# GAF 9 Book of Abstracts

9th Global Conference on

## Gender in Aquaculture & Fisheries (GAF9)

1-3 October 2025 | Bangkok, Thailand

## Transforming Aquaculture & Fisheries for Gender Justice

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# Book of Abstracts

## Transforming Aquaculture & Fisheries for Gender Justice

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ASIAN FISHERIES SOCIETY FOUNDED 1984

GAF GENDER IN AQUACULTURE AND FISHERIES SECTION

ASIAN INSTITUTE OF TECHNOLOGY 1959

**GAF9** - The 9th Global Conference on Gender in Aquaculture & Fisheries
**Transforming Aquaculture and Fisheries for Gender Justice**

**Book of Abstracts**

**Published by**
Gender in Aquaculture & Fisheries Section of the Asian Fisheries Society (GAFS of the AFS)
Asian Institute of Technology (AIT)

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**October 2025**

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## Dr. Holly Hapke

Director of Research Development,
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Dr. Holly Hapke is a geographer, feminist political economist, and interdisciplinary social scientist with research expertise in small-scale fisheries development, gender, livelihoods, and human-environment interactions. Over the past 30 years, she has conducted research on gender, fish markets, globalization, and livelihoods in southern India; agricultural development in India, Pakistan, and the United States; Gulf migration in South Asia; and Latino transnational migration in the U.S. South. Her recent projects examine the social economy of dried fish in India; the role of fish in food security for the urban poor in India and Ghana; and the gendered impacts of the blue economy in the Indian Ocean fisheries. She is a former Fulbright Scholar and Fulbright-Hays Fellow in India and has authored over 50 publications including peer-reviewed journal articles and book chapters, review essays, project reports, training manuals, and two textbooks. From 1996-2018 she was a professor of geography at East Carolina University and served as associate dean for faculty development in the College of Arts and Sciences from 2010-2014. She then served as a program director at the U.S. National Science Foundation from 2014-2017. Currently Dr. Hapke is a senior researcher and serves as director of research development in the School of Social Sciences at the University of California, Irvine.

## Ms. Angela Lentisco

Fishery and Aquaculture Officer, Food and Agriculture Organization (FAO) of the UN for Asia and the Pacific

Ms. Angela Lentisco brings over 18 years of international experience in fisheries and aquaculture sectors. She has worked with leading international organizations, providing technical advice, managing projects, and strengthening institutional capacity in areas such as small-scale fisheries, gender mainstreaming and women's empowerment, the ecosystem approach, aquatic resource management, and sustainable fisheries livelihoods. She currently serves as Fishery and Aquaculture Officer at the Regional Office for Asia and the Pacific of the Food and Agriculture Organization of the United Nations (FAO). Her career includes extensive fieldwork across South and Southeast Asia and Latin America offering her valuable, ground-level insight into diverse community contexts.

# KEYNOTES

## Ms. Dornnapha Sukkree

Co-founder and Executive Director, MAST Human

Ms. Dornnapha Sukkree is the Co-founder and Executive Director of MAST Human, dedicated to combating human trafficking and forced labor in Southeast Asia. She leads innovative technology-driven initiatives like the MAST Human Intelligence App to protect and empower vulnerable workers and coastal communities. With a strong focus on collaboration among governments, businesses, and civil society, Dornnapha champions access to justice and protection for trafficked individuals. She also serves on advisory boards for nonprofits advancing child protection and labor rights, combining passion and expertise to create lasting social impact.

# TECHNICAL SESSIONS

# Session 1:
# Women gender in the blue economy

# INLAND FISHERIES AND AQUACULTURE IN INDIA FOR SUSTAINABLE DEVELOPMENT GOALS AND WOMEN EMPOWERMENT

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Fisheries and aquaculture are a sunrise sector in India, which contributes to around 8% of the global fish production along with contributing to 1.24% of India's Gross Value Added (GVA) and 7.28% to the agricultural GVA (2018-19). The inland fisheries sector in India provides livelihood to 23,117,820 people in which women constitute 43.7% of the populace. In India, inland open water fisheries are considered small-scale because of involvement of more traditional types of craft and gear which involve low levels of mechanization, and being less capital intensive. The major resources of inland fisheries in India are rivers (164,118 km); canals (64,972 km); reservoirs (3,460,301 ha); floodplain wetlands (564,288 ha); estuaries (458,185 ha); lagoons (246,529 ha); lakes (30,551 ha); upland lakes (96,900 ha); and others (146,730 ha). The participation of women and men in these fisheries resources are shaped by social, cultural, economic, environmental, religious and political factors across different regions. In this study, women's participation in various inland aquatic ecosystems has been evaluated through Moser's triple role gender framework which encompasses production, reproduction (household work and child care), and community management roles. The activities in the production role involve fishing, fish seed collection, fish processing and value addition, marketing, fabrication of fishing gears, helping family members in preparation of fishing trips, and in unloading and sorting fishes. Women are also significantly involved in participation at community events to gain knowledge and information through training, mass awareness and demonstrations which pave the path towards empowerment. The flagship programmes undertaken by ICAR-CIFRI in this regard were National Mission for Clean Ganga (northern and eastern India), Scheduled Caste Sub Plan (eastern and southern India), Scheduled Tribe Component (eastern, southern and central India), North-East Hill Component (north-eastern region), National Innovations in Climate Resilient Agriculture (northern and eastern India), and WorldFish Window-III Project (eastern India) by addressing 9 out of 17 SDGs. However, in spite of such valuable and critical contributions, the challenges that women often have to encounter are lack of recognition, drudgery and various occupational health hazards.

# UNSUSTAINABLE FISHING AND ITS IMPACTS ON WOMEN IN SMALL-SCALE FISHERIES IN THAILAND

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Unsustainable fishing causes widespread damage, particularly to the environment and the livelihoods of coastal communities. Women in small-scale fisheries are especially vulnerable to its impacts, not only due to depleted fishery resources but also because of gender dynamics amplifying the severity of these effects. Since there is still limited literature available on the relationship between unsustainable fisheries and the livelihoods of women in small-scale fisheries, this research aims to fill this gap by delving deeper into how unsustainable fishing impacts women in small-scale fisheries in southern Thailand. We utilise the gender analysis framework of Four Core Dimensions for Intersectional Gender Integration, enabling a deeper examination of the structural factors driving gender-based vulnerabilities and inequities. We not only descriptively try and explain the impact of unsustainable fishing on women but also unveil hidden gender aspects such as gender inequality that intensify the issue. To do so, participatory observation, unstructured interviews, and semi-structured interviews were conducted with women in small-scale fisheries from three different water territories—the Gulf of Thailand, the Andaman Sea, and Songkhla Lake. Our study shows that the general effect of destructive fishing, as a part of unsustainable fishing, on small-scale fishers in southern Thailand is a decrease in family income. As a result, fishers are forced to work harder and spend longer hours in the sea. However, the reinforcement of gender norms has intensified the impacts on women by adding burdens to the reproductive responsibilities that women already hold, and which are barely perceived as "real" work. Additionally, different intersectional social factors from each woman's background create varying degrees of challenges depending on their individual circumstances.

# OCCUPATIONAL HAZARDS, GENDER ROLES, AND LIVELIHOOD CHALLENGES OF FISHERS IN DAL LAKE, JAMMU AND KASHMIR, INDIA

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Dal Lake is a crucial fisheries hub in Jammu and Kashmir, supporting the livelihoods of many fishers, particularly the *Hanji* community. This study assessed occupational hazards, gender roles, time-use patterns, and gender-specific needs and constraints faced by fishers. Data were collected through interviews and observations from fisher households. A sample size of 60 fishermen and fisherwomen was taken. Findings showed that many fishers were semi-literate, with 20% of fishermen and 3.33% of fisherwomen having primary education, and only 3.33% of fishermen being graduates, from nuclear families, and had extensive fishing experience (20-50 years). Fishing was the primary occupation, with boat tourism as a secondary income source (33.33%). The average monthly income from fishing was ₹12,320. Gender roles were distinct; fisherwomen primarily managed reproductive tasks, while productive roles were dominated by fishermen, although 21.66% of fisherwomen assisted in fishing activities. Occupational hazards were categorized into cold weather, physical, biological, ergonomic, and psychosocial risks. About 85% of fishermen reported reduced sensation in feet and fever due to cold, while 90% suffered burns from *Kangri* use. Fish bites, cuts (87.5%), and ergonomic injuries due to heavy labor were common. Psychosocial stress from political instability also disrupted livelihoods. No structured safety measures were reported. The study revealed that 90% of fisherwomen experienced frostbite, 96.6% suffered cuts from fish handling, and 86.6% faced biological hazards. Ergonomic issues like back pain and psychosocial stress (96.6%) due to instability and the COVID-19 pandemic were prevalent. Gender-specific needs varied, with women prioritizing security, childcare, and education, while men sought alternative livelihoods and financial aid. Fisherwomen had more access to household resources, but men controlled financial and fisheries-related assets. Fishermen of Dal Lake struggle with the stoppage of craft wood subsidies, while fisherwomen face severe discomfort due to the lack of washroom facilities. The study underscores the need for gender-sensitive policies, occupational safety measures, and institutional support to improve fisher livelihoods in Dal Lake.

# HISTORIES AND FUTURES OF GENDERED SEAFOOD MARKET SPACES IN SRI LANKA

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Small-scale fisheries are vital resource economies that sustain millions through livelihoods and food security. However, they are increasingly vulnerable due to shifting political ecologies, environmental changes, resource depletion, mechanisation and globalised value chains. These transformations, often framed within the Blue Economy, impact the sector in a gendered manner. Traditional small-scale fishers are increasingly pushed to marginal spaces within globalised value chains. Meanwhile, women face systemic exclusion from formal structures and institutions within the sector, with their contributions remaining largely unrecognised in fisheries data and policy. Furthermore, Sri Lanka went through multiple crises in the last five years, including the political economic crisis triggered by unsustainable debt and weak fiscal policies, that resulted in wide-spread fuel shortages and protests, the COVID-19 pandemic, marine disasters such as the MV X-Press Pearl disaster and development projects such as the Colombo Port City. We iteratively collected, qualitative data through individual in-depth interviews, participant observations and focus group discussions to comparatively research five seafood market spaces in Negombo, to understand the impacts of these sudden and slow-onset shocks as lived experiences. The data was collected from May 2022 to March 2023 in Negombo, Sri Lanka and involved 35 in-depth interviews and 7 focus group discussions with a total of 111 participants. Through individual histories, using social network analysis and delving into experiences of collectives and governance structures in the community, we study how groups of women continue to hold space in these markets, by creating spaces of their own, parallel to those that they are being excluded from. The data is being analysed at present, primarily following a grounded theory approach where we are coding data into theme that emerge from the interview transcripts and typed up participant observations. The findings highlight how women historically played a significant role in fish trading, but their involvement declined due to factors such as the introduction of high-value fish from outside Negombo, and the increasing masculinisation of fish trading driven by globalisation of value chains. In markets where higher-value seafood was introduced by external traders, women were often displaced from their traditional roles due to lack of capital and networks and discriminatory social norms. However, they adapted by occupying parallel spaces, such as market corridors, adjacent to the areas from which they were excluded. In peripheral markets, compared to the central market, women were more present, typically selling lower-value seafood in smaller quantities. During periods of crisis or 'rupture,' the spatial reorganisation of traders was gendered. Notably, women were observed occupying more prominent roles in fish markets during the political and economic crises. For instance, the initial stages of the crisis resulted in a lack of kerosene and diesel, which disrupted the operations of mechanised one-day and multi-day fishing boats, reducing the availability of fish for trade. Since women were primarily trading lower-value seafood items from non-mechanised traditional fishers, who had established networks with these women for decades, and dealing with smaller volumes of lower-value seafood from one-day boats instead of higher-value seafood from multi-day boats, women played a pronounced role in market spaces. The women in the peripheral markets had to rely on their networks to access the small volume of seafood that came to the central Pitipana market, which had a relatively

higher supply compared to the peripheral markets. Women with these networks were able to access this seafood and spatially shifted to sell along roadsides instead of within markets, as this offered higher access and visibility to customers. During the political economic crisis and other disruptions, the lack of institutional recognition and exclusion of women traders further exacerbated their vulnerability. Women traders were systematically excluded from compensation or support during events such as the MV X-Press Pearl ship incident or the development of the Colombo Port City. This gendered exclusion from fisheries societies reflects broader structural inequities that undermine women's agency and participation in economic activities, institutions, and decision-making spheres.

# WOMEN GLEANERS IN KERALA, INDIA: ASSESSMENT USING THE SUSTAINABLE LIVELIHOOD LENS

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Gleaning locally called '*thappippidutham'* (searching and catching) is a selective mode of fish harvest widely practiced by women small scale fishers globally. Indigenous methods and techniques are used which evolve locally but it is observed that the methods are still with low levels of technology. Along the Vembanad estuarine (one of the largest Ramsar wetland in the Southwest coast of India) belts of Kerala, gleaning is an important activity performed by women. This informal, unorganized and unrecognized fishing sector, falls outside the framework of formal recognition as a fishing activity and so keeps the women out of social security schemes by the state for fishers. This study using a Sustainable Livelihoods Framework (SLF) explores the activities and contribution of women involved in gleaning along the Vembanad estuarine system to analyse how the livelihood assets are being mobilized, how they cope with vulnerabilities, and what adaptive strategies are adopted without formal recognition or policy support. Field studies were carried out in eighteen locations across Alappuzha, Ernakulum and Kottayam Districts of Kerala using qualitative techniques such as focus group discussions, key informant interviews and field observations. The study employed qualitative techniques including focus group discussions (FGDs).Focus group discussions were conducted in 18 locations, mostly with female only groups, while a few included male participants.

Women used two major methods of gleaning, working at least for 4-6 hours submerged in water. Fishing follows the lunar cycles (locally known as '*Thakkam'*). The women mainly target on the fish species like peralspot, seabass, arius, gerres, prawn, mud crabs etc. Average catch ranges from 5-10 kg and mostly marketed in the local markets where they must give a commission of 10% to the auctioneers. Based on the value of the fish, they earn Rs 500-1500/day. They retain a small portion of the catch for household consumption. During the fishing operations they face several challenges like skin diseases, hearing issues, animal bites, otter attack, pollutants etc. Even though these vulnerabilities exist they are closely knitted social groups, and they motivate each other to do the activity. They are engaged in gleaning for the subsistence income, greater autonomy in household decision making and social interactions. The study highlights the critical gap in the fisheries policies and need for gender inclusive fisheries policies that formally recognizes these women as fishers. With the help of sustainable livelihood framework, the study contributes to the broader debates on gender, informal woks and rural livelihoods.

# DISMANTLING BARRIERS: WOMEN'S PARTICIPATION IN REDUCING THE USE OF PLASTICS IN FISHING VALUE CHAINS

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Women's role in the fisheries sector is not limited to productive and reproductive activities but extends to empowerment dimensions such as access to and control of resources. Being able to participate in decision making is a woman's right and enables her to transform her life towards achieving a higher level of well-being. The case of plastics use in the fisheries value chain is an urgent social and environmental concern. It has been reported that the Philippines is the world's third plastic polluter in the oceans (Ocean Conservancy and McKinsey Center for Business and Environment, 2015). In fishing, single-use plastics abound in processing and marketing --- i.e., for repacking, packaging, selling/retailing.

This paper posits that dismantling the barriers to women fishers' participation in decision making related to plastic use and plastic disposal will reduce plastic wastes/litter in the oceans. Findings show that there is a significant gender differential in knowledge, attitude and perception regarding single-use plastics. Specifically, female fishers know more than male fishers do, that single-use plastics is an environmental problem. Female fishers are more willing than their male counterparts to tell their families and friends about the risks of the increasing use of plastics and its irresponsible disposal to the seas. Female fishers are more willing than the male fishers to buy fish with as little plastic packaging as possible. But do women have significant roles in deciding the use of plastics in the fishing value chain?

There are barriers to women's participation in decision making. First, the perception that women's roles are focused on household responsibilities limits her participation in decision making about fisheries practices and resource management. Second, when she has lower income contribution to the family coffers, her ability to make independent decisions about resource use is further limited. Third, when she has few or no opportunities for capacity building (e.g. training in sustainable fishing practices and resource management), she is less confident to make informed decisions. Fourth, for women who challenge traditional power structures at home, at work and in the community, social pressures and cultural norms make it difficult for them to assert their interests in resource use decisions. Finally, women's economic dependence on men reduces their autonomy to make decisions and participate in discourses related to the use of plastics in fishing and its impact on the marine environment.

# INDIVIDUAL TO COLLECTIVE STRENGTH: WOMEN'S CAPABILITY EXPANSION IN KERALA'S FISHERIES ECONOMY

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Despite their critical involvement in the post-harvest fisheries sector, women in fisheries sector of Kerala remain economically and institutionally marginalized. This paper explores how collective organizing - through self-help groups, cooperatives, and community-based federations - has served as a transformative force in expanding the capabilities and economic agency of fisherwomen. Drawing on Amartya Sen's Capability Approach, the study analyses how these collective efforts not only enhance income generation and market participation but also improve women's freedom to lead lives they value - through greater mobility, decision-making power, and social recognition. Using a mixed-methods approach, including field-level case studies and policy analysis, the paper examines the experiences of women-led initiatives such as self-help groups (SHGs), cooperatives, and federations like *Theeramythri* enterprises. It highlights how these platforms help mitigate structural barriers - such as gendered access to credit, technology, and institutional support - while enabling collective action that alleviates capability deprivations and fosters sustainable livelihoods.

When individual capabilities fail to develop due to socio-economic and patriarchal structures, collective action and group identity can strengthen shared capabilities and bring meaningful changes in the workspace that people have reason to value. The analysis reveals several key outcomes of collective organizing. First, membership in SHGs and cooperatives led to a increase in average monthly income, largely attributable to improved bargaining power in fish markets and collective procurement of inputs at discounted rates. Second, women reported enhanced mobility and negotiation skills: indicated active participation in price negotiations at landing sites, a sharp rise prior to collective affiliation. Third, the formation of women's groups has significantly reduced their financial dependency on informal moneylenders - and even on their husbands - by promoting regular savings practices. Through collective organizing, these groups are better positioned to access formal credit from institutions such as Matsyafed, The Society for Assistance to Fisherwomen (SAF), Primary Agricultural Credit Society (PACS) and government-supported schemes like Scheduled Castes Sub-Programme (SCSP). These savings and credit mechanisms have enabled members to mobilize working capital and make productive investments. Importantly, this collective mobilisation not only had a transformative impact through shared knowledge and peer support but also bolstered women's self-confidence, enabling them to assume leadership roles within their communities. Participants highlighted that collective forums served as platforms for voicing grievances and asserting their rights. Despite these advances, persistent structural challenges remain, women-led collectives often face gender-blind policy frameworks that limit formal recognition, limited access to infrastructure, and deep-rooted social norms - continue to restrict full expansion of women's capacities and capabilities.

# EXPLORING THE MEANING OF SHIFTING OF GENDER PERCEPTION: FISHERS WIVES EXPERIENCES OF ECONOMIC EMPOWERMENT AND LEADERSHIP IN *KEMBALI MUDA MANDIRI* COOPERATIVE IN TORO VILLAGE, BONE REGENCY, SOUTH SULAWESI

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Women in coastal communities play an important role in managing household finances and raising children. However, the role of women in the context of social and business institutions in coastal communities is still insignificant. Processes such as institutional discussions, and collective decision-making in coastal communities that are entrenched with patriarchal culture, are still dominated by men. As a result, decisions can be biased and subjective. In the last 4 years, one of the groups of fisher's wives (*Mama Tuna Mandiri*) in Toro Village, started to build a business independently as a form of contribution to the family and community economy. In the process, their business group began to grow and through this growth, trust was formed in fisher's wives capacity to fill important positions in larger business institutions, such as the *Kembali Muda Mandiri* Cooperative. This change marks a shift in the role and social position of women in coastal communities. Through a qualitative Interpretative Phenomenological Analysis (IPA) approach, this study aims to understand the subjective experiences of fishermen and fishermen's wives regarding the shift in roles/positions that occur in fisher's business institutions. This study also focuses on fisher's wives interpreting the process of role shifting, the challenges faced, and its impact on identity and social relationships. This study not only describes the phenomenon of women's role shifting in local business institutions but can also be a model for women's empowerment intervention programs in locations with a strong patriarchal culture.

# GENDERED DISAGGREGATED HUMAN DEVELOPMENT OF FISH-FARMER HOUSEHOLDS IN THE EAST KOLKATA WETLANDS

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The East Kolkata Wetlands, designated as a Ramsar site, exemplifies sustainable resource recovery and livelihood generation through integrated sewage-fed aquaculture and agriculture. However, fish-farming communities in this region face significant socioeconomic challenges, necessitating a thorough examination of their human development. Traditional fishponds that use wastewater for aquaculture in the East Kolkata Wetlands are known as *bheries*. This study assesses the human development of fish farmers across three different management regimes—private, cooperative, and government—using the macro-level Human Development Index (HDI) framework developed by the UNDP, which focuses on education, health, and standard of living, while also considering gender dimensions in health indicators. Data were collected from 172 fish-farming households, purposively selected based on operational size and the population engaged in each management regime, through a pre-tested structured interview schedule during a survey conducted from January to July 2024. Household-specific data on maternal and child health were collected to reflect aspects of women and children's well-being within fish-farmer families. The HDI values indicated significant differences among the management types, with government-managed *bheries* exhibiting the highest HDI (0.67), significantly surpassing both private and cooperative regimes (each at 0.53). These differences were statistically validated by one-way ANOVA ($p < 0.001$), and Duncan's post-hoc test confirmed that government-managed *bheries* had significantly higher HDI scores than the other two regimes. Households under government management showed better access to education and healthcare services, resulting in an improved standard of living, particularly for women and children. The average HDI score across all management types was 0.55, falling below the averages for West Bengal (0.624) and India (0.644). The analysis further revealed strong correlations between maternal health and the overall health index ($r = 0.72$), and between maternal health and HDI ($r = 0.52$). Child health also showed significant associations with maternal health ($r = 0.38$) and the overall health index ($r = 0.62$), with the government-managed regime showing the strongest correlation ($r = 0.79$). The average maternal health index varied across the three regimes, being highest in government-managed *bheries*, reflecting how institutional arrangements and governance structures influence women's health outcomes. These findings underscore the critical role of gender-sensitive health interventions—particularly for women and children—in advancing human development in wetland-based livelihoods. They highlight the need for gender-responsive, inclusive governance aligned with SDGs 3, 5, and 10. Overall, the research stresses the importance of equity-driven policies to address development disparities and sustain the livelihoods of those—especially women—dependent on this unique ecosystem.

# GENDER INTEGRATION PROMOTES SUSTAINABLE COASTAL FISHERIES RESOURCE USE: CASE STUDIES AND POLICY IMPLICATIONS FROM JAPAN

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Promoting a Blue Economy that ensures sustainable use of marine resources requires including small-scale fishers and gender perspectives to ensure equity—known as Blue Justice—yet more studies are needed to understand how these efforts impact fisheries resource use in practice. This study explores how gender integration in small-scale coastal fisheries-related activities in Japan impact on sustainability of resource use, and offers policy recommendations based on the results of case studies.

Five case studies from Japan were examined: (1) husband-wife fishing operations in Chiba, (2) women's engagement in purse-seine fishery in Nagasaki, (3) management of Akamoku (*Sargassum horneri*) in Fukuoka, (4) the "Mothers' Restaurant" run by the Fisheries Cooperative Association (FCA) in Ibaraki, and (5) female leadership as an FCA president in Toyama. Semi-structured interviews were conducted to examine impacts caused on ecological and social aspects, including gender aspects. Findings show that gender integration strengthens communication among fishers, facilitates diverse contributions based on gendered knowledge, skills, and networks, and promotes sustainable coastal resource use (Fig. 1).

Japanese fisheries policy documents mention supports women's participation but do not include terms of "gender" or "gender mainstreaming" yet. The Basic Fisheries Plan (2022) emphasizes diversity and inclusion, encouraging participation regardless of age, gender, or nationality. While the cases highlight diverse contributions to sustainability, they also expose challenges linked to traditional gender roles, such as unequal care work distribution in fishing households and the need for gender-neutral infrastructure in ports and vessels. This study argues that shifting Japan's fisheries policies from a women-focused approach to gender mainstreaming is crucial to prevent reproducing gender-based inequalities. Such transformation will promote an equitable and Blue Economy incorporating small-scale fishers and gender perspective.

**Fig. 1 The impact of gender integration in fisheries-related activities on sustainability of coastal fisheries resource use**

# EMPOWERING WOMEN THROUGH TECHNOLOGICAL DEVELOPMENT IN THE FISHERIES SECTOR TO ACHIEVE GENDER JUSTICE

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The fisheries sector plays a vital role in coastal economies and food security; however, it remains characterized by persistent gender disparities, especially in developing regions. This study aims to investigate the impact of technological advancements on women's participation in the fisheries sector in Gujarat, India, with a focus on addressing systemic gender inequities.

A field-based survey was conducted involving 200 participants from selected coastal regions of Gujarat. The research adopts a mixed-methods approach to explore how digital tools, mechanical equipment, and other forms of technological innovation influence the roles, opportunities, and challenges faced by women across the fisheries value chain.

Preliminary insights reveal that while technological integration holds potential for empowering women, it may also exacerbate inequalities due to limited access to education, skill development, and ownership rights. Structural barriers such as contractual employment, health risks, and socio-cultural constraints continue to marginalize women's roles. However, when approached through an intersectional lens, technology can serve as a catalyst for enhancing gender justice and inclusive development.

This study contributes to the growing body of literature on gender and technology in fisheries by offering empirical evidence from India. It underscores the need for inclusive policy interventions that promote equitable access to technological resources and training for women. The research advocates for a gender-sensitive innovation framework to ensure the transformative potential of technology is realized across all segments of the fisheries sector.

# RESILIENCE, REPRESENTATION, AND REFORM: WOMEN IN AOTEAROA NEW ZEALAND'S SEAFOOD INDUSTRY

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Women are vital to the sustainability, innovation, and resilience of the global seafood sector. In Aotearoa, New Zealand (NZ), their contributions span commercial fishing, aquaculture, governance, processing, research, and policy, yet they remain underrepresented in leadership and face structural, cultural, and operational barriers. This presentation draws on a survey and personal narratives that explore women's roles, aspirations, and lived experiences across NZ's seafood industry and value chain, including the traditional roles of Māori women in customary fisheries and kaitiakitanga (a Māori term meaning guardianship, stewardship, or protection, especially of the natural environment).

Survey participants highlighted diverse pathways into the industry, including intergenerational knowledge transfer, environmental motivations, and personal passion. Despite progress in visibility and influence, 64% reported experiencing or witnessing gender inequity. Barriers included exclusion from leadership, assumptions around capability, and communication norms that marginalise women's voices. Informal mentorship was identified as a key driver of success; however, participants emphasised the need for structured, well-funded programmes like those seen abroad. Such programmes offer targeted leadership and innovation support. While NZ lacks comparable cross-sector initiatives, recent progress in aquaculture has led to more focused efforts. Still, support across commercial fishing, processing, and governance remains limited.

Despite ongoing challenges, optimism remains high as the NZ sector evolves. While participants highlighted areas still needing improvement, including the lack of psychologically safe environments to raise concerns about inequity, the presentation shares participants' significant achievements, from skippering vessels and shaping the Quota Management System to leading sustainability initiatives like the East Coast Tarakihi (stock) Rebuild Plan. Their achievements signal a shift in gender dynamics.

The presentation demonstrates that advancing women's roles in seafood is a social justice issue and a strategic imperative for the blue economy. Elevating women's voices, formalising support networks, and ensuring equitable access to leadership are vital to unlocking the sector's full potential.

# GENDER EQUALITY IN ACHIEVING RESEARCH CAREER SUCCESS: A CASE STUDY OF TWO INDONESIAN AQUACULTURE INSTITUTES

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Considerations of gender-based barriers to career development are of increasing public and academic interest, including the professional areas of fisheries and aquaculture science. This study explored potential differences in career progression paths of female versus male researchers at two participating aquaculture research institutions in Indonesia. Surveys, interviews and focus group discussions reported in this paper were conducted with 59 researchers at the Research Institute for Coastal Aquaculture and Fisheries Extension (RICAFE) in Maros, South Sulawesi; and the Institute for Mariculture Research and Fisheries Extension (IMRAFE) in Gondol, Bali. Three career progression indicators were explored: years working; educational levels (BSc, MSc or PhD); and the current position/pay grade (pay grades at the participating institutions ranged from 1, the lowest grade, to 4, the highest grade). Indicators of research productivity were based on publication records, specifically numbers of publications at conferences; in national scientific journals; and international scientific journals. Data were analysed using SPSS to (1) build multiple regression models; and (2) calculate Duncans' dissimilarity index, a measure of disparity of the occupational distributions between men and women. We analysed data both from our respondents and used bootstrapping to adjust for small sample.

We found that differences in position and pay grade were primarily influenced by education level and years of experience, not gender. Duncan's index score of 25 indicates minimal gender segregation. However, women were more concentrated in the lower-level 2 pay grade, while men dominated the higher-level 4 pay grade. Productivity, measured by publications, was linked to pay and education rather than gender. We found no systematic institutional barriers to women's career advancement, but identified 'time poverty'—the combined pressures of work, domestic duties, and societal expectations—as a significant barrier.

