Fisheries Data Collector
Code of Conduct

Fisheries Unit
Department of Agriculture
Government of Montserrat
DRAFT 27 May 2018

This document was produced for the Government of Montserrat.
It remains in draft form until it is incorporated into the Government's fisheries policy

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Role of the Data collector

The work of the Data Collector is vital to the long-term sustainability of the fishery. Good fisheries management depends on the robust, high-quality and comprehensive data that Data Collectors provide.

In addition, as Data Collectors you are the "eyes and ears" of the fishery. Data Collectors can provide feedback to the Fisheries Assistant on new issues arising in the fishery, and be a conduit for questions and concerns by fishers themselves.

The Data Collector is an officer of the Government of Montserrat. As such, you are required to;

- Maintain a high level of professionalism
- Work safely, and demonstrate a responsible and safe work ethic
- Provide excellent customer service
- Be diplomatic, courteous and kind to all stakeholders
- Show discretion and take care in protecting confidential, restricted and commercially sensitive information held by the GoM that is not public

You should familiarise yourself with **the National Fisheries Plan**. This is a publicly available document describing the GoM's vision of the fishery, conservation measures, fisheries assessments, science plan, and public outreach.

There are also a number of legal documents you should be familiar with; the Fisheries Act (9.01, Revised 2013) (http://agc.gov.ms/wp-content/uploads/2011/10/9.01-Fisheries-Act.pdf, Fisheries Regulations, and Licence Conditions. These describe in detail the requirements of the GoM and Fishers.

Your primary role is to collect high-quality primary data for biological monitoring of the stocks as well as monitoring the reef ecosystem.

You do not have a formal compliance role, but you are able to collect evidence to support compliance investigations.

All questions regarding your tasks and responsibilities should be directed to the Fisheries Assistant or whoever is acting on their behalf if not available.

Brief Description of the Fishery

Montserrat has a small artisanal fishery of approximately 18 vessels and 25-30 fishers. Vessels are typically small, open, wood or fiberglass construction from 3 to 10 m in length (as of January 2018). The fishery targets coral reef, demersal, coastal pelagic, and pelagic species. All catch is either sold immediately to the public or restaurants within an hour or so of landing, or utilized for personal subsistence. Most fishing in Montserrat occurs within 3 miles of the coast all around the island however, there is a developing FAD (Fish Aggregating Device) fishery in waters over 500m(?) depths.

Pots fishing uses traditional styled wooden framed traps with chicken wire mesh, set at depths from tens to hundreds of feet. Pots are sometimes baited with plant material or fish discards. Pot fishing is non-selective, with most of the varied catch retained for landing. Pots are marked with 'Clorox' bottle floats. These floats are often lost through natural deterioration or due to passing vessels and as such, pots can be lost and not recovered. Soak time for pots is in the order of days before being pulled up to harvest the fish. Once the fish are removed, the trap is baited and returned to the sea. If ocean conditions are not favourable, pots may be left soaking in the ocean for several weeks.

Bottom longlines are used at depths of ??, are typically ?? in length with ?? numbers of hooks (size of hook?) baited with squid, baitfish, or other discard. This is broadly also non-selective in terms of species catch.

Handline fishing is similar to bottom longlines, using baited hooks, and relatively non-selective.

Beach seine and gill nets fishing targets inshore pelagic species of ballyhoo, gar, or bait fishes. Mesh sizes are approximately ??. Fishing is carried out around the islands, and sometime vessels work together. In the case of gar catch, smaller fish are often released.

Troll line fishing is carried out around the islands over deeper water targeting larger pelagic species of tuna, wahoo, mahi mahi, ??.

Spear fishing is carried out largely by recreational divers or dive clubs, targeting lion fish. This catch is largely unmonitored at this time. Lionfish is a marine invasive, and catching lion fish is encouraged among all fishers.

The majority of catch among all fisheries is landed at Little Bay. There are one or two exceptions (eg Isles Bay, and ?) where catch is landed.

Fishing activity occurs every day of the week, with peak activity on the weekends. Most fishers are part-time, with other primary employment during normal working hours during the week.

General Daily Schedule

The daily schedule for Data Collectors needs to be relatively flexible given the variety and frequency of various fisheries and fishers. Generally, the structure should consist of;

1. Morning (8am) visit to the Port Authority to determine number of fishing vessels that have gone to sea for fishing. The Port Authority records these vessels in a dedicated Fisheries logbook.

