

## Plan Overview

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*A Data Management Plan created using DMP Tool*

**DMP ID:** <https://doi.org/10.48321/D17308be50>

**Title:** Fish Biodiversity Survey

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**Data Manager:** Kylie Ren, Charlotte Wiggins, Stephanie Gay

**Project Administrator:** Kylie Ren, Charlotte Wiggins, Stephanie Gay

**Funder:** Tetiaroa Society

**Template:** Tetiaroa Field Station

### **Project abstract:**

This survey addresses the marine biodiversity present off the coast of the Onetahi motu in Tetiaroa, French Polynesia. Researchers conducted transects observing present fish species and their interactions in order to analyze the structure of the ecosystem's food web and overarching species richness. Biodiversity analysis is an integral contribution to the knowledge and subsequent preservation of marine environments, and research in small-scale ecosystems like Tetiaroa is representative of the larger environmental conservation movement.

**Start date:** 01-28-2024

**End date:** 02-02-2024

**Last modified:** 07-08-2024

**Copyright information:**

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# **Fish Biodiversity Survey**

## **Methodology**

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### **How will data be collected or produced?**

#### Survey Site Selection

1 From north shore of the Onetahi Motu, aligned with ferry departure port, swim outwards towards the reef crest until reef substrate becomes primarily coral (as opposed to sand)

#### Belt Transect Survey

2 Split into teams of 2 (with additional team member(s) to assist with securing the transect tape)

3 Mark out a 30m transect section using transect tape Secure one end of the tape using a rock/coral or assign an additional team member to secure the tape Assign one team member to swim out with the other end of the tape to mark the full 30m length - head in a fixed direction either with use of compass or by heading toward a fixed landmark visible at horizon level

4 For member of team performing the swimming survey task Swim forward at a slow constant speed along the tape Estimate a transect width of 2m on either side of the tape Within the transect, use camera to document what is required (refer to step 5 and 6) Avoid splashing and move slowly to avoid scaring fish away Pause and wait if necessary along transect to allow fish to acclimatize to your presence

#### Species Identification

5 Photograph individuals of each unique species of fish sighted

6 Export photos from camera to laptop

7 Identify fish species Compare each photo of fish obtained with the fish in guide book or <https://www.tetiarosociety.org/island/fish>

8 Record the Genus and Species name for each species of fish identified into a spreadsheet

#### Species Interaction

9 Photograph distinct interactions between individuals of different species

10 Export photos from camera to laptop

11 Identify the species involved, and record description of these interactions in a spreadsheet marking them as trophic or non-trophic

12 Analyze relationships between species, record connections and hypothesized behavior behind interactions

Species Function

13 Photograph individuals performing functions for each unique species of fish sighted

## Access, Data Sharing and Reuse

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**Will you require an embargo period prior to making your prepublication data available?** If requested, an embargo period may be granted for up to [1 year] after the end date of the Project as specified in its Data Management Plan.

- No

**Do you agree to share all prepublication data contributed to the Tetiaroa Data Trust under the CC-0 license?**

- Yes

**Will your project include the collection of material samples? For example,** archeological, geochemical (geosamples), and biological (biosamples) materials.

- No

**Please describe standards you will utilize to** register sampling events, apply unique identifiers, implement relevant metadata standards, and track derived material samples, data, and outputs.

N.A.

**What are the further intended and/or foreseeable research uses for the completed dataset(s)?**

N.A.

**State any expected difficulties in data sharing, along with causes and possible measures to overcome these difficulties.**

N.A.

## Documentation and Metadata

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**What documentation and metadata will accompany the data?**

Fish Database

Food Web and Interactions Visual Graphic

Photographs

## Ethics and Intellectual Property

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**How will you manage copyright and Intellectual Property Rights (IP/IPR) issues? Demonstrate that you have sought advice on and addressed all copyright and rights management issues that apply to the resource.**

Public Copyright License, Creative Commons

**How will you handle sensitive data. Make explicit mention of consent, confidentiality, anonymization and other ethical considerations, where appropriate.**

N.A.

**Are any restrictions on data sharing required – for example to safeguard research participants or to gain appropriate intellectual property protection?**

- No

**Describe restrictions on data sharing required due to privacy or IP protection.**

N.A.

## **Short-Term Storage, Security, and Data Management**

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**Describe the planned quality assurance and back-up procedures, including security/storage and any use of encryption.**

Secure Encrypted Cloud Storage with 2FA (Google Drive)

**How will you manage access and security?**

Records of passcodes. 2FA. Bodyguard

**Specify the responsibilities for data management and curation within research teams participating in your project at all participating institutions.**

ISP 2024

## **Selection and Preservation**

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**Which data are of long-term value and should be retained, shared, and/or preserved?**

Methodology and Results for future ISP classes

**What is the long-term preservation plan for the dataset?**

Zenodo

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## Planned Research Outputs

### Dataset - "Fish Database"

Excel Spreadsheet

<https://docs.google.com/spreadsheets/d/1E3DMovmYe9Mi2MIebrRwkW9aOCNj4AyONMfElqymUXg/edit?usp=sharing>

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### Planned research output details

Title	Type	Anticipated release date	Initial access level	Intended repository(ies)	Anticipated file size	License	Metadata standard(s)	May contain sensitive data?	May contain PII?
Fish Database	Dataset	2024-03-11	Open	None specified		Creative Commons Attribution 4.0 International	None specified	No	No