Due to the small sample size, these findings should be confirmed with larger studies. Our data supports two main points: First, the observed differences are likely due to 'generational gap bias' rather than a gender gap, as senior males are compared to junior females. Longitudinal studies could clarify this. Second, time poverty, not institutional barriers, is seen as a major obstacle to career advancement.

In summary, while institutional barriers in fisheries and aquaculture research are important, social barriers related to time poverty may be even more significant. Further research in Indonesia and Southeast Asia is recommended.

# GENDER DYNAMICS IN *SAMA*-BAJO FISHERIES: CONSTRAINTS AND OPPORTUNITIES IN BLUE SWIMMING CRAB AND TUNA VALUE CHAINS

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Small-scale fisheries (SSF) in Indonesia provide essential livelihoods for millions of people. As the world's largest archipelagic country, Indonesia faces major challenges in its export-oriented fishery sector, including the depletion of marine resources due to ecosystem degradation and persistent poverty among local value chain actors, such as fishers, processors, and traders. These challenges are particularly evident in Indonesia's Blue Swimming Crab (BSC) and tuna value chains.

While women play crucial roles in Indonesian fisheries, their contributions are often undervalued and underrepresented. Research applying gender and intersectionality approaches to export-driven fishery value chains in Eastern Indonesia remains limited, particularly in Fisheries Management Area (WPP NRI) 714, from Tolo Bay to the Banda Sea. Studies of the *Sama*-Bajo community in Southeast Sulawesi within this context are mainly absent from the literature.

To address these gaps, this study investigates *Sama*-Bajo women's roles and challenges in two fishery value chains in Southeast Sulawesi. It explores how gender norms influence opportunities and barriers in post-harvest activities such as processing and trading. By analyzing two key fisheries—BSC and tuna—through a gendered value chain constraints framework, we can identify which groups of women face the most significant challenges. The research draws on qualitative data from single-gender focus group discussions, small-group interviews, key informant interviews with fishery stakeholders (men, women, and transgender individuals), and participant observation.

This study analyzes the value chain, focusing on gender dynamics and the specific constraints women face due to gender norms and stereotypes. We explore how these challenges vary by role, marital status, age, and ethnicity, and suggest ways to address them. The findings indicate that export-oriented value chains rely on women, especially in post-harvest activities. We recommend solutions such as childcare facilities at work, dedicated market spaces for Sama-Bajo women, recycling initiatives, and leveraging women-led financial institutions to overcome barriers.

# INCHING THEIR WAY UP: THE SMOKED SKIPJACK TUNA (*INAGUNAN*) PRODUCERS OF THE COASTAL COMMUNITY OF NATO, SAGNAY, CAMARINES SUR, PHILIPPINES

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Skipjack processing has been in operation in the village of Nato, Municipality of Sagñay, Camarines Sur, Philippines, for decades already but information concerning it is very limited. This study attempted to describe the socio-economics and marketing of smoked Skipjack tuna (or in local term called "*Inagunan*"). Specifically, it aimed to: map the *Inagunan* producers in Sagñay; describe the socio-economic characteristics of households engaged in producing *Inagunan*; describe their handling and processing practices; estimate the cost and benefit of processing *Inagunan*; identify problems encountered by *Inagunan* producers in processing; describe marketing activities related to *Inagunan*; and recommend ways to enhance its processing and profitability.

This study adopted quantitative and qualitative approaches employing face-to-face interview and focus group discussions, key informant interviews, photo documentations and literature review as data gathering techniques, respectively. Data from the face-to-face interviews were encoded and processed using excel. Descriptive statistics was used to analyze the data. Information from qualitative data gathering techniques was consolidated and recurring patterns and themes were identified. Results revealed 14 *Inagunan* producers located relatively close to each other, and living below the national poverty threshold. It also showed the tedious, traditional smoking fish process which was made more difficult with the absence of storage facility, safe and organized processing facility, use of scrap and improvised materials and others. Cost and benefits analysis showed that smoked Skipjack was highly profitable. Marketing which followed short distribution channel could still be expanded with increased production provided that some problems such as limited sources of income, low income, lack of capitalization and others are addressed. Recommendations to address these problems are provided.

# "REEL WOMEN" AND "SECRET WOMEN'S BUSINESS": WOMEN'S RECREATIONAL FISHING IN THE TOP END OF THE NORTHERN TERRITORY, AUSTRALIA

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The economic, social, health and wellbeing benefits of recreational fishing are increasingly recognised in the scholarship on the sector, but the male-dominated nature of the sport globally means that the gendered nature of these benefits is poorly understood by researchers, fisheries managers, and recreational fishing businesses and organisations. Therefore, there is a risk that such benefits are not equitably shared, and the experiences of women and gender diverse anglers, and those working in the recreational fishing sector, are overlooked.

The case of the Northern Territory of Australia provides a rare example where the participation rates of women and men in recreational fishing are equal, according to a recent National Social and Economic Survey of Recreational Fishers. Using a feminist qualitative approach, this study explored women's experiences of recreational fishing in the Top End region of the Northern Territory, the barriers and enablers of their participation, the role of women's fishing competitions and the private sector, and the vision that women anglers have for the sector. This qualitative approach highlights a number of issues that shape women's experiences of recreational fishing, which are not captured by existing gender-disaggregated participation data.

The findings reveal the inclusive nature of recreational fishing in the Top End while highlighting barriers and opportunities for improvement. Participants shared experiences that showcase the importance of fishing as a family activity in the Northern Territory. Key issues identified include managing family commitments and social dynamics involving various relationships such as interactions with friends, family romantic partners and other fishers. The study examines women's roles in fishing and their representation in media and decision-making. It concludes with participants' vision for the future and recommendations for promoting inclusive recreational fisheries research.

This research contributes to a growing discourse about understanding the social, wellbeing and cultural aspects of recreational fishing and emphasizes the need for greater recognition of fisher diversity. It provides insights for fishing communities aiming to enhance female participation and equitable resource distribution, with broader implications for outdoor recreation and the blue economy.

# GENDER DYNAMICS IN CONTRIBUTION OF MARICULTURE THE WELL-BEING OF COASTAL COMMUNITIES IN KENYA

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In Kenya, the mariculture sub-sector has received increased attention through financial investment by the government and non-governmental bodies, aiming to improve the wellbeing of the coastal communities. Nevertheless, since the beginning the practice of mariculture in Kenya – for over three decades, the general research in this area is very scanty. Studies that assess the contribution of mariculture to livelihoods of the coastal people are completely missing. The current study sought to analyse the gender dynamics which promote the role of mariculture in the well-being of the coastal communities in Kenya. To achieve the overall objective, the study explores how mariculture, two specific objectives were applied: 1. To analyze household's gender dynamics influencing and extent to which mariculture contributes to household's overall income. 2. To analyze farmers' gender and group-level characteristics influencing absolute income from mariculture

Data were collected in the coastal region from Kwale, Kilifi and Mombasa counties, through a survey, Key informant Interviews (KIIs), In-depth interviews and Focus Group Discussions (FGDs). In total 603 households were interviewed, 20 KIIs, 22 FGDs and 30 in-depth interviews were conducted. To analyse the data, econometric models and theories were applied in quantitative data, while thematic analysis was used in qualitative data. The econometric models include: A maximum likelihood mixed-effects GLM regression model and Multilevel generalized linear model (GLMM) with a gamma distribution and a log link function.

Single female households have a high dependence on seaweed farming as a source of livelihood (based on the seaweed farming households; data), but a lower dependence on fish farming (based on fish farming households' data). While fish farming is conducted by a community who own the ponds and share activities and income, seaweed farming is more individual or household based. In fish farming, farmers who spend more time in the group's activities tend to get a higher income share from the activities. Women have high domestic and reproduction activities and tend not have as much time to invest in the activities as compared to male group members. As a result, they may not have high reliance or income-based benefits from the sector

Male farmers obtained higher income as compared to female farmers. Additionally, more formally educated farmers obtained higher income in seaweed farming. Mariculture in general requires the ability to understand the technical dynamics in production within this sector. For seaweed farming, proposer planning allows farmers to maximize their production and minimize losses – which may favour more educated farmers. Women in the coastal region of Kenya are disadvantaged in accessing formal education – an inequality which magnifies economic disempowerment – including in mariculture.

# COLLECTIVE EMPOWERMENT: THE ROLE OF AYALKOOTAM IN ADVANCING WOMEN FISH VENDORS IN KERALA'S BLUE ECONOMY

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Women play a pivotal role in the fisheries value chain, particularly in post-harvest and vending activities. However, their contributions remain largely unrecognized in the framework of the blue economy. This qualitative study explores how Ayalkootam (neighbourhood groups) under Kudumbashree empower women fish vendors in Kerala's coastal regions, focusing on their role in enhancing financial capital, social solidarity, and collective agency. The Ayalkootam model, embedded within the Kudumbashree Mission, has become a vital institution for strengthening financial capital among women fish vendors. Through structured savings, access to microcredit, and mutual support mechanisms, Ayalkootams provide a financial cushion that enables these women to invest in better equipment, transportation, and bulk procurement of fish. This has improved their income security and reduced dependence on predatory informal lenders. Furthermore, Ayalkootams have helped inculcate financial literacy and negotiation skills, empowering women to navigate market dynamics more confidently. Beyond financial gains, Ayalkootams function as socially cohesive support networks, fostering solidarity and shared identity among women in a highly competitive and gender-biased sector.

Field-based evidence from Trivandrum district reveals that Ayalkootams have contributed to improved access to credit, enhanced savings practices, and increased financial decision-making at the household level. Furthermore, the collective strength of Ayalkootams has helped women mitigate market disruptions such as growing online seafood platforms, increasing male competition in traditional markets, and declining fish catch due to environmental degradation.

By applying the Sustainable Livelihoods Framework, this paper shows that Ayalkootams help women rebuild lost capitals—particularly financial, social, and human capital—thereby acting as micro-nodes of resilience in Kerala's coastal economy. Women reported that Ayalkootam membership improved their financial discipline, access to emergency loans, and participation in microenterprise training, which were otherwise unavailable through formal institutions. The peer-based support also provided a sense of emotional security, logistical collaboration, and collective resistance against structural barriers in the fish vending ecosystem. By integrating women's voices and reproductive labour into the blue economy discourse, this study underscores the importance of recognizing and strengthening women-led collectives. The findings advocate for mainstreaming such decentralized, community-based models in fisheries planning, positioning them as transformative agents for inclusive development and gender-just blue economies.

# FROM MARGINS TO THE CENTER: PROMOTING WOMEN'S BLUE JUSTICE IN TANZANIA'S BLUE ECONOMY

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Tanzania's blue economy holds immense potential for equitable and sustainable development through the responsible use of ocean and aquatic resources along its coastline, inland water bodies, and Exclusive Economic Zone. Women are key contributors to blue economy sectors such as small-scale fisheries, seaweed farming, fish processing, and coastal trade. However, their participation is often informal, undervalued, and constrained by gender-based inequalities in access to resources, finance, training, and decision-making spaces.

This abstract highlights the intersection of gender and blue justice a framework that calls for fairness in the distribution of benefits, protection of rights, and participation of marginalized groups in ocean governance. In Tanzania, women in coastal and fishing communities continue to face unequal power dynamics, insecure tenure, exclusion from co-management systems, and limited influence in policy-making. These injustices perpetuate poverty, limit adaptive capacity to climate change, and undermine the goals of inclusive blue growth.

Tanzania has taken promising steps, including the development of the Blue Economy Policy (2024), implementation of the National Plan of Action for Small-Scale Fisheries (NPoA-SSF), and establishment of women-led structures such as the Tanzania Women Fishworkers Association (TAWFA). These initiatives reflect a growing recognition of women's rights as resource users and leaders. To fully realize blue justice, there is a need to strengthen gender-sensitive legal frameworks, institutionalize gender-responsive budgeting, promote sex-disaggregated data systems, and ensure that women, particularly in rural and island communities have agency in blue economy governance.

Embedding blue justice in Tanzania's blue economy is essential to achieving SDG 5 (Gender Equality), SDG 8 (Decent Work), SDG 13 (Climate Action), and SDG 14 (Life Below Water), while ensuring that ocean prosperity does not come at the expense of gender equity and social inclusion.

# BEYOND THE CATCH: EXAMINING THE GENDERED AND MIGRANT WORKFORCE IN SCOTLAND'S FISH-PROCESSING INDUSTRY

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Research on the fishing industry often centres on the male-dominated catching sector, neglecting the post-harvest fishery historically sustained by fishermen's wives. This study explores how industrialisation, social change, and migration have reshaped Scotland's fish-processing sector, which is now 80% migrant in the research site. It asks how women's fishing identities are constructed and how they experience wellbeing. The research was part of a qualitative doctoral study using ethnographic fieldwork and Photovoice in a Scottish fishing community. A wellbeing framework guided the analysis across three groups: (1) fishermen's wives, and (2 & 3) migrant and local women fish processors. To deepen the social analysis, an intersectional lens was applied to their experiences.

Findings show that women's identities were shaped by policies that both enabled and constrained them and shaped their identities. In their wellbeing experiences, women were not passive recipients of material conditions but actively cultivated wellbeing through relational investments in family and community. While material security was essential yet unevenly distributed, relational wellbeing, rooted in marriage, kinship, and community, ultimately defined their lived experiences. These relational skills were common across the groups, but migrant women in particular acted as "kinkeepers" (Rosenthal 1985), fostering social networks critical to surviving policy failure, racial capitalism, and gendered expectations that produced everyday precarity.

# STRATEGIES TO INTEGRATE WOMEN'S ECONOMIC EMPOWERMENT IN SEAFOOD SUSTAINABILITY

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Seafood sustainability is an ongoing and evolving journey that has spanned more than two decades. When the sustainable seafood movement first began, the focus was primarily on environmental concerns. Led largely by Western NGOs, early discussions centered around issues such as mangrove destruction, bycatch, and other ecosystem impacts.

To support these efforts, certification schemes were developed to help major seafood buyers understand the fundamentals of sustainability and promote their products accordingly. However, it soon became clear that environmental sustainability alone was not enough—traceability and social responsibility were equally critical components that needed attention.

Over the past 15 years, new priorities have emerged. Climate impact, carbon accounting, and increasingly, animal welfare, have become central to the conversation around sustainable seafood.

One area that remains significantly underrepresented is Women's Economic Empowerment. Women make up a substantial portion of the workforce in seafood supply chains and play a crucial role in stabilizing communities. In short, women have a profound and positive influence on global seafood production. Yet, their voices are often missing from key sustainability conversations.

This program will highlight Aqua Star's initiatives to promote women's economic empowerment within the seafood supply chains we work in. It will also include a call to action, inviting GAF9 conference attendees to engage—particularly if this focus aligns with their own goals.

We will share details about our proposed work, including timelines, evaluation criteria, and potential market claims based on verified standards used in the program.

# GENDER-INCLUSIVE COMMUNITY FISHING: WOMEN'S ROLE IN SUSTAINABLE FISHERIES AND RURAL ECONOMIES

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Community-based fishing practices offer sustainable livelihoods, strengthen social ties, and promote gender equality by empowering women in food production and resource management. This study explores Mahajaal fishing-"Maha" meaning big and "Jaal" meaning net practiced in the Maharashtra side of the Sardar Sarovar Reservoir, India. The study employed qualitative methods including Focus Group Discussions (FGDs), Key Informant Interviews (KIIs), and field observations. FGDs captured collective community perspectives, while KIIs provided expert insights into fishing techniques and gender roles. Observational data documented the fishing process and post-harvest practices. All data were manually reviewed to identify key insights related to fishing practices and gender roles. This approach allowed for a contextual understanding of how Mahajaal fishing contributes to rural livelihoods. It was found that Mahajaal is a community fishing activity which enables selective harvesting of small indigenous fish, minimizing bycatch. The two-cycle process 5:30–7:00 AM and 7:00–8:30 PM yields 2 to 20 kg of fish per operation, with peak catches in winter. Men deploy and manoeuvre the net in water; women retrieve it from shore, ensuring effective capture. About hundred women participate, in harvest and post-harvest sun drying, for which which lasts 6-8 hours. Dried fish sells at ₹100–110/kg, compared to ₹25–30/kg for fresh fish. The targeted species, *Corica soborna* (locally called as Kachki / Bhaat Macchli), is ecologically significant and nutritionally rich in protein, omega-3s, calcium, iron, and vitamin D, contributing to food and nutritional security. Recommendations include focus on strengthening market linkages to connect fishers with larger dry fish markets, improving trade and profitability. Women contribute significantly to the harvesting and drying of indigenous fish, making their role integral to community fishing practices.

# BEYOND NETS AND TRAPS: EXAMINING GENDER ROLES AND WOMEN'S CONTRIBUTIONS IN THE CRAB FISHING COMMUNITY OF MANAPLA, NEGROS OCCIDENTAL, PHILIPPINES

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Crab is one of the most important aquatic products in the Philippines. It ranked third among the exported commodities with an estimated value of USD 91.44 million (DA-BFAR, 2023). As part of the implementation of the Blue Swimming Crab National Management Plan (BSC-NMP) of the country, the blue swimming crab Model Villages were established to serve as a platform for pilot coordinated and science-based interventions. There were two (2) established model villages in the country, one of which is in Barangay Tortosa in Negros Occidental, Philippines. Tortosa is one of the twelve barangays of the municipality of Manapla. It has an estimated population of about 7,008 with three (3) active fisherfolk organizations and one (1) crab-picking plant present in the barangay. The most common source of livelihood is crab fishing using crab gill net (locally known as *kurantay*) and crab pots (*panggal*).

This paper examines the gender division of labor in the crab fishing operation of Tortosa, focusing on the often-overlooked roles of women, particularly the fisher's wife. Qualitative data were gathered through key informant interviews (KII) and a focus group discussion (FGD). For the KII, a crab fisher and a fisher's wife were interviewed. For the FGD, a total of five (5) women participated in the discussion. The results were presented in a validation activity that was attended by various sectors involved in the crab industry.

Results show that the gender division of labor patterns observed in Tortosa demonstrate that while fishing activities are stereotypically associated with men, women, particularly the wives, also play significant roles in crab fisheries. Women assist their husbands by putting bait in crab pots and in the setting and hauling of fishing gears. They prefer not to hire additional crew members or *boso* so that they do not have to share the income with others. While men predominantly engage in fishing and fish marketing activities, women contribute significantly by managing household responsibilities, assisting in fishing operations, mending nets, processing and selling value-added crab products for additional income, and caring for the young children. The dual productive and reproductive roles highlight the vital contributions of women, which remain largely invisible in fisheries discussions.

These multiple burdens leave women with little to no opportunity at all for rest or recreation. Owing to their substantial workload, women express desires for leisure activities, time for rest, and alternative income sources. They also wish to retire from fishing because of its physically demanding and risky nature. They want their children to finish school and land a good job so that they will be able to provide financial support to the family. This paper advocates for the recognition of women's roles in fisheries and calls for gender-responsive policies that support women's welfare and economic empowerment in coastal fishing communities.

# ADVANCING GENDER EQUALITY IN AQUATIC BIODIVERSITY CONSERVATION THROUGH THE CONTINENTAL GENDER STRATEGY ON AQUATIC BIODIVERSITY CONSERVATION: ALIGNING WITH THE INTERNATIONAL YEAR OF THE WOMAN FARMER (IYWF 2026)

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The upcoming International Year of the Woman Farmer (IYWF 2026) presents a unique platform to spotlight the critical role of women in natural resource management, particularly in aquatic biodiversity conservation. This presentation will showcase the African Union InterAfrican Bureau for Animal Resources (AU-IBAR) Continental Gender Strategy for Mainstreaming Gender in Aquatic Biodiversity Conservation and Environmental Management in Africa.

In Africa, women constitute a significant portion of the aquaculture workforce, particularly in post-harvest roles like processing and marketing, with millions employed continent-wide. In specific programs, women represent 25-60% of fish farmers in Ghana, 50% of aquaculture beneficiaries in Tanzania, and a notable share in Zambia, where they also contribute to conservation efforts. Globally, women account for 40% of the aquatic value chain, with 24% in fish farming (The State of World Fisheries and Aquaculture - FAO, 2024) though cultural barriers and limited data obscure their full impact in conservation.

In that regard, the continental gender strategy provides a transformative framework for enhancing the visibility, participation, and empowerment of women across the aquatic value chains, from small-scale fisheries, including octopus fisheries and aquaculture to coastal and marine resource governance. It is underpinned by the Africa Union's Africa Blue Economy Strategy (ABES), Policy Framework and Reform Strategy on Fisheries and Aquaculture (PFRS), the Comprehensive Africa Agriculture Development Strategy (CAADP) Kampala Declaration on inclusivity in the aquatic food systems and the African Union Agenda 2063.

The presentation will outline the Strategy's core pillars, including gender-responsive policy development/ reform, capacity building, stakeholder engagement and research and development. It will also highlight progress made through African Union Member States in aligning national priorities and actions with the strategy, as well as lessons learned from pilot implementation across the 5 regions of Africa. Recently, a continental gender implementation plan was developed to operationalize the continental strategy for mainstreaming gender in aquatic biodiversity conservation in African Union Member States.

Framed within the context of IYWF 2026 and the GAF 9 conference theme of advancing gender equality in aquatic food systems, this contribution emphasizes the need for stronger policy coherence, increased investment, and multi-stakeholder collaboration to break systemic barriers and promote gender-transformative actions.

By sharing Africa's continental approach, the session aims to foster dialogue, build synergies with global gender strategies, and encourage cross-regional learning on inclusive and sustainable aquatic biodiversity management.

# SUSTAINING LIVELIHOODS AND ECOSYSTEMS: GENDER-RESPONSIVE AND CLIMATE-SMART APPROACHES IN WIO OCTOPUS FISHERIES

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Small-scale octopus fisheries sustain coastal livelihoods across East Africa and the Western Indian Ocean (WIO), yet they face intersecting pressures from gender inequality, climate variability, and resource exploitation. In Zanzibar, studies show that only ~30% of the estimated 7,313 octopus fishers are female, with women historically focused on gleaning—an activity threatened as male spear diving gains dominance and tourism demand now exceeds 90% of market share (Benbow et al., 2014; Msuya et al., 2023). Periodic closures have proven effective; in Madagascar's Velondriake Locally Managed Marine Area (LMMA), local closures covering ~20–25% of fishing grounds for 2–3 months increased octopus landings by over 700% in the month following re-opening, with catch per fisher nearly doubling within the same period (Oliver et al., 2015).

In coastal Kenya, a COMRED-supported initiative in Munje Beach Management Unit (BMU) demarcated a 0.4 km² closure in late 2023. Following three openings, approximately 308 kg of octopus were harvested, generating significant income and restoring ecosystem health—but successive openings saw declines attributed to heavy rainfall and elevated sea temperatures (COMRED, 2024). Qualitative research in Zanzibar confirms ecosystem recovery post-closure, with fisherwomen accessing larger, healthier octopus nearer shore, enhancing nutrition, income, and food security—evidenced by increased household budgets for school uniforms and healthier diets (Msuya et al., 2023).

Furthermore, the African Union Inter-African Bureau for Animal Resources (AU-IBAR) and SIDA convened over 30 stakeholders in Mombasa, Kenya (June 2025) to validate a regional study and form the Western Indian Ocean Network for Small-Scale Octopus Fisheries (WION-SOF), prioritizing gender equity, climate resilience, improved market access, and value chain strengthening (AU-IBAR, 2025).

However, climate variability remains an emerging threat: coastal researchers in Zanzibar link fluctuating sea-surface temperatures and coral degradation to decreased catch per unit effort (CPUE), highlighting the need for climate-smart closures, habitat restoration, and adaptive governance (Benbow et al., 2014; Oliver et al., 2015).

This presentation synthesizes empirical data from Kenya, Tanzania, Zanzibar, Madagascar, and NGO and academic sources to demonstrate how periodic closures—when combined with gender-responsive co-management, digital monitoring (e.g., FishPath), and climate–resilient policies - enhance ecological recovery, empower women, and bolster socio-economic resilience. We recommend scaling these integrated interventions to support equitable, sustainable blue economies across the WIO region.

# GENDER AND YOUTH AGENDA WITHIN THE POLICY FRAMEWORK AND REFORM STRATEGY IN FISHERIES AND AQUACULTURE IN AFRICA (PFRS)

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In Africa, approximately 200 million people depend on fish as an affordable source of protein and important micro-nutrients (AUC and NEPAD, 2014). The fisheries sector is employing approximately 13 million people (AUC, 2019). Generally, women account for 70% of the labour force in the fisheries sector. The great majority of these women are employed in post-harvest such as processing, sales, distribution and marketing thus making significant contribution to food security, livelihoods and household incomes. In addition, women are also involved in the production and do fish. The involvement increases their economic independence and power in the sector though still requires capacity building to professionalize their roles so that they can face competition from the men. The role of women is often not documented and hence undervalued. This results in lost development opportunities and undermines the contribution of the sector to food and nutrition security, poverty eradication, equitable development and sustainable resource utilization. Africa has the youngest population globally => 400 million young people aged (15 to 35 years). Youth also needs specific attention in its own right. Youth are very often hit by unemployment and limited access to resources and services. Young people represent the future and they need to be fully engaged in shaping that future. They need to be given appropriate skills through education and empowerment.

In terms of intra-regional fish trade, it is estimated that over 70% of the informal cross border traders (ICBT) in the Southern, West and Central Africa are women (Afrika and Ajumbo, 2012; FAO, 2017;.OECD, 2017; Chiukira 2021). The second conference of African Ministers of fisheries and aquaculture (CAMFA II) recommended to AU, RECs and MS ‘‘to facilitate the participation of Non-State Actors including women and youth in the fisheries and aquaculture decision making processes. The Comprehensive Africa Agricultural Development Programme (CAADP) is facilitating the preferential entry and participation for women and youth in gainful and attractive agri-business opportunities. The Policy Framework and Reform Strategy in Fisheries and Aquaculture in Africa (PFRS) underscored the need to empower women and youth and develop an advocacy strategy to facilitate their inclusion in fisheries management and decision-making process at national and regional level. AU-IBAR facilitated an establishment of an overarching continental body of women (African Women Fish Processors and Traders Network) to foster coordination between these organizations at national and regional levels for rational support and enhancing their capacity and empowerment. To effect a sustainable positive change, there is a need to focus on long term bottom up process requiring adequate funding is needed. Mechanisms to promote and protect women’s rights to participate in all aspects of fisheries governance and management. Seek to improve access of women to fish and fish markets, particularly through the provision of credit at affordable rates. The PFRS further advocates that strategies ensuring gender and youth considerations should be included in policy, laws and plans and be knowledge based; Effective participation of women and youth in decision-making processes; Adopt value chain approach and Inter-sectoral approaches and partnerships; prevent gender-based violence and eliminate child labour.

# THE ROLE OF WOMEN'S FISH ORGANIZATIONS IN CONTRIBUTING TO SUSTAINABLE SMALL-SCALE FISHERIES: AWFISHNET AS A CASE STUDY FROM AFRICA

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Despite their essential contributions to livelihoods, food security, and climate resilience, women's roles in African small-scale fisheries are often marginalized in policy, research, and development initiatives. This marginalization limits progress toward sustainable fisheries management and equitable resource access. Women's fisheries organizations, such as the African Women Fish Processors and Traders Network (AWFishNet), address these challenges by amplifying women's voices, fostering collective action, and advocating for inclusive governance in small-scale fisheries.

We examine AWFishNet as a case study, highlighting its role in strengthening women's influence and participation in fisheries governance across Africa. AWFishNet members have developed technical and leadership skills, expanded access to local and regional markets, engaged in national and regional policy dialogues, and established cross-border networks. These efforts have reduced power imbalances by improving women's access to finance and strengthening their roles in decision-making processes, such as community-based fisheries resources management.

Through showcasing AWFishNet's achievements, our case study demonstrates the transformative potential of women's fisheries networks to foster gender-equitable and climate-resilient small-scale fisheries. It offers practical strategies for policymakers, practitioners, and funders, including integrating women's networks into national fisheries policies and funding gender-responsive adaptation programs.

These approaches can enhance sustainable fisheries management and support equitable climate adaptation across Africa.

# A QUALITATIVE ASSESSMENT OF STRUCTURAL DRIVERS OF FISH FOR SEX EXCHANGES, AND TEENAGE MARRIAGES

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This study examines the structural drivers of fish-for-sex (FFS) exchanges and early marriages in kapenta (Limnothrissa miodon) fishing communities along Lake Tanganyika in Zambia. The research drew on 75 qualitative engagements, comprising semi-structured key informant interviews (KIIs) with government officials, community leaders, and service providers; focus group discussions (FGDs) with knowledgeable people, adult men and women, and young men and women; and in-depth life history interviews (IDIs) with women victims of FFS, victims of early marriages, and perpetrators (fishermen). The study sites were Mpulungu and Nsama Districts, with participants engaged at community, district, and provincial levels. All participants gave informed consent, with confidentiality and ethical safeguards strictly observed.

Data were analysed using NVivo 14 software in combination with manual content analysis. Transcripts were inductively coded, categorized, and synthesized into themes to capture multi-level structural drivers at individual, household, community, and governance levels. Rigour was enhanced through repeated transcript reviews, inductive theme development, and systematic categorization.

