

MYANMAR OCEAN PROJECT



INTERIM ASSESSMENT
OF PILOT MOPDROP AT
SITAT GALET VILLAGE,
LAMPI MARINE PARK.

The year-long pilot MOPDROP trial at Sitat Galet village is ongoing. The trial including the construction and implementation of the MOPDROP pontoon was funded by Istituto Oikos and private donations.

The Rural Waste Management Workshops have been led by Thant Myanmar and funded by Prevent Plastics Myanmar.

Myanmar Ocean Project is a registered marine conservation organization with the mission to restore and protect the health of Myanmar's oceans. Founded in 2018, the non-profit organization is the first to plan and execute strategic survey and cleanup expeditions to understand and assess the problem of abandoned, lost, or otherwise discarded fishing gear (ALDFG) in Myanmar. For more information see: www.myanmarocean.org

Author: Thanda Ko Gyi, Myanmar Ocean Project 2023

Cover Image: Gill nets being repaired on the boat at Sitat Galet village, Lampi Marine Park.

Photo credit ©Sirachai Arunrugstichai

ACRONYMS USED



ALDFG

Abandoned, Lost, or Discarded Fishing Gear

OIKOS

Istituto Oikos

MOP

Myanmar Ocean Project

MOPDROP

Myanmar Ocean Project, Disposal Rig for Ocean-bound Plastics

INTRODUCTION



In Myanmar, derelict fishing gear and a lack of waste management facilities in the coastal communities are emerging as one of the most critical issues impacting the marine ecosystems and livelihoods of the coastal communities.

Fishing is an integral part of the coastal communities, not only as a source of livelihood but also as a source of food and culture. Yet, the fish catch has been declining for years due to overfishing from unregulated fisheries and environmental degradation.

Very little management plan has been put in place to tackle waste management and end-of-life fishing gear disposal along the coastal towns and villages. The thousands of fishing boats working along Myanmar's coast have no access to proper disposal facilities for waste from the fishers on long journeys and for end-of-life fishing gear.

Abandoned, lost, and discarded fishing gear (ALDFG) continuously threatens the functions of marine ecosystems and in Myeik Archipelago, it poses a very real threat to Myanmar's budding marine tourism industry. In Myanmar's only marine national park, such as Lampi, the negative impacts from derelict fishing gear undermine the purpose of protecting the area from anthropogenic harm by drowning endangered marine animals including sharks, rays, and turtles, and smothering seafloor and coral reefs. Furthermore, the depletion of harvestable species directly impacts artisanal fishers.

BACKGROUND

Myanmar Ocean Project's expeditions have found ALDFG to be prevalent in Myeik Archipelago where 95% of the surveyed sites were observed to be contaminated with some form of ghost fishing gear.

One-third of the surveyed sites were classified as ALDFG hotspots. The two main types of hotspots observed were as follows;

1. Marine environments where intentional discarding of end-of-life fishing gear by resting boats was taking place regularly.
2. Marine environments where multiple layers of lost or abandoned large pieces of nets were found covering coral reefs, sea floor, and underwater pinnacles.

SITAT GALET VILLAGE, LAMPI MARINE NATIONAL PARK

Sitat Galet village was one of the identified hotspots for discarding end-of-life fishing gear with various types of fishing boats taking shelter during their journeys.

It is one of the busiest bays in the region for different types of fishing boats to rest, sell their catch, repair their nets and replenish their food and fresh water supplies, as well as take shelter from bad weather.

This makes the area a hotspot for discarding old pieces of fishing nets and also other plastic wastes from consumer products.

Our ongoing gill net loss assessment surveys with the fishers at this location are also revealing that fishing boats are producing end-of-life fishing gear weighing between 20kg to 100kg each visit to this location.



*A fisher being interviewed in Lampi marine park.
©Thanda Ko Gyi*

PROJECT OBJECTIVES

What is a MOPDROP?

MOPDROP (Myanmar Ocean Project, Disposal Rig for Ocean-bound Plastic) is a collection shed for end-of-life fishing gear and other ocean-bound plastics built on a pontoon to be located in areas frequented by fishing boats across the archipelago in Myanmar.

