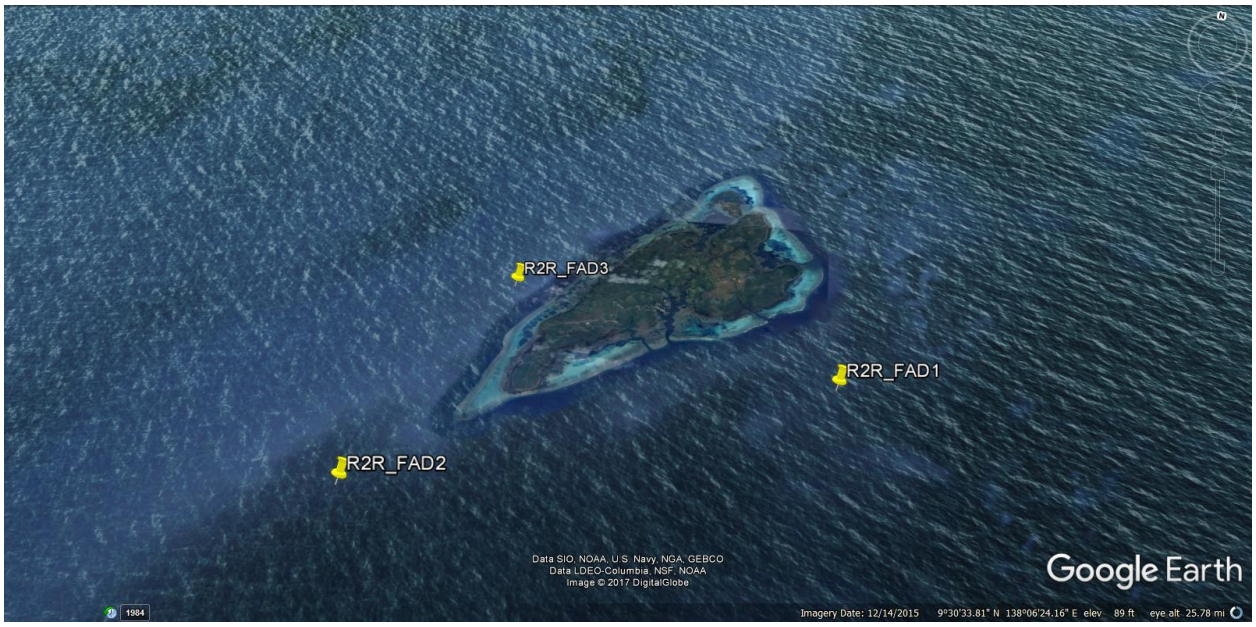
Site Survey Report

GEF 5; R2R Project

INTRODUCTION

On June 15, 2017, MRMD Staff in collaboration with Yap Fishing Authority conducted an initial site survey for potential sites to serve as host and to permanently deploy three Fish Aggregate Devices. Two of the visited sites were former and previous FADs location deployed by the Yap Fishing Authority in the 1980s which proved to be effective and accessible to both small-scale commercial fisheries vessels but mostly to small scale fishermen.

Based on what was observed during the survey and confirmed from the Google Maps, the farthest buoy from the coastline is what is labeled here as FAD number 2 located approximately South-Southeast of Yap Island and approximately 5.26 miles from the reef at coordinates 09.27'515N; 138.13.566E. Second farthest is that of what is labeled here as FAD No. 1 which is situated approximately 4.13 miles from the closest point of the reef and better positioned at coordinates 09.22'496N; 137.57'842E. The closest is FAD NO. 3 located at coordinates 09.31.200N. 138.00'.700 E. at approximately 1.76 miles from the closest point of the reef.



Google Map with FADs placement

As previously mentioned and with the exception of FAD No. 3, the other two FADS, NO.1 and NO.2 will be located at previous FAD sites from the earlier years. Additionally, these current sites were selected so that any point in time a FAD is always accessible to any which village on the island as well as within travelling proximities to fisherman and especially to most villages with Marine Protected Areas, MPAs. They are also placed at a distance far enough from each

other so the highly migrated pelagic fish do not roam between FADs when fisherman visit each of any of the FADs. The general consciences of most people in each of the respective villages is that they (FADS) are placed apart from each other enough to prevent roaming fish in between the situated FADs. As explained by one local fishermen with an economical subsidy from fishing, he has observed that when there are a lot of driftwoods the fish tend to roam back and forth between the closest driftwoods when they are found within a general area. Compared to days on when only one driftwood is found, 90 percent of the time, the Catch Per Unit Effort (CPUE) is higher. Based on these observations and recommendations from fishermen including the Yap Fishing Authority, the sites were selected with considerations on key issues.