Findings show that gendered exclusion from fisheries governance, market access, and resource control continues to marginalize women's participation in Zambia's blue economy. Economic vulnerabilities, climate variability, unfavourable regulatory environments, informal credit systems, and socio-cultural norms emerged as key drivers compelling women to engage in FFS for preferential access to fish. Early marriage was also found to serve as a household strategy to secure access to fish through marital ties with fishermen. Women's labour in fish processing and trade remains undervalued, while systemic barriers such as alleged corruption in fisheries enforcement exacerbate gendered exploitation.

Recommendations include: (1) strengthening collective action among women in the kapenta value chain; (2) improving access to financial services and skill-building opportunities; and (3) enforcing legal protections against gender-based exploitation. By situating FFS and early marriage within broader structural inequalities, this study contributes to discourses on inclusive blue economies and highlights the need for gender-transformative approaches in fisheries governance.

# GENDERED CONSIDERATIONS OF LAKE VICTORIA'S FISHERIES LIVELIHOODS AND ITS ROLE IN FOOD SECURITY IN SINDO, KENYA

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This research was situated on the Kenyan shores of Lake Victoria, a historically impoverished population with high rates of malnutrition and disease. Lake Victoria's main fisheries are Nile perch (*Lates niloticus*), tilapia (*Oreochromis niloticus*), and the silver cyprinid, known locally as omena (*Rastrineobola argentea*). Qualitative and quantitative research methods were used to examine the contribution of these fish to food security with gendered considerations. This study assessed nutrient intake for 112 people's diets, analysed 313 household livelihood and food security questionnaires, and conducted thematic analysis for 29 discussions with over 150 local people.

While this study found no gendered differences in food intake, gendered differences in livelihoods and access to fisheries' value (i.e., monetary value and value as food for consumption) were significant. While the community relied on fisheries for economic activity, positions available to women were generally high risk and low reward. Women were largely limited to low-value activities (i.e., low-value trading and processing of Nile perch, tilapias, and omena). As women played a dominant role in omena processing, this became the focus of this study. While omena processing is a low-value trade with tight margins, dried omena has disproportionate importance for local micronutrient provisioning and food security. Outside of omena processing, women lacked opportunity in other, more lucrative nodes of the omena value chain. Within the Nile perch and Nile tilapia value-chains, women lacked access to processing roles and were limited to trading, another high risk and low reward node. Very few alternative positions were available to women. Additionally, female omena dryers lacked institutional support, were omitted from leadership positions within both the household and the broader community.

Women relied on omena drying as an accessible, income-generating activity. Yet, omena was not valuable enough to trade for equally (financially nor nutritiously) valuable food. Instead, cash income from omena sales was used to purchase maize and pay for other household expenses. The omena-drying business also directly supported household food security because, unlike other fish species, some omena was retained for household consumption.

Gendered land ownership rights also existed and had consequences for women's food security. Women lacked direct access to land as a wealth resource. This created additional costs for them because they were forced to rent land or relied on poor-quality land for drying their omena. This study found a correlation between almost exclusively male-owned land and food security; thus, women's food security may be contingent on their relationships with men. This reliance has consequences for women's rights, where women omena drying participants may have chosen to stay in abusive relationships for food security, for example in sex-for-fish relationships, where women exchange sexual relations with fishers to gain access to fish.

These gendered inequalities had negative consequences for food security. Restricted opportunities for income-generating activities limited women's income-earning potential.

This is a significant lost opportunity because women direct more resources towards supporting household food security. Women's absence from many roles within the fish value chain (e.g., boat ownership, fish aggregation, local governance) and their lack of decision-making input into household decisions regarding expenditures may be the reason that economic benefits from fisheries fail to translate into improved food security and wellbeing. These findings have implications for fisheries policy and development and contribute to the evidence that research must have gendered considerations to adequately understand the role of fisheries in food security.

# THE WOMEN OF THE SEAS: UNPACKING THE ROLE OF WOMEN-LED FISHERIES LOCAL ACTION GROUPS (FLAGS) IN EMPOWERING FEMALE OYSTER FARMERS IN LEYTE, LEYTE PHILIPPINES

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Women account for 5.0% of the fisheries sector in the Philippines (PSA, 2025). Their contribution in the value-chain overwhelmingly spans from production and processing to marketing and distribution. However, the literature concedes to the diminutive involvement of women in fisheries management and leadership. This invisibility creates a ripple of harms that substantially defines their access to resources, opportunities, and successes. Bearing this context in mind, this paper examines how women through fisheries local action groups (FLAGs) navigate these issues. It specifically looks into the case of the women-led FLAG, *Toctoc Baywalk Fisherfolks Association,* from the oyster farming sector in Leyte, Leyte, Philippines. In the face of empowerment, FLAGs provide women and their interests both a platform and opportunity to be seen and heard. In various contexts, these groups have been utilized as an intervention mechanism in planning, lobbying, and policy implementation. The objective of this paper is threefold. First, the exploration of the role and contribution of women in oyster farming. Second, the identification of the challenges faced by women in this sector. Finally, using Nabeer's empowerment framework, this study provides a qualitative analysis into the impacts of women-led FLAGs, in the local example of *Toctoc Baywalk Fisherfolks Association,* in Leyte, Leyte, Philippines, in the empowerment of female oyster farmers. Nabeer's framework highlights the embeddedness of the dimensions of resources, agency, and achievements in the overall empowerment of women. With the challenges presented by the persistence of gender norms and stereotypes which often curtail the participation of women in management and leadership in fisheries, the study of FLAGs provides a rich ground of understanding how women's visibility in these positions affects their overall access to resources, opportunities, policy, decision-making powers, etc.

# SUSTAINABILITY THROUGH THE EYES OF THE CALAMIAN TAGBANWA INDIGENOUS PEOPLES

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The concept of sustainability (*likas-kaya* in Filipino) as an integral part of international development has been around for almost four decades. The complex, contextual, and dynamic nature of this concept makes it an elusive goal despite the many metrics developed to quantify it. The road to sustainability is anchored on sustainable development, which entails a development that is mindful of the needs of the present and future generations. But how does this pathway translate to local communities? Where do we draw the line between development and sustainability? This paper attempts to visualize sustainability through the eyes of the women and men members of the Calamian Tagbanwa Indigenous Peoples (IPs) community in Calauit Island, Philippines.

To explore how sustainability is interpreted at the local level and how it is manifested in the IPs engagements, we interviewed members of the Calamian Tagbanwa IP community on their personal views on: 1) sustainability; 2) characteristics of a sustainable community; 3) whether they consider their community as sustainable; 4) how is sustainability manifested in their community; 5) their personal aspirations; and 6) their aspirations for their community. Using sustainability interpretations based on the Man-Earth Dominance lens, our findings show a strong leaning towards Ecocentrism viewpoints, which range from faith to ethics and value to conservation of resources based on carrying capacity. Our key informants (KIs) defined sustainability as "maintained status and use of the environment and way of life". A sustainable community is described as one that "has good leaders who genuinely protect their community", "has strong conviction and observes the rules and regulations to conserve the environment", "one that unites, is connected, and has common goals", and "one that gives a good quality of life to its people, the environment and natural resources, and the next generations". Our KIs also consider their community as sustainable as manifested by the presence of *dugong* (sea cows) in their nearshore waters which also serves as a sustainable livelihood for the IP members; native tree and mangrove planting activities; presence of the spirit of *bayanihan* especially in times of calamities; observance of carrying capacity for tourism activities; zonation and designation of protected areas; and sustainable farming and fishing practices. Common aspirations in life cited by the KIs include "having 3 meals a day", "finishing school", "having a stable job", "serving the community", "providing a good future for our children", among others. For the community, KIs aspire to "maintain the management of their natural resources", "revive cultural traditions and indigenous knowledge systems and practices", and "nurture and help in the activities in the community".

# NURTURING BEHAVIOR CHANGE FOR INCLUSIVE BLUE ECONOMY: A CASE STUDY FROM A WOMEN'S COASTAL COMMUNITY IN BONE, INDONESIA

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This study explores how business and sustainable fisheries training, along with capital support, influence the economic independence of 14 Bugis coastal women in Bone Regency, South Sulawesi. Framed within a behavior change communication (BCC) approach, the initiative focused on training sessions and the provision of production capital to support the adaptive use of local marine resources. Traditionally, these women were expected to stay at home to manage household tasks and care for children, while their husbands spent up to three weeks at sea. Household labor is heavily gendered and economic participation was rare and discouraged. However, following the intervention, the women transitioned from having no personal income to independently managing a micro-scale fish processing business utilizing bycatches and *tetelan*—the remaining cuts of yellowfin tuna (*Thunnus albacares*) that cannot be sold by their husbands for export. Using a qualitative method, the research draws on in-depth interviews and basic household revenue data to assess changes post-intervention. Results show that the 14 participants now co-manage a micro-business generating an average annual revenue of USD 2,452 since 2023. Beyond financial literacy and entrepreneurship, many women expressed a newfound sense of purpose and emotional well-being, derived from engaging in meaningful work and peer networks. While domestic expectations persist, the women now have greater autonomy. Notably, several husbands—having witnessed the benefits of their wives' participation—have become more supportive of their daughters' education, allowing them to pursue university studies, a significant departure from previous norms of early marriage.

# ADVANCING INDIGENOUS WOMEN-LED CONSERVATION AND MANAGEMENT IN CALAUIT ISLAND: ACHIEVEMENTS, CHALLENGES, AND STRATEGIES FOR THE FUTURE

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This study explored the establishment, implementation, and challenges of the pioneering Women-Managed Area (WMA) of the Tagbanwa Indigenous People (IP) in Calauit Island, Palawan, Philippines. Drawing from focus group discussions (FGD) and key informant interviews (KII) with community members and local leaders, the case study explored how Indigenous women assumed greater stewardship roles that are traditionally dominated by men. In this case, through the management of a traditional fishing ground of or *cachipay*, an endemic windowpane oyster (*Placuna* sp.) in the area. The Calauit Island WMA was assessed across ten interrelated themes: (1) establishment and leadership, (2) community and gender dynamics, (3) policy and legal context, (4) capacity training, (5) economic outcomes, (6) environmental monitoring, (7) sustainability and funding, (8) coordination and partnerships, (9) lessons and replicability, and (10) strategic directions for the future. A deductive thematic analysis was employed, wherein transcripts from the FGDs and KIIs were then coded and categorized based on the predefined themes that framed the exploration of the WMA's establishment, implementation, and challenges.

The results of the study show that through the establishment of the first WMA in the country, the Tagbanwa women were granted formal management rights over the ancestral waters that their IP community struggled to claim as part of their ancestral domain. With the support of non-government organizations (NGOs) and other partners, the WMA benefited from training and support such as in livelihood development, ecological monitoring, and law enforcement. However, the lack of sustained income for the women members and the absence of policy and legal reinforcement in the municipality surfaced as major challenges. Jurisdictional ambiguity and the lack of recognition of ancestral domain rights by outsiders further constrained enforcement. Although environmental monitoring practices were in place, the inconsistent *cachipay* supply that is greatly affected by the poaching of outsiders led to ecological and organizational decline as the operating expenses and plans of the women's association were greatly anchored to this resource. These findings emphasize the importance of consistent financial income among women members, inter-agency coordination, and early market integration for the success of community-based and women-led conservation initiatives. Despite these obstacles, the WMA promotes women's empowerment and highlights strategies for enhancing their leadership in resource management. The findings advocate for a blue economy that recognizes the vital role of Indigenous women in marine conservation and sustainable livelihoods.

# EXPLORING INDONESIAN WOMEN'S CONTRIBUTION TO INLAND FISHERIES IN THE CONTEXT OF THE BLUE ECONOMY

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The development of Indonesia's marine and fisheries sector is strategically aligned with the national vision of Indonesia Emas 2045, as outlined in the president's mission through points 2 to 8 of Asta Cita. This vision prioritizes the development of superior human resources, strengthening food sovereignty through a Blue Economy approach, and the development of sustainable marine and fisheries infrastructure. As an integral part of the Blue Economy, freshwater fisheries hold significant potential to support national food security and improve the well-being of rural communities. Environmentally friendly fishing practices in rivers, lakes, and wetlands are not only crucial for maintaining biodiversity but also for empowering local economies and promoting the sustainable use of freshwater resources. Based on scientific management, resource mapping, and community participation, freshwater fisheries can make a vital contribution to the national economy in line with the core principles of the Blue Economy. The role of women in freshwater fisheries is increasingly prominent, particularly in fish farming and post-harvest processing.

This study explores the participation, challenges, and potential of Indonesian women in supporting sustainable inland fisheries development within the framework of the Blue Economy. SEAFDEC/IFRDMD has conducted numerous studies on the role of women in increasing income from the freshwater fisheries sector. In Riau Province, for example, women in Kampung Patin are actively involved in fish farming activities such as feeding, monitoring water quality, scaling, and packaging smoked fish, which significantly increases household income and supports community development. In South Sumatra, women lead small-scale fish processing businesses, producing traditional fish-based products such as fish crackers and salted fish. They are involved in the entire value chain—from raw material procurement, processing, to marketing, including leveraging digital platforms and e-commerce to expand market access. In the eel fishery sector in areas such as Bengkulu, West Java, Central Java, Bali, and Central Sulawesi, women also play a crucial role in the processing and marketing of anguillid eels. Despite limited access to training and formal decision-making forums, their contributions are fundamental to the sustainability and profitability of this sector.

The study identifies how women contribute to ecological preservation, food security, and rural livelihoods through their involvement in small-scale aquaculture, fish processing, and community-based resource management. To strengthen women's capacity and expand their role in freshwater fisheries, SEAFDEC/IFRDMD has implemented participatory training programs. These initiatives equip women with technical knowledge on freshwater fish farming and environmentally friendly handling practices, enabling them to participate more actively in fisheries governance and resource management. Integrating gender equity into the Blue Economy paradigm is thus not only a matter of justice but also a strategic approach to maximize the productivity and resilience of Indonesia's inland fisheries sector. By integrating women throughout the fisheries value chain and promoting gender-inclusive policies, freshwater fisheries can become more sustainable, equitable, and resilient—ultimately contributing to the achievement of national development goals and community well-being.

# EMPOWERING RURAL WOMEN THROUGH MICRO- ENTERPRISE: A SUCCESS STORY OF ORNAMENTAL FISH VILLAGE PROJECT IN SOUTHERN INDIA

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Despite the global recognition of ornamental fish farming as a women-friendly enterprise and having abundant resources, India's contribution to the global ornamental fish trade valued at USD 341 million remains minimal at 0.4%. The "Ornamental Fish Village" project, initiated in 2008 in T.V. Puram Panchayat, Kottayam district, Kerala, India aimed to empower women through micro-enterprise development in the ornamental fish farming sector. The project, implemented by the State Poverty Eradication Mission of Kerala: Kudumbashree Mission, sought to harness the region's potential for ornamental fish production and the upliftment of women. Through primary surveys and key informant interviews, a detailed account of the project was conducted, focusing on scaling up, costs, and benefits. Various organizations were involved in the project, with the key player in the initiation and continuation of the project being the Kudumbashree Mission. The project was executed in three phases. Phase I included project incubation and planning, formation of the enterprise and funding. During project incubation and planning 3 stages of training were given to the aspiring entrepreneurs- General Orientation Training, Entrepreneurship Development Programme and Skill training. Phase II consisted of scaling up for consistent supply chain- oriented production for export. Phase III included technological funding. Proper monitoring and timely intervention resulted in the reduction of risk factors. The species cultured included guppy, platy, molly, swordtail, angelfish, beta, shark, moon tail, goldfish, and gourami. Total production cost per cycle (45 days) was USD 416.49. Cost-benefit estimation per culture cycle revealed that the enterprise was profitable, with a net profit of USD 265.33 per cycle, a benefit-cost ratio of 1.64, and a net profit margin of 38.91%. According to Asian Development Bank the monthly income of an individual to be above poverty line should be USD 37.5. Hence, the project has generated significant profits, successfully uplifting rural women from poverty. Future line of research of this project would be, the factors contributing to the project's success, especially in contrast to its limited success in other regions, to provide valuable insights for replicating the model elsewhere need to be analysed for future prospects.

# Session 2:

# Gender and climate change: Navigating the impacts on fisheries and aquaculture

# EXPLORING THE INFLUENCE OF URBAN EXPANSION TO FISHING COMMUNITIES ALONG THE DAVAO CITY COASTAL ROAD: THE WOMEN'S NARRATIVES AND ITS INTERSECTIONALITIES

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This study looks into the narratives of women living along the coastal communities of Davao City. With the construction of dikes and the coastal road, this paper aims to foreground women issues as a result of these radical changes in the local environment. Through survey interviews and FGDs, the study generated these themes: (a) changes in the local vegetation which prompted communities to engage in mangrove tree planting, (b) nostalgia of the past where participants recounted the better situation in their community prior to the constructions, (c) safety concerns for the docking areas of the fishing vessels in the community, (d) fish vending livelihood challenges, and (e) safety brought by dikes. These themes are subsequently reinterpreted with Crenshaw's notion of intersectionality. With this theory, the engagement with the data resulted in the following critical remarks: (a) For structural intersectionality, the women along the coast are forced to deal with the changes in the seascape which meant that they needed to re-grow the lost mangrove forest. From having shorelines with productive mangroves, they find themselves having to start all over again by replanting mangroves in the hope that local fishery resources will thrive once more, (b) For political intersectionality, this raises the concern on women representation in the consultation process prior to the construction of the coastal road and dikes in the community, and (c) For representational intersectionality, it is important to revisit how women are framed within the SSF sector. For this note, it remains important to assess and appreciate how women contribute to the local economy, and to address subsistence needs in the household.

# WOMEN'S ROLE IN CLIMATE SOLUTIONS: A GENDER PERSPECTIVE IN MEXICAN FISHING COMMUNITIES

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Fishing communities have demonstrated a strong capacity for adaptation and resilience to both local and global impacts, such as climate change. However, gender inequalities within the fishing sector result in women experiencing disproportionate impacts, limiting their access to resources, decision-making and leadership opportunities. Despite these barriers, women play a fundamental role enhancing community resilience by actively participating in the development and implementation of community-led climate solutions.

To better understand the contributions of women in Mexican fisheries to climate adaptation and mitigation, we analyzed initiatives documented in the PescaData mobile application, a platform that records and shares innovative projects from coastal communities across Mexico, Latin America, and the Caribbean. Our analysis focused on 53 solutions registered in eight Mexican states, highlighting the level of female leadership and participation. Of these initiatives, 13 are led by women, 26 include their participation, and 14 lack gender-specific information. Although women may not lead most projects, their involvement is significant in key areas, particularly in pollution reduction, conservation strategies and fisheries management, and biological and environmental monitoring.

These solutions contribute directly to global sustainability frameworks, particularly the Sustainable Development Goals (SDGs), with 43 projects aligning with SDG 14 (Life Below Water) and 34 projects with SDG 13 (Climate Action). Additionally, within the context of the FAO Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries, we identified 5 solutions addressing gender equality and 46 related to disaster risk management and climate change. A key finding is that female participation increases when working with multidisciplinary teams, highlighting the importance of collaboration with allied organizations to ensure gender equity in the implementation of solutions. The recurring themes in women's engagement highlight an opportunity to strengthen exchange networks and training programs across communities.

In conclusion, women in Mexican fisheries play a crucial, yet often under recognized role in climate adaptation and mitigation. To maximize their impact, it is essential to promote strategic collaborations, implement inclusive policies, and create opportunities for training and leadership. Strengthening these efforts will enhance women's roles in climate solutions, contributing to more resilient communities and sustainable marine ecosystems in the long term.

# INVESTIGATING ADAPTIVE CAPACITY IN SMALL-SCALE FISHERIES: THE CASE OF WOMEN'S FISHERIES ORGANIZATIONS IN UGANDA

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The impacts of anthropogenic stressors like climate change on fishery-dependent communities are well documented globally and understanding factors that contribute to the adaptive capacity of fishing households is an active area of research. Scholars have recognized the important role of social organization in shaping adaptive capacity at various scales, particularly for marginalized groups (e.g., women) who often lack access to critical resources. However, little research has been conducted to understand how adaptive capacity of community-based organizations may mediate adaptive capacity for its members and their households. In this study, we use the case of women's fisheries organizations (WFOs) in Uganda to answer the questions: (1) How does organizational membership mediate adaptive capacity for small-scale fishing households in Uganda and does it differ between genders? (2) Which dimensions of organizational adaptive capacity are most important in determining WFOs ability to support their members during a shock? and (3) How does organizational adaptive capacity mediate household adaptive capacity for WFO members in Uganda? We examine various dimensions of organizational and household adaptive capacity to understand cross-scale linkages among factors influencing livelihood resilience across scales. We draw on semi-structured and key informant interviews with members and leaders of WFOs to understand why some organizations and households are more able to adapt to social and ecological shocks than others. We present our findings as comparative case studies to illustrate factors that can lead to livelihood resilience for women and communities in Uganda's inland fisheries.

# A GENDER ANALYSIS OF BARRIERS TO CLIMATE CHANGE ADAPTATION IN SMALL-SCALE FISHING COMMUNITIES IN LAKE VICTORIA, UGANDA

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In fisheries-based communities, extreme weather events and declining productivity have negative impacts on livelihoods. Gendered institutions and intersecting social factors shape climate adaptation strategies, often creating barriers that affect men and women differently. While male fishers typically adopt adaptation strategies such as livelihood diversification and skill development, women shoulder the dual burden of domestic labor and external work, including fish processing and trade. Research that aims to understand effective adaptation strategies will be critical in aiding the physical and economic well-being of women fish workers and their communities faced with climate change impacts. Using a mixed-methods approach, we examine gender differences in climate change perceptions, adaptation strategies, and the efficacy of response measures among fish traders and processors in five fishing villages in Lake Victoria, Uganda. We also assessed how gender influences adaptation barriers, perceptions of capacity building mechanisms, and preferred alternative livelihoods. We found that women face higher barriers in adapting to climate-related stressors with fewer livelihood diversification options, higher responsibilities in supporting families, and limited access to fish resources. However, with adequate support, women adopt adaptive strategies that lead to resilient futures for households and communities. Our findings contribute to a growing body of literature on gendered climate adaptation in small-scale fisheries and provide insights for shaping more inclusive and equitable climate resilience.

# EXPLORING POVERTY ERADICATION STRATEGY DUE TO CLIMATE CHANGE: A FOCUS GROUP DISCUSSION AMONG HOUSEWIVES IN SABAK BERNAM

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This paper presents strategies to eradicate poverty due to the impact of climate change on housewives in Sabak Bernam Selangor, a coastal district in the Malacca Strait of Peninsular Malaysia. This paper reported two data sets: the survey and Focus Group Discussion (FGD). The survey was among *n*=274, in which *n*=108 [39.42%]) of respondents reported on their experiences of households' poverty increase due to climate change - the responses are by sex disaggregation and in four levels. The highest percentage (21.30%) among males experienced 'YES moderately' that climate change impacts their household poverty level, but among females, the highest percentage (22.22%) reported 'no increase' in poverty level. These results may be due to gender roles, where males are responsible for household income and feel more about the impact of poverty on the household as compared to females.

Among n=108, the 16 housewives then participated in the FGD session discussing on strategies to eradicate poverty. In the survey, the majority of females responded to the 'no increase' in poverty, which may be due to their strategies to cope with it. Therefore, this FGD was conducted among housewives. In the survey, among these 16 informants, 43.75% indicated 'YES, moderately'; 12.5%, 'YES, obviously,' and 43.75% 'NO' or 'NOT SURE' that climate change increases their household poverty. This paper focuses on nine informants who answered 'YES, obviously' and 'YES moderately.' They experience the impact of climate change on households' poverty at a younger age. With little assets and little savings, any disaster will be a significant point in life and may suddenly turn their households into poor or extremely poor. The FGD discussion on poverty eradication strategies due to climate change concluded with threethemes which are good practices of personal finance, agricultural activities, and venture into business. In conclusion, from the point of view of housewives, they have some coping strategies for household poverty, which may be why they responded to 'no increase' of poverty in the survey because besides 'agriculture activities', the strategies obtained which are good practices in personal financial management, and venture into business are also good strategies during climate change.

# MANIPULATION IN STOCKING DENSITY OF CARPS TO INCREASE YIELD IN FLOOD AND DROUGHT PRONE AREAS IN NEPAL

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The Terai region of Nepal hosts the majority of Nepal's carp farming activities but is highly vulnerable to flooding, which disrupts and damage fish farming operations. The 2017 floods affected 31 districts, resulting in the loss of over 60% of fish in ponds. To ensure sustainable aquaculture under changing climatic conditions, a climate-smart polyculture technology was developed, benefitting 102 women and 9 male farmers from three cooperatives and 4 women's self-help groups in Chitwan and Nawalparasi districts who are particularly affected by climate-induced flooding and lack access to adaptive technologies and resources.

Modifications to stocking density and species composition were implemented to reduce losses from flooding and avian predation during low water depths, as well as to lessen thermal stress during hot seasons. The total stocking density was reduced from 15,000 to 13,000 fish per hectare, decreasing the proportion of surface-feeding species ((Silver Carp and Bighead Carp) by 61% while increasing the density of bottom-feeders(Mrigal and Common Carp) by 38%, relative to conventional fish farming practices. The stocking density of column and marginal feeders (Rohu and Grass Carp) was maintained at conventional levels. Carps were provided with supplementary feed consisting of rice bran and mustard oil cake, given at a rate equivalent to 3% of the total body weight. This feeding ration was adjusted monthly, based on assessments of fish growth within a culture period of eight months. Carp production was evaluated and compared with yields from conventional polyculture practices employed by the same farmers, in the previous year. Results indicated a 7.7% increase in production, reaching 6.9 t / ha /year. This improvement is likely due to enhanced space and reduced competition for natural food sources and dissolved oxygen. While promising, further scientific study is needed to validate these outcomes. Nonetheless, the adjusted stocking density and species compositions offer a viable approach for carp farmers in flood- and drought-prone areas to improve resilience and productivity.

# ENHANCING ADAPTIVE CAPACITY IN LAKE VICTORIA'S FISHERIES THROUGH LEGITIMATE GOVERNANCE AND GENDER EQUITY

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Freshwater fishing societies are among the most vulnerable to climate change given their dependence on highly threatened aquatic resources. As climate change intensifies, building adaptive capacity within communities is essential for resilience under ongoing social and environmental changes. In this study we link livelihood impacts of climate change, adaptive responses, and perceptions of governance legitimacy to understand how governance across multiple scales can support or erode adaptive capacity of fishing households in the Lake Victoria basin in Uganda. Using a sex-disaggregated approach we conducted a series of household surveys and focus group discussions across five fish landing sites to assess adaptive capacity and adaptive actions of 207 fishing households. We conducted semi-structured interviews with fishers, local fishery leaders, fisheries officers, and decision makers to understand communication channels and perceptions across fisheries governance, from local to national (state) scales. Our findings revealed widespread governance illegitimacy both within and across these scales. At the state level, this included limited accountability to local communities, where central government often overlooked local priorities and undermined local authority. At the local level, it reflected weak recognition of the legitimacy of the rules among users, shaped by low trust, fragile social cohesion, and perceptions of inequity. Together, these interconnected forms of illegitimacy constrained households' capacity for adaptive action and, in some cases, deepened gendered disparities in the challenges faced by fishery actors. We present several routes towards developing effective adaptive approaches contributing to a growing foundation of community-based knowledge for building adaptive capacity in inland fisheries.

# SIGNIFICANT PREDICTORS OF POOR FEMALE-HEADED HOUSEHOLDS WITH CLIMATE CHANGE EXPERIENCE IN SABAK BERNAM SELANGOR

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This paper aims to identify the significant predictors of poor female-headed households with climate change experience. The tested predictors (IVs) are gender, academic background, household expenses, day-pay workers, and the age of households' heads. A purposive sampling approach was used to collect data from n=265 respondents in Sabak Bernam, a coastal district in Malaysia. Only n=230 were reported in this paper for respondents with climate change experience, meaning the respondents answer YES they were having experience on climate change. The binary logistic regression model is significant ($p<0.05$) with 28.6 percent variance in DV (poor female-headed households=1, other households=0) explained by the IVs. Three significant predictors (IVs) of poor female-headed households obtained in this study are gender of the respondents, household expenses, and daily-paid worker (vulnerable group). The first significant predictor is the gender of the respondents. Male gender explained less than 86.5 percent (odds=0.135) likelihood that male respondents are from poor female-headed households. Meaning, male respondents in this study were mainly from non-poor family and male-headed households. Second, the household expenses explained that less than 0.1 percent (odds=0.999) likelihood that the respondents are from poor female-headed households. RM1 increase in the household expenses, explained that less 0.1 percent of the households are from poor female-headed households. In other words, an increase in household expenses indicates that poor females are less likely to head households.. Last but not least, the daily-paid workers (the vulnerable group) explain 8.812 (odds=8.812) likelihood that the respondents are from poor female-headed households. Members from poor female headed households are usually involved in informal economic sector, or indirectly in the fisheries sector. Therefore, they have ? been paid as day-workers. This paper concludes that female respondents, household expenses, and daily-paid workers are significant predictors of poor female-headed households with climate change experience in coastal areas of Sabak Bernam, Selangor.

# CLIMATE-PROOFING FISHERIES LIVELIHOODS: GENDERED PERSPECTIVES FROM THE FRONTLINE

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Climate change threatens the fisheries-dependent communities in the Kurigram district of Bangladesh as they contend with climate-related hazards such as floods, droughts, and extreme heat with increasing magnitude and frequency. Whereas there are growing efforts toward strengthening climate adaptation, for this community, life amid climatic change could look and be better if different policy actors at sub-national and national levels collaborate with communities to address certain underlying climate risk drivers in the fisheries sector.