Sitat Galet was chosen as the pilot location to trial a MOPDROP due to its proximity to the mainland town, Aung Bar, and the predictability of the presence of visiting fishing boats.

The aim of this trial is to build and implement the pontoon, to build relationships with the villagers, to assess how much end-of-life fishing gear can be collected, to understand the motives and incentives for fishers and villagers to buy into this plan, and to understand the type of plastic that can be collected.

The findings at the end of this twelve months trial will assist our team to better tailor our efforts to maximize collaboration with the fishers and villagers and will allow us to plan the next stage including how much of the collection is recyclable, how the recyclables can be transported and utilized, and replicate similar methods for other hotspots in the region.



*Collected end-of-life fishing gear at MOPDROP
©Thanda Ko Gyi*



*Fish stuck in large gill net entangled on coral reefs.
©Thanda Ko Gyi*

The following specific steps were taken to implement the first MOPDROP trial in the region to hopefully assist us in developing a collaborative solution;

1. Three villages and/or 30 community members engaged in Rural Waste Management Training supported by Thant Myanmar.
2. Set up basic waste separation infrastructure in three communities/villages and establish Waste Management Committee/s.
3. Design and set up in Sitat Galet one trial pontoon as a collection point for plastics, end-of-life fishing gear, and consumer packaging waste (MOP DROP) and assess potential systems of incentives (e.g. income/benefit-generating mechanisms) to guarantee engagement in the collection of local fishers.
4. Collect at least 500kg of ocean-bound plastics and end-of-life fishing gear at Sitat Galet MOP DROP during this trial period in collaboration with local fishers.
5. Engage with island and coastal communities in the area to survey and assess for a second suitable location for the implementation of MOPDROP.
6. Produce of final report analyzing the results of the collection trial to articulate the next stages. The final report will include how much of the collection is recyclable, how the recyclables can be transported, utilized, and/or commercialized, and replicate similar methods for other hotspots in the region.