   Some fishing vessels are used for other purposes such as diving, goat hunting, or sand barge tenders, and when this occurs those vessels are not recorded in the Fisheries logbook. It is worth visually determining the number of vessels that are still moored in the bay vs the number that are actually fishing according to the logbook.

2. You should be able to plan the rest of your day around the vessels you expect to return later that morning, afternoon or evening. Some vessels stay out overnight, and this can be determined from the Port Authority logbook the next day.

3. Call fishers from other parts of the island that do not land fish at Little Bay. Conduct their interview, record their catch. Where possible, arrange a time to go meet them face to face to record catch when landed and get any other feedback.

4. Consult the Biological Sampling white board to see which species require biological data collection for the month.

5. There may be some time now before fishers return. This would be a good time to prepare gear, sample containers, labels, enter data, fill in Fisheries Unit Log Book, produce statistics report, process/package otoliths, etc.

6. You should be alerted to fishers arriving back to port via phone or text message, IVMS, or other means. You should then immediately head down to the Port either on your own or in pairs, depending on the work that is required that day.

7. At the end of the day, all gear needs to be washed thoroughly with cleaners, and stored.

8. At the end of the day you should ideally report to the Fisheries Assistant or Fisheries Officer your day's activities and any other matters arising from your day's work and observations.

Health and Safety

The Fisheries Unit aims to provide for a safe working environment for all staff, including provision of equipment for the field.

Working at the Port Authority

Before entering the Port Authority, you will be informed of any shipping activity. At particularly busy times, you may be given limited access where you must park the vehicle and walk to the jetty, or you may not be permitted access at all. It is important to cooperate with the Port Authority at all times.

When working on the jetty you must;

1. Advise the gate house of your intentions and time you're likely to spend near the jetty
2. Wear a high-viz vest at all times
3. Wear a hard had when there is shipping activity
4. Wear sunblock if you will be out in the sun for long periods.
5. Ensure the vehicle is not blocking other Port activity
6. Conduct observations and data collection quickly so as to not cause any other delays.

Optional gear to use;

1. Hard-wearing thick rubber gloves for handling fish with spines, or lionfish.
2. Sun glasses and hat.
3. Waterproof overalls or butchers apron when doing dissections.

Driving

You will be required to drive to various sites for data collection, or other tasks. When driving;

1. Always obey all traffic regulations
2. Drinking and driving will not be tolerated, and will result in immediate dismissal.
3. Remember to be courteous and diplomatic when driving GoM vehicles.
4. You must be insured to drive.
5. Remember to fill out the vehicle logbook.

If you have any other suggestions, please talk to the Fisheries Assistant.

Equipment

You will be responsible to the care and maintenance of various pieces of equipment. You will also be tasked with maintaining supplies of various consumables, forms, etc.

STATIONERY

- Data forms.
  - Catch
  - Length-weight
  - Length frequency
  - Otoliths
  - Interviews
- Pencils (HB or 2H)
- Rubbers
- Otolith envelopes
- ID guides. Biological manuals
- Notepads
- Waterproof paper/labels
- Folder containing regulations, licence conditions, Fisheries Act.

CLOTHING

- Hard Hat
- Hi-Viz vest
- Hat
- Overalls/apron
- Rubber gloves

EQUIPMENT

- Fish Baskets
- Digital hanging scales
- Digital bench scales
- Large plastic tray for weighing large fish
- Transparent plastic bags, various sizes
- Measuring boards
- Small gutting/filleting knife
- Scalpel and scalpel blades
- Forceps
- Digital microscope
- Calibration weights

Making Fisheries Observations – General Considerations

Main considerations

1. Ensure accurate good quality reporting.
2. Work quickly so as to not hold up fishers from their jobs
3. At the onset, make it clear to the fisher what data you aim to collect e.g. total catch, species catch, length-weight measurements, etc.
4. Be assertive, but considerate. It is the fisher's obligation to help facilitate collection of data and to respond to the requests of the data collector. This is particularly important when taking extra time for biological data collection.

Total Catch / Species Catch

1. Refer to *Biological Data Collection Manual*
2. Refer to *Species ID Guides*
3. Fishers may help load fish straight into baskets for weighing
4. Fish may be tied up in sacks when landed. Confirm with the fisher the contents of the sack, or ideally, ask if you are able to examine the contents yourself.
5. Record weight as read on scales. Weight may fluctuate while hanging so make a best estimate of the weight.
6. Either TAR the scales while weighing the basket, or record the basket weight on the form and indicate if the basket weight needs to be deducted from each weight measurement.