This study, conducted under the Transboundary Rivers of South Asia Program (TROSA 2), applied a qualitative Gender Equality and Social Inclusion (GESI) lens to examine these challenges and amplify gender-disaggregated perspectives. Using focus group discussions (FGDs) and photovoice methodologies, we engaged fisheries communities to document their lived experiences. Preliminary findings indicate that both women and men experience marginalization, social inequity, and environmental degradation as primary barriers to climate adaptation for fishing communities.

Women's engagement in the fisheries sector varies depending on diverse intersecting factors such as age, religion, wealth and marital status, and these have complex interactions compounding marginalization and inequality. Older men tend to be regarded as the primary fishers, particularly in strong patriarchal contexts where women are confined to their domestic roles. Marginalized younger men are being pushed out of fishing, some permanently, while some do seasonal migration to bigger cities to work in the garment factories and as rickshaw drivers during the off-peak season. This presents the potential erosion of fishing communities' livelihoods and endangers the critical ecological knowledge embedded in their practices, which is essential for sustaining riverine ecosystems. Both women and men lamented the elite capture of fisheries by powerful, rich men who also practiced harmful fishing practices and restricted access to the bils, particularly during the lean season. These powerful men also constituted the committees that owned the fishing leases and captured the markets where they fixed the fish prices and loan repayments that left the fisherfolk operating at a loss and caught in a perpetual debt trap. Marginalization determines access to *Jele* cards and information on these, with single women often not having access to information about this.

These findings shed light on the marginalization and powerlessness of both women and men in the fisheries sector. A multipronged approach is required to support fishing communities through customized skill-based complementary livelihoods and recognition of their expertise as stewards of river ecosystems. Empowerment efforts focusing exclusively on women will not yield results unless broader systemic inequalities are addressed. We propose strengthening community-led approaches that build collective agency among women and men to foster equitable engagement with policymakers and improve fisheries governance.

While many fisherfolk aspire to better opportunities for their children outside the sector, their deep-rooted connection to the river underscores the need to integrate them as key partners in sustaining their traditional livelihoods rather than alienating them. Policymakers, practitioners, and civil society need to reframe their interventions to acknowledge and empower these communities in shaping their resilient future.

# GENDERED IMPACTS OF CLIMATE CHANGE ON FISHERIES-DEPENDENT COMMUNITIES: A SECTORAL ANALYSIS FROM INDIA

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Fisheries-dependent communities are among the most vulnerable to the adverse effects of climate change, with women bearing disproportionate burdens due to existing socio-economic and cultural inequities. This study aims to examine the gendered impacts of climate change on such communities, focusing on how environmental shifts affect women's livelihoods, resilience, and access to resources in the fisheries sector.

The research is based on a comprehensive review and analysis of secondary data, including reports from national and international organizations, academic literature, and policy documents. It adopts an intersectional feminist framework to evaluate how climate-induced changes - such as rising sea levels, declining fish stocks, and extreme weather events - differentially affect women in coastal and island fisheries communities.

Preliminary findings indicate that climate change exacerbates existing gender inequalities by intensifying livelihood insecurity, increasing care burdens, and limiting women's adaptive capacity. Women's restricted access to decision-making processes, financial resources, and climate-resilient infrastructure further compounds their vulnerability. However, community-based adaptation strategies and gender-inclusive climate governance offer pathways toward resilience and equity.

This study contributes to the emerging discourse on gender and climate justice in the context of marine and coastal ecosystems. It highlights the need for gender-responsive climate action in fisheries policy and advocates for the inclusion of women in climate resilience planning, research, and implementation. By situating women not just as victims but as key agents of change, the study calls for more inclusive and participatory approaches to climate governance in fisheries-dependent communities.

# AN INTERSECTIONAL ANALYSIS OF GENDER AND SOCIAL CAPITAL IN UNDERSTANDING ADAPTIVE CAPACITIES AND CLIMATE CHANGE VULNERABILITIES OF WOMEN FISHERS IN THE PHILIPPINES

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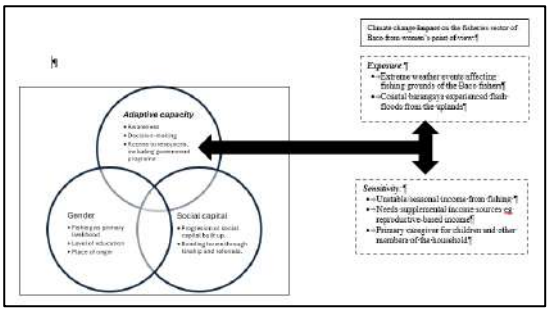


*Gender and social capital elements that affect the adaptive capacity of fishers in a rural coastal community on the potential climate impacts based on the sector's exposure and sensitivity to climate hazards.*

Various climate change vulnerability assessment tools have been developed to understand potential impacts and risks to specific sectors. However, most of the climate models assume homogeneity among subjects. This assumption limits perspectives on projections and systematic impacts. This research investigated the vulnerabilities of the fishery sector, particularly women fishers, to the impacts of climate change through an intersectional analysis of the adaptive capacity of women as influenced by their social capital. The research applied ecofeminism and intersectionality theories in the gender analysis framework in climate change vulnerability assessment of the fisheries sector locates women fishers in the climate change discourse and helps identify appropriate gender responsive climate actions.

The results of the Fisheries Vulnerability Assessment Tool showed that the fisheries sector of Baco, Oriental Mindoro, Philippines was low. Supplemented by additional survey questions, focus group discussions and key informant interviews, the research further investigated women's adaptive capacities and social capital as they navigated their lives as fishers, wives, mothers, and members of the community.

The discussions demonstrated that women's adaptive capacity are affected by their women's socio-economic status particularly their years of residence in Baco, and women's social capital influence the fisheries sector's adaptive capacity. Despite women's participation in community activities, traditional gender roles and gender stereotypes remain unchallenged in fishing villages such as Baco. Women fishers face multiple burdens and marginalization as they try to contend with the climate and environmental risks. Social expectations on women also prevent them in maximizing the resources to adapt to the changing environment.

The intersectional gender analysis of the climate vulnerability could contribute to developing gender responsive climate actions in the fishery sector. The study recommends local specific climate change vulnerability assessments of the fishery sector that consider social and economic factors to surface gender differentiated vulnerabilities and develop appropriate and inclusive climate adaptation strategies.

# NUT FOOD CONSUMPTION AS A SIGNIFICANT PREDICTOR OF FEMALE COASTAL COMMUNITIES WITH CLIMATE CHANGE EXPERIENCE IN SABAK BERNAM, SELANGOR

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This paper aims to measure the food consumption score (FCS) among respondents with experience of climate change (CCE). A purposive sampling approach was used to collect data from *n*=274 respondents in Sabak Bernam, a coastal district in Malaysia. A Binary Logistic Regression (BLR) Model was used to test the Following Hypotheses: Ho1, no significant FCS predicts respondents with CCE; Ho2, no significant FCS predicts male respondents with CCE; and Ho3, no significant FCS predicts female respondents with CCE. The DV=1 refers to the respondent with CCE. In *n*=230 respondents reported that they have CCE. There are 8 categories of FCS and only 6-category are selected as IVs which are milk, vegetables, fruits, oil, nuts, and rice/cereal. This is because of multicollinearity within the IVs where meat has a strong relationship with the vegetables and oil, and oil has a strong relationship with sugar. The additional IVs are the gender (male & female) of the respondents and the gender of the household heads. Only general and female BLR Models are significant ($p$<0.05). For the general BLR Model, 26.6 percent variance in DV can be explained by the IVs; and the significant ($p$<0.05) predictors are nuts FCS (odds=0.928), male gender (odds=7.162) and male-headed household (odds=3.621). For the female BLR model, an 18.3 percent variance in the DV can be explained by the IVs; and the significant predictors are nuts FCS (odds=0.920) and male-headed household (odds= 5.079). Focusing on FCS, only nuts FCS is significant in both general and female BLR models. An increase of one score in nuts FCS will reduce the 7.2 per cent and 8.0 per cent likelihood that the respondents have CCE in general and female BLR Models respectively. Thus, males were 7.16 times more likely to report CCE than females in the general model. This could reflect differences in exposure (e.g., males working outdoors) or reporting biases. Female respondents in male-headed households were significantly more likely to report CCE, indicating potential inequalities in resource access or decision-making power that shape climate experiences. In conclusion, this study highlights nuanced links between diet (especially nuts), gender, and climate perception, urging integrated policies for food security and gender equity in coastal areas.

**Wald Chi-Square (General Model)**

| | B | S.E. | Wald | df | Sig. | Exp(B) |
|---|---|---|---|---|---|---|
| Cereals, grains, roots, and tubers | -.029 | .081 | .128 | 1 | .721 | .971 |
| **Legumes/pulses, nuts, and seeds** | **-.074** | **.031** | **5.609** | **1** | **.018** | **.928** |
| Milk and other dairy products | -.002 | .018 | .015 | 1 | .903 | .998 |
| Vegetables and leaves | .001 | .120 | .000 | 1 | .996 | 1.001 |
| Fruits | -.034 | .092 | .139 | 1 | .709 | .966 |
| Oils | .182 | .189 | .930 | 1 | .335 | 1.200 |
| **Gender (Male=1)** | **1.969** | **.578** | **11.620** | **1** | **.001** | **7.162** |
| **Head of Household (Male headed=1)** | **1.287** | **.476** | **7.318** | **1** | **.007** | **3.621** |
| Poverty Status (Non-poor=1) | -.395 | .432 | .838 | 1 | .360 | .673 |
| Constant | .903 | 1.159 | .607 | 1 | .436 | 2.467 |

# GENDER DISPARITIES ON FOOD CONSUMPTION PATTERNS AMONG COASTAL COMMUNITY WITH CLIMATE CHANGE EXPERIENCE IN SABAK BERNAM SELANGOR

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This study explores gender-related differences in food consumption across eight food categories: (1) carbohydrates (cereals, grains, roots, and tubers), (2) legumes, pulses, nuts, and seeds, (3) dairy, (4) protein sources (meat, fish, and eggs), (5) vegetables and leaves, (6) fruits, (7) oils, fats, and butter, and (8) sugar and sweets. The analysis is based on three demographic variables: the gender of the respondent, the gender of the household head, and the gender composition of household members. The study also aims to identify significant predictors of poor female-headed households based on food consumption patterns.

Data were collected through purposive sampling from 274 households in Sabak Bernam, a coastal district in Malaysia known for its active fisheries and aquaculture activities. The district contributes significantly to Malaysia's coastal economy, with the locals engaged throughout the fisheries value chain. This study focuses on 226 valid responses from individuals who reported experiencing climate change-related events.

Independent samples t-tests and one-way ANOVA were used to assess mean differences in Food Consumption Scores (FCS) across the gender-related variables. Significant differences ($p < 0.05$) were found in the consumption of vegetables, fruits, and oils. Females consumed more vegetables (FCS = 6.17) and oil (FCS = 3.08) than males (FCS = 5.25 and 2.68, respectively). Conversely, fruit consumption was lower among males (FCS = 3.27) than females (FCS = 4.10). Significant differences were also found in the consumption of legumes, nuts, and seeds based on household headship. Female-headed households reported lower consumption (FCS = 0.98) than male-headed households (FCS = 3.78). For other food categories, including meat, fish, and eggs, no significant differences were observed, suggesting a level of dietary homogeneity across households regardless of gender—possibly influenced by affordability, availability, or cultural food norms.

A binary logistic regression model was used to predict the likelihood of a household being poor and female-headed. The model was statistically significant ($p < 0.05$), explaining 19.6% of the variance. Two significant predictors emerged: the FCS for legumes, nuts, and seeds (OR = 0.711) and the number of male household members (OR = 0.577). Each unit increase in legume consumption reduced the odds of being poor and female-headed by 29%, suggesting these foods may be markers of economic well-being. Additionally, each additional male household member reduced the odds by 42%, implying that male presence may support income generation and contribute to improved food security. These findings underscore the intersection of gender, diet, and economic status, highlighting the need for gender-responsive nutrition and social protection policies in climate-affected coastal communities.

# GENDER DISPARITY OF HOUSEHOLD COMPOSITION PREDICTS POOR WITH HIGH WELL-BEING COMMUNITY MEMBER WITH CLIMATE CHANGE EXPERIENCE IN SABAK BERNAM

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This paper investigates the intricate relationships between well-being, household income, poverty status, and gender dynamics in the context of climate change impacts on coastal communities in Sabak Bernam, Selangor. Specifically, it aims to explore the intricate relationships between well-being and household income (RO-1), examine the connection between poverty status and well-being levels based on the gender of respondents and household heads (RO-2), and identify how household gender composition predicts poor yet high-well-being respondents (RO-3). The livelihoods of Sabak Bernam residents are predominantly based on agriculture and fisheries. These activities are highly vulnerable to climate change. Respondents reported experiencing climate-related events such as declining fish stocks, extreme weather disruptions (e.g., floods or droughts), and coastal habitat degradation. These events have exacerbated economic instability and gender disparities by disproportionately affecting income sources and increasing caregiving burdens during disasters.

Among 265 residents of Sabak Bernam, selected through purposive sampling to represent the diverse backgrounds of coastal communities in the area, only 230 reported experiencing climate change. The Pearson correlation test revealed a significant positive relationship between well-being and household income among males in male-headed households with climate change exposure ($p < 0.05$, $r = 0.186$). When categorizing households by poverty (PLI cutoff = RM2589) and well-being levels, chi-square tests showed significant associations ($p < 0.05$) for females in male-headed households with climate change experience. Most respondents (55.26%) were high-well-being and non-poor, while 48.98% of females with climate change exposure fell into this category. Further analysis highlighted gendered disparities: 28.75% of high-well-being females in non-poor households had more male members, whereas 21.3% of high-well-being females in poor households had more female members. The findings indicated that female respondents in male-headed households with climate change experience show significant poverty-well-being linkages. This suggests women may bear disproportionate burdens (e.g., lost income, care work during disasters). In addition, a binary logistic regression ($n = 230$) identified households with fewer males (male-to-female ratio < 1) as 2.03 times more likely to be poor yet report high well-being ($p < 0.05$). This leads to the conclusion that lower male ratios correlate with high well-being despite poverty. This could further imply female resilience (e.g., diversified livelihoods) or hidden hardships (e.g., women sacrificing well-being to sustain households). Overall, these findings underscore how climate change may interact with gendered livelihood vulnerabilities in these agricultural- and fisheries-dependent communities, emphasizing the need for targeted interventions to safeguard well-being amid ecological and economic shocks.

# Session 3:
# Nature-based solutions in aquaculture and fisheries

# PRELIMINARY ASSESSMENT ON GENDER AND SOCIAL INCLUSION IN AQUACULTURE IN THAILAND

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Aquaculture in Thailand is primarily divided into three major categories: freshwater, coastal, and ornamental aquaculture. This sector plays a crucial role in the country's economy, food security and livelihoods, engaging a significant portion of the Thais people. According to updated farm registration data from the Department of Fisheries in 2025, approximately half a million individuals and enterprises are registered in both commercial and subsistence aquaculture, with women accounting for over 45% of these registrations. The substantial participation of women highlights gender as a critical factor for sustainable development in fisheries and aquaculture. Although gender and development issues have been addressed for more than two decades, the focus on Gender Equality and Social Inclusion (GESI) remains insufficiently integrated within the national development action plan.

This preliminary reviewed existing national policies and strategic plans, analyzes sex-disaggregated aquaculture data, and summary resulted from survey on nature based solution in aquaculture faced by marginalized groups, including women, ethnic minorities, and the new generation to enter an aquaculture sector. By evaluating labor distribution, knowledge and resource access, and decision-making roles, the study identifies key gaps and opportunities to promote equitable participation through the advancement of aquaculture registration regulation. Findings nature based solution in aquaculture reveal persistent gender-based barriers, limited access to knowledge innovation and resource, and prevailing societal norms that restrict inclusive engagement. The study recommends policy reforms, capacity-building programs, and strengthened institutional support to enhance GESI integration in Thailand's aquaculture industry. Promoting inclusive practices is essential for achieving sustainable and equitable growth, ensuring that all stakeholders benefit from the sector's development.

# SALTWATER STORIES: WOMEN, SEAWEED, AND SURVIVAL IN ATAURO

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Women in Timor-Leste play an undeniable and critical role in fisheries and aquaculture, significantly contributing to household income and nutrition. However, their extensive contributions, particularly in seaweed farming, are often inadequately captured in national census data. This study investigates the severe impacts of climate change—including altered water temperature, salinity, light intensity, and wave motion—on seaweed farming communities, predominantly composed of women. These environmental shifts have led to disease outbreaks, diminished seaweed production, and subsequently, a decline in women's economic independence. Utilizing a qualitative methodology, this research was conducted using informant interviews with 15 women seaweed farmers. Data were gathered in stages, aligning with community adaptation planning meetings for the Ikan Adapt Project, from early 2024 and continuing from November 2024 to March 2025, primarily on Atauro Island. This flexible data collection approach allowed for the capture of crucial perspectives and experiences of women heavily involved in seaweed cultivation for economic benefits and livelihoods. The findings reveal that while communities in Atauro, particularly women, have eagerly embraced innovations introduced by the Ikan Adapt Project as early adopters of new techniques, significant challenges remain. A pervasive lack of technical knowledge regarding climate-resilient seaweed cultivation techniques contributes to low productivity. Furthermore, women perform all seaweed activities manually, requiring strenuous effort by swimming to plant and maintain their crops. The absence of essential resources, such as small boats, forces women to rely heavily on unpredictable ocean conditions, limiting their ability to tend to their farms daily and optimize harvest times. This manual labor is time-consuming and physically demanding, highlighting the urgent need for improved infrastructure and tools. Despite these challenges, technical training on climate-resilient seaweed farming has significantly broadened farmers' understanding of cultivation practices, particularly concerning climate change impacts. Specific techniques related to tying ropes, optimizing rope length, seedling handling, and daily maintenance have offered practical solutions to previously encountered difficulties. The instruction on appropriate rope length is anticipated to substantially reduce the physical burden of transporting seedlings and harvested seaweed. This paper underscores the urgent need for targeted support and resources to enhance the resilience of women seaweed farmers in Timor-Leste against the escalating impacts of climate change, ultimately promoting sustainable livelihoods and economic empowerment.

# WEAVING EMPOWERMENT: THE TRANSFORMATIVE ROLE OF SEAWEED FARMING FOR COASTAL WOMEN IN BANGLADESH

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Seaweed farming is emerging as a vital catalyst for socio-economic transformation in coastal Bangladesh, particularly in empowering women from vulnerable communities. This study explores the nuanced roles women play across the seaweed value chain and evaluates the potential of this sector to advance gender equity and coastal resilience. Drawing on recent field data from Cox's Bazar, where seaweed production is practiced mainly through off-bottom long line and net culture, findings reveal that women constitute approximately 70% of active producers and collectors. While the expansion of sub-tidal floating raft culture remains largely male-dominated due to its physical demands and offshore nature, women's engagement is significant in seed inoculation, monitoring, harvesting, washing, drying, and post-harvest handling. Economic analysis highlights encouraging profitability: an average 24 m² seaweed plot yields about 63 kg of dry *Gracilaria* over five months, generating a net return of BDT 6,064.66 and a return on investment of 104.59%. Despite limited formal education (52.5% of farmers are illiterate), women's participation has grown steadily, fueled by NGO support, local training, and low capital requirements. Value chain mapping reveals women's dominance in early production and processing stages, although market linkages remain constrained by reliance on middlemen, limited transport, and inadequate post-harvest infrastructure. The marketing system largely channels products from farm gate wholesalers to distant markets like Bandarban, where demand is driven by ethnic communities, limiting broader market penetration. The study concludes that seaweed farming holds transformative potential to empower coastal women economically and socially by providing accessible, climate-resilient livelihoods. Policy recommendations include expanding training tailored for women, improving local processing facilities, and diversifying markets through branding and export strategies. By strengthening women's agency within the value chain and addressing structural barriers, seaweed farming can significantly contribute to Bangladesh's blue economy goals while promoting gender equity and community resilience against climate change.

# WOMEN'S ROLES IN FISHERIES, SEAWEED FARMING, AND AQUACULTURE IN TIMOR-LESTE

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This case study explores the multifaceted roles of women in fisheries, seaweed farming, and aquaculture in Timor-Leste, emphasizing their significant contributions to household economies and community resilience. Through the narratives of Xandriña da Conceição, Rosita Gomes, Norberta Marques, Joaquina Martins, Merita da Costa, and Domingas Dahudo, this qualitative study investigates the challenges and opportunities women encounter in these sectors. It highlights their agency and adaptive strategies when faced with environmental and economic uncertainties. Data was collected from November 18th to December 10th, 2024, across five villages in three different municipalities of Timor-Leste. The study employed qualitative methods, specifically key informant interviews, with respondents purposefully selected as direct beneficiaries of the GEF-funded Ikan Adapt Project. Thematic analysis was utilized to understand the underlying meanings and perspectives of women involved in fisheries and aquaculture, aiming to address the challenges they face. Findings reveal that women in these sectors are heavily impacted by climate stressors and face limited access to climate information, fishing materials, and adaptive knowledge for climate-smart practices in fishing, seaweed farming, and aquaculture. Furthermore, the study identified a lack of access to fish feed and fingerlings in the aquaculture sector, alongside insufficient technical training in climate-resilient aquaculture and seaweed practices. The women interviewed called for support to address these challenges to sustain their livelihoods. The ongoing data analysis will inform future project interventions designed to mitigate the difficulties women experience in the aquaculture and fisheries sectors. Future interventions must prioritize sustainability to empower women and strengthen their economic well-being. This study will also serve to raise awareness in Timor-Leste regarding women's crucial role in the aquaculture and fisheries sectors and their contribution to family food security.

# Session 4:

# Innovative frameworks/methodology for gender research in fisheries and aquaculture

# RAISING THE VOICES OF WOMEN FISHERS AND FISHWORKERS FOR BLUE JUSTICE WITH PHOTOVOICE IN BRAZIL

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The UN Decade of Ocean stresses the importance of engaging with women and men artisanal fishers and coastal stakeholders for advancing socially equitable ocean sustainability. “Blue Justice” for small-scale fishers is part of this momentum and the gathering of perception-based data that emphasizes local knowledge can inspire social learning and collective action, especially when done with gender equity in mind. We illustrate this in the context of Babitonga Bay, Santa Caterina State, Brazil, where a group of women fishers and fishworkers used Photovoice, a participatory, stepwise photography-based research protocol, to highlight the challenges and benefits they experience and to voice their hopes and aspirations for a just fisheries sector. We describe how Photovoice was used and share the photos and narratives that the participants decided to bring to the attention of local authorities and the wider public in the context of an outward-facing and interactive exhibition. Their messages, in stark contrast with prevailing economic development trends, are a powerful catalyst for awareness and change. We reflect on the innovative and transformative power of Photovoice in gender research, even if conducted over a relatively short timeframe. We underline in particular how critical the last step in the Photovoice process (outward-facing exhibition) was in crystallizing the empowerment process initiated through the participants’ photographs and exchanges, and in fostering a longer-term shift in women fishers and fishworkers’ own perceptions and self-beliefs.

# HOW TO PURSUE GENDER EQUITY WITH COMMUNITIES THAT HAVE COMPLEMENTARIAN VALUES? CASE STUDY FROM INDONESIA

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Achieving gender equity is an important part of realising human development, including in the conventionally male-dominated sector of fisheries. The Indonesian government has committed to working towards an inclusive economy and to reducing gender gaps in the workforce. This paper arose from a project looking at gender in industries in Kendari, a major tuna port in Indonesia, which showed that the gendered division of labour (GDL) was quite unequal. Kendari is known as a conservative region in majority Muslim Indonesia, and the observed GDL pattern aligned with complementarian values in Islam, a normative perspective by which men's primary role is to be income earners and women's primary role is to be reproductive workers, with women's cash-earning work being a lesser priority. The researchers thus face a challenge in formulating recommendations to improve gender equity in Kendari's tuna industries. We cannot simply argue that equity will be achieved by Kendari men taking on more household tasks and women being given equal opportunity in income-earning roles, because equity is shaped by local values, which here includes complementarianism. However, complementarian patterns of GDL can result in inequitable outcomes. Equity is also a core value in Islam so refusing to intervene in tuna industries' GDL because complementarian GDL is a religious and cultural norm may contravene local norms regarding equity. This paper is a first step towards teasing out the complexity of pursuing gender equity in Kendari tuna industries, presenting relevant ideas from the literature about gender in Islam and Indonesian society, in fisheries and international development studies. We find that Indonesian government policies reflect the unresolved contradiction between international framings of gender equality goals and complementarianism as a core religious and cultural value in Indonesia, meaning policy incoherence. Gender transformative development approaches focus on the alignment of norms to enable socially inclusive development based in local cultures. We call for extending this work on pursuing gender equity from within local communities to the national scale to enable policies that promote gender equity effectively and culturally appropriately.

# SIGNIFICANT PREDICTORS OF MICRO ENTREPRENEURS BY SEX DISAGGREGATION WITH CLIMATE CHANGE EXPERIENCE IN SABAK BERNAM SELANGOR

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This paper aims to identify the significant predictors of micro-entrepreneurs in Sabak Bernam Selangor by sex disaggregation. Sex disaggregation analysis explains male and female microentrepreneur situation in experiencing climate change and predictors. A total of *n*=274 was collected through purposive sampling in Sabak Bernam, a coastal district of Malaysia. Nevertheless, only *n*=230 were reported in this paper among respondents who answered YES they have climate change experience. In a total of *n*=130 are micro entrepreneurs, either involve in food enterprising (m=3.9%, f=28.30%), agriculture business (m=70.13%, f=45.28%) or other type of business (m=25.97, f=26.42%).

Two Binary Logistic Regression (BLR) models were tested among male and female entrepreneurs respectively. The micro-entrepreneurs are a Dependent Variable, and the predictors are the total number of household members (male & female), gender of respondents (male & female), the 4-vulnerable status (older adult, day-pay worker, youth, & disabilities), five sub-district locations, household monthly income and food consumption score (FCS) (poor/low & acceptable).

The BLR model shows that most of the microentrepreneur is a male compared to female. The male microentrepreneur is a young age compared to female microentrepreneur. The six predictors are the total number of family members (male), older adults, sub-district locations (Bagan Nakhoda Omar [BNO] & Pasir Panjang), household income and FCS. A respondent from BNO Sub-district had more male micro entrepreneur compared to male respondent from Sungai Panjang Sub-district. The more household income per month shows that he is predicted as a micro-entrepreneur. However, for FCS with poor/low score means he is likely are a micro-entrepreneur.

The BLR model shows that female microentrepreneur has two significant predictors which are Pasir Panjang Sub-district and day-pay workers. A respondent from Pasir Panjang sub district has more female micro-entrepreneur, and a day-pay worker. This paper concludes 6-significant predictors for male entrepreneurs which are a total number of male family members, younger age, from BNO and Sungai Panjang sub-district, increase in household income, and low FCS; and only 2-significant predictors for female entrepreneurs - from Pasir Panjang and day-pay worker. This study is significant to the policy makers to develop a program to male and female residents of blue economy areas.

# DIGITAL TECHNOLOGY ADOPTION OF WOMEN ENTREPRENEURS AS STRATEGY FOR ECONOMIC INCLUSION: INVESTIGATING THE LANDSCAPE OF THE PARTIDO DISTRICT IN BICOL REGION, PHILIPPINES

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Current trends in digital technology suggest opportunities for economic inclusion of women who are traditionally left out of the labor force. The emergence of digitalization through digital learning, the rise of various digital platforms and applications, improvements in telecommunications and connectivity bode well for the economic inclusion of women in the vulnerable groups through self-employment or the generation add-on or secondary income sources. Within this context, digital tools present a viable avenue for women's entrepreneurial participation, especially in rural and resource-based communities. This study contributes to the scarce literature on women entrepreneurs from vulnerable sectors, particularly those engaged in fisheries-related microenterprises such as fish vending in the Partido districts of Camarines Sur, Bicol region. These women play a crucial but often overlooked role in the local blue economy, contributing to the post-harvest and value-chain activities in small-scale fisheries and aquaculture systems. By leveraging digital platforms for product promotion, mobile banking, and communication with buyers and suppliers, they have been able to sustain and scale their livelihood practices despite limited physical infrastructure. Using quantitative methods—including descriptive statistics, correlation analysis, and multiple regression—the study investigates how digital technology adoption under individual, technological, organizational, and environmental dimensions impacts women's participation in fisheries- based and other microenterprises. Findings reveal that adoption of digital tools has fostered economic inclusion by facilitating employment creation, business networking, and improved access to formal financial services. Several factors were found to be significantly associated with the adoption of digital technology, including the decision to engage in micro and small businesses and avail of loans from cooperatives or private institutions. The results offer insights into policy and program development aimed at strengthening women's roles in the blue economy and enhancing their digital entrepreneurial capacity through more inclusive and sustainable digital strategies.