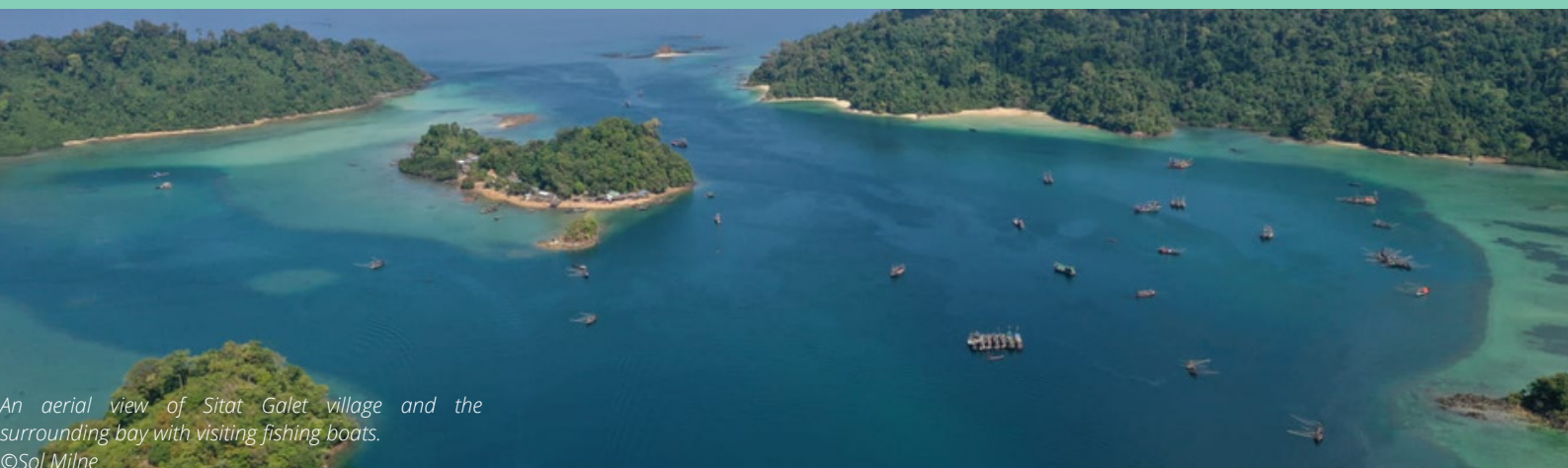
RESULTS AND FINDINGS



RURAL WASTE MANAGEMENT WORKSHOPS

- Three communities were engaged to run Rural Waste Management Workshop led by Thant Myanmar supported by Prevent Plastics Myanmar, between October and November 2022. This includes Sitat Galet village, War Kyun village, and Aung Bar.
- All three villages conducted beach and community cleanups during the workshops.
- All three villages completed the workshop and incinerators were tested and installed.
- 316 community members participated in the workshops and cleanups. 64 villagers from Aung Bar, 200 villagers from War Kyun, and 52 from Sitat Galet village.
- During the workshop periods, the following amount of waste was cleaned from the beaches and villages; 29.85 kg from the households and 70kg from the beach at Aung Bar, 343kg at War Kyun, and 45 kg at Sitat Galet village.
- A strong mother and son-led team was key to War Kyun being the most successful workshop with continued cleanups and waste separation efforts
- Sitat Galet had no apparent leader and little ownership of the place they live in and was hard to engage. Residents are migrating temporary traders and mechanics.
- Aung Bar took longer to engage with and to gain trust due to apparent distrust of organizations and groups they have previously engaged with.

RESULTS AND FINDINGS



An aerial view of Sitat Galet village and the surrounding bay with visiting fishing boats.
©Sol Milne

SITAT GALET MOPDROP TRIAL

- Construction of the MOPDROP pontoon was completed in early December 2022 in Magyone Galet village and it was transported and installed in Sitat Galet village on the 10th of December 2022.
- The location of MOPDROP at Sitat Galet currently is as follows; 10.878514, 98.079636
- It has since been used 13 times by fishing boats passing by between 13th December 2022 and 1st February 2023.
- The majority of end-of-life fishing gear left behind has been gill nets ranging from 8kg to 100kg at each disposal by an individual boat and one (accidental) use by an industrial purse seine boat disposing of 120kg of end-of-life purse seine nets. The purse seine boat mistook the MOPDROP pontoon with a pontoon selling fresh water and upon realizing the purpose, used it to leave behind their end-of-life gear.
- The collected nets were sold to a collector at Koh Phot village.
- Our team has begun handing out small rubbish bags to fishing boats to encourage the collection of smaller pieces of end-of-life fishing gear to prevent the fishers from throwing them in the ocean as they work to fix the nets.
- The MOPDROP pontoon has so far collected 587 kg in the two months which is less than expected.
- Circumstances that led to less collection compared to during monsoon when the team was interviewing fishers appear to be that the boats are spending less time taking shelter in the bay. The more time they spend away from the bay would result in more waste being thrown into the ocean before the trip is made to the bay.
- Other factors influencing the use include the frequent presence of the navy and the fluctuating numbers of boats at sea due to uncertain regulations.

RECOMMENDATIONS

- The team has put up a sign at the MOPDROP pontoon and will be making more signs to direct the fishers to the pontoon. They will be put up on the walls at all the market pontoons that sell fresh water in the bay with permission. All the boats visiting the bay visit a freshwater supplier pontoon.
- More bags in different sizes will be made and will be handed out to the fishing boats visiting the bay to encourage the collection of smaller pieces of end-of-life nets during the time the fishers fix and repair the nets and to make it more convenient to drop them off at MOPDROP pontoon. Will include an information pamphlet and instructions.
- We were informed words have started picking up and the use of the MOPDROP pontoon will likely become more regular.
- The team is currently taking counts of all visiting boats at the bay to understand the busy periods within each month to understand how it affects the use of MOPDROP.
- Potentially working with the collector at Koh Phot village since it is closer to transport.
- At the sixth month after installation, the MOPDROP will need to be taken out of the water to polish the base, we hope to make the pontoon larger by then to accommodate more weight.
- Within the Lampi marine park island villages, the team would not recommend another disposal facility but would prioritize continuous engagement with fishers by handing out bags and collaborating with villagers.



MOPDROP with collected end-of-life fishing nets.
©Thanda Ko Gyi