SITE SELECTION

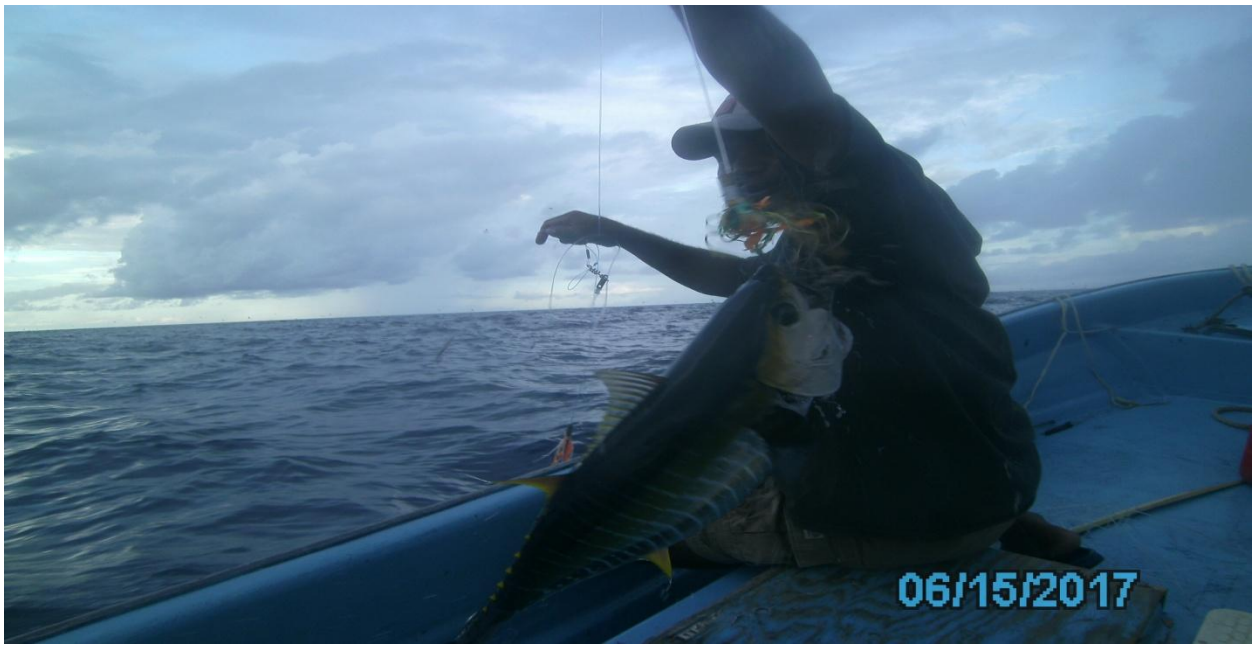
The three selected sites were based on recommendations from fishermen as well as earlier collective experiences of which FADs are most effective. FADs numbers 1 and 2 locations proved to be effective with the previously deployed FADs from former years. The third FAD, FAD No. 3 however, is yet to be proven as no FADs were deployed on the western side of the island. Fishermen most certainly believe this new location would be effective due to a high concentration of pelagic fish found in the area. They certainly hope that this newer FAD would keep fish around the area for longer periods. Fishermen claimed that when pelagic fish are present in the water, the general location of this third FAD usually provide higher catch effort.

Land reference from FAD No.1 (Background: Gagil and Tomil)

SITE SURVEY METHOD

One unit of 25-footer Yamaha boat equipped with a double 4 stroke Yamaha engines was used to conduct the initial site survey. A handheld GARMIN 72H™ GPS unit was used to pinpoint the provided GPS coordinates. A Sea & Sea camera in a Sea & Sea housing was used to capture still shots in relations to proximity and referencing purposes as well as other resourceful photos

The boat steamed to the location of the provided coordinates and stopped in the area long enough for data gathering as well as observation and noting all other relevant information on waterproof paper. After all information has been gathered, the boat proceeded from its point of origin noted and saved in the GPS unit first to a quarter mile radius with hand-lines equipped with lures to assess fish stock density in the area. After the boat comes to a complete circumference of the area, it then moves another quarter mile farther and so on to the one mile mark at which the stock density assessment is completed and the boat moves on to the next FAD position.



General Fish Stock Assessment at FAD No. 3

The crucial part of the survey which was not done was the depth sounding of the area to provide information of actual depth. This was not done due to lack of equipments on island which could reach such depth; however, it shall be noted that the team will continue exploring ways to find the accurate depth of those selected FAD locations. It is crucial to have information on the depth so anchor ropes could accurately be measured, otherwise, the ropes will either be wasted with too much slack or ropes too short to enable effectiveness of the FADs. General depth figures were provided on two of the FADs, FAD No.1 and No.2; however, none are available for FAD No. 3. Currently, the only available piece of information on depth at FAD No. 3 is what is available and presented on Charts, Chart No. 8117.

DISCUSSIONS

1. The three planned FADs to be deployed around the island of Yap will be of great assets to the greater community of the main island, Waab, in Yap State, as expressed by most fishermen being interviewed.

2. Overtime, the FAD will relieve pressure from the reefs, most especially such communities with established Marine Protected Areas. It will also provide alternatives for other people who may not have access to fish on the reefs around the island due to their lack of fishing grounds.

3. The three planned FADs are being distributed so all if not most villagers and fishermen could access at least one of them at any given time.

4. Two of the FADs are prepositioned in areas where it was highly effective based on previous ones being deployed.

5. The Third FAD is in a location where no FAD has deployed in the past, according to the recollection of fishermen who have fished at all the previously deployed FADs. However, this new position holds high potential for effectiveness. The general survey of free-trolling in the area out to the one mile mark presented good and effective results of higher catch effort within the general area.