# ASSESSING ACCESS, CONTROL, AND DECISION-MAKING OVER RESOURCES OF MEN AND WOMEN IN SMALL-SCALE FISHING HOUSEHOLDS IN MIAGAO, ILOILO

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Men and women in small-scale fishing households contribute to the household economy. However, their contributions differ significantly due to disparities in access, control, and decision-making power over resources. The lack of measures to assess and document these aspects, especially for women, exacerbates their vulnerability to inequality, particularly in the fisheries sector. This study aims to address this gap by (1) determining the activities of men and women, (2) assessing their access to and control over resources, and (3) examining the decision-making dynamics within small-scale fishing households in Miagao, Iloilo. Elements of the Harvard Analytical Framework, the Moser Framework, and the Collective Model were combined to guide the conduct of this study. The study employed a mixed-method approach, combining a survey of 269 fishing households with insights collected from six focus group discussions involving 36 participants.

Table 1. Summary of Access to and Control over Resources of Men and Women

| Resources | Men | Women |
|---|---|---|
| Physical Capital | | |
| Fishing boat | A/C | a/c |
| Fishing gear | A/C | a/c |
| Other fishing equipment | A/C | A/c |
| Vehicle | A/C | a/c |
| Land | A/c | A/C |
| House | A/C | A/c |
| Human Capital | | |
| Formal education | A/C | A/C |
| Training/seminar | A/C | A/C |
| Health | A/C | A/C |
| Financial Capital | | |
| Formal and Semi-formal | a/C | A/C |
| Informal | a/C | A/c |
| Social Capital | | |
| Membership in Organizations | A/C | a/c |
| Extension Services | A/C | a/c |
| Political Expression | A/C | A/C |

*Legend:*
*a – had limited access*
*c – had limited control*
*A – had significant access*
*C – had significant control*

The results show that men predominantly engaged in productive activities, while women were more involved in reproductive and community activities. Additionally, men were found to have greater access to and control over physical and social capital, whereas both men and women had access to and control over human capital. For financial capital, women had more access, but men had more control, particularly over resources from informal financial institutions. Lastly, regarding household decision-making, men exclusively decided on the following resources: fishing equipment, house, financial resources, membership in organizations, and extension services. Notably, decision-making regarding human capital was generally shared between men and women. As revealed in the FGD, the results are influenced by traditional beliefs, gender role expectations and biases, and household income. Additionally, households adopt these practices as a strategy to allocate their limited resources more efficiently. These findings provide valuable insights for designing poverty intervention and gender-inclusive policies, programs, and projects that will effectively enhance economic opportunities for both men and women in fishing households.

# PROMOTING GENDER EQUALITY IN THE SEAFOOD SECTOR: TAKEAWAYS FROM BUILDING SAGE'S GENDER STRATEGIES PROGRAMS

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While 50% of the global seafood workforce is women, women and genderqueer people are significantly underrepresented in management and decision-making roles. Further, women and genderqueer people's contributions to the sector are often ignored, unseen, and unacknowledged. Seafood and Gender Equality (SAGE) promotes gender equality in the global seafood sector, leading to a more resilient industry, thriving communities, and abundant resources for future generations. Through the Gender Equality Dialogues (GED) and the Gender Equity Index (GEI) Tool, SAGE promotes equality in the sector by co-creating space for industry leaders to develop actionable gender equality commitments. In this session, Becca Williams, the Director of Gender Strategies, will discuss the key takeaways from building SAGE's Gender Strategies Program, including the completion of the pilot GED and accompanying curriculum, devising a sector-specific Gender Action Framework, and collaborating with seafood companies to create robust public facing gender equality commitments. Additionally, she'll briefly describe the process of developing SAGE's new Gender Equity Index, a tool providing seafood companies and nonprofit organizations an assessment and roadmap to improve gender equality within their policies and operations.

SAGE's Gender Strategies programs underscore the necessity of applying a gender lens and adopting internal facing gender equality measures for seafood companies and non-profit organizations. It is not enough for seafood companies and organizations to apply a gender lens only when looking down their supply chains. In order for these adaptations to have long-lasting impacts, the industry itself must first do the difficult work of making strides internally toward gender equality. Further, many seafood companies and organizations are working to achieve SDG 14, Life Below Water. The UN has stipulated that gender equality is a necessary precondition for realizing all the sustainable development goals. Notably, gender is not integrated into SDG 14, which makes this work even more critical. In addition to building and retaining a diverse and inclusive workforce, the promotion of gender equity and justice within the seafood sector has significant implications for understanding and improving social and gender conditions, while also serving as a catalyst for mitigating the impacts of climate change for decades to come.

# INVISIBLE WORK, LIMINAL SPACES: WOMEN FISH VENDORS AND THE URBAN INFORMAL ECONOMY IN DAR ES SALAAM

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This study examines the everyday spatial practices of marginalized urban women fishers, with a particular focus on how their informal economic spaces become gendered and liminal space. In many developing countries, women comprise nearly half of the fisheries workforce and play a crucial role in sustaining the industry. Yet, scholarly attention to the gendered nature of informal fisheries economies remains limited. This research seeks to make visible these overlooked spaces and expand the understanding of urban livelihood strategies in the Global South, thereby contributing to broader discussions on inclusive urban policy.

The study is grounded in feminist geography, drawing on Doreen Massey's concept of relational space. Also, Sharon Zukin's notion of liminal space to analyze how public and private (informal) boundaries are negotiated. The empirical focus is on women fishers operating in the Mzizima Fish Market in Dar es Salaam, Tanzania. It explores how their spatial practices disrupt, reconfigure, and reproduce spatial identities through their daily activities.

Methodologically, the study employs qualitative research methods, including semi-structured interviews and participant observation. Twenty women fishers were recruited through snowball sampling, and data were collected with the assistance of Swahili-English interpretation. The research focuses on two key sites of practice: the home and the marketplace.

Three main findings emerge. First, the domestic space - typically associated with care and reproduction - is transformed into a liminal space as women engage in fish processing and selling, thus blurring the boundary between private and public functions. Second, the fish market, while ostensibly a formal public space, becomes partially privatized through women's trust-based networks and informal participation in auctions. These practices generate alternative pathways for engaging with formal economic structures. Third, such spatial transformations are not merely the result of physical mobility, but are produced through women's repeated, relational engagements with space.

Ultimately, this study supports feminist geography's critique of the rigid public/private divide by illustrating how women create and sustain liminal economic spaces in both domestic and market environments. These spaces, grounded in everyday social relations and trust, play an essential role in supporting urban economic systems such as food distribution and household livelihoods. In doing so, the study sheds light on how marginalized actors shape and sustain the city from its informal margins.

# GENDER INTEGRATION IN FISHERIES: CHALLENGES AND LESSONS LEARNED FROM THE USAID SUFIA TS EXPERIENCE

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Gender Equality and Social Inclusion (GESI) was a major cross-cutting component in the project, Sustainable Fish Asia Technical Support (SuFiA TS), a regional activity funded by the United States Agency for International Development through the Regional Development Mission for Asia (USAID/RDMA) during November 2022 to February 2025. The goal of the SuFiA TS project was to improve the management of marine biodiversity and fisheries resources in the Indo-Pacific region by reducing unsustainable fishing and illegal, unreported, and unregulated (IUU) fishing. One of its strategic approaches was to improve social inclusion within regional fisheries management, including small-scale fishers, women, and youth empowerment. This strategic approach was applied across the other strategic approaches focusing on fisheries, marine biodiversity and climate change policies and regulatory frameworks, private sector engagement for fair labor and sustainable fishing practices, coordination and communication, monitoring, evaluation and learning, and maritime security. SuFiA TS recognized that empowering women and girls is crucial to meeting its goals to improve the management of marine biodiversity and fisheries resources in this region, and in ensuring effective climate change adaptation. This paper will present how the gender equality lens was employed within a technical project that focused on fisheries management, climate change adaptation, regional collaboration including private sector engagement, and maritime security. It will share experiences from conducting a gender analysis, to the development of a gender and inclusive development action plan, conducting gender sensitive risk assessments, ecosystems approach to fisheries management and climate risk management planning, capacity building, and policy guidelines and communication products development that address issues across the Indo-Pacific region to benefit marginalized groups in the sector. The success stories, challenges and lessons learned from USAID SuFiA TS implementation in partnership with regional fisheries organizations, NGOs, private sector, including women, youth and stateless fishers could provide a reference and a guide for current and future generations of project implementers and gender practitioners to design and develop initiatives that are gender responsive and socially inclusive.

# BETWEEN THE UNIVERSAL WOMAN AND INDIVIDUALS: USING IDEAL TYPES

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The word "women" often infers all women. When based on findings from selected groups, however, inferences for all women may ignore heterogeneity and convey false impressions. For example, a regional science committee proclaimed great progress on gender issues in the fishery, but their evidence came only from observing that women now occupied more high profile political and professional management positions. Meanwhile, the interests of the women on fishing vessels, in processing factories and elsewhere in the fishery's value chain had not advanced. At the other end of specificity are reports that pay close attention to heterogeneity, applying intersectional approaches using constructed categories and/or studying individual cases. In the vast space between women as a homogeneous group and the individual cases are options for categorisation such as gendered constructions for women small-scale farmers - the "*productive farmers*" and the "*virtuous food securers*" (Prügl & Joshi, 2021). "*Decent Work and Thriving Businesses for Women in Fisheries: A Cooperative Action Plan*" (USAID et al., 2022), differentiated the types of women's labour, life stages and ethnicity and suggested specific actions each type would need to achieve decent work.

Taking these differentiating approaches further, we have applied Max Weber's "Ideal Types" concepts (Coser, 1977, pp. 223–224) for women across the fish value chains. Ideal Types are social constructs, not ideals in the sense of being the best or morally ideal, for investigating social differences. Based on empirical information, ideal types must be logically consistent, but no person or institutions may actually fit the type (Chowdhury, 2014).

We constructed eight Ideal Types of women that we use as a tool to examine broad political economy differences in women's needs, responses and positionality in fisheries and aquaculture labour, capital accumulation, technology, governance and exogeneous shocks. In the presentation, we will illustrate the Ideal Types using the example of labour. We show how each Ideal Type is located in the different parts of the fish economy, and which are and are not included in the global System on National Accounts. Ideal Types are useful when considering policy options because they can be constructed to suit the recommendation domain.

# WOMEN IN GOVERNANCE DOESN'T MEAN GENDER EQUALITY IN FISHERIES AND AQUACULTURE

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This presentation delves into the intricate relationship among gender, governance, and sustainable fisheries management, emphasising the roles of women and their marginalisation in governance within the fisheries and aquaculture sectors. Employing case studies from the tuna fishery in the Western and Central Pacific Ocean (WCPO) and the neoliberal governance model in the Global North, the research reveals the structural barriers and gendered implications of existing governance frameworks.

Despite a growing inclusion of gender equality in global policies, such as the FAO's Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries, the integration of gender perspectives in governance continues to encounter significant hurdles. Women's interests are predominantly excluded from decision-making at local, national, and international levels, even though they play a crucial role in pre- and post-harvest activities. The case studies demonstrate how institutional configurations, gendered power structures, and neoliberal governance practices contribute to this exclusion, restricting women's access to resources, decision-making power, and leadership opportunities.

Through a feminist political economy perspective, this research critiques gender issues in fisheries governance, analysing how market-oriented mechanisms such as Individual Transferable Quotas (ITQs) often perpetuate gender disparities by overlooking women's contributions. Furthermore, the presentation discusses how women's expertise, particularly in small-scale fisheries and aquaculture, is often overlooked in knowledge production processes, thereby deepening gendered power disparities.

# AGAINST THE STINGS, THE BELL RINGS: RETHINKING JELLYFISH HAZARDS THROUGH GENDER-INCLUSIVE AND MORE-THAN-HUMAN ONE HEALTH ETHICS

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When a jellyfish pulses through the sea, its bell rings silently—but its sting demands a broader reckoning. This perspective examines how jellyfish sting hazards are conceptualized in Philippine literature and policy. Using a post-qualitative orientation grounded in feminist political ecology, intersectionality, and One Health, the paper explores gendered vulnerabilities, local adaptation, and multispecies relations. Findings show that women, queer individuals, fishers, and the elderly disproportionately face these risks but are often excluded from governance. Local knowledge and community-based practices remain undervalued, while non-human lifeforms are treated as threats rather than ecological indicators. The paper advocates for a more inclusive, relational approach to hazard governance—one that centers epistemic justice, interdependence, and more-than-human ethics to promote sustainable public health in the Anthropocene.

# BECOMING 'VISIBLE': HOW FISHERWOMEN NEGOTIATE POSITION IN SMALL-SCALE FISHERIES VALUE CHAINS IN GUIUAN, EASTERN SAMAR, PHILIPPINES

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Why are women rendered invisible in fisheries value chains? The study responds to calls for an increased understanding of the underlying factors behind fisherwomen's "invisibility," which starts with the assumption that "women do fish" and explores whether the women who do fish can achieve the status of a "good fisher." Through a Feminist-Bourdieusian analysis of the transformation and persistence of gendered practices in small-scale fisheries value chains in Guiuan, Eastern Samar, the study explored the impact of crises, particularly caused by the super typhoon Yolanda (internationally known as Haiyan) and the subsequent Coronavirus Disease 2019 (COVID-19) pandemic, on gendered practices and gender power relations. Interviews, participant observation, and value chain mapping revealed how coping strategies and novel field opportunities, including interventions by governments and non-government organizations (NGOs), helped elevate women's status as leaders in fishing communities and increase the recognition of women's roles and contributions in fisheries value chains. In the post-Yolanda context, the valuation of femininity or feminine-associated skills has improved, as these have become essential in implementing strategies for sustaining livelihood. Formerly "underrecognized" roles of women in sales and marketing, and customer relations in the pre-Yolanda context have helped women develop the necessary skills and dispositions required to thrive in the new value chain structures that emerged after Yolanda. As the new practices are largely carried out through communal exchanges rooted in loyalty, reciprocity, and resource sharing, women, who are typically tasked with emotional practices such as preparing gifts and appealing to the sympathies of other value chain actors, play a significant role in sustaining fisheries value chain activities.

# WOMEN'S CONTRIBUTIONS TO FISHERIES AND GENDER-RELATED HUMAN RIGHTS ACROSS 28 COUNTRIES

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Although an estimated 45 million women contribute to small-scale fisheries and generate $5.6 billion in landed value annually, their contributions across value chains remain largely invisible in data, policy, and decision-making. Structural barriers, gender norms, and unequal access to resources continue to constrain their participation and limit the benefits they derive.

An initiative focused on gender and fisheries supported by the Ocean Risk and Resilience Action Alliance supported by the Ocean Risk and Resilience Action Alliance (ORRAA) and led by the University of British Columbia (UBC), Stockholm Resilience Centre (SRC), and Stanford Center for Ocean Solutions (COS) has a dual focus: generating actionable evidence and fostering inclusive collaboration to help strengthen gender equity in coastal fisheries.

Three key components anchor this work:

- The co-development of country fact sheets for 28 countries across the Caribbean, Africa, Oceania, South and Southeast Asia synthesizing available data and qualitative insights. These fact sheets integrate women's roles in the broader fisheries context together with relevant social, economic and political and governance considerations that act as barriers or enablers to empowerment;
- A gender-responsive policy analysis assessing the extent to which gender equity is integrated into fisheries governance documents; and
- A strong emphasis on co-development, capacity strengthening and inclusive participation. This included two workshops - one in Panama focused on focal countries in the Caribbean and one in Fiji focused on in Oceania – that facilitated cross-sectoral learning and, in many contexts, enabled close dialogue between fisheries agencies and gender machineries for the first time.

In this presentation, we share insights from these activities, highlighting key patterns and differences across regions, as well as opportunities to strengthen gender-responsive governance. We also reflect on the ethical and practical complexities of this work.

# FROM AWARENESS TO TRANSFORMATION: STRENGTHENING GEDSI INTEGRATION IN INDONESIA'S OCEAN ACCOUNTS

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Indonesia's Ocean Accounts (OA) initiative represents a major advancement in integrated marine governance, bringing together environmental and economic data across four analytical pillars. Since its initial pilot in the Gili Matra Marine Protected Area (MPA) in 2021, the OA framework has expanded to ten diverse coastal and marine ecosystems across the country. This study examines how effectively the OA initiative reflects the principles of Gender Equality, Disability, and Social Inclusion (GEDSI), and explores opportunities to enhance its inclusivity in future development and implementation. The analysis applies an adapted framework based on the Swiss Agency for Development and Cooperation's four gender lenses, focusing on gendered participation, role classification, and geographic representation.

The findings reveal both notable progress and persistent gaps. While the OA demonstrates a degree of organic gender balance at the national level - reflected in 53% female representation in operational roles - significant disparities remain. Women are underrepresented in leadership positions, with 69% of these roles held by men, and are often excluded from field activities due to infrastructural limitations, as evidenced in the Sawu Sea MPA case. Moreover, persons with disabilities are systematically excluded, with no disability-disaggregated data collected across any OA pilot sites or related activities. These challenges are further compounded by entrenched cultural norms and geographic isolation, which disproportionately impact marginalized coastal communities.

To address these challenges, the study proposes a phased GEDSI integration strategy. In the short term (0–2 years), priorities include disaggregating data by gender and disability, training enumerators in inclusive data collection, and partnering with local disability organizations. In the medium term (2–5 years), GEDSI should be institutionalized through the development of national OA guidelines, the establishment of accountability mechanisms, and the integration of social indicators. Social accounting approaches - designed to capture disparities in access, participation, and outcomes - can complement OA's existing analytical pillars and ensure that governance decisions are both equitable and evidence-based. In the long term (5+ years), successful inclusive practices should be scaled nationally and aligned with global frameworks such as the UN System of Environmental-Economic Accounting.

The findings underscore the importance of sustained leadership, institutional commitment, and participatory approaches in transforming OA from GEDSI-aware to GEDSI-transformative. By embedding GEDSI principles and social accounting into its methodology, OA can evolve into a more inclusive and equitable governance tool - ensuring that marine policy and decision-making are grounded not only in ecological and economic data, but also in the lived experiences of Indonesia's diverse coastal communities.

# BEYOND EFFICIENCY: AN INTERSECTIONAL POLICY ANALYSIS OF THE PHILIPPINE SEAWEED INDUSTRY ROADMAP

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The Philippines has been one of the leading producers of *Kappaphycus* and *Eucheuma* seaweed varieties for over five decades. In 2022, the Department of Agriculture - Bureau of Fisheries and Aquatic Resources (DA-BFAR) released the Philippine Seaweed Industry Roadmap (2022-2026), a strategic document outlining policy objectives to re-establish the country as the "Global Market's Preferred Seaweed and Carrageenan Supplier". However, the industry must first address long-standing challenges that continue to hinder its growth.

Drawing from our studies between 2020 and 2024, gender, risk, and social networks emerged as key themes for critically examining the Roadmap. The Intersectionality-Based Policy Analysis (IBPA) framework structured the analysis, providing insights into how gender relations and broader social structures shape vulnerabilities and patterns of (in)equity across the seaweed value chain. IBPA's descriptive and transformative questions guided the analysis. Descriptive questions were addressed through content analysis, focusing on how the Roadmap frames key issues, depicts social relations, and represents value chain actors. Once the core themes were established, their interconnections were examined to respond to the transformative questions, which are intended to guide the policy focus toward addressing root causes of inequity and promoting more connected, inclusive and forward-looking approaches.

A total of 195 codes were generated (Table 1), with 50% categorized under risk, 42% under social networks, and only 8% under gender. This distribution underscores the emphasis on industry challenges and relational networks, alongside a comparatively limited attention to gender-related dimensions. Risk is intertwined with gender and social structures, highlighting how value chain actors remain vulnerable within the industry. Applying the IBPA framework shows that although the Roadmap emphasizes economic growth and industry advancement, it underrepresents the complex realities faced by women, who constitute nearly half of the workforce. As a guiding policy strategy for the Philippine seaweed industry, its future orientation should move beyond efficiency and toward a more adaptive framework grounded in principles of social justice.

Table1. Thematic distribution and policy framing in the seaweed roadmap (2022-2026)

| Themes | Frequency | Framing |
|---|---|---|
| Gender | 16 ( 8%) | Gendered roles in seaweed value chain |
| Risk | 98 (50%) | Environmental and market risks |
| Social Networks | 81 (42%) | Cooperatives and industry coordination |

# WOMEN FISHERS' VULNERABILITY IN THE PHILIPPINES: A COMPARISON OF TWO ASSESSMENT METHODS

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The Social Reform and Poverty Alleviation Act (Republic Act Number 8425) of the Philippines is a law that defines basic sectors as the disadvantaged or marginalized sectors of the Philippine society. The act encompasses 14 sectors, including artisanal fisherfolks and women (Philippines Statistical Authority, 2025). This definition affirms that the overlapping conditions of women in small-scale fisheries place them in a disadvantaged and marginalized position in Philippine society.

Cognizant of the marginalized position of women fishers, there have been numerous researches that tackle their well-being. These studies include, among others, sustainable livelihoods, poverty, participation, gender roles, marginalization, and even violence against women. One highly researched topic is vulnerability. The United Nations Office for Disaster Risk Reduction (UNDRR) defines vulnerability as "the conditions determined by physical, social, economic and environmental factors or processes which increase the susceptibility of an individual, a community, assets or systems to the impacts of hazards." While generally applied in the context of hazards, vulnerability is a useful framework/method in understanding the susceptibility of disadvantaged groups such as women fishers to hazards or shocks (e.g. market shocks).

There are several vulnerability assessment methods that are useful in evaluating the well-being of women fishers. This research applies two types of vulnerability assessment methods, vulnerability to poverty (VEP) and social vulnerability (SOVI), to study the well-being of female-headed fishing households in the Philippines. The objective is to compare the two assessment methods according to conceptual basis, ease of use, and scope of assessment, among others.

The study utilized the latest Philippine Food, Income, and Expenditure (FIES) and Labor Force Surveys (LFS) to assess the social vulnerability (SOVI) and vulnerability to poverty (VEP) of female-headed fishing households in the Philippines. Almost the same set of variables were used in the two assessment methods. The VEP used regression analysis to determine vulnerability while an index was constructed for the SOVI.

The two methods were compared based on several factors including definition, unit of analysis, focus, variables, measurement approach and time dimension. The comparison showed that social vulnerability is multi-dimensional and much broader in scope compared to VEP which is purely economic. Moreover, SOVI is based on the inherent characteristics of women and measures innate vulnerabilities, VEP on the other hand, is more forward looking and measures the probability of women fishers falling into poverty in the future. The study concludes that poverty exacerbates social vulnerability. Lastly, both tools are complementary and generated a comprehensive assessment of women fishers' vulnerability useful in informing policy on poverty reduction and resiliency.

# Session 5:

# Counting and discounting: men's and women's work in fisheries and aquaculture

# EXAMINING LIVED EXPERIENCES OF WOMEN LEADERS OF FISHERFOLK ASSOCIATIONS IN SEBASTE, ANTIQUE

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Women in fisheries play vital roles in fisheries management, but their contributions are often overlooked, and their opportunities in the fisheries sector are limited. These are influenced by various factors, such as gender norms, socioeconomic conditions, and gender roles. In this study, the lived experiences of women leaders of fisherfolk associations in the coastal municipality of Sebaste, Antique, were documented and examined. Key informant interviews with the four (4) women leaders of the three (3) operational fisherfolk associations in the area were conducted, and preliminary results were validated through a focus group discussion. Secondary data was also collected from the local Coastal and Fisheries Resource Management (CFRM) plan, municipal ordinances, a list of fisherfolk associations, and other relevant documents. Women leaders benefit from facilitative factors such as prior leadership experience, positive support systems, and positive views on leadership itself. Whereas, inexperience in leadership, social conflicts, and gender norms were found to be hindering factors.

Leadership experiences for women were reported to be beneficial in building competence and value formation. This study also discussed the persistence of struggling to maximize membership participation among fisherfolk associations as an issue common to all fisherfolk associations in the municipality.

This study recommends for the capacity-building of the officers of fisherfolk associations; the incorporation of a gender mainstreaming strategy in organizing fisherfolk associations; and increasing community-based coastal resource management (CBCRM) projects for fisherfolk associations to complement livelihood-based projects.

# A GENDER PERSPECTIVE OF CHANGE IN SMALL-SCALE FISHERIES, A LEGACY FROM THE SEA CUCUMBER FISHERIES OF YUCATÁN

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Global social and environmental changes such as population and economic growth, new and increasing patterns of consumption, and new technologies have driven overexploitation of fisheries worldwide. Although this phenomenon has been well-documented, we require a gender perspective of change to better understand how women and men experience and are differentially affected by decline in fisheries. Sea cucumber fisheries often undergo rapid boom and bust cycles with stark social and environmental impacts. Based on fishing community members' knowledge and perceptions, we identified gendered patterns of change, in the communities and the marine environment, before, during and after the sea cucumber became a market export good to supply increasing Asian demand for this echinoderm. Eight focus groups in four different communities in Yucatán, Mexico, provided evidence of how the sea cucumber fishery resulted in rapid socioenvironmental changes, impacting livelihoods. Women and men agree that before sea cucumber fishing, marine resources were abundant and accessible. During the boom of the sea cucumber fishery, overexploitation caused severe damage to marine ecosystems, affecting key species and habitats, and increased social conflicts, arrival of outsiders, and community disintegration. After the fishery declined, a resulting economic collapse and continuing depletion of marine resources led to multiple hardships differentiated by gender. Men emphasize technical and organizational aspects of fishing, like overexploitation, the introduction of risky fishing practices, and large-scale economic consequences, such as debts incurred during the sea cucumber boom. Women are more concerned with the social and familial consequences, such as the disruption of traditional roles, the loss of economic stability in complementary activities like fish filleting, and the broader impact on household subsistence and food security. Perceptions varied among the four study communities, indicating that gendered experiences of social and environmental change are mediated by local social, environmental, and political-economic structures.

# NOT JUST SHRIMP: TRANSFORMING SHRIMP AQUACULTURE WITH GENDER EQUALITY AND SOCIAL INCLUSION (GESI) AND CLIMATE ACTION

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In Indonesia, women make up 42% of fisheries labor yet remain largely invisible in management and policy. Social norms define them as caregivers, framing their work as unpaid domestic labor, while men dominate high-value roles like harvesting, transportation, and trade. Meanwhile, women are confined to lower-value tasks in pre- and post-harvest stages, such as grading, sorting, and market sales. Gender data gaps further obscure their contributions, as fisheries data prioritizes male-dominated sectors like capture fisheries while neglecting women's roles in gleaning and processing. Without formal recognition, women lack legal rights and struggle to access government support, reinforcing their exclusion from resources and worsening poverty in small-scale fishing communities. Addressing these gaps is essential to achieving inclusive and equitable fisheries governance.

Our study seeks to uncover the gendered power dynamics and structural factors driving inequality in the shrimp aquaculture sector. We aim to identify, analyze, and address the underlying social norms, structures, systemic barriers, and power dynamics contributing to gender disparities and women's exclusion from the sector. Through this study, we also seek to map women's livelihood spaces, understanding their contribution to managing coastal resources and shrimp ponds. Ultimately, this study aims to provide a solid foundation and critical insights to promote gender equality and social inclusion in the aquaculture sector, particularly in advancing climate-smart shrimp aquaculture. Ensuring that the industry's adaptive strategies and climate action also prioritize GESI (Gender Equality and Social Inclusion) is essential.

We applied Caroline Moser's Gender Analysis Framework (1993) to examine the division of labour and roles within households and communities in the shrimp aquaculture sector. We then adapted this framework and integrated it with Participatory Rural Appraisal (PRA) tools, including historical timelines to map community profiles and resources, time-use surveys to analyze seasonal labour patterns between men and women, and participatory focus group discussions (p'FGDs) to explore livelihood spaces, tenure systems, social norms, and structural barriers. Using snowball sampling with local facilitators, we engaged 52 respondents (25 women, 27 men) from two villages in Banyuwangi, Indonesia. We prioritize a participatory approach to ensure that we capture aspirations and data from the perspective of local communities. Through this approach, we uncovered power dynamics within local communities and identified areas where women face disproportionate burdens in shrimp aquaculture.

Our emerging findings reveal that women play a vital collaborative role in shrimp pond management. While not directly involved in technical tasks, they acquire valuable knowledge through discussions with their husbands and step in when needed—feeding shrimp, monitoring ponds, and managing finances. Beyond these tasks, their domestic contributions, such as cooking for workers, maintaining family well-being, and overseeing children's education, are crucial to sustaining shrimp farming. These roles strengthen social capital, reduce operational costs, and legitimize care work as essential to the sector. By challenging

the notion that shrimp aquaculture is male-dominated, our findings highlight the need for gender-inclusive policies that recognize women as key players in the production chain, including through access to training in shrimp farming and financial management.

This study aims to advance gender equality and social inclusion by laying a foundation and addressing social and structural barriers in the shrimp aquaculture sector. Our findings also seek to promote greater inclusion in climate-smart shrimp aquaculture innovations.

