

Assessing Barriers to Establishing OECMs in Exclusive Fishing Rights Areas in Taiwan:

A Qualitative Study of Expert and Fisheries Association Representative Perspectives

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Outline

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1. Introduction



Challenges of Traditional Marine Protected Areas

Traditional marine protected areas (MPAs) aim to **conserve biodiversity** by strictly limiting or excluding human activities.

However, they face challenges.

1. They often face **opposition from stakeholders**, such as **local fishers** who rely on marine resources for their livelihoods.
2. The designation process, which must follow **legal procedures**, is often complicated and **time-consuming**.



Source: <https://www.civilmedia.tw/archives/108976> .

Global Context: Shift in Biodiversity Governance



Source: https://wwf.panda.org/wwf_news/cop14/

Global biodiversity governance has shifted from a focus on **establishing protected areas** to an emphasis on **diversified governance** and **long-term effectiveness**.

In 2018, the UN Biodiversity Conference (CBD **COP14**) formally adopted the concept of **Other Effective Area-Based Conservation Measures (OECMs)**, recognizing that **well-governed areas outside protected zones** can also deliver meaningful biodiversity outcomes.

Taiwan Context: Coastal Fisheries & Challenges

Taiwan, an island surrounded by the sea, has many **coastal fishing communities and small-scale fisheries**.

These areas are also the **hardest places to establish formal marine protected areas (MPAs)**.

Coastal fisheries are deeply connected with **local livelihoods** but are under **growing pressure** from **overfishing, habitat loss, and climate change**.

Finding ways to advance **non-protected-area conservation** through existing **fishery governance systems** has become a critical challenge.



Source: This study.



Source: This study.

Key question:

How to enhance **coastal biodiversity conservation** while ensuring the **sustainable use of fishery resources** and the **sustainable development of local fisheries**?

Exclusive Fishery Rights Areas

- Originally designed for **fishery management**
- Have clearly defined **spatial boundaries** and **community-based governance** features
- If aligned with the **principles of OECMs**, they could become a new model that **balances livelihood needs and conservation goals**

Research purpose

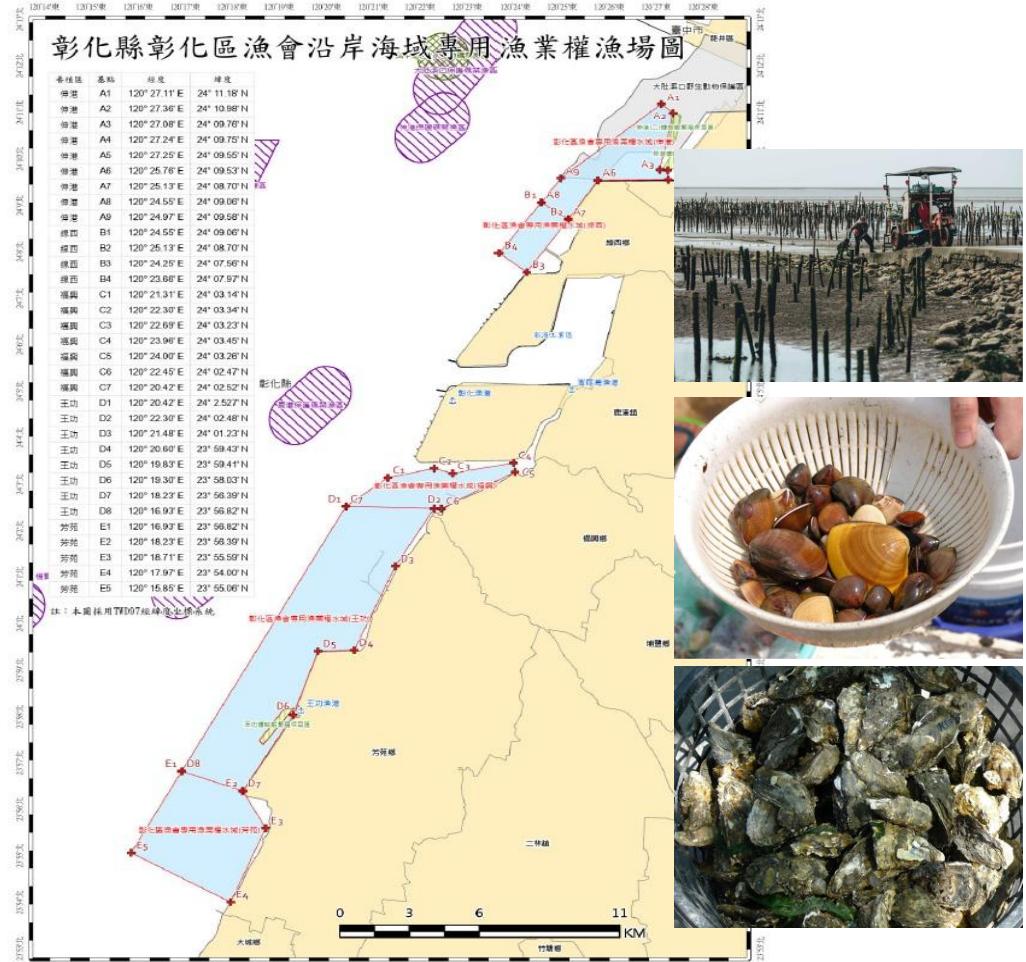
To analyze the potential for establishing **Other Effective Area-Based Conservation Measures (OECMs)** based on **Exclusive Fishery Right Areas** in Taiwan, and to identify the **key barriers** affecting their implementation.

