

Local people's values and motivations toward Marine Protected Areas as a communication tool for inclusive and just MPA management

MSEAS Conference S05-17563

June 6th 15:40-15:55

Stockholm Resilience Centre

Shun Kageyama, Abigayil Blandon, Robert Blasiak

shun.kageyama1476@gmail.com

Stockholm
Resilience Centre



Stockholm
University

High demand to expand MPAs

Approximately 8% of the ocean is covered by MPAs

“30 by 30 agreement” in December 2022

Protect 30% of Earth’s oceans by 2030

More than 190 countries agreed on this ambitious goal

CBD MON // 19.12.2022

By 2030: Protect 30% of Earth's lands, oceans, coastal areas, inland waters; Reduce by \$500 billion annual harmful government subsidies; Cut food waste in half

Official CBD Press Release - 19 December 2022, Montreal

[\[PDF version - 469 Kb\]](#)



Source: Convention of Biodiversity

<https://www.cbd.int/article/cop15-cbd-press-release-final-19dec2022>

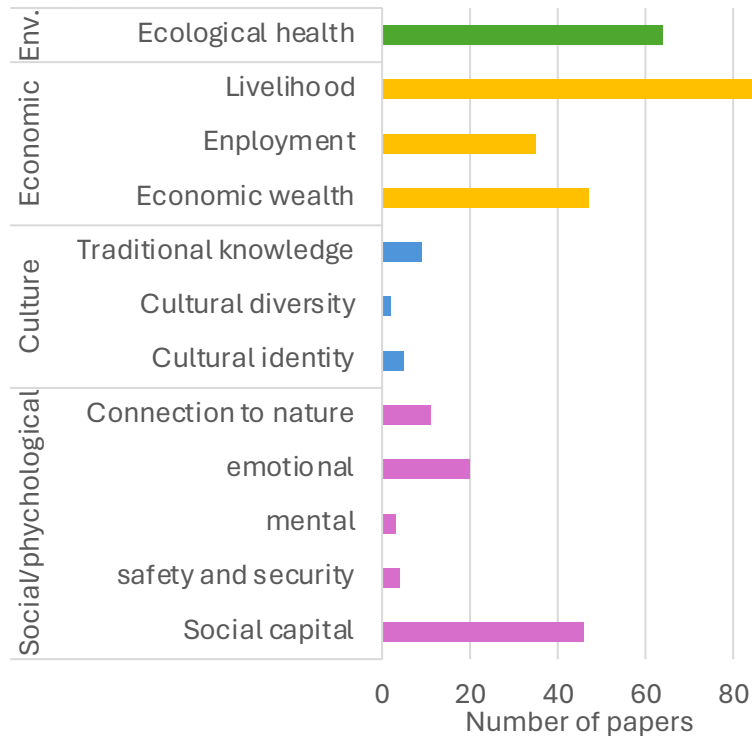
Focal points to promote local people's participation

what local people value and what motivates them toward MPA management

Three research gaps addressed in this study

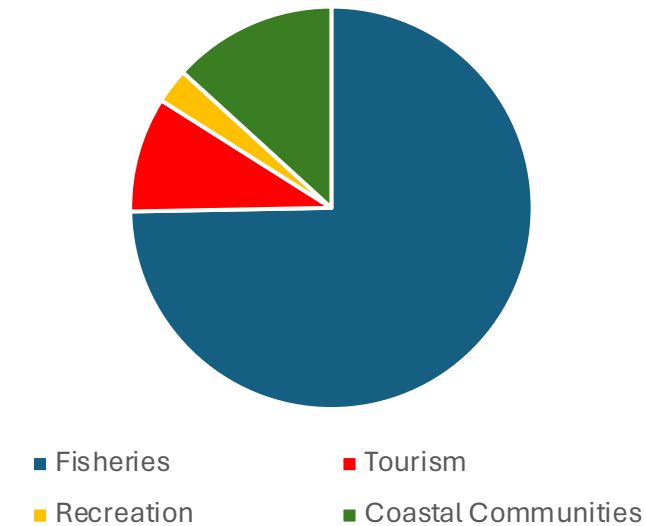
1. Limited value concepts

a. Domains of human well-being mentioned in reviewed articles (Ban et al., 2019)



2. Tourism industry

b. Percentage of stakeholder data in reviewed articles (Ban et al., 2019)



3. Japanese case

c. Geographic distribution of MPA governance research (Ban et al., 2019)

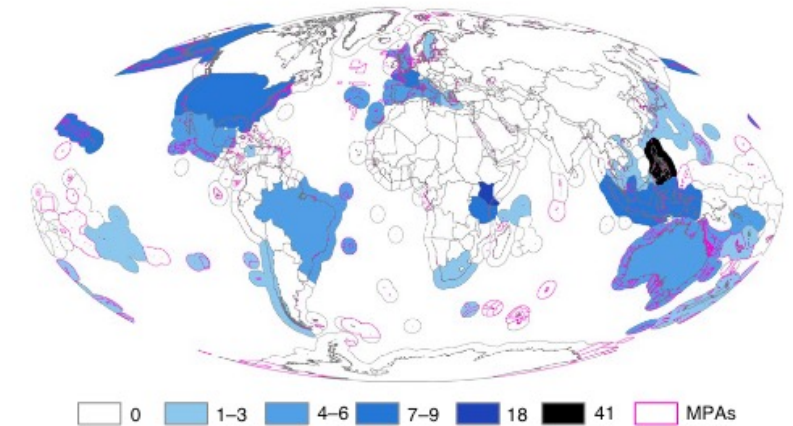


Figure a-c. The types of MPA governance research according to the data in Ban et al., 2019

Local people's participation and self-regulation are crucial
in dealing with challenges in MPA management



Also,,,

It is challenging to **encourage sustained participation** from diverse stakeholder groups

The framework of this study

RQ.1 What values do local people emphasize as reasons to support the MPAs on the Yonarasuido Strait?

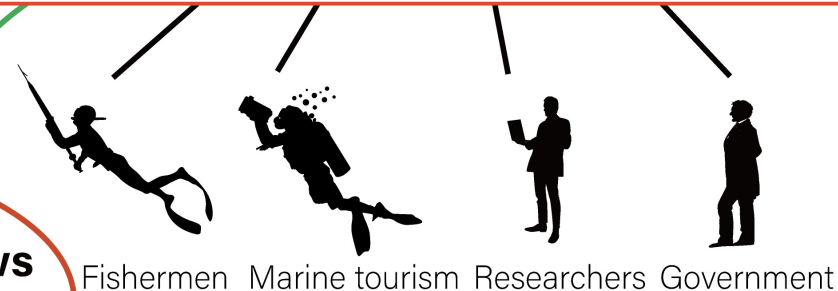
IPBES conceptual framework for value assessment
e.g., Instrumental, Intrinsic, and Relational values

RQ.2 What similarities and differences exist in MPA value preferences within and between various stakeholder groups?

Q-methodology

Semi-structured Interviews

- MPA expansion
- Interactions between stakeholders



Local People (Participants)

RQ.3 What are local people's opinions about the current MPA governance and potential future change?



