



MAR 17, 2023

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Protocol Citation: Ellis Gelt, Kiran Bengard, jparadise, slicata, Ellinor Arzbaecher, Juliet Capriola, Laura Barragan, Grace Sandel 2023. Moorea Transect Protocol.

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Protocol status: Working
We use this protocol and it's working

Created: Mar 17, 2023

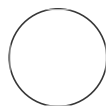
Last Modified: Mar 17, 2023

PROTOCOL integer ID:
79001

Moorea Transect Protocol

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ABSTRACT

This procedure is used for costal monitoring and has been tested along the majority of the coast of Mo'orea, French Polynesia; completed by UC Berkeley's Island Sustainability classes. This protocol includes steps to collect observation data regarding birds, costal armoring, and boats, along shoreline transects.


GUIDELINES

- Do not trample coral.
- Do not walk through private property, unless you have explicit authorization.
- Write observations in a field notebook.
- Take pictures to document your transect.
- Try interacting with people as soon as possible and explaining what you are doing/getting feedback.

MATERIALS

- Gaia GPS mobile app
- Field notebooks
- Stopwatch (with seconds)
- Water-appropriate shoes
- Tape-measurer
- Pencil

SAFETY WARNINGS

-  - Eels and stone fish may be present
- Remain wary of stray dogs (staying grouped and pretending to pick up a stone or stick to throw at them is a sufficient deterrent)
- Entering private property often happens by accident, be prepared with phrases in the local language to explain who you are

BEFORE START INSTRUCTIONS

- Wear attire appropriate for constant re-entry into the water.
- Check that a working seconds stopwatch is present..

GAIA GPS Tracking

1

- 1.1 Have two team-members start a track (full battery).
- 1.2 After starting track recording, with the GAIA-App take a picture of the group's hand-watch with seconds showing on the hand-watch (will help making sure time on watch and GPS time are synced).
- 1.3 When done tracking, don't forget to save and export track as .gpx file.

Observation Methods

2 Bird Observations

- 2.1 When you see a bird, record the number and identify whether the birds(s) is an egret or heron. Refer to the bird ID sheet, linked [here](#).
- 2.2 Record the timestamp at the time you spotted the bird.

Coastal Armoring

- 3 Start time-stamp as soon as coastal profile changes or as soon as you are no longer able to monitor.
 - 3.1 Record-stamp on data sheet and record the coast types on the data sheet using the following categories: unArmored (no apparent human-made alteration), armRocks (armored coast w/ piles of rocks/stones), armSeaWall (armored coast cement/concrete wall), and armOther (other category of armored coast). When you encounter a perpendicular structure (dock/over-water bungalow/stone alignment), record a time-stamp and the type of perpendicular structure on the data sheet.
 - 3.2 Estimate the distance in meters from the coastal armoring to the shoreline and record on data sheet.
- 4 Start a time-stamp if backtracking or if you left the coast and make note.

Boats

- 5 Walking along the shore, take a time stamp of any boats, canoes, jetskis, or other vessels on the water that are visible to you. Record under Time-Stamp using military time up to the millisecond.
- 6 If a fishing vessel, ID each vessel as one of the following under fisherBoat: outrigger, motorboat, swimon-foot. Leave this section blank if not a fishing vessel.
- 7 If applicable, note the type of fishing gear under fisherGear: spear, line, or net.
- 8 Under fisherN, record the number of fishermen in the crew if applicable.

- 9 Under vesselType, regardless of if the vessel is for fishing, ID the vessel from the following categories: closed-cabin motorboat, opened-cabin motorboat, tourist-operator motorboat, sailboat, jet-ski [indicate number of jetskis in ()].
- 10 Under anch-navigating, indicate whether the vessel (regardless of if it is fishing), is anchoring or navigating.
- 11 Repeat for each new vessel spotted. Use a single entry for each vessel unless it is a group of jetskis which pass at the same timestamp. Indicate if you cannot see the gear in the fishing boat.

Closing Steps

- 12 At the end of the day, take a picture of your notebooks before data entry.

Water Outlets

- 13 Walking along the shore or as close to the shore as possible, write down the time stamp of every water outlet walked by.
- 14 Try estimating width of outlet (in feet or meters. Write down the estimate.
- 15 Mark if the water outlet is flowing and any other relevant observations about it.