Length Frequency

1. Refer to *Biological Data Collection Manual*
2. This can be done from the back of the truck. Ideally, this should be done with 2 data collectors to increase speed.
3. Take a sample of the species of interest (eg if gar, then take a sample of 30 fish). If there are only a few fish of each species caught, then measure the whole catch.

   IMPORTANT – make sure your record if this is a TOTAL or a SAMPLE
4. TAKE A RANDOM SAMPLE. It is very important that the sample is representative of the whole catch. Eg in the case of gar, sometimes the fishers will grade the fish in the boat. Try to take a proportionate sample from each grade.
5. Follow the Biological sampling manual instructions for measuring fish length. Different fish have different standard measurements.

Length / weight

1. Refer to *Biological Data Collection Manual*
2. Weight measurements can be done from a sub-sample of the length measurements above.
3. Unlike Length-frequency measurements, its important to get a good range of sizes for length-weight measurements. These should be clearly recorded as NON-RANDOM.
4. For larger fish, use a tray on the balance.

Sex/maturity and Otoliths

1. Refer to *Biological Data Collection Manual*
2. Can be done on either Random or non-random samples, but must be clearly indicated on the data sheet which they are.
3. Follow protocols as set out in the Biological data collection manual.
4. Ideally, sex/maturity and otoliths should be taken all at once. Length and weight measurements are also required.

Conversion Factor

1. Refer to *Biological Data Collection Manual*
2. For species that are processed at sea, eg Old Wife.
3. Must request in advance that fishers return fish Whole and unprocessed.
4. Measure weight of whole fish.
5. Ask fisher to process fish as would normally be done at sea.
6. Re-weigh processed fish.
7. Repeat for at least 20 fish if possible, of various sizes.

Other samples

You may be required to make specific measurement for research or stock assessment purposes. A research protocol will be provided for this work. If none is provided, then do not do the work until a proposal is provided. Review the proposal with the person requesting the data before going into the field. Such projects may include collection of stomach samples, measurements for condition index, taxonomic studies, etc.

Elements to the proposal that should be clear to you include;

1. Summary of the purpose of study
2. Species
3. Number of measurements / samples
4. Size range? Depth range?
5. Which fishery – pots? Nets? Lines?
6. Data sheets
7. Where/when hand I data and to whom
8. Equipment – eg sample bags, tools.
9. Time period – how long to continue the study?

Interviews with Fishers

Fishers have the best knowledge of the fishery and the reef, and they are typically the first people to detect any changes. Its important to try and capture some of that knowledge through questions and listening while conversing with each other. It is important to try and capture other details of the fishery that are not easily quantified. This information may form the basis for further investigation or management and policy development. Questions to ask formally include;

1. Number and types of gears used
2. Bait used

3. Sea conditions
4. Location of fishing (if not on IVMS).
5. By-catch – especially turtles and sharks
6. General commentary on fishing – good? Bad? Anything different?

Compliance monitoring

Fishers must comply with licence regulations and legislation. It is important that you have a copy of the regulations etc with you if any questions arise. If there is some dispute as to the nature of any regulation, defer this question to the Fisheries Officer or Chief Fisheries and Ocean Governance Officer.

Making observations

While conducting data collection tasks, keep your eyes and ears open for any non-compliance or irregularities. In most circumstances, you should refrain from addressing the issue directly as this might elicit an argument. However, use your best judgement; if you feel the matter can be resolved in a friendly way then that might be more appropriate.

Never offer judgements on difficult areas of interpretation. Refer such questions to the Fisheries Assistant or Chief FOGO. You may then be asked to provide an account of your observation. You do not have powers of arrest.

Collection of evidence.

If you notice something physical, then take a photo and report to Chief FOGO. However, as above, you should not put yourself in a position where conflict may arise. Instead, report the potential infringement to the Chief FOGO and they will determine the next course of action.

Other observations and compliance tasks

You may be asked to make specific observations, such as checking mesh sizes, size of fish landed (if there are restrictions), check safety equipment, check the IVMS (if present), etc. In those instances, you should make it clear to the fisher that you will be taking those measurements or make those inspections. If the fishers protest, then do not persist.

Appendix

1. Biological collection manual
2. Fish ID guides
3. Licence and legal documentation
4. National Fisheries Plan