The Yonarasuido Strait

Two MPAs covering the place:

- 1. Top-down National Park**
- 2. Bottom-up reserve led by fishermen**

IPBES conceptual framework for value assessment

Instrumental Values (Economic)

Nature's benefits for humans (Anthropocentric)

e.g., Ecosystem services, Food provision, Tourism, Disaster mitigation

Intrinsic Values (Ecological)

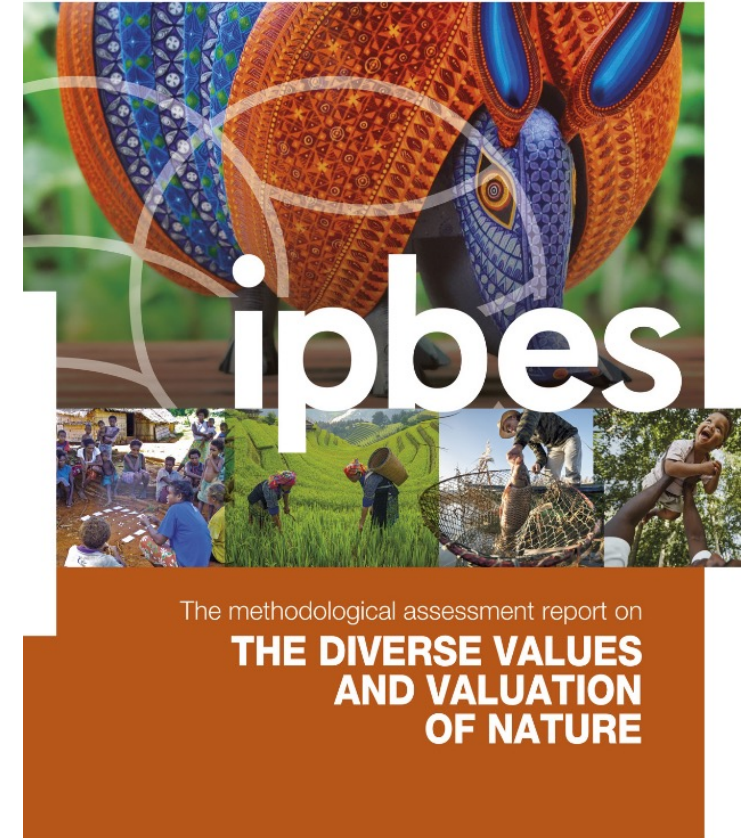
Nature is important, independent of human judgment (Ecocentric)

e.g., Beauty of nature, Reducing human impacts

Relational Values (Social / Cultural)

Values in reciprocal human-nature relationships (Pluricentric)

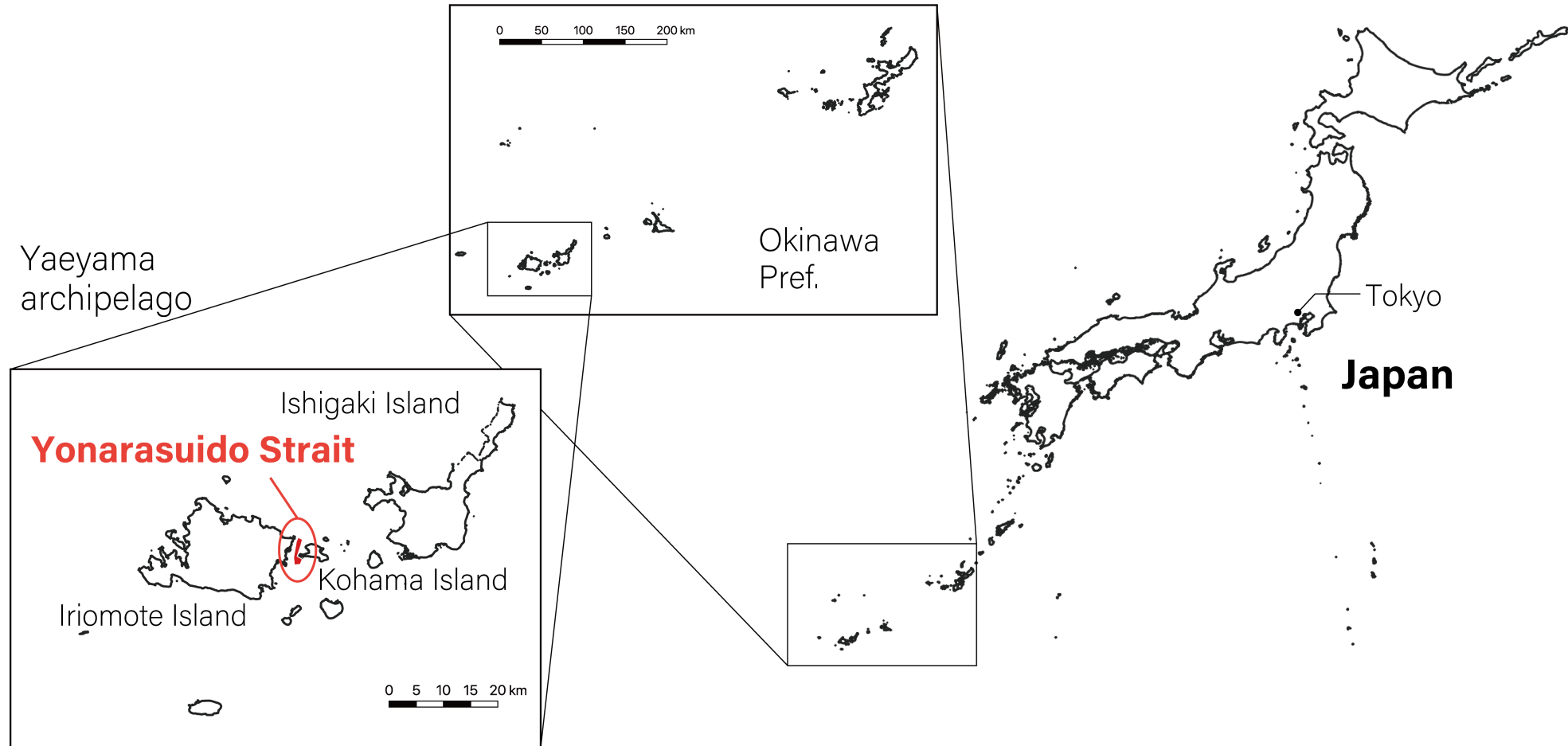
e.g., Sense of place, Stewardship, Affection, Spirituality



Source: IPBES. (2022)

<https://zenodo.org/record/7687931>

The Yonarasuido Strait



Two threats to environmental degradation

- Fish stock loss (overfishing/deterioration of ecosystem)
- Damage to coral reefs (“Sekisei Lagoon”/ bleaching)

Two primary marine users

- Fisheries (361 workers/downscaling/11 million USD)
- Tourism (673 shops/upscaling/650 million USD)

The Yonarasuido Strait

Why this area?

1. An **important area** for diverse marine users (spawning colonies/ scuba diving)
2. **Collaboration** between researchers and fishermen
3. **Few studies** on the governance system / many on the ecological effects
4. **Two MPAs** cover this area: a top-down national park and a bottom-up reserve



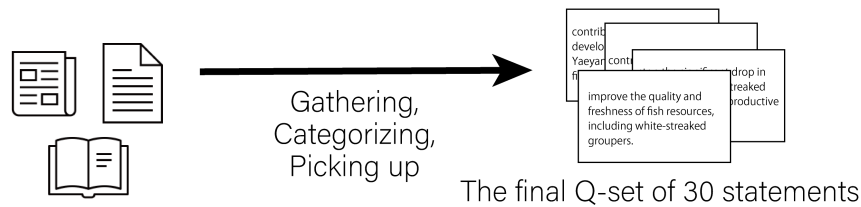
Photos taken by Nanami and Nanjo

Q-methodology

- Capture people's **subjective preferences** and **group people** with similar views
- Statistic analysis was complemented with follow-up interviews