2. Taiwan exclusive fishery rights



Taiwan Exclusive Fishery Rights

- It was first introduced during the Japanese era.
- It was later written into the **Fisheries Act** as a formal framework for **fishery management**.
- It grants **local fisherman associations** the **exclusive use of specific coastal waters** (usually within three nautical miles from the shore), for a **ten-year renewable term**.
- It aligns with key OECM characteristics, such as **clear spatial boundaries, local stewardship, and long-term management**.



Source:

https://www.fa.gov.tw/view.php?theme=web_structure&id=2331&hash=aefffdebf894e180018f9adb313b0e05

<https://www.verse.com.tw/article/sea>

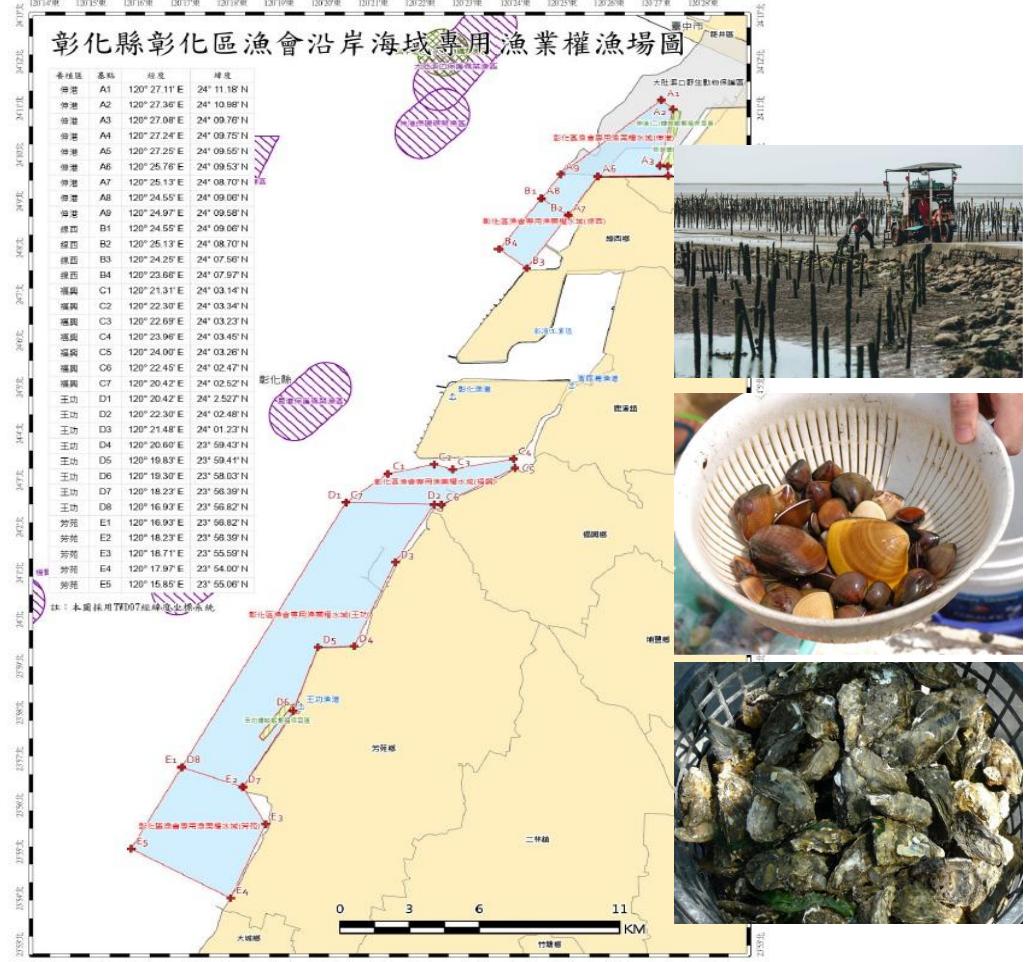
<https://www.foodnext.net/science/scs/resource/paper/5111266319>

<https://www.verse.com.tw/article/meretrix-taiwanica>

Exclusive Fishery Right Area of Changhua District
Fishermen Association

Barriers in Implementation

- Unlike in Japan, the system in Taiwan is **not mandatory**.
- There are **39 fishermen associations** across the Taiwan, **fewer than 5 remain active** in maintaining Exclusive Fishery Right Areas.
- Fishermen associations now **face difficulties** not only in **maintaining or renewing** their rights, but in **effectively managing** these areas.



Source:

https://www.fa.gov.tw/view.php?theme=web_structure&id=2331&hash=aefffdebf894e180018f9adb313b0e05

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3. Research methods



Data Collection & Analysis

Semi-structured Interviews (February 10 to April 23, 2025)

- **19 participants** (7 officials from central and local governments, 8 scholars, 3 representatives from fisherman associations, and 1 NGO member).
- Each interview was conducted either in **person or online**.

