

Data and Python code for "Næss, Marius W., Fisktjønmo, G. L. H. and Bårdsen, B.-J. Social networks and ecological collapse: A case study of the Tana salmon fishery in Norway."

This file provides an overview of the variables and datasets used in the analyses.

Background

The data reported here is based on the results from 1) interviews, 2) Net-Maps, and 3) an allocation game with fishers in the Tana river, Norway.

The data was collected over two years, with the aim of collecting data from the vignettes in the winter of 2022/2023 and playing a follow-up game with the same participants in the spring of 2023. Participants were recruited from a list of active fishers provided by the Tana River Management (TF).

However, while most of the participants in 2022 agreed to a follow-up in 2023 (one declined), eight of the 2022 participants were unreachable in 2023. Thus, thirty-five participants played the game in 2023 (we excluded two participants who requested to be removed from the game after playing). See Table 1 in main text for descriptive data.

Datasets

1. Reason_for_gift.xlsx

1.1 Description

Dataset used for the analyses focusing on the reason why participants gave anything away in the allocation game. They are coded based on verbal responses. Verbal statements are not included due to issues with GDPR.

Number of rows (excluding header): 39.

1.2 Variables

- **ID**: Unique anonymous ID for each participant.
- **Code**: Coding of prosocial reason for giving anything away in the following way:

```
- `generosity`  
- `kinship`  
- `need-based`  
- `reciprocity`
```

1.3 Datatypes

- Numeric
- Text

2. Reason_for_keeping.xlsx

2.1 Description

Dataset used for the analyses focusing on the reason why participants kept salmon in the allocation game. They are coded based on verbal responses. Verbal statements are not included due to issues with GDPR.

Number of rows (excluding header): 22.

2.2 Variables

- **ID**: Unique anonymous ID for each participant.
- **Code**: Coding of prosocial reason for giving anything away in the following way:

```
- `amount needed`  
- `money he keeps`  
- `money to charity`  
- `no point giving money`  
- `noboby to give to`  
- `want fish`
```

2.3 Datatypes

- Numeric
- Text

3. allocation_network.gml

3.1 Description

Anonymised network file containing data from the allocation game. Participants were given 15 kg salmon to either keep for themselves or distribute among other fishers, the specific proportion to keep versus give away being up to them to decide.

Number of nodes: 55. Number of edges: 39.

3.2 Variables

Each node has an unique anonymous ID.

- **Kg**: Kg salmon given or received. Edge attribute.
- **municipality**: Municipality of nodes. Node attribute.

3.3 Datatypes

- Numeric
- Text
- **Na**: missing values are indicated by "".

3.4 Network type

- **Directed**.

4. **help_network.gml**

4.1 Description

Anonymised network file containing data from Net-Maps to the questions 'who do you help with fishing related issues?' 'And who helps you?'.

Number of nodes: 60. Number of edges: 69.

4.2 Variables

Each node has an unique anonymous ID.

- **municipality**: Municipality of nodes. Node attribute.

4.3 Datatypes

- Numeric
- Text
- **Na**: missing values are indicated by "".

4.4 Network type

- **Directed**.

5. **information_network.gml**

5.1 Description

Anonymised network file containing data from Net-Maps to the questions 'who do you go to for information and/or advice concerning fishing related issues?' 'And who approaches you?'.

Number of nodes: 82. Number of edges: 124.

5.2 Variables

Each node has an unique anonymous ID.

- **municipality**: Municipality of nodes. Node attribute.

5.3 Datatypes

- Numeric

- Text
- **Na**: missing values are indicated by "".

5.4 Network type

- **Directed**.

6. **management_network.gml**

6.1 Description

Anonymised network file containing data from Net-Maps to the questions 'who do you go to for information, advice, discussion concerning the management of the Tana River?' 'And who approaches you?'.

Number of nodes: 46. Number of edges: 62.

6.2 Variables

Each node has an unique anonymous ID. Either text (for organisations) or numeric (for individuals).

- **municipality**: Municipality of nodes. Node attribute.

6.3 Datatypes

- Numeric
- Text
- **Na**: missing values are indicated by "".

6.4 Network type

- **Undirected**.