

## Ghost Fishing Project

In July 2021, fishers from across the island were introduced to the topic of ghost fishing workshop hosted by the Global Ghost Gear Initiative (GGGI) held on July 8-9, 2021 where approximately forty (40) participants were in attendance. Following that workshop, devices issued by Blue Ocean Gear and Resqunit were issued to fisher folk to be tested on spiny lobster gear as part of a contract between the GGGI (c/o Ocean Conservancy) and the Jamaica National Fisheries Authority (NFA).

The Blue Ocean Gear Smart Buoy is a system developed to be attached to surface deployed gear and send real-time GPS coordinates back to the fisher via an app on a smart device or via a computer so they can track their gear's location in real-time. Fishers can also be notified if their gear moves from its deployed position for any reason, making the gear very easy to retrieve if lost. The Resqunit device is a combination of escape hatch and emergency retrieval buoy. In the event a piece of gear – most commonly a trap or pot – becomes lost, the Resqunit is released after the cotton twine that holds the unit over a hole cut in the side of the pot biodegrades. The Resqunit then floats to the surface, attached to the pot with a length of line contained inside the floating buoy, providing a method to identify and retrieve the lost trap, as well as opening up a hole in the side of the trap to effectively disable it and prevent ghost fishing potential.

The testing and monitoring of both devices has been ongoing since July 2021 and is being conducted by seventeen (17) fishers across the island at ten (10) landing sites. Some fishers are testing both devices while others are only testing one type of device.

Twenty-four (24) Blue Ocean Gear Smart Buoys were received and are currently being tested in the following locations:

- Long Acre (Galleon), St. Elizabeth
- Discovery Bay, St. Ann
- St. Ann's Bay, St. Ann
- Morant Bay, St. Thomas
- Whitehouse, St. James
- Negril, Westmoreland

Ninety-six (96) Resqunit devices were received and are currently being tested in eight (8) sites across the island. These are as follows:

- Rio Nuevo, St. Mary
- Long Acre (Galleon), St. Elizabeth
- St. Ann's Bay, St. Ann
- Morant Bay, St. Thomas
- Lysons, St. Thomas
- Whitehouse, St. James
- River Bay, St. James
- Jamworld, St. Catherine
- Old Harbour Bay, St. Catherine

### Testimonials

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Fishers have testified that the devices do indeed work as intended. Some say that the Resqunit devices pop up when they were supposed to, and one fisher said that his gear got lost and he was able to recover all his gear thanks to the Resqunits. This device has helped him to save thousands of dollars which would have otherwise been spent to replace his traps.

### Challenges of Blue Ocean Gear

There were issues receiving the devices from the Customs Department. This process took a very long time and had to be facilitated through a customs broker. One (1) of two (2) iPhones which were sent by Blue Ocean Gear and slated to be used with the Blue Ocean Gear App was not received as the cost in storage fees at the wharves were very high and exceeded the cost of the phone. One phone still remains at the wharf while the other was issued to a fisher for testing.

Some of the Smart Buoys needed to be recharged and although still in the water had to wait for months for the charger to arrive in the island. When the chargers finally arrived in January 2022, they were not released from customs and into the hands of the NFA until March 2022. This has posed another issue as there were only two (2) chargers that were sent and the devices are being tested right across the island, therefore the chargers will have to be transported to each location and left with the fishers for a period of time so that he or she will have the time to retrieve their gear and have it charged. After the buoys have been charged, the officer will have to go back to the location to collect the chargers and take to another location.

A fisher in St. Ann's Bay reported that buoy 311 was cut off by passing vessels, this Smart Buoy is nowhere to be found as the battery has died and is no longer transmitting its location, so it has been deemed lost.

Some fishers within the Montego Bay area were submerging the Smart Buoys under water. They say this is a practice they use in that area to prevent predators and other fishers from finding their pots. They were however advised that the buoys are not to be submerged, as though they are capable of being submerged for short periods of time, they will not transmit their location data unless they are at the surface.

### Challenges of Resqunit Gear

Some fishers, upon receiving the devices, took a very long time to deploy them in the field to test them. Some fishers have only tested a portion of the units which were given to them and upon making contact with them to retrieve the balance, this proved difficult for the NFA.

Some crab fishers have said that the Resqunit is too large for their crab pots which are made of very light materials and have caused the pots to tumble over on many occasions. Several fishers expressed that they have to use a stone to tie down the Resqunit on the top so that it doesn't turn over. Due to the vast amount of pollution in the area where some pots are set, a high number of barnacles have remained on the units. They recommend that the units be made smaller for their type of fishery.

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Fish pot fishers complain that no fish have been able to be caught in their pots since they installed the device. The reasons for this are unclear, but it may be that fish are spooked by the bright yellow of the device. Others complain that when they cut the hole in the pot to attach the Resqunit, the fish runs out of the pot when the unit pops up. This is, of course, by design, as the Resqunit is designed to disable traps to prevent them from ghost fishing.

The expected time for the Resqunit devices to deploy is about 90 days, depending on the temperature and salinity of the water in which they are used. Fishers say that the 90 days period for pop up is too long for their needs (as they only typically deploy traps for a matter of hours or days – not weeks or months) and this should be adjusted to suit soak times for fishers. Others have said that some of the devices did not pop up at the expected 90 days and they lost their test traps, though it is unclear whether this is because the traps were moved from their original locations due to strong currents, etc. Some fishers have used a banana string to replace the biodegradable string as they say this works well and is much stronger.

In March, 2022, Erik Nobbe from Resqunit travelled to Jamaica to speak with the NFA and local fishers to address some of their concerns and to test some of the new electronic release versions of the Resqunit devices that rely on an electronic release timer to activate the buoy rather than the biodegradable “rot cord” found on the original versions. This was found to be far more effective for fishers in Jamaica, as they don’t have to wait 90 days for the device to work, but rather can set the devices to activate at a set time (in minutes, hours or days). One of the remaining challenges with the prototypes is that currently the timing on the units has to be set at the time of manufacture, though with the production versions, users will be able to set the timing via a smartphone app to whatever they want. Fishers have also recommended the inclusion of serial numbers, manual timing, longer ropes and even a change of colour of the unit. It is hoped that further testing can be carried out in the future using the electronic release versions and incorporating other modifications.

### Monitoring

Gear monitoring continues to be done across the island on a continuous basis.

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(Omar – Whitehouse, St.James)



Crab Pot fisher – Jamworld, St.Catherine



Shem & Eletha – Rio Nuevo, St.Mary



Artesanal Fish Pot (Z-Traps)





Trecion Walters - Long acre (Galleon)