# The Hidden Hands of Shrimp Aquaculture:

## Recognizing Women's Labor and Care as Climate-Smart Action

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# Background: Gender Gap in Fisheries

In Indonesia, women make up nearly **42%** of the fisheries workforce, yet they remain largely invisible in both data and decision-making.

While men dominate high-value roles such as pond ownership, harvesting, transportation, and trade, women are pushed into **lower-value tasks**- grading, sorting, marketing, and processing—often on top of their unpaid domestic and caregiving work.

This gender gap is **not only a matter of fairness but also of resilience**. Women's labor and care work subsidize the sector by reducing operational costs, sustaining households, and maintaining social networks.

These contributions are rarely recognized as "fisheries labor," meaning **women lack legal status as fishers**, are excluded from insurance and credit schemes, and are often invisible in official statistics that prioritize capture fisheries.

Yet without recognition and support, their contributions remain **undervalued**, reinforcing cycles of exclusion and poverty in small-scale fishing and aquaculture communities.

# Setting the Context

In Banyuwangi, shrimp aquaculture is more than ponds and production:

**Women, remain invisible**—confined to roles labeled as "domestic help" while carrying the weight of feeding workers, managing household finances, and sustaining social ties.

**Young people aspire to enter aquaculture** but are locked out by land, capital, and entrenched hierarchies.

Power rests with older men who own assets, shaping decisions and capturing benefits. Without addressing these inequities, climate-smart innovations risk reinforcing exclusion instead of building resilience.

# Objectives

Therefore, this study aims to:

Examine gendered power relations, social norms, and structural barriers in shrimp aquaculture

Map women's and youth's livelihood spaces and highlight their invisible contributions, particularly care work that sustains aquaculture systems

Provide critical insights for integrating gender equality and social inclusion into aquaculture governance so that climate-smart innovations and adaptation strategies are inclusive, equitable, and resilient.

# Methodology and Theoretical Framework

We combined Moser's Gender Analysis Framework with Participatory Rural Appraisal tools (timelines, time-use surveys, and participatory focus group discussions) to explore labor divisions, resource access, and decision-making in two shrimp-farming villages in Banyuwangi.

Beyond mapping roles, we analyzed our findings through the lens of **care work as infrastructure**, drawing on Federici (2012), Weeratunge et al. (2010), Kusakabe (2003), Kleiber et al. (2017), and Fisher & Tronto (1990).

This perspective **frames women's caregiving, domestic labor, and community work not as peripheral, but as the hidden infrastructure that sustains shrimp aquaculture**, reduces costs, builds social capital, and underpins resilience.

Key Findings:

# Structural and Cultural Barriers

Structural and cultural barriers in shrimp aquaculture reveal how women's and youth's contributions are systematically undervalued:

Asset ownership and inheritance systems concentrate power among older men, excluding others from decision-making and formal recognition. Women's work is relegated to informal or domestic spheres—cooking for workers, managing household finances, building community ties—seen as peripheral rather than productive.

Yet, building on Fisher and Tronto's theory of care (1990), **these activities constitute *hidden infrastructure* that subsidizes production costs, maintain social capital, and sustain resilience**. In Wringin Putih, strong cohesion allows these contributions to partially surface, while in Karangrejo, elite capture and weaker social ties further marginalize them.

This highlights how patriarchal norms and structural exclusion render care work invisible, despite being central to aquaculture systems.

Key Findings:

# Asset Ownership and Power Gap

**Ownership in shrimp aquaculture is tied not only to material assets but also to masculine authority**. Ponds, land, and capital become markers of power that legitimize men's dominance in decision-making spaces, while women and youth are relegated to supportive or informal roles.

This dynamic reflects what Federici (2012) describes as the political economy of reproduction: **women's labor sustains the system, yet masculine control over assets dictates who is recognized, who speaks, and who benefits**.

In this way, ownership consolidates masculine energy as the locus of authority, while **women's and youth's contributions persist as *hidden infrastructures*, which is indispensable, yet excluded from formal power.**

Key Findings:

# Youth Dynamics

Youth in Banyuwangi show strong interest in aquaculture, yet opportunities are highly constrained. Entry into shrimp farming is largely reserved for **a small group of young men** with access to family-owned land, capital, and networks.

For most other youth, especially young women, participation is limited to informal labor, support roles, or unrealized aspirations. In Karangrejo, urbanization and weaker social cohesion exacerbate risks of exclusion, while in Wringin Putih, stronger community ties provide more supportive, though still unequal, pathways.

Through a feminist political economy lens (Federici, 2012; Weeratunge et al., 2010), these dynamics reveal how youth labor and aspirations form an **invisible backbone** of the sector which is essential to sustaining aquaculture but rarely recognized or rewarded.

Key Findings:

# Collaborative and Care Roles

Women in shrimp-farming households take on **collaborative roles** in pond management, such as gaining knowledge through daily discussions with their husbands, stepping in to feed shrimp, monitor ponds, and manage aquaculture finances whenever needed.

Alongside this, they shoulder **everyday care responsibilities** that are often dismissed as domestic support: preparing meals for workers, safeguarding family health, and ensuring children's education.

Far from peripheral, these roles directly sustain pond operations by **reducing costs and maintaining the stability of the household workforce**. Beyond the pond, **women also contribute to the household economy** through processing, adding value to fish products, and managing family assets.

These contributions are best understood as **unacknowledged infrastructures of aquaculture, or** forms of reproductive and care labor that make production possible, while remaining structurally invisible in governance and policy.

# Conclusion

Shrimp aquaculture is built on more than ponds and technology, it relies on a **hidden care infrastructure** carried by women and youth. Their collaborative labor, everyday care, and economic contributions sustain production and resilience, yet remain unrecognized in policy and governance. Making this hidden infrastructure visible and valued is essential for aquaculture to become truly inclusive, equitable, and climate-resilient.

# Thank You.

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