# VALUING THE CONTRIBUTION OF MEN AND WOMEN IN SMALL-SCALE FISHING HOUSEHOLDS IN MIAGAO, ILOILO

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Men's and women's actual contribution to the household economy is often overlooked because a huge portion of their activities are undervalued and often unaccounted for. This study determines the contribution of men and women to the small-scale fishing household economy using data gathered from a survey of 269 fishing households selected using multi-stage random sampling and six focus group discussions with 36 participants in the 22 coastal barangays in Miagao, Iloilo. The time spent by the contributing members of the household-participants was identified, measured, and given value (when not compensated). The results showed that both men and women contributed actively to the household economy. Men devoted most of their time to productive activities like fishing and other income-generating activities. In contrast, women spent a significant portion of their time on reproductive and community-related activities. Income from fishing shared 35% of the average annual household income (compensated labor plus cash transfer) of P324,717.12. For the average annual fishing income (P114, 937.32), women shared a measly 4%. However, from other sources of income (including productive, reproductive, and community activities plus cash transfer), women shared 58%. For the average total value of uncompensated labor (P 166,769.72), women shared 68%. Overall, women contributed 49% while men contributed 51% to the household economy, with an average total annual income of P 491,486.84, if productive, reproductive, and community activities of household members are compensated and accounted for. Of the total contribution of women to the household economy (P 238,647.37), 53% was from compensated labor while 47% was from uncompensated labor. For men, 79% was from compensated labor while 21% was from uncompensated labor (Table 1). Notably, of the total contribution of women to fishing activities (P 20,479.91), 76% was uncompensated (P 15,496). The findings highlight the undervaluation of the contributions of men and women in the household economy. This information is important in pushing for policies, programs, and activities to promote gender equality in small-scale fisheries.

Table 1. Summary of the Total Contribution of Men and Women to the Household Economy

| Sources | Men | Women |
|---|---|---|
| Labor with Compensation | 198,732.72 | 125,984.40 |
| Labor without Compensation | 54,106.75 | 112,662.97 |
| TOTAL | 252,839.47 | 238,647.37 |

# GENDER IN FISHERIES: CONTEXTUAL UNDERSTANDING OF GENDER-BASED ROLES DIVISION AMONG TUNA FISHING COMMUNITIES IN MALUKU PROVINCE, INDONESIA

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Gender roles have become an essential factor that influence the division of labour, socio-economic contributions, and decision-making within coastal communities and tuna fisheries. Men primarily engage in offshore tuna fishing, while women play critical yet often overlooked roles in post-harvest activities, including fish processing, trading, and financial management. Additionally, women contribute to maintaining household stability and community resilience despite facing limited access to resources, decision-making platforms, and formal recognition in the fisheries sector. Despite this fundamental influence of gender roles toward tuna fisheries which vary from one community to another, limited research examines factors that influence and shape these gender-based dynamics in small-scale tuna fisheries especially in the eastern part of Indonesia. This study aims to analyse the gender-based division of labour among small-scale tuna fishing communities in Maluku Province - which in 2024 ranked third as the largest tuna producers in Indonesia - highlighting the socio-cultural and socio-economic factors that affect how men and women participate differently in tuna fisheries. Using a mixed-methods approach, we will triangulate results of in-depth cases of (1) semi-structured interviews with fishers and women (target: n=10-30), (2) purposive questionnaire (target: n=10-30), and (3) observations in 3–6 tuna fishing coastal villages spread across three districts in Maluku Province. Data will be analysed thematically and supplemented with descriptive statistics to identify key factors (socio-cultural, socio-economic, socio-ecological) shape decision making process on how men and women play particular roles in tuna fishing communities and interact differently to the use of marine resources. This study not only promotes recognition of women's role in tuna fisheries but also emphasizes the empirical contextual factors to inform better gender-sensitive policies and development interventions with implication for improving the livelihoods and enhancing climate-resilience of coastal communities in Maluku Province and beyond.

# UNDERSTANDING GENDER ROLES IN BARANGAY LAWI, GUIMARAS' COMMUNITY-BASED MARINE TURTLE TOURISM

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This study aims to unpack the gender roles in Barangay Lawi's community-based marine turtle tourism industry. Lawi's rich marine biodiversity, especially numerous sightings and nesting sites of green sea turtles (*Chelonia mydas*), makes it suitable for coastal tourism to thrive alongside fisheries conservation. This study utilized qualitative-descriptive methods, specifically key informant interviews, focus group discussion workshops, and secondary data gathering. It also utilized several tools including the access and control profiling tool and activity profiling tool to assess power relationships and gender division of labor among men and women in the community's marine turtle tourism industry. The researchers engaged a total of 25 participants with three to five years of experience and exposure to the marine turtle tourism industry, including local government offices and people's organizations, and compared the data gathered in 2018 and 2021 (Table 1), respectively. The results of this study explain how ecofeminism resonates among women in the community and their relationship with marine turtles stemming from the similar gender-based and sex-attributed roles (e.g., childbearing), and the multiple challenges they face. Their active involvement in marine turtle conservation extends their reproductive roles to the community. Thus, the marine turtle tourism activities in the community were observed to be assumed by both genders accordingly wherein hospitality (e.g., general management and conservation roles) are assumed by women, while laborious roles (e.g., boat operations, construction of tourism hubs), and law enforcement are assumed by men. Both men and women have more or less equal access to the resources, however control varies on the roles that they respectively play. Men have more control among fishing, construction, and transportation resources, while women have more control over financial and capacity building resources. The results of this study exemplify that understanding the dynamics and relationships among various stakeholders in the community is pivotal in recognizing their respective gender roles in community-based tourism.

# SUSTAINING SMALL SCALE FISHING, NAVIGATING SOCIAL AND MARKET DISRUPTIONS: A CASE STUDY OF INLAND CAPTURE FISHERY IN VEMBANAD LAKE, KERALA, INDIA

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Vembanad Lake located at Kerala is the longest lake in India and one of the largest brackish lagoons in South Asia. The present case study provides a comprehensive overview of the current state of the small scale fisheries in Muhamma, located along the Vembanad lake, highlighting its potential and challenges, reinforcing the need for efforts to ensure its sustainability to ensure the well-being of the local community. In-depth interviews were done with fishers, fisher women, processors and traders involved in the fishing and clam processing in Muhamma fishing village. We observed issues such as conflicting role of middlemen both as a driver and a barrier affecting the income of the primary producer, generational shift in fishery as a livelihood, organizational and the existence of innovative community support mechanisms. The major constraints reported were in-effective utilization of existing infrastructure, health concerns, challenges in accessing support systems, lack of strong, unified collectives for fishermen, environmental degradation and resource depletion.

# REVISITING GENDER ROLES IN FISHERIES: A CASE STUDY OF THE SEGARE HARAPAN JAYA COOPERATIVE

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This study re-examines gender roles in Indonesia's fisheries sector, focusing on the Segare Harapan Jaya Cooperative in East Lombok. In this coastal community, men are predominantly engaged in offshore fishing, while women - particularly housewives - play an important role in cooperative management. Their responsibilities encompass administrative duties, post-harvest processing, and strategic decision-making. The research investigates how these gendered roles influence the economic resilience and sustainability of coastal communities. Employing a qualitative case study approach, the study integrates in-depth interviews, participant observation, and cooperative document analysis. Data are analyzed thematically to identify patterns in gender relations and socio-economic contributions. Frameworks from gendered division of labor, feminist political ecology, and social capital theory inform the analysis of how women's participation shapes local institutions and natural resource management. Findings reveal that, despite their underrepresentation in official statistics, women's contributions are vital in sustaining household economies and enhancing community resilience amid social and environmental changes. These insights suggest that inclusive and collaborative approaches to gender roles can foster more equitable and sustainable fisheries management.

# ENGENDERING COMMUNITY BASED MARINE CONSERVATION AREA IN BANDA ISLANDS, INDONESIA

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Marine conservation area is perceived as one tool to manage the sustainability of marine resources and community-based conservation areas promote the involvement of all stakeholders. Unfortunately, women are often underrepresented in the management. This case study highlighted gender segregated roles and power dynamics in community-based resource management in the Banda Islands. This is specifically relevant to Banda Islands as part of Maluku province, Indonesia, where Sasi, a customary system for resources management is well-known and promoted. This study used focus group discussions (n=6) that involved 51 people, and interviewed 11 key informants to explore a deeper discussion. This study mapped gender roles at the community level, perceived and experiences of men and women's role on marine resources. This study revealed the position of men and women in decision making in a household and at the community level and barriers to women's participation in marine resource management. The results provided evidence that acknowledgement of women in marine resource is important, what is more important to achieve equal participation of women, men and other social groups in decision making process. In order to promote a meaningful participatory approach for all genders to govern marine resources in the community-based system context, several steps are required including capacity building for women, raising awareness of gender equality and inclusion of women from customary communities in decision making processes.

# GENDER DIVISION OF LABOUR IN CULTURE-BASED FISHERIES (CBF): INSIGHTS FROM FIVE DISTRICTS IN SRI LANKA

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Culture-based fisheries (CBF) have distinct gender dynamics with men and women playing crucial roles in various value chain stages. In order to increase equitable engagement, productivity, and sustainability in fisheries, it is strategically necessary to investigate the gender division of labour in CBF. The study focused on studying gender segregation and gaps in CBF activities related to fish and giant freshwater prawns (GFP) in inland reservoir communities in Sri Lanka, based on a mixed method ethnographic approach. Seven reservoirs covering five districts were selected. The purposive sampling method was used to select individual respondents, comprising a 32.7% sample of total fishing households in the selected communities. Despite fishing being typically considered as a male-dominated field, 49.6% of selected respondents were female to ensure that women's opinions and perspectives were sufficiently represented. Data collection was primarily based on qualitative methods – in-depth, semi-structured interviews and focus group discussions (FGDs). The results show that the majority of activities associated with fishing are dominated by men – respondents indicated collecting bait (98%), fishing (93%), disentangling fish from nets (88%), mending nets (71%), processing fresh fish (92%), collecting fresh fish/GFP (88%), wholesaling (95%) and retailing (97%) fresh fish/GFP as male activities. Around 19% of respondents reported dried fish processing as a female activity, while 44% indicated it as a joint activity by women and men within their households. Around 24% of respondents indicated retailing dried fish as a women's activity, while 19% reported it as a shared activity between women and men. Thus, women were engaged in dried fish processing in 63% and in dried fish retailing in 43% of households respectively, solely or jointly with male household members. This sector's occupational roles are extensively rooted in sociocultural norms as evidenced by the gendered segregation of most tasks. Women's low involvement in high-risk, high-investment activities, such as fishing and trading of fresh fish and GFP, suggests possible obstacles to empowerment and equity. Addressing these imbalances through targeted interventions, such as increased participation of women in CBF, needs to be accompanied by equitable benefit sharing. Relevant gender awareness and training programmes could enhance productivity, and sustainability and gender equality in Sri Lanka's CBF sector.

# GENDERED IMPACTS OF BIOINVASION OF THE ALIEN MUSSEL (*MYTELLA STRIGATA*) IN ENNORE CREEK: LIVELIHOOD DISRUPTION, DRUDGERY, AND OCCUPATIONAL HEALTH HAZARDS

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The alien mussel *Mytella strigata* (Hanley, 1843) known as Charru mussel, native to the eastern coast of South and Central America, has emerged as a globally invasive species, including Asia, Europe, and North America. In India, its first occurrence was reported in Kerala in 2018, and it has since expanded along the southeast coast, including the Gulf of Mannar, Ennore, and Pulicat Lake. This study examines the gendered impacts of the *Mytella strigata* invasion through focus group discussions and semi-structured interviews with 90 small-scale fishers in the Ennore region. Comprising 45 fishermen who use stake nets for shrimp and monofilament gill nets for mud crab fishing and 45 marginalized and unrecognized fisherwomen who have practiced handpicking shrimp for generations as a primary occupation for sustaining their households. The study revealed that the edible Asian green mussel (*Perna viridis*) and the edible oyster (*Crassostrea madrasensis*), which once formed extensive colonies in the estuarine barmouth, have been completely wiped out due to the proliferation of *M. strigata*. The excessive mussel has also prevented ecologically and economically important native species such as the Indian white shrimp (*Penaeus indicus*), black tiger prawn (*Penaeus monodon*), and mud crab (*Scylla serrata*) from grazing or burrowing into the riverbed sediment. Due to the decline of native species, fisherwomen encountered livelihood constraints, and significantly 80% shrimp catches have been reduced from ~ 5-6 kg/day to only about 1 kg/day yield, leading to a 74% decline in daily income, from ~Rs. 1500 to just Rs. 400-500. The financial constraints forced half of the fisherwomen (from 300 to 150) to migrate to Pulicat lake to alternative livelihoods. The invasion has also increased drudgery, Garrett ranking scores indicate that fishermen primarily perceived fishing (98.79) and removing shells/mussels from gear and craft (96.42) as the most labor-intensive or difficult tasks. For fisherwomen, collecting shrimps/crabs (98.54) as the most difficult activity, followed by removing shells/mussels from the creek bed (96.27). Both groups have resorted to wearing gloves and leg socks for protection against shell-related injuries, though these create discomfort during prolonged work. An occupational health hazard shows that the fisherwomen are more sensitive and severely affected than fishermen. All fisherwomen encountered severe physical hazards, including minor cuts and scrapes, injuries, sunburns, skin burns, sprains, fractures, and headaches resulting from the mussel invasion. These findings emphasize the need to address the socio-economic and health impacts of invasive aquatic species among vulnerable coastal communities, and to integrate gender-sensitive policies for the effective management of invasive species.

# COUNTING THE UNCOUNTED: GENDERED LABOUR IN THE SEAFOOD INDUSTRY IN AUSTRALIA'S NORTHERN TERRITORY

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Women have long contributed to the commercial seafood sector - both fisheries and aquaculture - in Australia's Northern Territory (NT). As in other regions, however, their participation has remained limited, shaped by structural and social factors. Yet the reasons for women's limited involvement in the sector have received scant research attention. This presentation investigates gendered labour force participation in the NT seafood industry and the factors that influenced it, through a historical analysis spanning 1950 to the early 2020s. It situates current labour patterns within the broader development of the industry. Specifically, the following questions are addressed: What roles did women occupy in the seafood sector, and how did these evolve? Who were the key stakeholders, how did their roles shift, and what were the implications for women's engagement? Finally, how did the growth of the commercial seafood sector affect women's roles and economic participation?

This study draws on qualitative research conducted in the NT between 2023 and 2025, using an iterative design that enabled ongoing refinement of assumptions and led to the periodisation of the sector's development into four key epochs. Initial stages involved a desktop literature review and consultations with subject matter experts. Data collection employed three complementary methods: (i) a targeted review of published and archival materials; (ii) 25 semi-structured interviews with sector participants, selected through purposive and snowball sampling to reflect gender and role diversity; and (iii) an online small group interview with former Aboriginal employees of a seafood processing factory active in the 1970s. The research design, data collection and analysis were guided by a social provisioning-based conceptual framework.

The study identified four phases of sectoral development, and mapped gendered labour patterns across each: (i) Organization (1950 to late 1960s), which saw the systematization of fisheries under Church-led Missions reliant on un-/under-paid Aboriginal labour; (ii) Capitalization (1970 to late 1980s), marked by commercial expansion and rapid growth of the Northern Prawn Fishery; (iii) Regulation (1990s), during which bio-economic controls were introduced; and (iv) Negotiation (2000 to 2020s), a period marked by changes in production as well as gender relations.

Findings show that women played active and diverse roles, especially in the 1970s, when government-led regional development expanded the industry, connected it to local livelihoods, and supported social provisions that enabled strong female participation. Women in this period participated across the value chain, from harvesting to post-harvest processing. From the 1980s onward, policy priority shifted decisively towards commercialisation and licence consolidation. This shift produced an extractive, export-oriented model of fisheries growth, leading to the decline of local processing and the marginalisation of women from core industry roles. The study highlights how women's labour has been persistently undervalued, both statistically and institutionally, with the sector, even in the new

millennium, failing to recognise and support successful enterprises, some women-led, in fish processing and retail. The findings underscore the urgent need for gender-responsive reforms in labour accounting and policy. Recognising women's economic contributions is not only a matter of equity but is key to social provisioning for a more productive, resilient, and just seafood sector in the NT - one where both women's and men's roles are fully acknowledged in the stewardship of fisheries and aquaculture.

# WHO IS A FISHERWOMAN: CASTE, MIGRATION, AND GENDER IN INDIAN FISH MARKETS

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India recorded a marine fish landing of 3.49 million tonnes in 2022, of which Tamil Nadu secured the highest position with 7.22 lakh tonnes of fish landings. Over 5.12 lakh fisherwomen's labour sustain this trade in the state by playing key roles in the supply chain for both human consumption and Fish Meal Fish Oil production However, women's contributions to the market supply chain such as fish drying, cleaning, and vending have been largely invisible in policy and ecology. They have structurally been prevented from directly accessing the resources from the sea and pushed to such ancillary activities

As in all livelihoods in India, an evident caste hierarchy exists among these women that manifests in multiple ways in the market space. This paper analyses how caste and gender intersect to shape these women's labour experiences in coastal Tamil Nadu by exploring women's narratives from Kasimedu. The region is a group of 15 coastal villages that also house the largest harbour in the state and is a site of rampant migration and urbanisation. Using ethnographic fieldwork and narrative interviews with 10 women, it traces the caste-specific nature of labour where Dalit women are often confined to lower-status, low-paid, or hazardous roles within fisheries. The rationale behind using narrative interviews, particularly the Biographical Narrative Interpretive Method (BNIM), is explore their stories in the context of what they perceive as important, identify their challenges, and how they respond to caste oppression in their lives. The site chosen also aids in eliciting these observations as its location in the capital city (Chennai) ensures the presence of people from various regions and acts as a representative sample of the politics of fishing in Tamil Nadu. The collected data has been coded and analysed using intersectional feminist concepts of 'choice' and 'space' to describe the limitations imposed among these women in their livelihoods and mobility. In India, caste is not just another identity that stratifies labour but a central axis that dictates access to space, mobility, and market participation. This, along with patriarchal structures, leads to exclusion and discrimination of Dalit women, whose labour is dismissed as non-economic or even 'dirty'. The study reveals that in the Kasimedu market, women from traditional fishing castes (usually MBC or *pattinavars*) often engage in selling fresh and dried fish, auctioneering or even money lending. However, Dalit women are disproportionately relegated to physically demanding, stigmatised, or poorly paid work such as fish drying, cleaning, preparation of poultry feed, or transporting goods—labour that is often excluded from formal records and public recognition. Interviews indicate that many of these women are also migrants from other parts of the state, leaving them in precarious positions without access to identity cards, ration systems, and voting power. They are ridiculed if they attempt to engage in direct vending and are ostracised as 'smelly' and their residences are located in lower flood-prone areas. Collectively, this renders them more susceptible to violence from caste fishers, customers, and even the state on numerous occasions.

These observations disrupt the monolithic representations of the 'fishermen' caste in the blue economy. By highlighting these structural inequalities, the study urges readers to recognise the multi-layered oppression faced by women from marginalised communities. It also recommends an immediate redrafting of the export driven draft Blue Economic Policy from a caste and gender-responsive approach through participatory documentation, especially from the most vulnerable.

# GENDER DIFFERENTIALS ON DISASTER RESILIENCE IN SMALL ISLAND COMMUNITIES IN WESTERN VISAYAS REGION, PHILIPPINES

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Small islands are highly exposed to hazards with potentially disastrous consequences for property and local livelihoods. However, little is known on gender differentials particularly on the ability of women and men to measure and assess their degree of resilience. Thus, this study was conducted to compare the perceived disaster resilience of men and women in small island communities. Using the Torrens Resilience Institute framework, the level of hazard awareness, resilience, and preparedness were measured using the perception of 214 females and 424 males in a 5-point Likert Scale through a Delphi survey conducted in 2019 in the islands of Boracay, Gigantes and Guimaras. Results indicate that the level of hazard awareness, resilience, and preparedness of both male and female in all study sites were high. However, the perceived level of hazard awareness (Mann-Whitney *U*-test, $p = 0.006$) and resilience ($t = 2.013$, $p = 0.038$) of males were significantly higher compared to females. The perceived level of preparedness of male and female had no significant difference probably because of their long exposure to disasters, local knowledge, traditions, and practices, and collective action and adaptive capacity of local community. Given the disadvantaged position in small islands, there is a need to increase women's access to information, resources, and opportunities to increase their resilience thereby enhancing their capacity to cope with and recover from disasters.

# CHALLENGES FACED BY WOMEN WORKING IN SMALL-SCALE FISHERIES SECTOR IN BANGLADESH

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Bangladesh, being a riverine country, relies heavily on fisheries to meet nutritional needs, particularly in rural areas. In the countryside, both men and women are actively involved in fisheries. However, disparities in access to resources are evident, largely due to institutional barriers and prevailing social and cultural norms. This study aims to explore the challenges faced by women working in small scale fisheries sectors in different parts of Bangladesh.

A qualitative approach was adopted for this study, with respondents selected through purposive sampling. Selection was guided by specific inclusion criteria, focusing on 15 women who are actively involved in and earn an income from small-scale fisheries. The data were analyzed using thematic analysis.

The study's findings highlight marked gender disparities in the scope and practice of fishing. Men typically operate in open, expansive waters—seas, rivers, and large lakes—whereas women are largely confined to shore- or land-based activities. This divergence stems in part from women's roles as de facto heads of household, which require them to balance domestic responsibilities with income-generating work. Prevailing gender norms limit their mobility, making extended trips away from home impractical when children or elderly relatives need care. In addition, women have limited access to and control over key resources such as land, mobile phones, and fishing equipment, and they often lack formal training in fishing techniques, due to absence of policies, related to women's engagement in the sector. Consequently, their agency within the sector remains underdeveloped, and their participation is driven primarily by the need to earn a subsistence income to meet daily household necessities.

The study underscores the challenges women face in the fisheries sector. Their potential contribution could be significantly increased through targeted training and by ensuring they have access to and control over the resources essential to the fishing industry.

# VOICES OF SILENCE: ABSENCE OF WOMEN IN GOVERNANCE OF CULTURE-BASED FISHERIES (CBF) IN SRI LANKA

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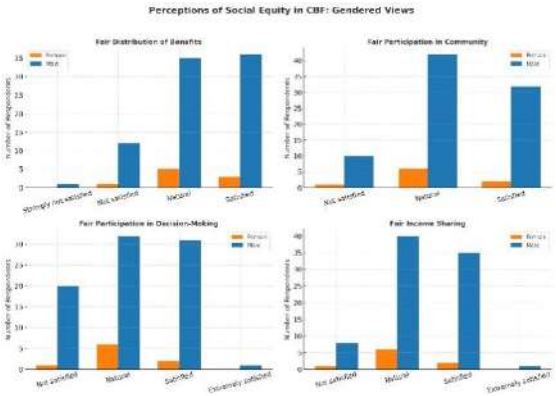
Culture-based fisheries (CBF) are a key livelihood activity in rural Sri Lanka, particularly in the dry zone. Despite women's significant yet often unrecognized roles, the prevailing governance systems in CBF societies continue to marginalize their participation. This study explores gendered perceptions of social equity and livelihood benefits across four reservoirs in the Puttalam District—Karavitagaraya, Tabbowa (medium reservoir), and Pahariya, Kottukachchiya (minor reservoir). Data were collected from 93 respondents, who are members of fisheries societies, including 9 women and 84 men, through structured interviews, focused on benefit sharing, community participation, decision-making, and income equity, based on a randomized quantitative sample. The significantly lower proportion of women is representative of the very low levels of membership of women within fisheries societies.

Findings reveal a consistent gender gap in perceived fairness and inclusion. Most female members were widows who inherited society membership after the death of their husbands, highlighting structural exclusion from formal roles in fisheries governance. Cross-tabulated data show that women expressed lower satisfaction with benefit distribution, participation, and income-sharing processes.




For instance, 66% of women reported being "neutral" or "not satisfied" with their ability to participate in decision-making, compared to 62% of men who were "satisfied" or "extremely satisfied." Furthermore, fishermen suggested that the male–female ratio in CBF societies influenced key outcomes such as income generation, decision-making, and financial management. Communities with higher levels of female membership reported stronger perceptions of equity and efficiency. These disparities reflect broader systemic inequities and demonstrates how the underrepresentation of women can lead to inefficiencies in governance and benefit distribution.

The findings underscore the urgent need for inclusive governance reforms in CBF to provide more opportunities for women's involvement in fisheries-related activities and to promote their active engagement in decision-making within fisheries societies. Establishing gender-responsive institutional frameworks is essential for improving social equity and maximizing livelihood outcomes in CBF systems.

# MEN AND WOMEN FISHERIES PERSONNEL IN SELECTED MUNICIPALITIES IN ILOILO PROVINCE, PHILIPPINES

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In the Philippines, local government units are mandated under the Fisheries Code to manage fisheries and aquatic resources within municipal waters. This responsibility is carried out by the local agriculture office, which employs fisheries personnel to implement technical and extension activities in coastal communities. These personnel play an important role in supporting programs to improve the welfare of small-scale fishers. This paper examined the experiences of men and women fisheries personnel in selected municipalities in Iloilo Province. Based on interviews with nine fisheries personnel from the southern Iloilo Province, the study gathered perspectives on their competencies, perceptions of work, community engagement, and involvement in local policy-making. Interviews revealed that most fisheries personnel were women, who had attended several trainings, though many emphasized the need for updated and broader capacity-building. Their perceptions of work were linked to personal growth and supportive leadership, yet challenges persisted in terms of limited resources and employment support. Good community engagement and active involvement in local fisheries policy-making were evident through collaboration with fisherfolk representatives and contributions to project design. By documenting their gendered experiences, the study highlights the underrecognized role of fisheries personnel in coastal resource management and emphasizes the need to strengthen their competencies, ensure institutional support, and promote leadership that prioritizes the welfare of small-scale fishers.

# BOOSTING GENDER ROLES IN SOUTHEAST ASIAN FISHERIES AND AQUACULTURE FOR ADDRESSING POLICY GAPS AND EXPLORING OPPORTUNITIES

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Fisheries and aquaculture are vital to Southeast Asia's food security and economy, yet gender roles remain unequal. This summary from the regional workshop on gender mainstreaming in fisheries in Southeast Asia highlights how men's and women's contributions are differently valued across SEAFDEC member countries, based on insights from a regional workshop examining the gendered division of labor and the need for more inclusive policies and recognition. Across SEAFDEC member countries, gender roles in fisheries remain distinct. Women are predominantly engaged in processing, marketing, aquaculture, and support activities, while men are mainly involved in fishing and other primary production tasks. In Brunei Darussalam and Malaysia, women focus on processing and local marketing. In Cambodia, Myanmar, and the Philippines, women face barriers to resources but benefit from capacity-building and post-harvest programs. Indonesia and Thailand show strong female participation in aquaculture, small-scale fisheries, and community groups, though decision-making remains male-dominated. In the Lao PDR**,** women contribute through reservoir-based groups and local leadership**.** Viet Nam supports women's roles in business and leadership through national programs, though challenges persist. Across the region, men consistently lead in offshore fishing and other primary activities, while women's essential contributions, particularly in post-harvest and informal sectors, are often undervalued. Addressing this imbalance is key to achieving inclusive and sustainable fisheries development.

Despite varying national contexts, Southeast Asian fisheries and aquaculture sectors face common barriers to gender equality. A key issue is the lack of sex-disaggregated data, which limits visibility of women's contributions and weakens policy effectiveness. Deeply rooted cultural norms and gender stereotypes further restrict women's mobility, leadership, and participation in decision-making. Women also face limited access to resources such as credit, training, land, and modern technology. These constraints are compounded by their underrepresentation in governance structures and the undervaluation of their economic roles, particularly in post-harvest and informal sectors where work is often unpaid or underpaid. To overcome these barriers, gender mainstreaming strategies must be prioritized. Collecting and analyzing sex-disaggregated data is essential to inform inclusive policy design. Capacity-building initiatives should enhance women's technical, leadership, and business skills, while increased representation in decision-making bodies can help ensure gender-sensitive governance. Fisheries policies must integrate gender equality as a core component, and communities need to be engaged through awareness campaigns that promote shared responsibilities and challenge gender norms. Furthermore, equitable access to financial and technical resources is critical for supporting women fishers and entrepreneurs.

In conclusion, fully recognizing and supporting both women's and men's roles in fisheries is key to building resilient, equitable, and sustainable sectors. Women contribute significantly across the value chain from fisheries, aquaculture, and processing to marketing and community leadership. By adopting inclusive policies and practices, SEAFDEC member countries can transform the fisheries sector into a driver of gender equity and inclusive development, leaving no one behind.

# MAPPING GENDER-FOCUSED RESEARCH IN FISHERIES AND MARINE ECOSYSTEM CONSERVATION: A SCIENTOMETRIC ANALYSIS (1950–2025)

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In recent decades, gender perspectives have gained increasing recognition in fisheries and marine ecosystem conservation, acknowledging the significant yet underrepresented roles played by women and other marginalized gender groups in resource management, livelihoods, and social-ecological resilience. Despite growing awareness, academic engagement with gender in this domain remains scattered, with noticeable gaps, particularly in areas concerning marine resource management and ecosystem conservation. A lot has been documented about gender in fisheries, but there are still clear gaps when it comes to resource management and conservation—areas where women often play a much bigger role than what the research shows so far. This scientometric review addresses these gaps by mapping the evolution, thematic scope, and research networks of gender-focused studies in fisheries and marine conservation from 1950 to 2025. Drawing on the Dimensions.ai platform, the study employs keyword-based retrieval using terms such as “fisherwomen,” “women in fisheries,” “fisheries conservation,” and “marine ecosystem management.” After filtering for relevance, a total of 2,486 publications were retained, of which 85.56% were research articles. Significant scholarly attention to gender in this field emerged only after the 1992, with research outputs and citation counts rising notably since the early 2000s—averaging 19.7 citations per article. The overall annual publication growth rate stands at 6.56%, with an average of 151 articles per year in the last seven years. The analysis reveals that countries like the United States, Australia, Canada, China, Brazil, and India together contributed to 51% of the total output. PLOS ONE and Fisheries Research emerged as the top publishing journals. Contributions came from 3,752 institutions across 99 countries, with Ecolibrium Inc. (USA) producing the highest number of publications. In total, 7,962 authors were involved in this body of work, with Dr. Godley B.J. (UK) being the most prolific contributor. Keyword co-occurrence analysis revealed frequent associations with terms such as “female,” “conservation of natural resources,” “conservation,”, “fisheries”, “marine resources”, “ecosystem” and “male.” However, thematic analysis shows persistent underrepresentation of gender issues specifically in the context of ecosystem-based management and conservation. While substantial literature exists on gender and fisheries broadly, research directly linking gender to marine ecosystem conservation vis-a-vis governance remains limited. Strengthening this connection is critical, as effective and sustainable marine resource management is closely tied to inclusive governance structures. Empowering women through participatory decision-making and integrating gender-disaggregated data and Indigenous knowledge systems are essential to building a more just, resilient, and effective marine ecosystem conservation paradigm.