RECOMMENDATIONS

These selected sites hold high potentials for the FADs to be effective given the previous collective experiences from the fishermen interviewed. As most of the fishermen agreed, they are spaced at well prepositioned areas far apart to prevent pelagic fish from roaming in between the FADs when being visited by fishermen thus reducing fishing cost and increase catch efforts. These FADs will also help alleviate fishing pressure from the reefs as well.

It is recommended that these positions are kept at the selected positions so that it is accessible, effective, and numbers of fishermen at one given boy is less than if there is only one serving the population of the island. These proposed locations are and will be at the best interest of the greater communities of Yap Island.

Finally, to reduce the cost and to enable all three FADs to be deployed with enough funding for materials and labor, it is highly recommended that the actual depths of those are further explored so that the right amount of rope and other materials are kept to a minimum and effective length. It will be of great importance to have at least this final but crucial piece of information. It will be of urgency to obtain such information prior to the construction phase of the FADs. The lack of available resources available on island to accurately measure and obtain depth information is what is keeping those information from becoming available; however, must be done.

SITE SURVEY REPORT

Fish Aggregating Devices (FADs)

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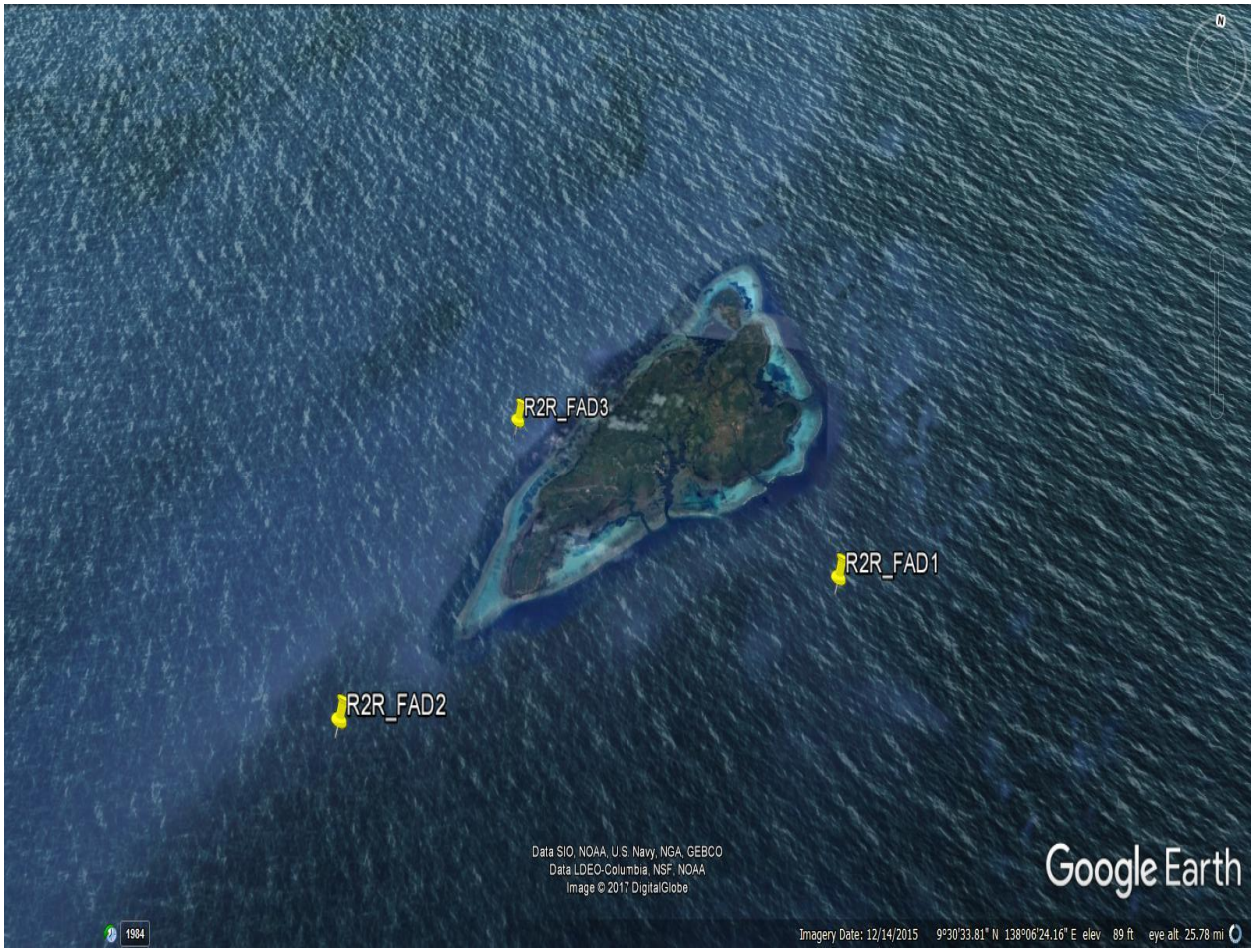

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