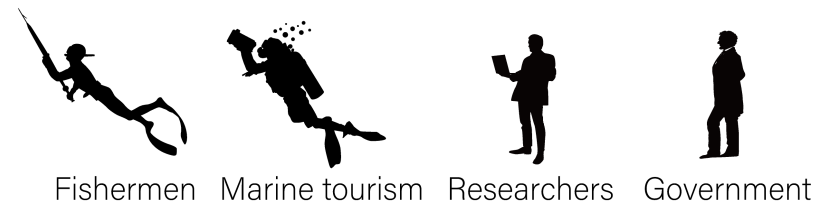
Step1. Designing question statements (Q-set)

Literature review to create statements on value preferences
12 on instrumental, 5 on intrinsic, and 13 on relational



Step2. Participants selection

Generic purposive sampling & snowball sampling
People whose viewpoint matters in relation to MPAs



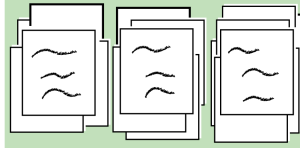
Step3. Conducting fieldwork to gather data

I conducted face-to-face interviews from Nov. 14th to Dec. 22nd

Participants sort, distribute, and answer the questions according to **their value preferences for the MPAs.**

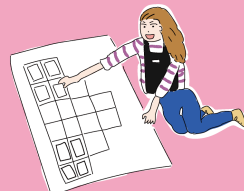
Step 1

Sort the 30 statements into three piles



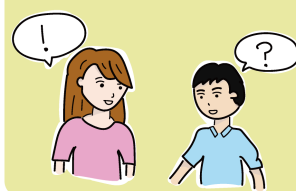
Step 2

Distribute the statements



Step 3

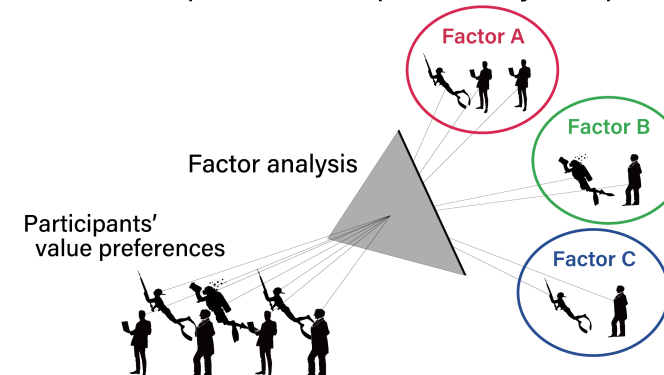
Follow-up questions



Step4. Factor analysis and interpretation

Centroid factor analysis was performed

The follow-up interviews qualitatively complemented



Semi-structured Interviews

Two questions about the marine governance:

- **Intentions for MPA expansions** for the future and their priority issues
- **Opinions on interactions** between stakeholder groups



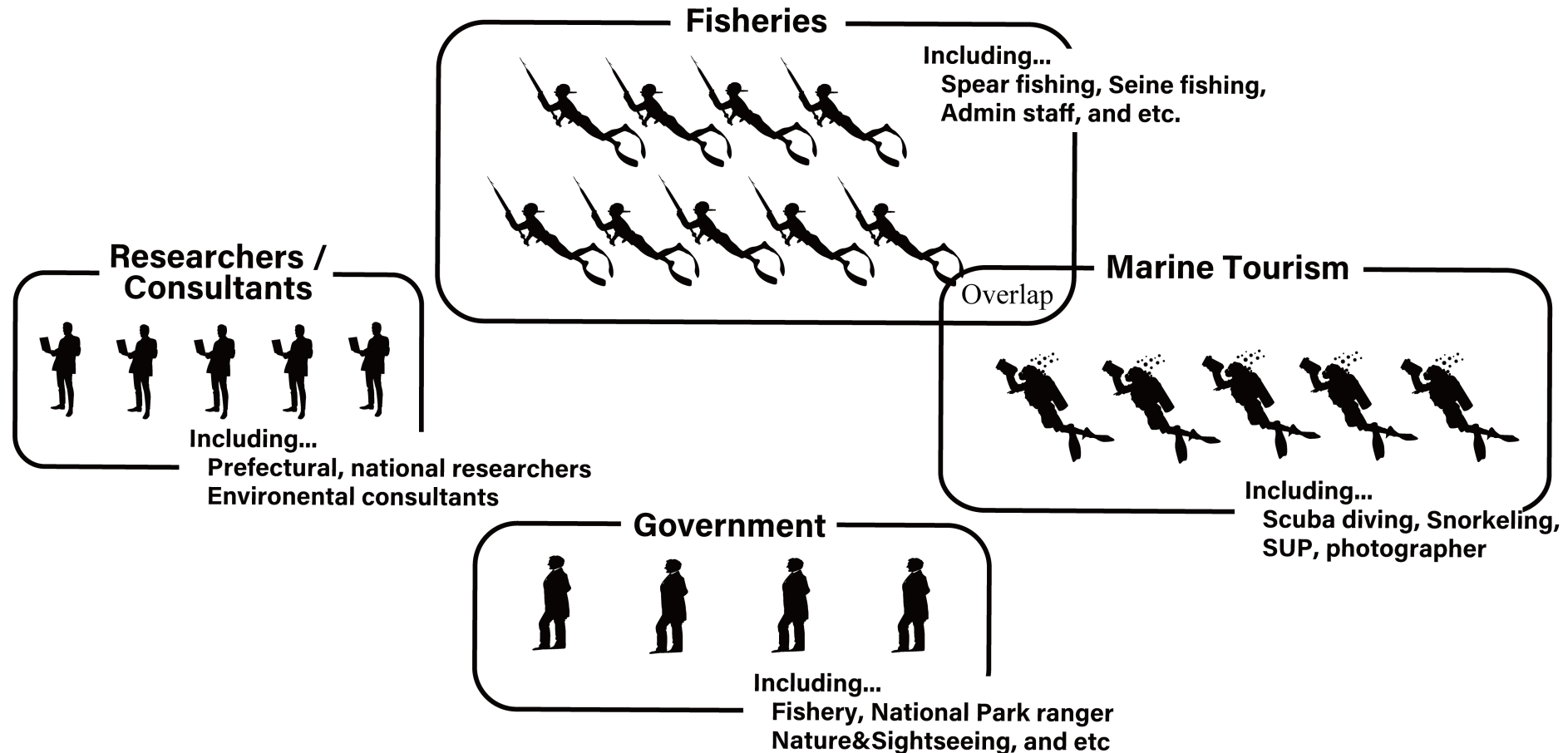
Figure. A picture during an interview.