# ADVANCING GENDER EQUITY FOR WOMEN'S EMPOWERMENT IN CAMBODIA'S POST-HARVEST FISHERIES

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The UNIDO CAPFISH-Capture: Post-harvest Fisheries Development project was invited to the 9th Global Conference on Gender in Aquaculture and Fisheries, themed "Transforming aquaculture and fisheries for gender justice," taking place from 1-3 October 2025 at the Asian Institute of Technology (AIT) in Pathum Thani, Thailand.

The CAPFISH-Capture: Post-harvest Fisheries Development project, co-funded by the European Union (EU) and implemented by the United Nations Industrial Development Organization (UNIDO) in collaboration with the Fisheries Administration (FiA) of Cambodia and other partners, aims to enhance the competitiveness of the business operators (FBOs) post-harvest fisheries. With the main objective of improving regulatory systems and promoting better practices in the fishery post-harvest operations for better market access, the project also aimed for gender equality by targeting 40% of women beneficiaries at all levels of the project intervention areas, who engage in capacity building, facilities upgraded, and access to resources.

The CAPFISH-Capture project's gender strategy and action plan, informed by the Gender Analysis study of the post-harvest sector, focuses on mainstreaming gender throughout its activities and empowering women processors and women-led fish processing enterprises. Key achievements include that 63% of enterprises receiving the Cambodia Quality Seal (CQS) certification are women-led (13 out of 19), and 67% of the project's 50 beneficiary enterprises and five producer groups are led by women (37 out of 55). In these five producer groups, 125 out of 141 members are women. This reflects women's significant engagement in upgrading their businesses, improving food safety, and expanding into new markets.

In the research and development domain, a strong representation of women is evident, with 13 out of 30 supported research projects being led by women scientists. Notably, women make up more than 50% of the core teams on research projects (36 out of 68). Furthermore, seven women-led enterprises accessed vital product development services.

Additionally, among the new jobs created, women hold 48.50% of positions at the enterprise and value chain levels. Notably, two women-led enterprises have successfully entered the international market, exporting fisheries products to New Zealand and Australia, collectively demonstrating the project's profound impact on gender equality and women's empowerment in the sector.

In summary, the UNIDO CAPFISH-Capture project has made significant progress through inclusive policies and targeted support, increasing women's leadership, market access, and gender-transformative outcomes, showcasing a strong commitment to gender justice in fisheries.

# ADVANCING GENDER EQUITY IN INLAND FISHERIES: SUCCESSES AND REFLECTIONS ON THE NATURE CONSERVANCY'S GENDER TRANSFORMATIVE APPROACHES IN COMMUNITY-LED INLAND FISHERIES CONSERVATION

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Inland fisheries, despite being small in scale, are crucial for aquatic biodiversity and the wellbeing of men, women and Indigenous Peoples who depend on them for their livelihoods and health. Women in inland fisheries and related value chains face similar invisibility, constraints and discrimination to women in small-scale coastal fisheries. In addition, they have limited access to resources and financing and are often victims of gender-based violence because of their vulnerable position in the value chain. They can also be negatively impacted by fisheries conservation measures because their reliance on nearshore fisheries is ignored and they are denied opportunities to actively participate in management decisions. Integrating and achieving gender equity in inland fisheries conservation is therefore paramount not only to redress this, but also because women have a unique knowledge of the natural resource, and their meaningful participation has been shown to increase the effectiveness of conservation efforts and yield benefits for themselves, their families and communities.

As part of its conservation agenda, The Nature Conservancy (TNC) has been progressing gender equity and seeking transformative change across its freshwater fisheries programmes in Africa and the Latin America. We outline TNC's approach to integrate gender equity in conservation and steps to empower women in freshwater fisheries, and present examples of the successes achieved by elevating women's capabilities as part of community-led inland fisheries management. In the Brazilian Amazon, local fishing agreements were complemented by gender-targeted capacity building and rights awareness that opened the door for women's access to leadership positions in fishing councils and bring the need to strengthen fisherwomen's organizations to the Ministries of Women and of Fisheries and Aquaculture. In Colombia, local women gained recognition, confidence and respect from becoming fisheries data collectors and knowledge holders in a community-based fisheries management scheme. In Africa, under the gender action plan elaborated as part of inland fisheries conservation in Lake Tanganyika (Tanzania), gender dialogues on social norms in fishing and in households have been initiated in fishing communities. This is complemented with capacity building of women to access leadership positions in fisheries community management institutions and finances for complementary livelihood activities through the creation of community conservation banks (COCOBAs) and fisheries cooperative societies.

These stories from the field highlight the multiple ways gender transformative approaches (GTAs) can be embedded in inland fisheries conservation and empower women. They underscore the importance of going slowly, listening to men and women, building trust,

understanding and ownership, raising awareness and accounting for intersectionality. Despite progress, identifying simultaneously changes men and women would like to see and opportunities for leverage, whilst creating a space where new ways of being and doing can be tested and norms shifted, remains challenging work, especially when this is compounded by rampant gender-based violence and persistent discrimination in inland fisheries governance.

# ANALYZING GENDER ROLES AND PROMOTING EQUITY IN THE MARINE CAPTURE FISHERIES SECTOR OF KHANH HOA PROVINCE, VIETNAM

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Women play a vital yet often undervalued role in the marine capture fisheries sector. However, various structural and socio-cultural barriers continue to limit their access to and control over critical fisheries-related resources. This study investigates gender participation and equity in the marine capture fisheries industry in Khanh Hoa Province, Vietnam, while drawing comparative insights from global research on gender roles in fisheries. Applying the Harvard Gender Analytical Framework alongside qualitative methodologies—namely structured questionnaires, focus group discussions, and key informant interviews—the research explores the gendered division of labor and the constraints influencing women's roles in the sector. Khanh Hoa, with 3,190 fishing vessels and a total marine harvest of 101,243.5 metric tons in 2023, provides employment for 23,165 workers across both offshore capture and fisheries logistics operations.

Among 293 fisheries workers surveyed (49.49% female and 50.51% male), a stark gendered labor differentiation was observed. Men predominated in primary production activities such as offshore fishing (79.7%), vessel inspection (52%), and onboard fish preservation (62.2%). Conversely, women took leading roles in post-harvest tasks—seafood processing (79.3%), trading (88.3%), and unpaid domestic labor (97.9%). Time-use analysis revealed that women spent an average of 7.05 hours/day on unpaid domestic responsibilities, whereas men spent 5.3 hours/day on fishing activities. In terms of resource access and control, men dominated in asset ownership and decision-making over key production resources, including land (74.7%), fishing vessels (68.8 %), and fishing grounds (83.5%). Women, however, held primary control over household financial management, especially in savings (59.7%) and daily expenditures (57%), yet had limited access to training programs, decision-making forums, and fisheries governance. The key barriers identified include entrenched gender norms (affecting 77.2% of women), traditional beliefs (90.3%), lack of asset ownership (78.6%), and the burden of household labor (84.8%).

Despite these challenges, the study affirms that women's involvement in production-related activities can enhance their financial agency and elevate their household decision-making roles. To address persistent gender inequalities, the study recommends the implementation of gender-responsive policies and programs aimed at empowering women and ensuring equitable access to resources and decision-making processes. Stakeholders—including policymakers, industry actors, and community organizations—should collaborate to foster an inclusive and sustainable fisheries sector that recognizes and balances the contributions of both men and women. By promoting gender equity in marine capture fisheries, this research contributes actionable recommendations toward sustainable fisheries development and the advancement of women's roles in Vietnam's coastal fisheries economy.

# EXPLORING HIDDEN STRENGTHS: HOW INDONESIAN WOMEN DRIVE AQUACULTURE AND FISHERIES – INSIGHTS FROM THE 2023 CENSUS

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Indonesia's aquaculture and fisheries sector, a cornerstone of national food security and economic growth, frequently overlooks women's critical and multifaceted contributions across its value chain. Despite their undeniable roles in cultivation, processing, marketing, and essential domestic support, this oversight persists. The recently released 2023 Agricultural Census (ST2023) provides an unprecedented empirical foundation, offering a unique opportunity to meticulously examine gender participation in Indonesian aquaculture and fisheries, thereby highlighting underestimated potential and persistent challenges.

This study addresses a significant research gap by comprehensively analyzing the scale, form, and impact of women's participation, particularly within the context of extensive national census data. Our primary objective is to leverage ST2023 data to systematically delineate gender participation patterns, identify existing inequalities, and formulate evidence-based policy recommendations to foster inclusive and sustainable gender equality. The novelty of this research lies in its pioneering use of this newly available, large-scale census data, enabling robust generalizability of findings and providing a macro-level understanding of gender roles across the Indonesian archipelago previously unattainable.

Key research questions guiding this investigation include: (1) How is the distribution of male and female participation structured across various sub-sectors of aquaculture and fisheries based on ST2023 data? (2) What socio-economic factors influence gender participation and contribute to potential disparities in access to resources and control? (3) How does female participation correlate with the productivity and sustainability of aquaculture and fisheries enterprises?

Our methodology will utilize the 2023 Agricultural Census data from the Central Statistics Agency (BPS) of Indonesia, specifically focusing on household and individual involvement in the sector. We will primarily employ descriptive statistical analysis to unveil intricate gender participation patterns. Initial findings from ST2023 suggest that while men predominantly hold formal ownership and decision-making roles, women exert vital influence in operational activities, post-harvest processes, and household financial management. Crucially, these findings underscore disparities in women's access to capital, training, relevant technology, and markets, which impede the sector's holistic growth potential.

In conclusion, achieving gender equality in the aquaculture and fisheries sector transcends mere social justice; it represents an absolute prerequisite for optimizing productivity, ensuring sustainable food security, and driving inclusive economic growth. This study is poised to provide a robust foundation for developing gender-responsive policies that empower women and cultivate a more equitable environment for all stakeholders. Future policy recommendations will strategically focus on enhancing women's access to resources, fostering entrepreneurial training, promoting gender-relevant technological adoption, and ensuring greater participation in local and national decision-making processes. This research ultimately champions a future where the full potential of all actors in Indonesia's vital aquatic sectors can be realized.

# INVISIBLE LABOR, VISIBLE IMPACT: GENDERED TIME USE AND ECONOMIC PARTICIPATION IN THE FISHERIES OF BANUYAO, MIAGAO, PHILIPPINES

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Women's contributions to aquaculture and fisheries remain undervalued, largely due to the invisibility of unpaid domestic work and caregiving. While time is universally recognized as a finite and valuable resource, often exchanged for economic gain, the gendered allocation of time in households engaged in fisheries is rarely examined in depth. This study explores how household responsibilities and gender norms shape men's and women's ability to participate in the fisheries of Banuyao, Miagao, Iloilo, a fishing community that mainly uses *pukot* or gill nets. We gathered gender-disaggregated data using structured interviews, daily activity logs, and focus group discussions, revealing that women spend a median of 8 h per day on unpaid domestic work, compared to 3 h for men. This reflects a persistent gender gap in household labor. In terms of paid labor, the situation is almost inverse, with most men engaged in fishing activities reporting 8 h and 3.5 h for women who primarily sell fish. This still discounts the effort and time spent by women in assisting with pre-fishing care and post-fishing net repair and maintenance, which constitutes an additional 2 h of unpaid but livelihood-supporting tasks, such as food preparation before their husbands sail, gear and material preparation assistance. Qualitative findings highlight women's multitasking experiences, mental load, and role flexibility. Many women, especially those with small children or in single-parent households, reported that housework constrained their ability to maintain paid work. In contrast, men reported more single-focused labor activities. Notably, women identified appliances like *gasul* and rice cookers as assets that eased daily burdens given the frequency of meal preparation and removed the gathering of firewood, "*pangahoy*" housework for men. While traditional gender roles persisted, most described their household dynamics as "teamwork," with evolving responsibilities in response to economic pressures. Even though all efforts of men and women in their households were recognized, appreciated, and treated with equal importance, the nature of housework as invisible labor highlights the need to recognize and address the invisible labor carried by women in fisheries-dependent communities and calls for gender-sensitive interventions and local government policy support that acknowledge both visible and invisible contributions to fisheries livelihoods. Addressing these invisible contributions that translate to economic productivity constraints is essential to achieving gender justice and enabling equitable participation in the blue economy.

# VULNERABILITY TO POVERTY OF FEMALE-HEADED FISHING HOUSEHOLDS IN THE PHILIPPINES

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Fishers are among the poorest people in the Philippines. Based on the most recent national poverty statistics from 2023, the fisheries sector reported a poverty rate of 27.4%, the second-highest poverty incidence after Indigenous People (Philippine Statistical Authority, 2025).

Poverty is pervasive in the country's fisheries sector, as the number of poor fishing households has remained high for almost a decade since 2015. Families and individuals in this sector often suffer from low income, food insecurity, poor health, and low nutritional status. They lack access to basic amenities such as safe drinking water or sanitation facilities, including water-sealed toilets. Women in fisheries are generally poorer than men because of gender discrimination, causing economic marginalization, lower earnings, and limited access to resources and opportunities. Fewer women hold political and administrative positions and are often excluded from major decision-making in the household and the community.

This study aims to understand the nature and characteristics of women's poverty in the Philippine fisheries sector and determine the probability of women fishers falling into poverty in the future. Vulnerability to poverty is an assessment of the ex-ante poverty risk faced by households and individuals, including women (Hohberg et al., 2018). Using the 2021 national statistics on food, income, expenditure and labor force surveys in the Philippines, the vulnerability to poverty (VEP) of female-headed fishing households was examined. Results show that the average age of female household heads is 54 years old, and the average monthly family income is 15,313 Philippine pesos (approximately 273.01 USD). The VEP model indicates that 11.45% of fishing families are vulnerable to poverty, and that larger households are less likely to be poor in the future. The research findings provide valuable insights into the poverty of female-headed fishing households, which can inform poverty-reducing strategies and policies tailored to their specific needs.

# WOMEN'S PARTICIPATION IN FISH SPECIES AND TRAIT SELECTION: AN INTERSECTIONAL ANALYSIS

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It is well recognized that women's inclusion in aquaculture decision-making is essential for managing sustainable systems that benefit households. In many African countries such as Nigeria, Uganda, and Ghana women play active roles throughout the aquaculture value chain, including production, processing, trading, and consumption. For example, in Nigeria where Nile tilapia and African catfish are two commonly farmed species—women participate in broodstock management, pond feeding, harvesting, hatchery maintenance, processing, and particularly marketing, representing approximately 21 percent of all value-chain actors. Despite prevalent gender biases and socio-cultural constraints that limit women's access to higher-level managerial and decision-making positions, they continue to contribute substantially to economic growth.

However, the extent to which women's roles are limited in the entrepreneurial aspect of aquaculture in Nigeria remains undocumented likewise gendered preference for certain fish trait. This paper reviews the literature on women's participation in production, processing, and marketing across aquaculture species in Africa, with a particular focus on Nigeria. We aim to determine whether there are business opportunities available for women in aquaculture and also to see possible barriers in this business space especially in the intensive sector of aquaculture. By synthesizing existing studies, we identify gaps in our understanding of possible ways to increase the population of women in aquaculture business and also gendered dynamics in species- and trait-specific aquaculture activities and offer recommendations for future research and policy interventions to enhance women's engagement at all levels of the value chain.

# RECOGNIZING THE INVISIBLE: LEGAL ADVANCES FOR GENDER EQUITY IN SMALL-SCALE FISHERIES IN CHILE

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In Chile, women involved in small-scale fisheries have historically undertaken critical pre- and post-harvest activities, such as shelling, baiting hooks, cleaning, unloading, and preparing gear, without legal recognition or protection. These "related activities" ("actividades conexas" in spanish) have been systematically excluded from policy frameworks, resulting in institutional invisibility, labor precarity, and exclusion from decision-making and resource access.

Since 2020, WWF Chile has worked in collaboration with the National Corporation of Women in Artisanal Fisheries and Related Activities and public institutions to generate evidence, engage in participatory research, and advocate for policy reform to address these gendered inequalities. This work culminated in two landmark legislative outcomes: (1) the 2021 Gender Equity Law in the Fisheries and Aquaculture Sector (Law No. 21.370), which formally recognized related activities as essential to fisheries and mandated gender parity in management committees; and (2) the 2024 reform to the Caletas Law (Law No. 21.698/2024), which incorporates gender equity criteria in the governance of artisanal fishing coves, enabling the participation of women in related activities in territorial decision-making.

A key component of this initiative was the publication of Bodies, trades and inequalities, a national diagnostic that documented the working conditions of sea women, including musculoskeletal disorders linked to the nature of their labor and the lack of adequate infrastructure in artisanal caletas. Based on participatory research with women from fishing coves, the report included visual infographics that were widely distributed across the country. The initiative also mapped women's roles along the value chains of eight hydrobiological resources—analyzing payment conditions and whether labor was individual or collective—and developed materials to promote inclusive language and raise awareness of public policies supporting gender equity in caletas.

This abstract presents the methodology, advocacy strategy, and lessons learned from this policy innovation, which positions Chile as the first country to legally recognize related activities in fisheries law. It argues for the urgent need to bridge gender equity with national development strategies and fiscal policy—moving beyond human rights rhetoric to demonstrate how inclusion improves sustainability and economic performance in the blue economy. It further discusses how this work feeds into a nascent regional agenda on gender, governance, and conservation in Latin America and the Caribbean.

# THE CARING MASCULINITIES OF MALE FISHERS: A CASE STUDY OF TWO VILLAGES IN FISHING ISLANDS IN THE PHILIPPINES

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This study focuses on two fishing villages where men reveal narratives of caring masculinity in their fishing work and their relationship with the marine and coastal environment. Traditional gender roles often cast men as providers and women as nurturers, leading to societal expectations that discourage men from expressing empathy or engaging in caring behaviors. As early as childhood, boys are taught that being masculine means having control and power over others (the females, more specifically), and being able to exercise protection and provisioning for the females who are perceived to be emphatic and maternal in their behaviors. At the extreme, being masculine brings dominance and violence in the guise of a deep concern and care for the other.

This traditional definition and perception of masculinity may result in social stigma, labeling empathetic men as unmanly, leading to discrimination and marginalization. The study shows that male fishers challenge these conventional notions of masculinity, demonstrating that caring is not an exclusively feminine trait; that caring men take the stance of co-responsibility and empathy, and that caring is a masculine role which is not synonymous to dominance. Through in-depth interviews, the study explores how these men care for each other. These men exhibit nurturing roles in fishing activities which are similarly extensions of homework that women do and are expected to do. The gender ideology becomes blurred as male fishers play the roles of carers that challenge the traditional boundaries of masculinity.

Moreover, male fishers show caring behaviors when they relate to the marine and coastal environment. In the process, they encounter barriers while fulfilling caregiving roles. The caring masculinity of male fishers challenges prevailing stereotypes and provides a narrative of resilience, community, and the evolving nature of gender roles in Philippine fishing communities which are promotive of gender justice and healthy modes of caring. In a traditionally male-dominated fishing sector, a social transformation redefining caring (masculinities) is crucial.

# GENDERED EFFICIENCY AND PROFITABILITY IN THE DRY FISH SECTOR: A COMPARATIVE ANALYSIS OF WOMEN AND MEN PROCESSORS IN COASTAL TAMIL NADU

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In the bustling dry fish sector, women are omnipresent, hauling, drying, sorting, and selling, yet their contributions often go unrecognized. Despite their visible presence, little is known about whether women dry fish processors (DFPs) achieve the same levels of efficiency and profitability as their male counterparts. Therefore, the study sheds light on the deeply gendered labour dynamics within this informal economy through a gendered analysis of 300 DFPs across 14 coastal districts of Tamil Nadu. Women constitute an overwhelming 82.3% of the workforce (247), including widows and persons with disabilities. Women DFPs, predominantly small-scale operators, work either as unpaid family labour or micro-entrepreneurs drying fish for sustenance and livelihood. In contrast, men more often operate at a larger scale, with hired labour and better access to export markets. Despite having lower average years of schooling (4.38 years vs. 6.02 years for men), women possess more hands-on experience (20.19 years vs. 17.49 years) and demonstrate greater resource-use efficiency (Benefit-Cost Ratio: 1.41 ± 0.27 for women vs. 1.37 ± 0.25 for men). Yet their average monthly production (599.1 kg) and profits (₹15,007.10 or ~$177) remain lower than men (841.7 kg; ₹16,303.43 or ~$192), reflecting barriers to capital, mobility, and access to drying yards. Stochastic frontier analyses reveal parity between men and women in technical (92%), economic (85%), and allocative (93%) efficiency. This paradox of higher efficiency but lower returns underlines the intersectional disadvantages women face: a disproportionate burden, longer working hours, more drudgery, and a heavier share of unpaid care work. Despite their experience and skills, these constraints undermine their competitiveness and income potential, leaving them socio-economically marginalised. Constraint and need assessments show similar systemic challenges (constraint scores: women 0.49, men 0.50), but women express greater need for targeted support (needs scores: women 0.64, men 0.61), especially in technology, training, and market linkages. Although traditional solar drying remains the norm, the adoption of solar dryers is low due to mobility issues and a lack of supportive policy frameworks. Addressing these systemic barriers is essential to unlocking the full economic potential of women dry fish processors, enhancing inclusive growth, and advancing SDGs 5, 8, 10, and 14.

# TRAWLING FOR BALANCE: GENDER, LIVELIHOODS, AND CRITICALLY ENDANGERED ELASMOBRANCHS IN NORTHERN JAVA'S FISHERIES

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Fisheries along the northern coast of Java, Indonesia, operate within complex social-ecological systems that reflect both pressing conservation challenges and entrenched gender inequalities. This study explores the gendered dynamics of wedgefish and guitarfish (Rhinidae and Glaucostegidae) bycatch fisheries in Central Java, where these critically endangered elasmobranchs are regularly landed despite their Appendix II CITES status. Drawing on landing data from 2019–2023 and a socioeconomic survey conducted from 2022–2024 involving 757 purposively sampled respondents, the research examines how men and women participate differently—and unequally—across the fisheries value chain.

The data reveal that more than 12,000 individuals were landed over five years (averaging 5,700 annually), with over 80% below the recommended size limit, highlighting unsustainable fishing practices. While men dominate capture activities, vessel operations, and decisions on bycatch release, women are deeply engaged in post-harvest processing and local trade of meat products, including smoked ray and traditional dishes made from offal. These gendered divisions of labor are reinforced by cultural norms and economic necessity, yet women's work remains largely invisible in official statistics and fisheries management frameworks.

Findings show that captains, who are more likely to be aware of conservation regulations, report a higher tendency to release live bycatch compared to crew members, who often rely on retained bycatch for supplemental income. However, the onboard decision-making process is shaped by structural pressures: long fishing trips (15–30 days), lack of enforcement, and limited incentives for compliance. In contrast, women sustain household economies and local food systems through their microenterprises, yet remain excluded from decision-making spaces and formal recognition as fisheries stakeholders.

The study underscores the urgent need to move beyond gender-blind conservation models. Current fisheries management policies in Indonesia continue to "count" men's work in extraction while "discounting" women's labor in value addition and food security. The failure to recognize women's roles not only perpetuates gender disparities but also undermines the effectiveness of conservation efforts aimed at protecting endangered elasmobranchs. Without acknowledging women's labor, knowledge, and agency, policy responses risk reinforcing existing inequalities while missing critical opportunities for community-based, inclusive, and sustainable solutions.

We argue for gender-responsive management strategies that incorporate women's knowledge systems, support alternative livelihoods, and improve access to resources and decision-making platforms. This includes formally recognizing women's contributions in fisheries data collection, strengthening cooperatives, and designing targeted interventions that address both ecological and gendered livelihood needs. Ultimately, balancing conservation with equity requires a transformation in how fisheries governance counts and values the work of both men and women.

# CHANGING GENDER ROLES IN DIVING FISHING: A CASE STUDY OF JAPAN

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This study aims to clarify the factors that lead to the change in diver fishermen from women to men who collect shellfish and seaweed. Since the Edo period, women have been diving into the sea in the study area to collect abalone, turban shells, sea urchins, and others to present to the feudal lord. Even today, the women divers are recognized by their feudal lords as 'samurai' of diving fishing and take pride in their work.

However, in recent years, more and more men have started diving, due to a number of factors including the aging of female divers, a lack of successors, the high commercial value of their catch, the pride they take in diver, and the desire to balance it with a second job.

From this study, it can be said that the roles of men and women in subsistence activities, with men fishing and women gathering, change depending on the social situation.

# CHALLENGING BLUE PERCEPTIONS: A GENDER LENS ON POST-HARVEST IN BLUE SWIMMING CRAB MODEL VILLAGES IN WESTERN VISAYAS, PHILIPPINES

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The blue swimming crab (*Portunus pelagicus*) fisheries is one of the major fisheries industries in the Philippines that contributes significantly to the local economic development. However, due to overexploitation, there is a decline in crab production in the recent years. To address this, several measures have been implemented by the Philippine government through policy interventions that seek to improve not only the environmental aspect of the industry but also its socio-economic component.

The establishment of crab model villages in fisheries management areas (FMAs) is a targeted approach of the Blue Swimming Crab National Management Plan involving "champion" crab communities. This crab model village endeavors to promote sustainable practices and social equity among key players in the supply chain through participatory resource management. While much has been poured into advancing the capacities of local communities, especially in crab production, there have been limited interventions introduced to the key players in the crab post-harvest sector through a gender lens.

Hence, this study examined the roles of men and women in handling, processing, and marketing crabs, specifically their work conditions, benefits, and perceived challenges. Data collection was conducted through surveys using KoboToolbox, key informant interviews, and focus group discussions involving processors, pickers, and traders in established crab model villages in Igbon, Concepcion, Iloilo and Tortosa, Manapla, Negros Occidental. Results showed that the crab post-harvest sector was dominated by women who were mostly concentrated in crab picking plants. Notably, quality control and quality assurance in picking plants were mostly overseen by women. This can be associated with the meticulous process involved in the production of quality crab meat, which requires appropriate skills and extensive experience. Men were usually found to perform heavy workloads such as cooking, hauling, packing, and trading of crabs. With this labor division, women experienced some health-related issues such as skin allergies and muscle spasms. In terms of labor rates, crab pickers were paid based on their outputs while crab cookers, haulers, and packers were paid in fixed rates – making women receive less stable income than men. Moreover, the men and women of the blue swimming crab industry faced pressing issues that require long-term solutions to effectively boost socio-economic transformation in crab model villages. These findings can serve as baseline information for national government agencies in formulating data-driven, science-based, and socially inclusive management strategies and programs for the blue swimming crab.

# WOMEN AND THEIR ROLE IN FISHERIES GOVERNANCE IN SOUTHERN ILOILO, PHILIPPINES

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Women play a vital role in fisheries governance, whether accounted for or not documented. This paper aims to examine the role of women in the adoption and implementation of the different Philippine fisheries laws and policies at the local government unit (LGU) level in the coastal municipalities along Panay Gulf in Southern Iloilo, Philippines. The small-scale fisheries sector utilizing Panay Gulf forms part of an important local economy. The laws and policies are integral components of resource management in the LGUs. Moreover, coastal communities play an important role in managing the coastal resources.

Data collection was conducted using key informant interviews (N=56) and focus group discussions with fisherfolk leaders, deputized fish wardens (*Bantay-Dagat*), barangay officials, and LGU personnel in five coastal municipalities in Southern Iloilo, Philippines. A total of five FGDs were conducted and were participated in by 36 stakeholders (an average of 7 participants per FGD). Results of the study revealed that most of the study sites (4 out of 5) have women as their municipal agriculturists and fisheries technicians, who were taking significant roles in implementing fisheries laws and policies in their respective localities. One study site has elected a woman chairperson for its municipal fisheries and aquatic resources management council (MFARMC), while four out of 21 fisherfolk leaders who were interviewed are women. In addition, two of the study sites have women municipal environment and natural resources officers that complement the duties of the municipal agriculturists. Some of the national laws and policies are being adopted in the local fisheries ordinance, and some are implemented as is. The role of women in the adoption of fisheries laws and policies ranges from being consulted in meetings to being a member of a technical working group and being involved in the review and drafting of resolutions. Thus, the positions held by women in the local government unit are crucial in the adoption of the different fisheries laws and policies at the LGU level.