Interview Contents

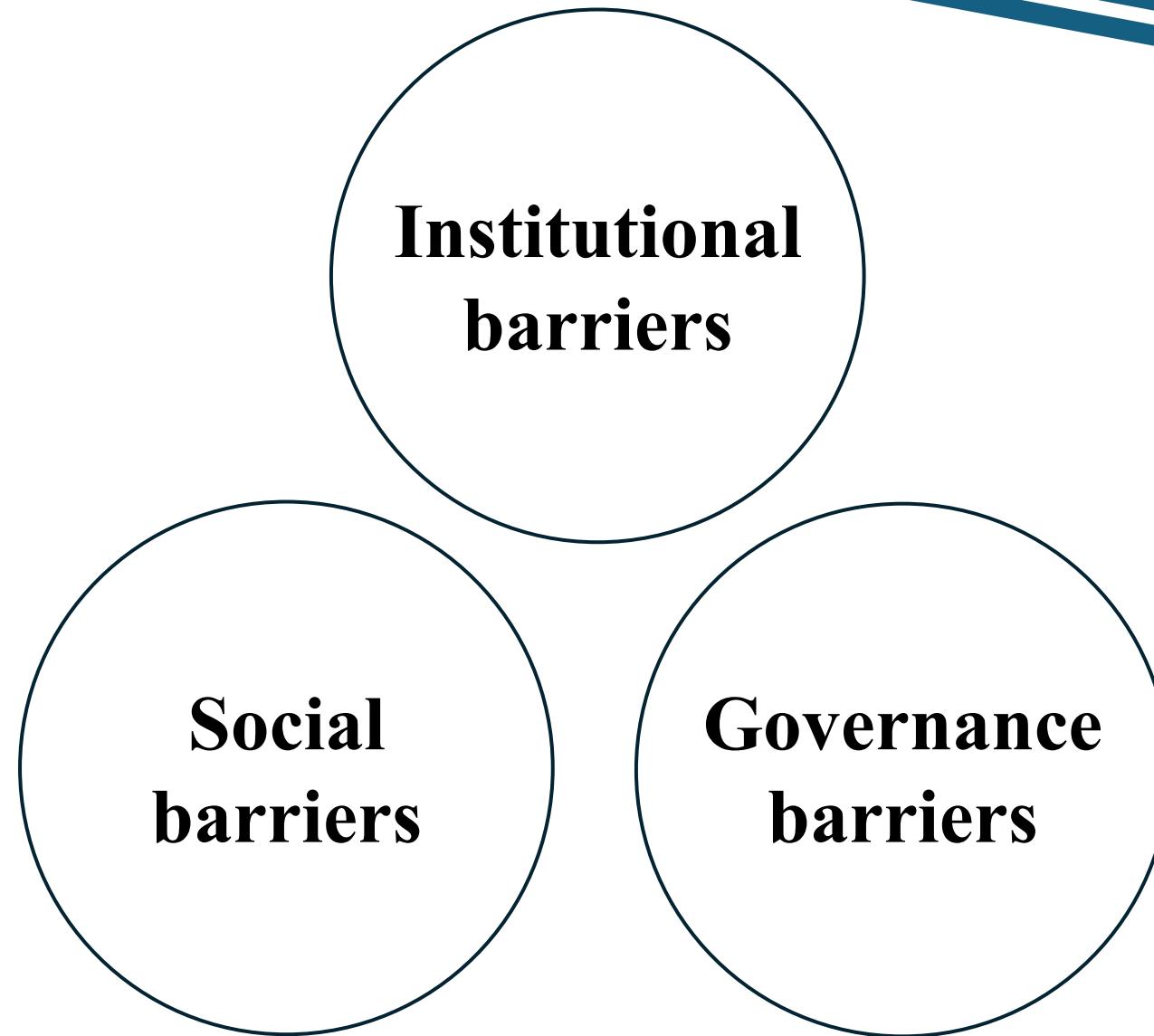
- **Implementation and management** of the Exclusive Fishery Right Area
- Roles of **fisherman associations** in **management and coordination**
- **Perceptions** of **OECMs**, and the **potential** for Exclusive Fishery Right Area to become **fishery-based OECMs**

Grounded Theory

1. **Open Coding:** Identifying and labeling key concepts from the **transcripts**.
2. **Axial Coding:** Grouping and linking related concepts to form preliminary categories.
3. **Selective Coding:** Integrating results into **analytical dimensions** and identifying **key barrier factors**.

4. Preliminary results & discussion





Institutional barriers

Lack of Conservation Orientation

- Taiwan's Exclusive Fishery Right Area originated from Japan's early fishery management measures.
- It has primarily focused on **fishery production and management**, with limited integration of biodiversity or conservation objectives.

Limited Flexibility

- Once an area is designated under the Exclusive Fishery Right Area, the rights are **difficult to modify or revoke**.
- Local governments and fisherman associations have **little flexibility to adjust management in response to ecological or social changes**.

Institutional barriers

Mismatch with Local Contexts

- Most regulations were **developed decades ago** and no longer reflect current fishery resource & ecological conditions, or community needs.
- As a result, local governments and fisherman associations have **limited capacity to adapt or innovate** under the existing framework.