Local People (Participants)

In total, **23 people participated** in the interviews

(9 fishermen / 5 marine tourism instructors / 3 researchers / 2 consultants / 4 government officers)

I contacted a **local research institute** and a **fisheries cooperative** as a starting point



Results: Q-methodology

A, Original Goals First

B, Disconnected Stewards

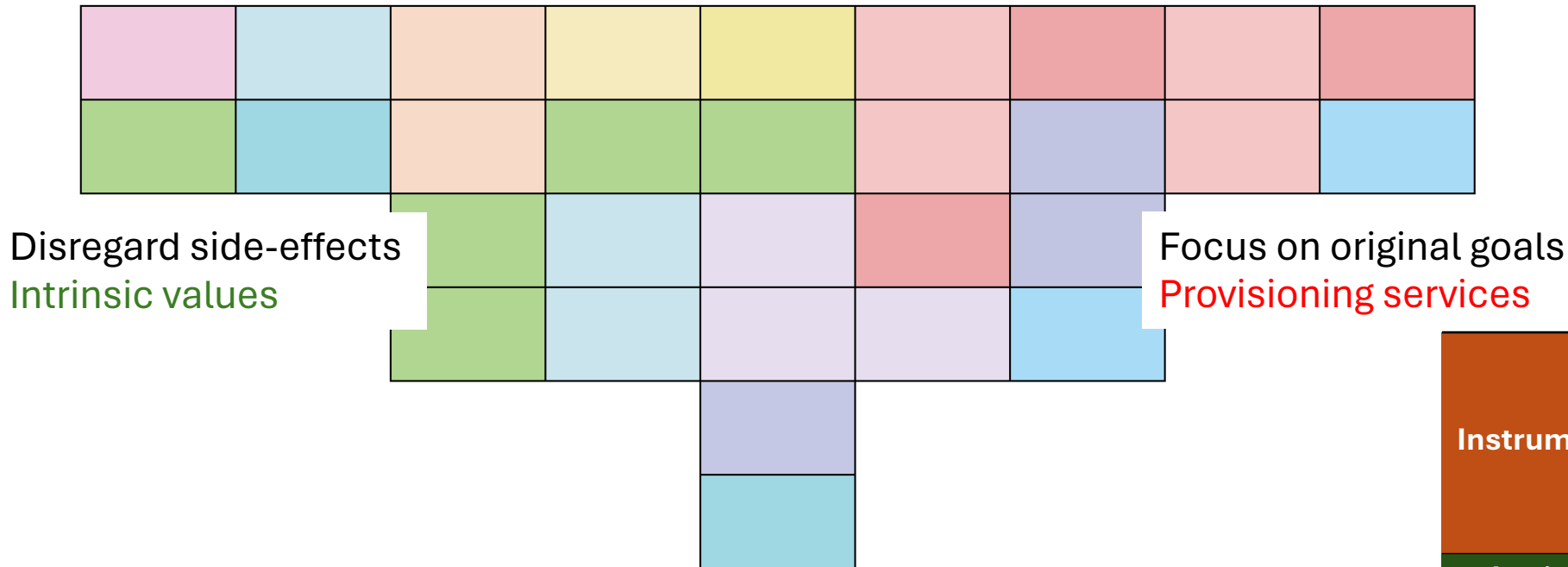
C, Tourism vs. Fisheries

Initial objectives

Fisheries resources

Most Disagree

Most Agree



Instrumental	Provisioning services / prosperity
	Provisioning services / security
	Regulating services / security
	Cultural services / health
	Cultural services / harmony
	Cultural services / prosperity
Intrinsic	Beauty
Relational	Sense of place / attachment
	Care / Stewardship
	Responsibility
	Affection / Harmony
	Spirituality

Figure. **Representative distribution** of people's value preferences for the MPAs in the "Original Goals First" factor

Results: Q-methodology

A, Original Goals First

B, Disconnected Stewards

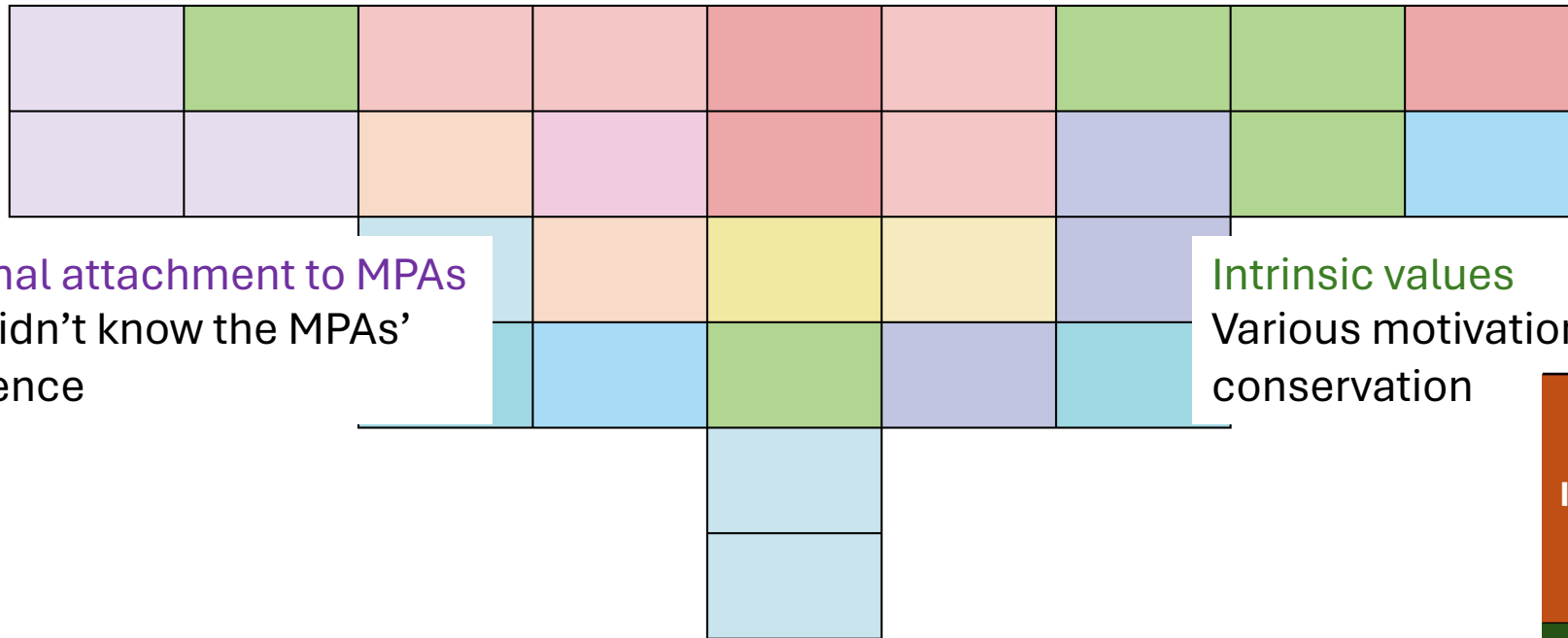
C, Tourism vs. Fisheries

Nature conservation

Emotionally detached from MPAs

Most Disagree

Most Agree



Emotional attachment to MPAs
Some didn't know the MPAs' existence

Intrinsic values
Various motivations for conservation

Instrumental	Provisioning services / prosperity
	Provisioning services / security
	Regulating services / security
	Cultural services / health
	Cultural services / prosperity
Intrinsic	Beauty
Relational	Sense of place / attachment
	Care / Stewardship
	Responsibility
	Affection / Harmony
	Spirituality

Figure. **Representative distribution** of people's value preferences for the MPAs in the "Disconnected Stewards" factor