The study further highlighted the following roles of women in fisheries governance: 1) participation during regular meetings and consultation, 2) drafting of resolutions as a basis for drafting a new ordinance, 3) membership in a technical working group for coastal resource management, 4) acting as a facilitator during meetings, 5) membership in the enforcement and monitoring team, 6) acting as the overall fisheries program coordinator, and 7) leading in information dissemination and implementation of fishery laws. These activities performed by women are pivotal in achieving a sustainable and equitable resource use in coastal communities in Southern Iloilo. Further studies on mainstreaming and documenting the role of women in the fisheries sector are recommended.

# BREAKING BARRIERS AND BUILDING LIVELIHOODS: WOMEN PARTICIPATION IN ORNAMENTAL FISHERIES FOR SUSTAINABLE DEVELOPMENT

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Women empowerment is vital for achieving gender equality, encompassing increased self-respect, decision-making power, access to resources, and the ability to influence change. The rising demand for ornamental fish in national and international markets has created a niche for women to engage in income-generating activities that require minimal capital, space, and time making it compatible with household responsibilities. Kolkata and surrounding districts in West Bengal, India offer favorable climatic conditions and a strong local market, making them ideal hubs for ornamental fish culture. This study investigates women participation in ornamental fish farming and trading in West Bengal, examining the socio-economic impacts and challenges involved. Findings reveal with 85% of women involved in fish farming and 38% in trading. Among them, 96% reported increased family income, 94% noted improved living standards, 90% gained new knowledge, 76% reported better savings, and 66% experienced enhanced social participation. Despite these benefits, the study identifies persistent gendered barriers. Only 32% of women reported improved decision-making power, while 30% experienced greater financial security and just 26% achieved asset creation. Moreover, 82% observed no improvement in infrastructure, and over 70% saw no change in social status or stakeholder engagement. These gaps highlight the need for targeted interventions including training, technological support, institutional engagement, and policy reforms. The success of women in developing homestead ornamental fish businesses is motivating other self-help groups and NGOs to replicate such models. This study underscores that ornamental fisheries are not just economic activities but a way of life, rooted in gendered identities and local culture. Supporting women in this sector aligns with Sustainable Development Goals (SDG 1: No Poverty; SDG 5: Gender Equality; SDG 8: Decent work and Economic growth) offering a pathway to inclusive, sustainable development and empowerment through the blue economy.

# SPECIAL SESSIONS

# Special Session 1:

# Gender in Nature-based Aquaculture: Evidence from Thailand, Cambodia and the Philippines (GeNA Project)

## GENDER MONITORING SCHEMA IN NbCS

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The gender monitoring schema is a prototype process monitoring system to be used during the implementation of development projects in NbCS aquaculture to ensure that women and other marginalized groups benefit from the project. In this process, women's roles in NbCS are documented; and any changes in gender roles and gender relations as a result of development projects is also recorded. The gender monitoring schema will consider strategies for better understanding intersectional gender concerns in context and for meaningfully engaging marginalized groups to advance gender equality, fairness, and inclusion. It will also prompt discussion on how we might monitor progress towards inclusion and equity throughout the project cycle in ways that are reflexive, ongoing, and empathetic to different actors' needs.

# GENDER IN RICE-FISH CULTURE: CASE STUDY FROM THAILAND

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Rice-fish is being promoted by the Thai government, and extension workers as well as women's groups are active in this area. However, the farm work remains gender specific with men dominating jobs that need strength and mobility; and women dominating jobs that involve daily care work on the farm/pond. Other tasks are shared by both women and men. However, other issues such as land ownership, access to support services in terms of information, finances and technical know-how remain challenging for women. Most importantly, women's knowledge of the micro-environment and impacts of climate change need to be documented and utilized in the scientific process.

# GENDER IN RICE-FISH CULTURE: CASE STUDY FROM CAMBODIA

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Rice-fish is being promoted by international NGOs as an IMTA to increase livelihoods and reduce dependence on high-cost inputs. Additionally, traditional communities continue to practice rice-fish culture depending on their location and/or access to fish. However, there is little information about women's involvement in rice-fish culture since most farmers groups are male-dominated. This presentation will share data on gender roles in rice-fish culture in Cambodia, followed by initial findings from the pilot project regarding the gender monitoring schema.

# GENDER IN SEAWEED FARMING: CASE STUDY FROM SAN DIONISIO, THE PHILIPPINES

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Seaweed farming has been supported by government agencies as a source of livelihood and San Dionisio is the biggest producer of seaweed in the Province of Iloilo. There is a need to ensure that the benefits from seaweed farming reach the most marginalized people at all levels, including in the family, in the community and in the district. This presentation will share initial data from the pilot project using the gender monitoring schema to ensure women seaweed farmers gain equitable benefits and their gendered knowledge is included in the scientific data and in trainings.

# MONITORING WOMEN RICE-FISH FARMERS: CHALLENGES AND OPPORTUNITIES WHILE IMPLEMENTING THE SCHEMA

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This paper presents the preliminary observations from implementing the gender monitoring schema in 2 districts of Mahasarakham province in Thailand where 23 women farmers were chosen for monitoring. The presentation will highlight how the framework questions were locally adapted, and how the farmers interacted with the monitoring researchers. Farmers were encouraged to make their own observations, and the regular monitoring visit to women have put the women, who used to be shy in discussing the scientific nature of aquaculture, at the center of rice-fish farming. The process of learning from the farmers, of encouraging women farmers, and recording the monitoring data provided much insight into further refining the schema.

# GENDER IN NbCS AQUACULTURE: CASE STUDIES OF RICE-FISH AND SEAWEED CULTURES

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This presentation will summarize the key findings and issues raised during the implementation of the gender monitoring schema in the three pilot sites.

# Special Session 2:

# Telling the Story: A Gender Perspective on Involvement in International Fisheries R&D Projects (ACIAR)

# FROM STRUGGLES TO STRENGTH: A WOMAN'S JOURNEY IN MABE PEARL FARMING

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This story reflects the journey of Faka'anaua Lakai, a single mother of five, who found new opportunities and personal transformation through Mabe pearl farming in Vava'u, Tonga. Initially unfamiliar with pearls, Faka'anaua participated in a Tonga Skills Program training, later joining the ACIAR-supported pearl research project, which provides technical training, equipment, and market support for coastal communities in Tonga, Fiji, and Papua New Guinea.

The narrative highlights the role of gender inclusivity in fisheries and aquaculture, illustrating how women contribute as farmers, artisans, marketers, and leaders. Pearl farming not only provides income and economic stability but also fosters personal growth, confidence, and resilience. The story emphasizes the importance of collaborative approaches and international partnerships in strengthening community livelihoods and creating sustainable development outcomes.

By sharing this experience, the presentation will demonstrate how empowering women in aquaculture and pearl farming can transform both individual lives and community well-being, offering insights for gender-responsive approaches in international fisheries and aquaculture research projects.

# TRANSFER CAPACITY BUILDING THROUGH A SOUTH-SOUTH TRIANGULAR COOPERATION BETWEEN CAMBODIA, INDONESIA AND AUSTRALIA: BRIDGING TECHNOLOGICAL GAPS AND SUPPORTING SUSTAINABLE MARICULTURE IN CAMBODIA

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The South-South Triangular Cooperation (SSTC) approach, the pivotal partners (Indonesia) provided training to Cambodian (beneficiary partner) researchers in research and development methodologies related to finfish mariculture, specifically seedstock production, fish nutrition and feed development, and disease diagnostics and fish health, with funding and overall project management provided by the facilitating partner (Australia). Seventeen Cambodian beneficiary partner staff (6 female, 11 male) successfully completed this training, while another 12 staff (4 female, 8 male) were trained in value chain analysis methods. Outcomes from the training contributed to improved sustainability for finfish mariculture in Cambodia through: increased availability of locally produced marine finfish seedstock, identification of locally available aquafeed ingredients, and improved fish health support services for farmers. Capacity building of Indonesian researchers on scientific publication are being supported by facilitating partner (Australia) through ongoing SRA Project (FIS/2024/105).

# EMPOWERING COASTAL WOMEN IN FIJI THROUGH SUSTAINABLE MABÈ PEARL CULTURE

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My story will include how the introduction of pearl oyster spat collection and mabe farming has transformed lives of women and youths in some of the local coastal communities in Fiji. It will explain why and how these were introduced, and benefits it provided to local women. Women involved have been provided all relevant trainings on pearl oyster spat deployments, pearl oyster culture, mabe implanting, mabe culture and mabe harvest. There are also women's groups that are now known in the country for making high quality shell handicrafts after they were trained under our pearl project. One of the women trained by our project now manages a commercial handicraft center for a company that our project has partnered with to sell mabe. This company currently has mabe in 8 of the stores in the country with plans to expand it to other stores to increase retail hubs for mabe products.

# TILAPIA, MUD CRABS & RESILIENCE: WOMEN LEADING SUSTAINABLE FISHERIES IN THE FLY RIVER, WESTERN PROVINCE, PAPUA NEW GUINEA"

**Josephine Laka***
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My story, “Tilapia, Mud Crabs & Resilience: Women Leading Sustainable Fisheries in the Fly River, Western Province, Papua New Guinea”, shares the experiences of women who rely on tilapia and mud crabs as a lifeline for their families and communities. It highlights the challenges they face declining resources, limited market access, and the remoteness of the Fly River and how, through participatory workshops and value chain studies, women shaped their own visions for sustainable fisheries. The story reflects how including women’s voices not only strengthened the research outcomes but also gave them greater agency, resilience, and ownership of the pathways to improved livelihoods.

# BEHIND THE NUMBERS: GENDERED PERSPECTIVES ON LABOR IN SEA CUCUMBER FARMING IN VIETNAM

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Sea cucumber farming in Vietnam relies on small, family-based workforces where both men and women play important but unequal roles. Men are most often responsible for management, security, and harvesting, while women contribute significantly through daily farm tasks and especially processing, often in connection with local women's groups. Despite these essential contributions, women's roles remain less visible and under-recognized, raising questions about how aquaculture research and development can better integrate gender perspectives to strengthen both livelihoods and project outcomes.

# ADVOCATING FOR GENDER INCLUSION IN NATURAL RESOURCE MANAGEMENT AND LIVELIHOOD PROJECTS IN SOLOMON ISLANDS

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Most of the islands in the Solomon Islands are patrilineal in culture. Most, if not all, decisions regarding land tenure belong only to tribal male members. Women in patrilineal cultures rarely have a say regarding tribal land tenure, including decision-making for the management of natural resources projects such as protected area establishment projects and livelihoods projects.

Most terrestrial resource management projects face this challenge. Current legislation, including the Protected Areas Act 2010, also does not guide gender inclusivity.

Lessons learnt from our experiences in protected area establishment projects and livelihood projects have guided our work and recommendations to include women, youth, and people with disabilities in management committees and community-based organisations. These include considerations regarding choice of venues, management committees, group discussions, and ranger membership. Outcomes include consideration in the choice of venues that allows women and girls to freely attend protected areas meetings and workshops, increased inclusion of women, youth and people with disabilities representatives in management committees, increased understanding of the importance of including vulnerable groups of people in such committees, allowing and making space and time for such vulnerable groups to voice their inputs and concerns and the inclusion of females as rangers.

# EMPOWERING WOMEN THROUGH COMMUNITY-BASED FISHERIES MANAGEMENT IN KIRIBATI: A GENDER-INFORMED APPROACH

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The Community-Based Fisheries Management (CBFM) Project, implemented under the Ministry of Fisheries and Ocean Resources (MFOR) in Kiribati and funded by ACIAR in collaboration with the University of Wollongong, was initiated in 2014. Its primary focus was on introducing CBFM and supporting the development of fisheries management plans using a bottom-up approach.

I joined the project in 2019 during its second phase under ACIAR Project FIS-2016-300 *"Strengthening and Scaling Community-Based Approaches to Pacific Coastal Fisheries Management in Support of the New Song."* At this stage, the program expanded to reach 16–20 additional communities across the islands of Kiribati.

Currently, in the third phase under ACIAR Project FIS-2020-172 *"Coalitions for Change in Sustainable National CBFM Programs in the Pacific,"* the project is advancing towards the formalisation and legalisation of fisheries management plans.

Throughout my involvement in this work, gender inclusion has been a central priority. By designing inclusive consultation processes such as advocating for flexible meeting times and organizing sex- and age-based group discussions, the program ensures that women and youth actively participate in fisheries planning and community decision-making.

Some key highlights of CBFM initiatives in Kiribati include the establishment of Women's Associations in several island communities. These associations have supported the implementation of village fisheries management plans by:

- Encouraging compliance with Marine Protected Areas by reminding their husbands not to fish inside restricted zones.
- Organising weekly beach clean-ups.
- Introducing home gardening and vegetable cultivation for households.
- Taking leadership roles in preparing communities to receive government or NGO visits.

These efforts demonstrate the critical role of women in strengthening community fisheries management, promoting environmental stewardship, and enhancing household livelihoods.

# OPPORTUNITIES AND CONSTRAINTS FOR ACHIEVING EQUITABLE LIVELIHOOD BENEFITS FOR WOMEN AND MEN FROM CULTURE-BASED FISHERIES IN RESERVOIR COMMUNITIES IN SELECTED DISTRICTS IN SRI LANKA

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My study focused on addressing gender equality benefits in culture-based fisheries covering five districts in Sri Lanka. To provide broad insights, the data was gathered from minor, medium and major reservoirs to gain balanced insights. In accordance with my study, I plan to briefly discuss the roles and relations of men and women within the livelihood system, as well as opportunities and constraints for increasing women's and men's benefits from culture-based fisheries. Moreover, the ways in which women and men shape and influence CBF governance.

# Special Session 3:

# Measuring Gender Justice in Aquaculture and Fisheries: Tools & Lessons from Practice

(IDRC)

# MALAYSIAN WOMEN EMPOWERMENT FISHERIES INDEX (M-WEFI): A CLIMATE CHANGE ADAPTATION STRATEGY

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Poverty is a socioeconomic impact of climate change, to which women are typically more vulnerable than men. This paper shares a proposal for a Malaysian Women's Empowerment in Fisheries Index (M-WEFI), with the aim of seeking feedback from experts and practitioners. The M-WEFI is an adaptation of the Women's Empowerment in Fisheries and Aquaculture Index (WEFI) and Abbreviated Women's Empowerment in Fisheries and Aquaculture (A-WEFI) tools for Malaysian fisheries communities. In Malaysia, women may be directly or indirectly involved in fisheries activities or may not be involved at all. Nevertheless, they may reside in climate vulnerable environments, especially close to water bodies and coastal areas. One of the important reasons for M-WEFI is that Malaysia is a coastal country with 1,972 km of coastlines (Peninsular Malaysia) and 4,809 km in total coastlines, and 189 river basins, with a total area of 80km2. These geographic indicators make Malaysians highly vulnerable to climate change impacts, especially coastal and riverine communities, and within them, women and marginalized groups. Thus, understanding empowerment indicators through the M-WEFI essential. Gender informed program and policy interventions can mitigate poverty risks or support women in escaping poverty soon after climate disasters. The M-WEFI's main indicators are the same as those of the A-WEFI: production, resource, income, time and leadership. However, M-WEFI has eight (8) sub-indicators compared to the original six (6) in the A-WEFI. M-WEFI sub indicators are input in productive decisions, asset ownership, access to and control over decisions on financial services, income autonomy, work-life balance, time use, CSO membership, and leadership. The M-WEFI also uses different measures of adequacy adapted to the Malaysian context.

# BEYOND NOMINAL PARTICIPATION: USING PARTICIPATORY LIVELIHOOD MAPPING TO REIMAGINE GENDER-INCLUSIVE SHRIMP AQUACULTURE

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Understanding the potential of livelihood spaces--both as sources of food and household income--is essential through a gender equality and social inclusion (GESI) lens. Women and youth often have distinct spatial perspectives in navigating and utilizing these spaces. In Banyuwangi, East Java, communities depend heavily on aquaculture and capture fisheries. However, women's and youth roles in this sector are often overlooked, with limited opportunities to enhance their skills and actively participate in the production cycle. Climate change further intensifies these challenges, increasing the vulnerabilities they face.

Participatory livelihood mapping serves as a vital tool for identifying commodities where women and youth play significant roles beyond nominal participation. By recognizing these spaces, this approach raises awareness of the potential for more inclusive coastal resource management, particularly in aquaculture. Through the Climate-Smart Shrimp Aquaculture initiative, this study challenges the perception of shrimp farming as a male-dominated sector and highlights the urgency of gender-inclusive policies. By acknowledging women and youth as key actors in the production chain– ensuring their access to training in shrimp farming and financial management– this approach aims to enhance their active participation in shaping inclusive nature-based solutions.

# GENDER MAINSTREAMING ON THE ROLES OF WOMEN ON SUPPLY CHAIN AND CONSERVATION ACTIVITIES OF THE FISHERIES SECTOR

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The fisheries sector is vital to food security and economic sustainability in Capiz. While both men and women contribute to fisheries, their roles are often shaped by gender norms, affecting collaboration and productivity. This study examines gender participation in supply chain and conservation activities using the Gendered Organization Theory, which highlights gender inequalities in community fisheries settings. A qualitative approach was employed through thematic analysis of gathered data from focus group discussions with men and women from key fishing communities in Pilar, Pontevedra, President Roxas, and Panay. Data collection explores participants' practices, knowledge, beliefs, and challenges related to fisheries supply chain operations and conservation efforts.

Thematic analysis of the data gathered from the focus group discussions revealed that both men and women shared common knowledge of supply chain activities that can be described as highly nature-dependent traditional fishing practices. Both genders possess minimal localized conservation knowledge. Their participation in the supply chain activities revealed two major areas, the men-dominated fishing and the women-dominated marketing activities. In terms of participation in conservation activities, both genders demonstrated common practices. These are NGO-led mangrove planting activities, and the responsible fishing activities. Challenges in the supply chain operations can be categorized into women-centered, environmental, and competition-conflict challenges. Thematic analysis of gathered data pointed out the limited knowledge of conservation practices as the overall hindering factor. This study highlights the need to introduce innovations in supply chain and conservation activities while organizing, supporting, and strengthening fisheries communities to establish gender dynamics that promote sustainable development.

# CATALYSING GENDER JUSTICE THROUGH NATURE-BASED SOLUTIONS: LESSONS FROM GESI MAINSTREAMING AND CASE STUDY FROM MALAYSIA

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This presentation explores ways nature-based solutions can catalyze gender and social justice by implementing gender-responsive and socially inclusive research. Drawing on a case study from Malaysia—and informed by the comprehensive gender equality and social inclusion (GESI) plan implemented within the Climate-Adaptive, Inclusive, Nature-based Aquaculture (CAINA) research project—a gender-responsive or even potentially transformative approach goes far beyond reducing immediate harms to the communities we work with. It provides an opportunity for aquaculture research to address systemic power dynamics by integrating environmental justice with inclusive social transformation. By implementing a Gender Equality and Social Inclusion (GESI) framework within the project, we aim to demonstrate the potential of participatory and inclusive methodologies.

Key insights include, but are not limited to, co-learning and discussing about GESI with project partners, sharing the value of engaging both women and men in aquaculture as experts, collecting larger bodies of sex-disaggregated data, and facilitating inclusive stakeholder workshops that include the voices of marginalized communities. These strategies ensure that interventions are co-designed with local actors, addressing not only ecological challenges but also the deep-rooted gendered and harmful social norms that contribute to their vulnerability. In summary, this presentation emphasizes the need for nature-based solutions to be aligned with gender-responsive and transformative research principles to catalyse lasting change in communities and beyond.

# **Special Session 4: Engendering Climate Justice in Aquaculture through Inclusive Nature-Based Solutions** (IDRC)

# GENDER, FEMINIST POLITICAL ECOLOGY, AND CLIMATE RESILIENCE: NAVIGATING AQUACULTURE ADAPTATION IN NORTHEAST THAILAND

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This study examines the gendered dimensions of climate-adaptive aquaculture in Northeast Thailand through a feminist political ecology lens, focusing on women's roles, power dynamics, and resilience strategies in small-scale fisheries. Drawing on qualitative data from Non Deang and Non Chan villages, findings reveal that geography and socio-cultural norms shape women's participation in aquaculture. In Non Deang, where water bodies are more accessible, women actively manage fish ponds, integrating traditional and scientific knowledge. In contrast, in Non Chan, safety concerns and large reservoirs restrict their direct engagement, reinforcing gendered divisions of labor in fisheries and market roles. Climate adaptation strategies are also gendered and uneven, with women in Non Deang leveraging nature-based solutions (NbS) to enhance food security, while those in Non Chan depend on male-led irrigation systems, limiting their agency in decision-making. Importantly, the study argues that NbS are not new for local women. They have long practiced forms of NbS in their own terms, rooted in everyday knowledge and community-based resource management. However, global NbS frameworks often ignore these local definitions and practices, overlooking the gendered expertise that underpins resilience in aquaculture. These disparities highlight structural inequalities in climate resilience and the need for inclusive governance that recognizes women's expertise, supports equitable access to resources, and strengthens their leadership in sustainable aquaculture.

# RESILIENT VOICES: WOMEN'S ROLE IN SUSTAINABLE AQUACULTURE AND CLIMATE JUSTICE – THE CASE STUDY FROM THE RED RIVER DELTA, VIETNAM

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Women in the Red River Delta in northern Vietnam play a crucial role in small-scale aquaculture, yet they face mounting challenges from climate change, water pollution, and biodiversity degradation. While women comprise half of the workforce within the fisheries and aquaculture value chain, most are concentrated in the least stable and least skilled segments of the sub-sector. Their activities include small-scale fishing, shellfish harvesting, seaweed collection, aqua-product processing, and marketing. They are essential to the rural economy, significantly impacting household nutrition, food security, and family health care, all while often remaining unpaid. They also face systemic barriers, including a lack of training or access to updated information on aquaculture. Deep-rooted patriarchal norms within their communities further confine women to domestic roles, dictate shared responsibilities for both genders, and restrict their access to higher-paying jobs.

Nature-based solutions (NbS) are favorable pathways to improve climate resilience and ecological health. However, many NbS initiatives have overlooked or excluded women in their planning and execution. This paper examines gender dynamics and delves into feminist and gendered resistance practices, and particularly the often-unrecognized efforts that enable, sustain, and reproduce resistance within nature-based aquaculture systems in response to climate change. The paper underscores the importance of acknowledging the interconnection between gender justice and climate justice, which is crucial for advancing inclusive and sustainable aquaculture systems.

# GENDER, VULNERABILITY, AND POVERTY PREDICT THE EXPERIENCE OF CLIMATE CHANGE EVENTS AMONG COASTAL COMMUNITY MEMBERS IN SABAK BERNAM SELANGOR

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This study aimed to profile the socioeconomic backgrounds of the respondents by gender disaggregation (RO-1) to identify the diverse experiences of climate change (RO-2) and assess the roles of gender, vulnerability, and poverty in individuals' experiences of climate events (RO-3). Data was collected in Sabak Bernam Selangor through a specially developed questionnaire with prompts about household profiles, vulnerability type, household income, and climate change experience. A total of 274 respondents reported with an equal proportion of male and female participants. The mean age was 47.79 years old, mean household income was RM3914.38, and the average number of household members was 4.5. Five climate change events were reported: floods, storms, high tides, droughts, and landslides (93.88% of the respondents). Floods were the most reported experience (27.44%), followed by storms (25.62%) and high tides (20.63%). Men were more likely than women to have experienced high tides (61.54%), droughts (55.22%), and storms (54.87%). Women's experiences were generally similar, though with slightly lower exposure than men's, across most climate events. Notably, all reported cases of landslides came from men (100%).

One Binary Logistic Regression Model was tested with the DV=1 (the respondents with experience of climate change events) and the DV=0 (without experience of climate change events). The independent variables (IVs) are gender, vulnerability type, and poverty level. The BLR Model is significant ($p<0.05$), with 24.2 percent of the variance in the DV explained by the IVs. Two significant ($p<0.05$) predictors are gender with odd=15.036 and age with odd=2.842. Male respondents were 15.036 times more likely than female respondents to experience climate change events, and younger respondents were 2.862 more likely to experience climate change events than the older adults. In conclusion, the respondents reported in this paper are at a mature age and are from low-income households with a small number of household members. A high majority of respondents experience climate change events, especially floods, with male and younger respondents being more likely to experience climate change events.

# GENDER AND CLIMATE VULNERABILITY IN SMALL-SCALE AQUACULTURE IN THE PHILIPPINES AND CAMBODIA: EARLY LESSONS FROM THE PHILCAM PROJECT

**Blesshe L. Querijero***
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The challenge to researchers in action-based research from planning to design, to implementation, monitoring and evaluation is not only to have technical capabilities to harness the potential of nature-based solutions to achieve a more resilient and sustainable aquaculture food system but also to have understanding on the gender needs of the target individuals, households and/or communities and to be able to address these needs, ultimately providing meaningful and sustainable change in people's lives. Commonly assuming that research interventions will have equal impacts on all genders often resulted in failure of numerous projects to improve people's lives. The AQUADAPT PhilCam project aims to provide evidence of inclusive, nature-based climate solutions in small-scale aquaculture in its five pilot sites in the Philippines and Cambodia.

This presentation will discuss gender and climate vulnerability in the context of small-scale aquaculture communities in the Philippines and Cambodia. It will present case studies and share its innovative approach in making project interventions both technically feasible and socially inclusive. Enabling its field researchers, most of whom have no social science background, to understand and appreciate gender integration in the project have equipped them to collect and analyze gendered data; asking simple questions about the differential situation, practices, and needs of women and men project stakeholders. Some of these questions include: who does what activities? Who owns or accesses what resources? Who decides? Who benefits from project interventions? And what does this mean for climate vulnerability or resilience? The analysis illustrates a variety of gendered barriers in the aquaculture sector as well as opportunities for gender responsive nature-based climate solutions across contexts.

# Special Session 5:

# Gender Justice on Stage – Participatory Theatre for Social Change in Fisheries and Aquaculture (FAO)

## Gender Justice on Stage – Participatory Theatre for Social Change in Fisheries and Aquaculture

**Purpose:** This session will highlight participatory theatre as a transformative tool for promoting gender justice, as well as intersecting dimensions of climate, blue, and social justice in aquaculture and fisheries. By blending performance, expert insights, and audience engagement, the session will showcase how theatre can amplify marginalized voices, challenge social norms, and inspire transformative change in aquatic food systems. Participants will gain practical insights into the use of theatre for advocacy, education, and community empowerment, while exploring successful case studies of participatory theatre initiatives that have addressed gender inequalities.

**Session Objectives:**

- Raise awareness of gender-related challenges in fisheries and aquaculture.
- Demonstrate how participatory theatre can foster social change and inform policy.
- Facilitate dialogue between theatre practitioners, gender experts, and sector stakeholders.
- Promote integration of theatre-based approaches into gender mainstreaming strategies.

### Moderator: Rachel Matheson – FAO

### Outline, Participants & Abstracts:

1. ***Opening, Grounding & Context Setting (15 mins)***

In this section, welcome and introduction remarks will be shared with participants to share with them session expectations and objectives – icebreakers will be included to set the stage for the participatory session.

2. ***Participatory Theatre in Action (50 mins)***

In this section, participatory theatre methodologies will be shared and directly experienced through participants' direct involvement and interaction, with the aim of sharing practical skills, methodological insights and explore how participatory theatre can drive awareness, policy engagement, and community mobilization. This will include 2 segments:

- Theatre Games to Theatre (25 mins)
- Image Theatre: Exploring Gender Injustice (25 mins)

The 2 segments will propose interactive elements that will invite the audience to engage with the narrative and reflect critically on the issues presented.

3. ***Action Mapping (25 mins)***

By referring to real-world experiences of women working in fisheries and aquaculture, facilitators and participants will collectively engage to explore the impacts of the issues discussed during theatre activities and actively identify key action points supporting the achievement of gender justice.

4. ***Reflection & Analysis (20 mins)***

In this section, there will be an open space for discussion where, based on the experiences gained in the previous activities, participants will be able to ask final questions, share their thoughts and perceptions, as well as sharing perspective on how participatory theatre can be key to support their work towards the achievement of gender justice, blue justice and climate justice.

5. ***Closing Remarks & Call to Action (10 mins)***

*Keynote Speaker*: Dr. Moenieba Isaacs – Gender Justice

The session will end with a keynote address exploring to reflect on how theatre has empowered women, challenged discrimination, and shaped inclusive policies in aquatic food systems to achieve gender justice in fisheries and aquaculture.

The closing will be an opportunity to share a summary of key insights, and a call for participants to adopt participatory theatre approaches within their own organizations, communities, and projects to promote inclusive change in aquatic food systems.

**Contributors (with short bios):**

**Facilitators:**

**Ms. Michelle Barrow (Voices from The Shore Theatre Collective)** is a Barbadian artist and educator who has spent over 30 years educating and entertaining audiences through acting, directing, playwriting and storytelling. She currently facilitates Theatre for Development with youth and the Voices From The Shore Theatre Collective in Barbados. Ms. Barrow is a graduate of the Edna Manley College for the Visual and Performing Arts in Jamaica and the University of Bradford in the UK. Michelle believes in the power of Theatre to change and inspire lives. Through Theatre for Development, she creates a safe space for people/communities to explore and engage in dialogue, critical thinking, edutainment and activism, with experiences in the Caribbean and Africa, to name a few.

**Ms. Mercy Kambulu (Circus Zambia)** is an artist and a trainer with 12 years of experience in theatre and circus performance, as well as in community work, with a focus on direction, script writing, performance and choreography of art-based initiatives. