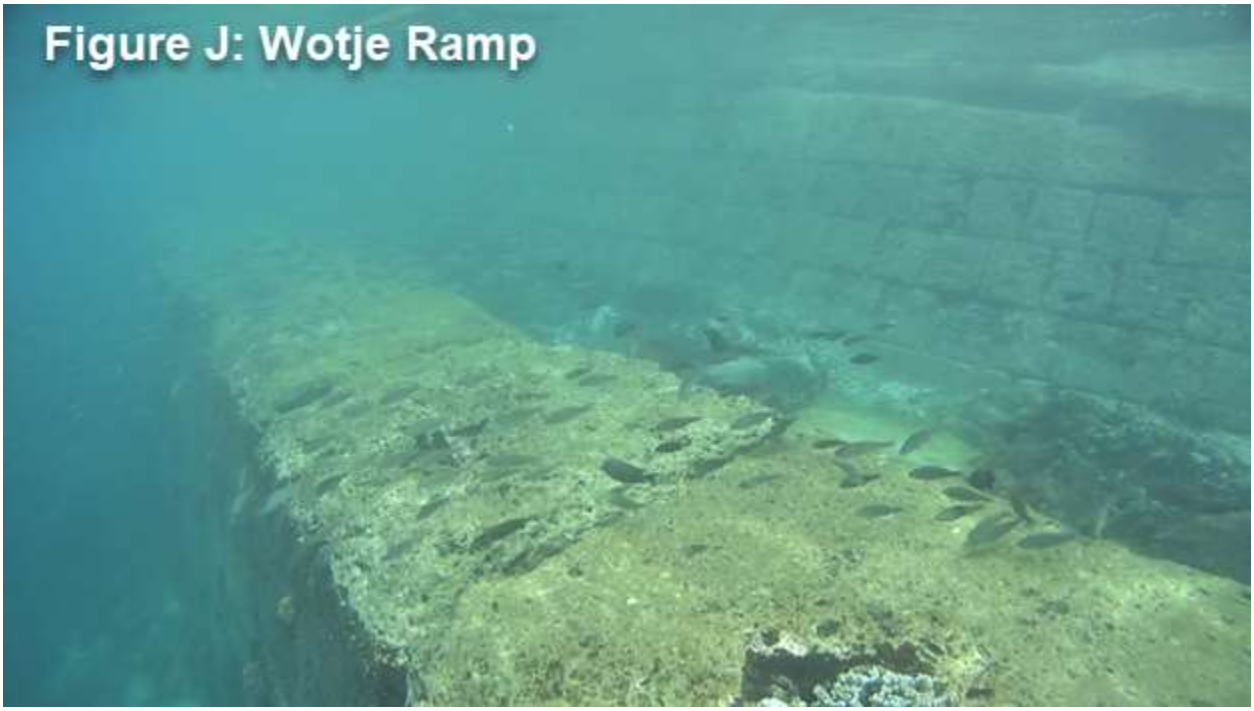
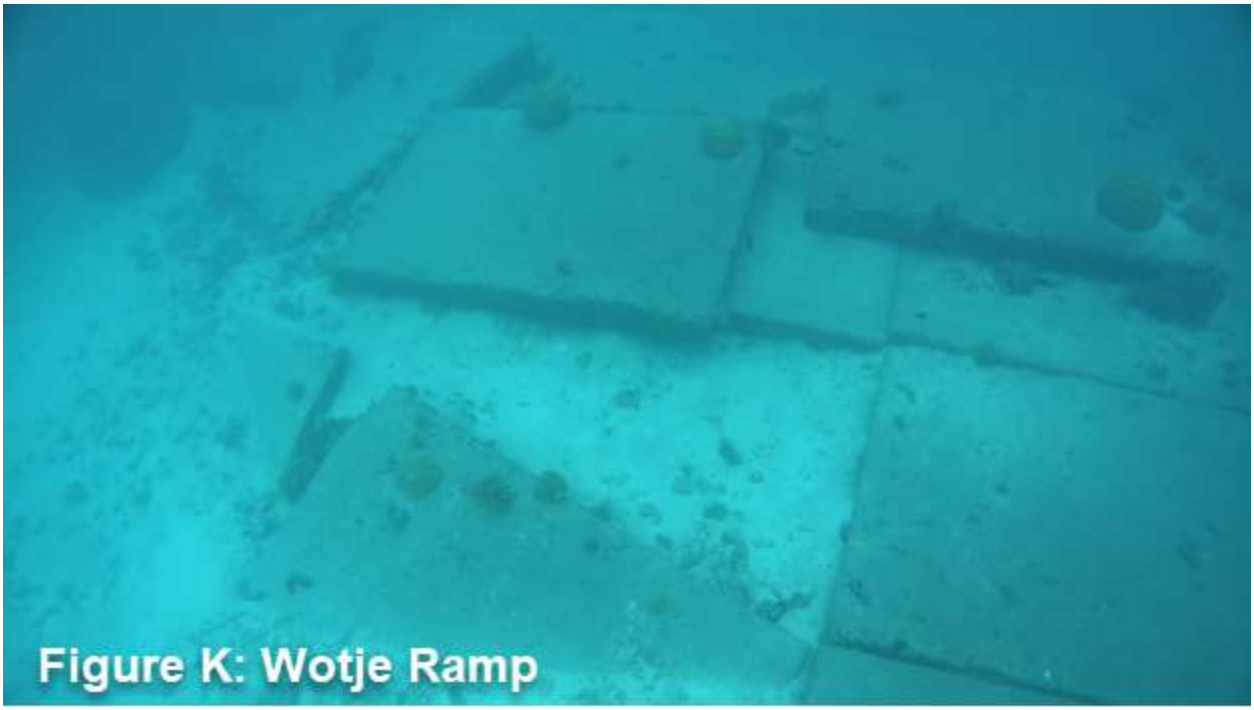


Figure I: Wotje Ramp





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.

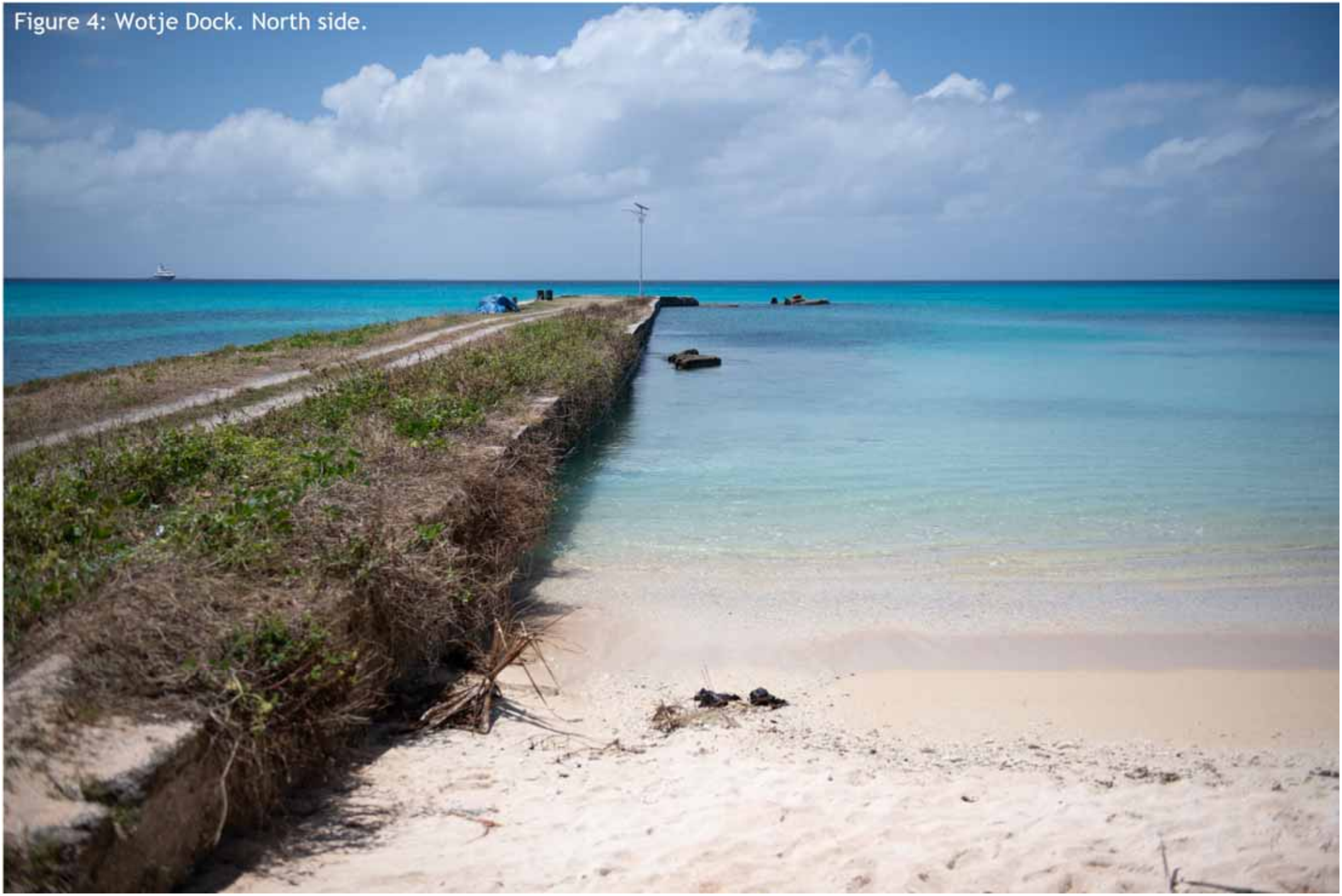

Figure 4: Wotje Dock. North side.

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

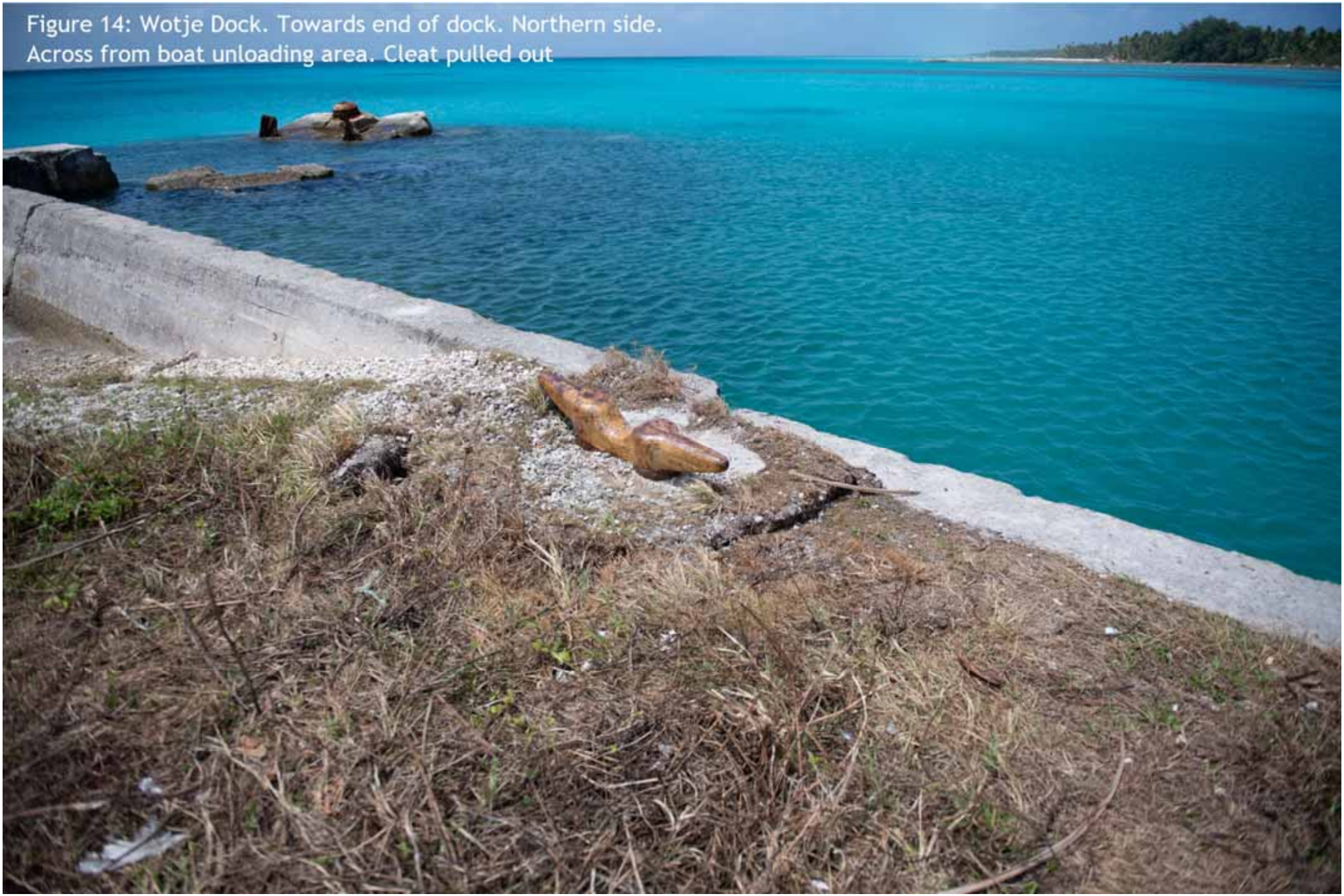

Figure 14: Wotje Dock. Towards end of dock. Northern side.
Across from boat unloading area. Cleat pulled out

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