Future Directions

- The system should **incorporate a conservation-oriented** approach and adaptive mechanisms, **allowing local actors to revise** management methods according to ecological, resource, and community changes.
- It is necessary to establish a framework that achieves both **flexibility and localized governance** through an **institutional design** combining **central support with local feedback**.

Social barriers

Livelihoods Take Priority

- For coastal communities and traditional fishers, securing **livelihoods** remains the primary concern.
- Without clear incentives or fair compensation, conservation efforts are often perceived as an **additional burden** rather than a common benefit (Tragedy of the commons).

Local Knowledge Not Integrated

- Fishers possess valuable ecological and management knowledge accumulated through long-term experience, **yet such knowledge is rarely integrated** into policy, management, or monitoring design.

Social barriers

Limited Understanding of OECMs

- The concept of **OECMs** remains **abstract and unfamiliar** to most local communities.
- This creates a **communication gap** between national policy language and local understanding.

Passive Local Participation

- **Fisherman associations** mainly serve as **intermediaries** for policy communication and implementation.
- They seldom take **proactive roles in management or conservation** due to **limited incentives and support mechanisms**.

Social barriers

Future Directions

- A stable **mechanism for dialogue and feedback** between **government** and **civil society** should be established, gradually building trust and consensus.
- With **livelihood co-benefits and community participation** (including respect for traditional ecological knowledge) as the core, the social foundation for public support can be strengthened.



Governance barriers

Government: Fragmented Management

- Agencies such as the Fisheries Agency, Ocean Conservation Administration, Energy Administration, and Tourism Administration each use or plan marine areas according to their own responsibilities.
- However, there is **no comprehensive marine spatial use or planning framework** (such as Marine Spatial Planning).

Government: Weak Coordination Between Central and Local Authorities.

- The **central government** is responsible for authorization and oversight but provides limited ongoing guidance or coordination.
- **Local governments** face shortages in manpower, funding, and technical support, constraining effective monitoring, assessment, and enforcement.

Governance barriers

Government: Lack of Continuity in Support Programs

- Although the exclusive fishery right has a ten-year period, related support programs and policies are often driven by short **political cycles** that **demand visible results** within 1 or 2 years, making long-term funding difficult to sustain.

Management Units (Fisherman Associations): Insufficient Capacity

- Under the “**local management**”, the local level is expected to serve as the main **driver**.
- However, most fisherman associations lack full-time personnel and financial resources, making it difficult to sustain long-term management, monitoring, and community coordination work.

Governance barriers

Future Directions

- Both **horizontal (inter-ministerial)** and **vertical (central-local)** coordination mechanisms should be established to **integrate marine spatial use**.
- **Long-term mechanisms for funding, manpower, and capacity building** should be ensured, so that local governments and fisherman associations can continuously promote fishery-based OECMs.



6. Conclusion



Policy implications

This study examines the potential for establishing fishery OECMs in Taiwan through the Exclusive Fishery Right Areas, analyzing the barriers **from institutional, social, and governance perspectives**.

Well-managed Exclusive Fishery Right Areas already demonstrate many characteristics of fishery OECMs, and have the potential to serve as **localized governance tools** that balance biodiversity conservation and coastal livelihoods.

This idea also echoes the concept of **SATO-UMI**, where production, livelihoods, and biodiversity coexist in harmony.



Source: https://www.env.go.jp/water/heisa/satoumi/en/01_e.html

Limitations & Future Research

- The interview sample mainly included **government officials** and **scholars**, and did not fully capture the perspectives of **local fishers**.
- Future research could expand the sample to include fisherman associations and communities across regions with **different local characteristics**.

- As this research was conducted during the early stage of OECM development in Taiwan, it could not capture **long-term implementation outcomes**.
- Future research could continue tracking Exclusive Fishery Right Areas practices and develop indicators to evaluate their **ecological and social outcomes**.

Thank you

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