Results: Q-methodology

A, Original Goals First

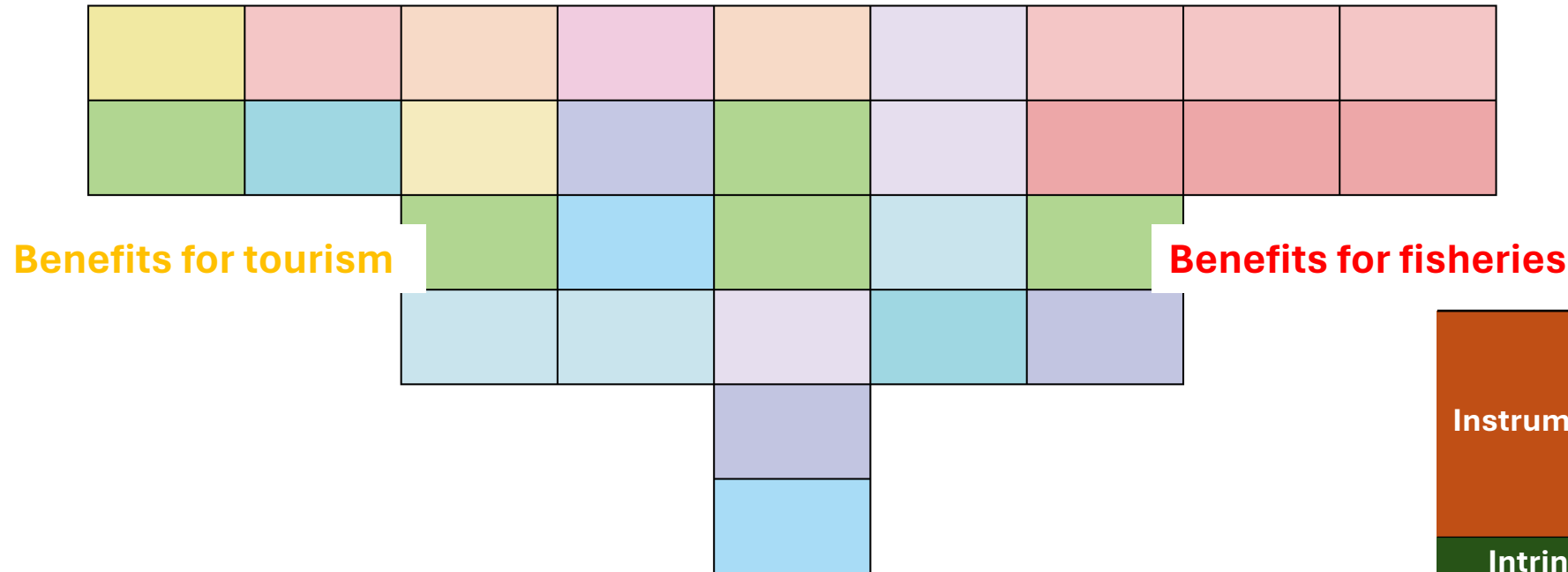
B, Disconnected Stewards

C, Tourism vs. Fisheries

Polar opinions regarding fisheries & tourism

**Most Disagree (Two fishermen)
Most Agree (The others)**

**Most Agree (Two fishermen)
Most Disagree (The others)**



Instrumental	Provisioning services / prosperity
	Provisioning services / security
	Regulating services / security
	Cultural services / health
	Cultural services / harmony
	Cultural services / prosperity
Intrinsic	Beauty
Relational	Sense of place / attachment
	Care / Stewardship
	Responsibility
	Affection / Harmony
	Spirituality

Figure. **Representative distribution** of people's value preferences for the MPAs in the "Tourism vs. Fisheries" factor

Results: Q-methodology

A, Original Goals First

Initial objectives

Fisheries resources

B, Disconnected Stewards

Nature conservation

Emotionally detached from MPAs

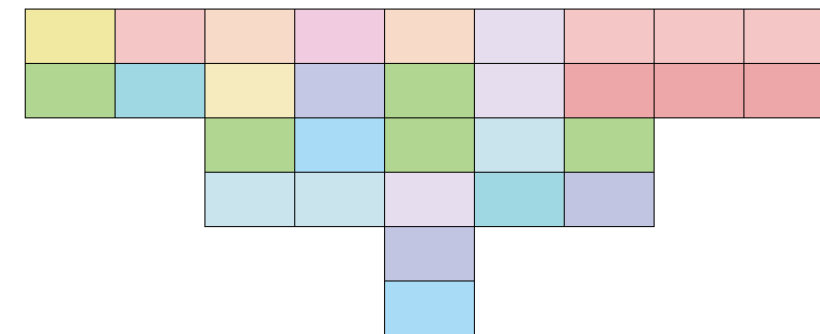
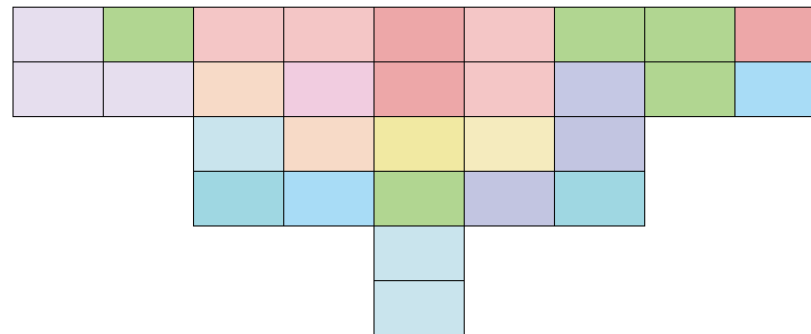
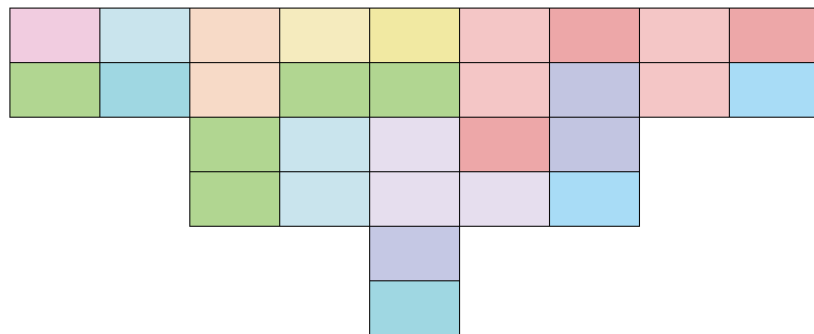
C, Tourism vs. Fisheries

Polar opinions regarding fisheries & tourism

Key findings:

- Highlighted people's **diverse value preferences**
- A comprehensive value lens**, including diverse value perspectives, provides a holistic view

Instrumental	Provisioning services / prosperity
	Provisioning services / security
	Regulating services / security
	Cultural services / health
	Cultural services / harmony
	Cultural services / prosperity
Intrinsic	Beauty
Relational	Sense of place / attachment
	Care / Stewardship
	Responsibility
	Affection / Harmony
	Spirituality



Results: Q-methodology grouping

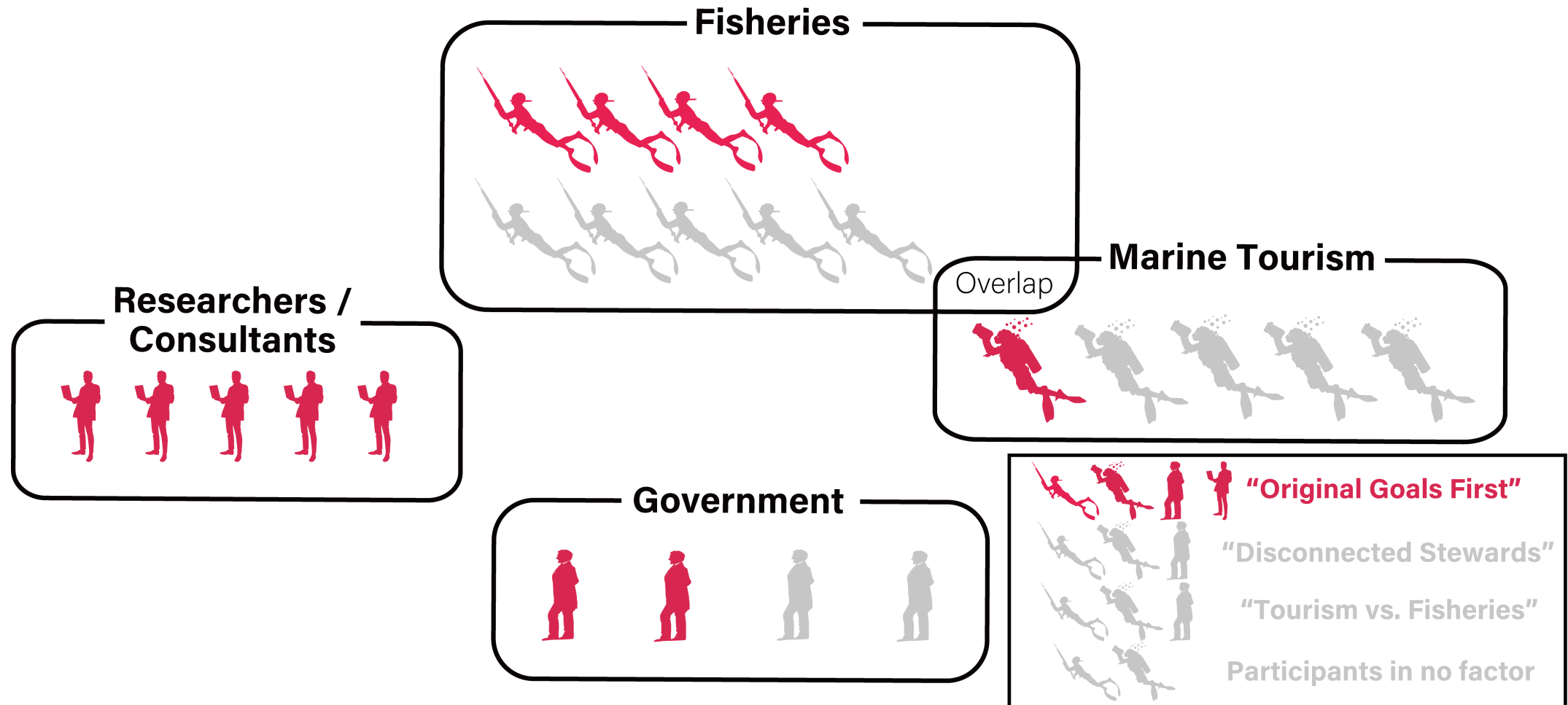
A, Original Goals First

B, Disconnected Stewards

C, Tourism vs. Fisheries

12 people

All researchers/consultants



Results: Q-methodology grouping

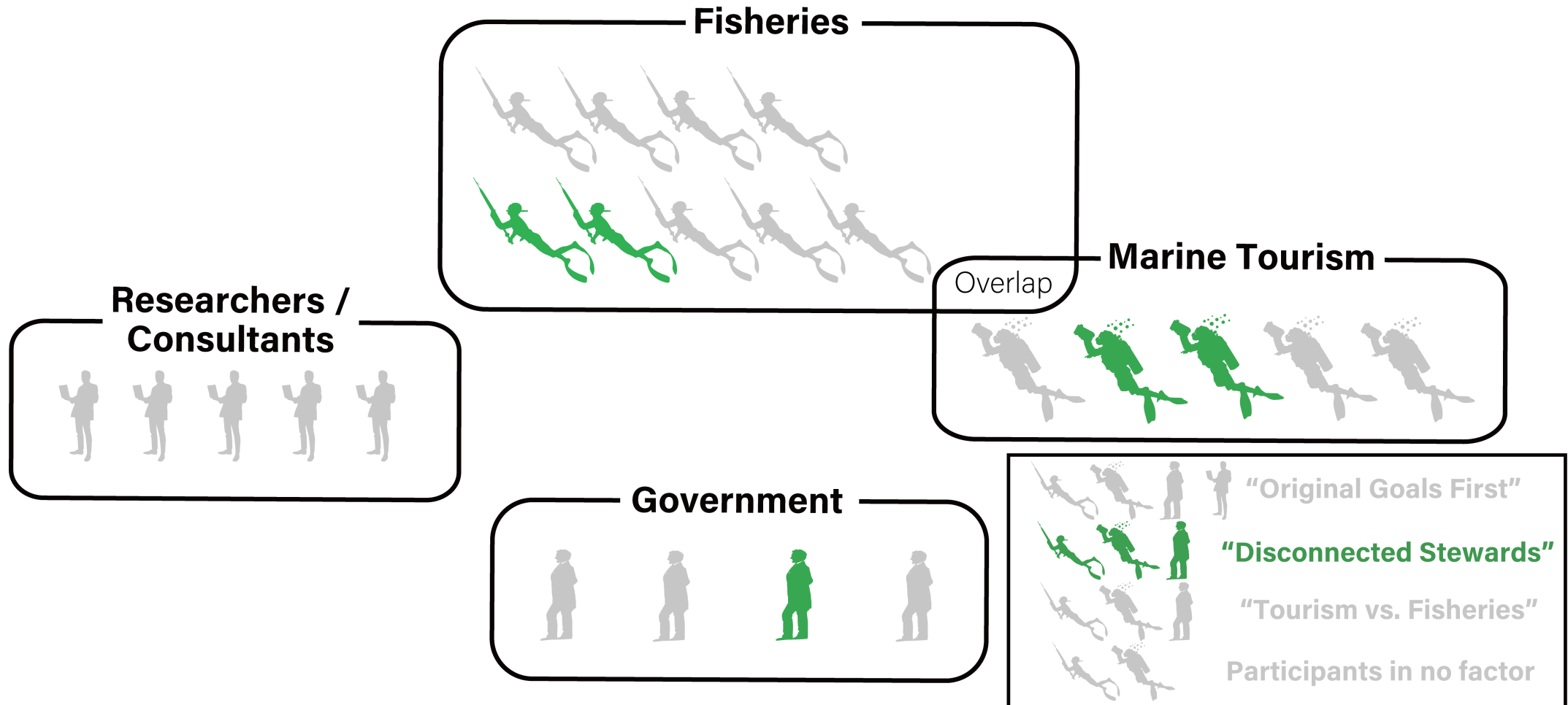
A, Original Goals First

B, Disconnected Stewards

C, Tourism vs. Fisheries

5 people

Include various stakeholders



Results: Q-methodology grouping

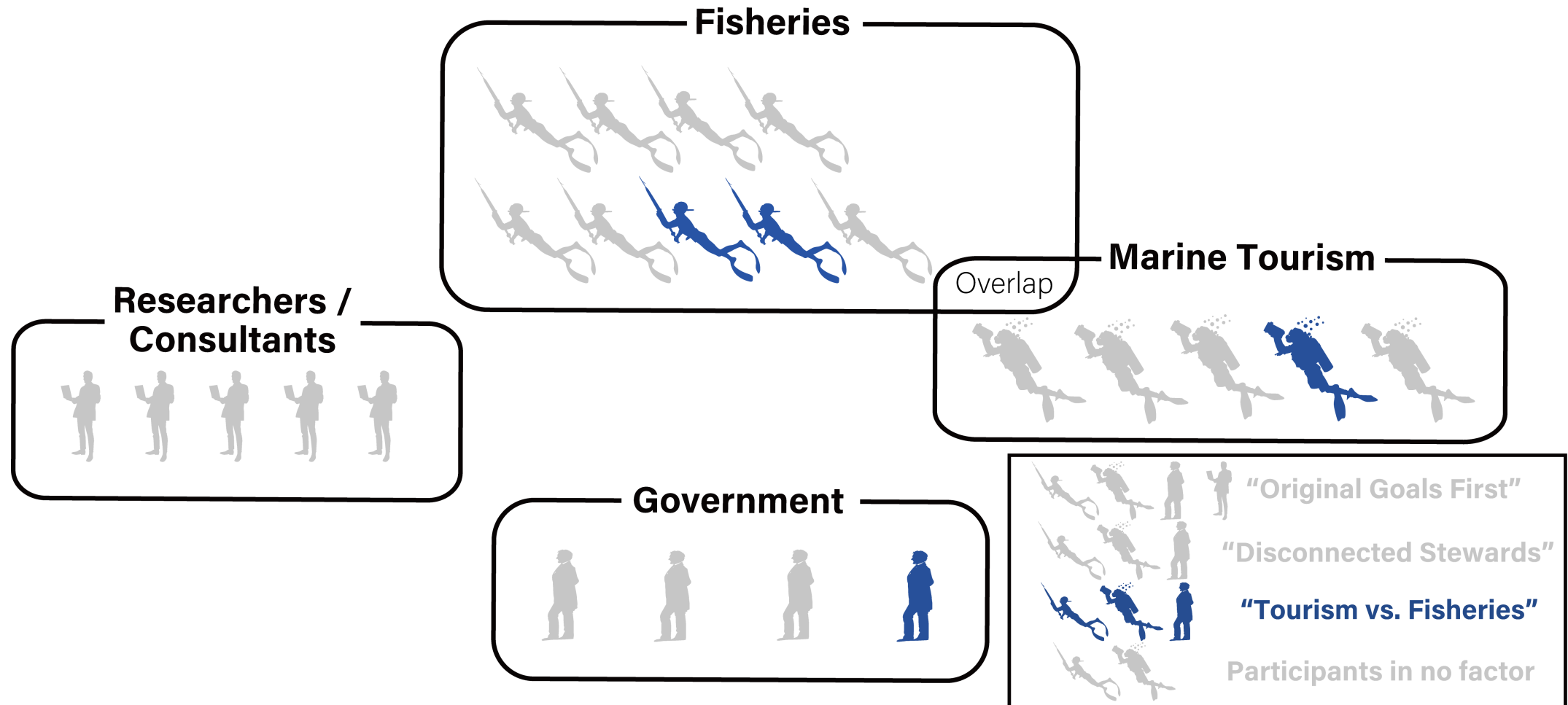
A, Original Goals First

B, Disconnected Stewards

C, Tourism vs. Fisheries

4 people

Include various stakeholders



Results: Q-methodology grouping

A, Original Goals First

12 people

All researchers/consultants

B, Disconnected Stewards

5 people

Include various stakeholders

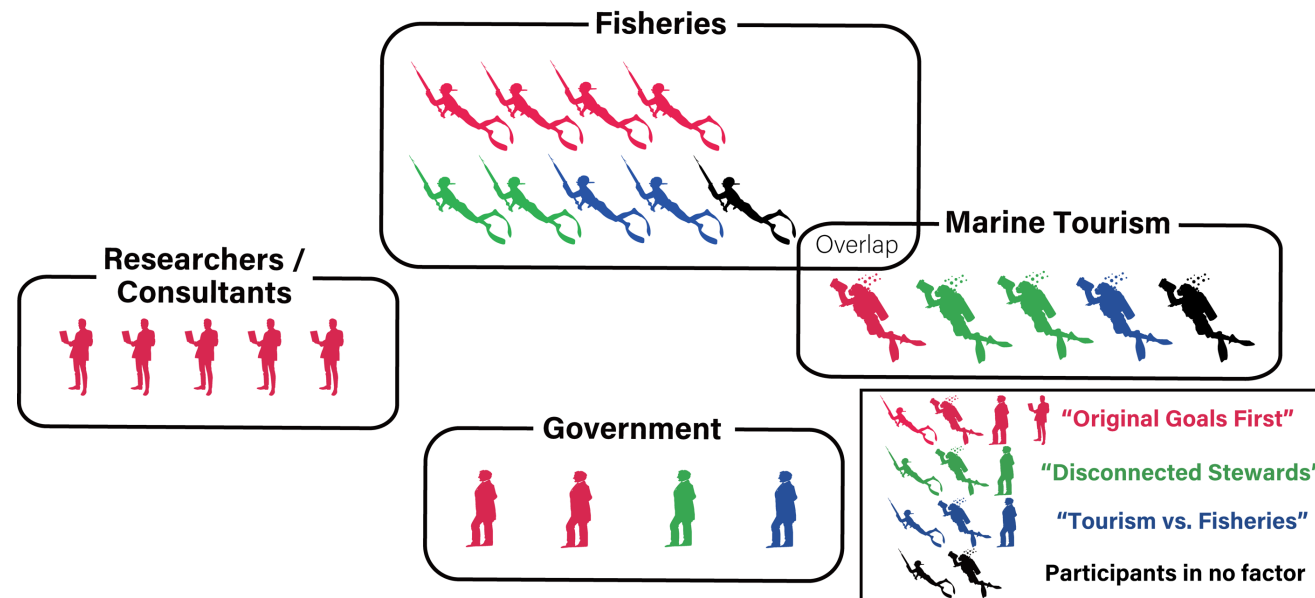
C, Tourism vs. Fisheries

4 people

Include various stakeholders

Key findings:

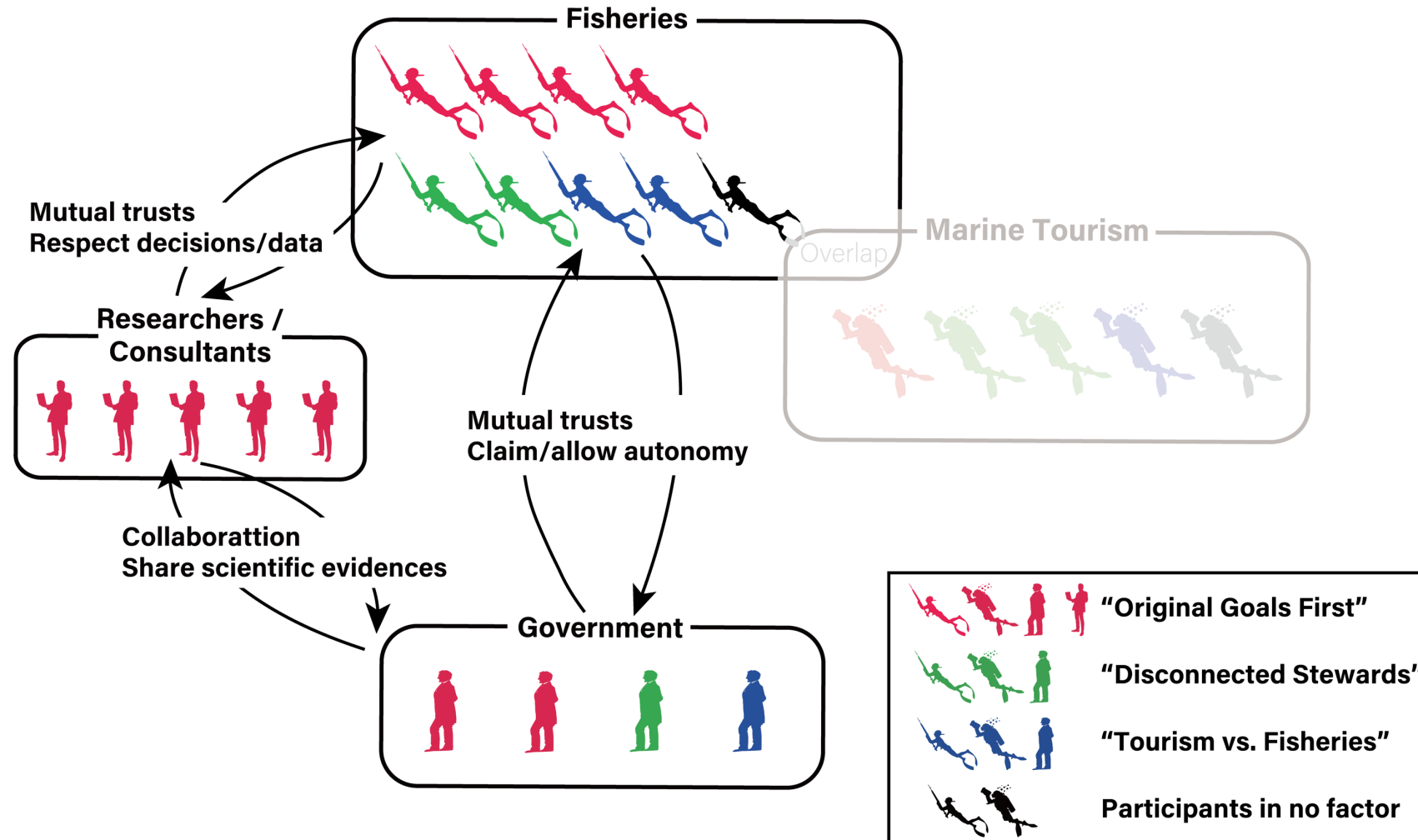
- **Diversity** within each stakeholder group / **similar** groupings between stakeholder groups
Suggesting **areas of consensus and disagreement** in the governance system
- Researchers and consultants seemed to be a more homogeneous group



Results: Semi-structured interviews

Opinions on interactions between stakeholder groups

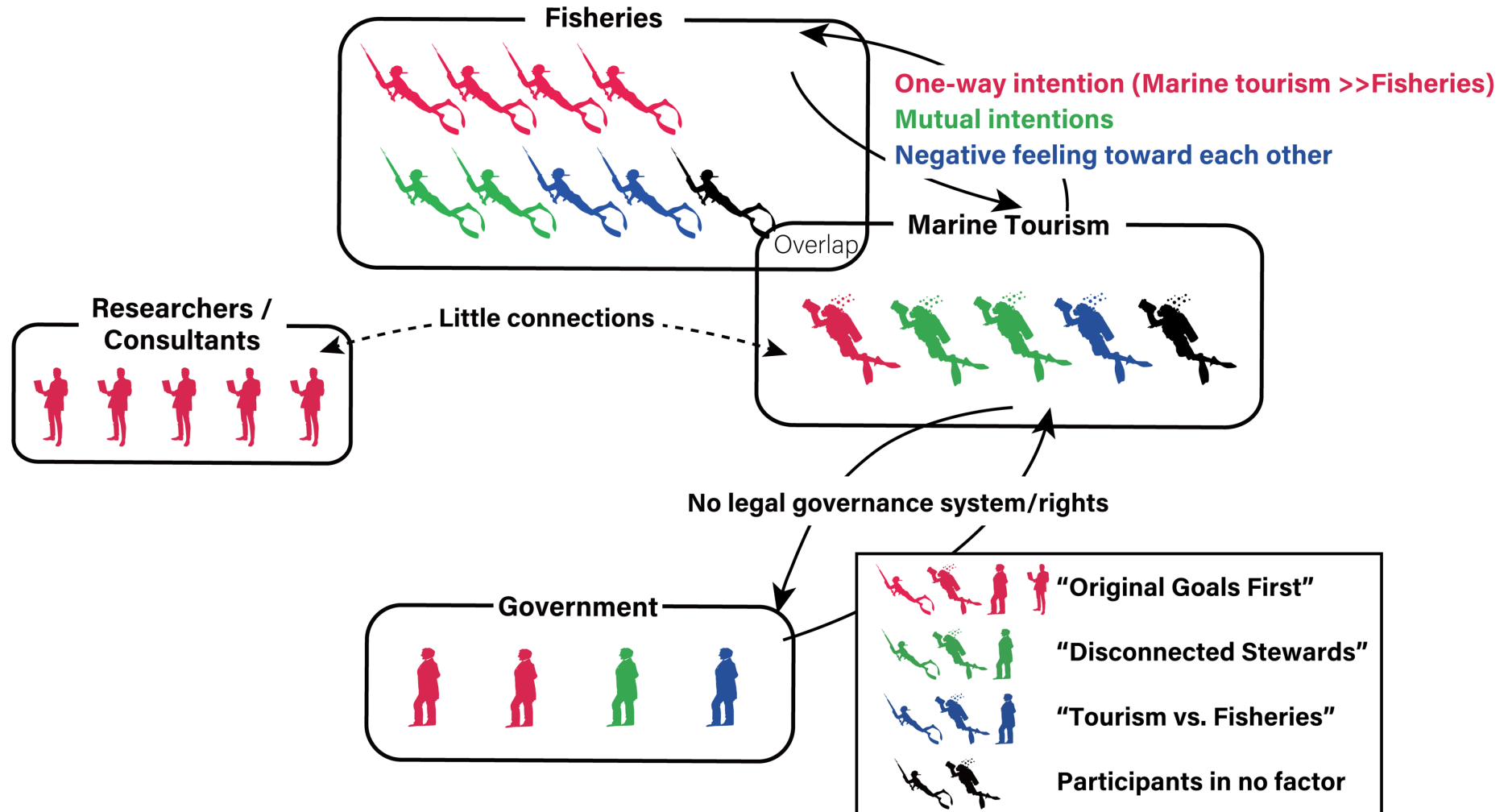
Mutual relationships can be seen between fisheries, researchers, and governments



Results: Semi-structured interviews

Opinions on interactions between stakeholder groups

Contested and diverse opinions related to marine tourism



Results: Semi-structured interviews

Intentions for the MPA expansions

People in “**Original Goals First**” and “**Disconnected Stewards**” had similar intentions

- **No intentions** to change
- Intentions for expanding MPAs **to conserve coral reefs** actively

People in “**Tourism vs. Fisheries**” had a different pattern

- Intentions for putting **more strict regulations** on the current MPAs
- Intentions for **utilizing the MPAs for tourism** while conserving

Results: Semi-structured interviews

People in “**Original Goals First**” and “**Disconnected Stewards**” had similar intentions

- **No intentions** to change
- Intentions for expanding MPAs **to conserve coral reefs** actively

People in “**Tourism vs. Fisheries**” had a different pattern

- Intentions for putting **more strict regulations** on the current MPAs
- Intentions for **utilizing the MPAs for tourism** while conserving

Key findings:

- Many participants **recognize the importance** of the MPAs (No intention for abolishment)
- This can be because of:
 - **Autonomy** and bottom-up approach / effectiveness of empowering local people
 - **Researcher-fishermen collaborations** / providing mutual benefits

Discussion: Implications for the future marine governance

Original goals and narrow focus vs. Adaptive governance and tackling other issues

- The two MPAs can take **complementary roles** in adaptive governance (cf. “Original Goals First”)
 - The National Park can provide large-scale and long-term monitoring data
 - The spawning ground reserve can tackle other issues, such as coral reef conservation and tourism

Low awareness and **information dissemination** (cf. “Disconnected Stewards”)

- The currently available information is **limited to basics or academics**
 - Suggesting Information sharing with specific targets / Emphasizing background information
- Potential benefits:
 - e.g., Sustainable industries by **certification** / **Stakeholder inclusion** to address large-scale issues

Considerable **division** between fisheries and marine tourism (cf. “Tourism vs. Fisheries”)

- **Some issues behind** the division
 - Complex **power imbalance** (Fisheries: historical autonomy / Tourism: increasing economic power)
 - **No governance system** for marine tourism (spreading quickly / municipality territories)
- Investigating “**who wants what and why?**” will navigate communication

Thank you for your attention

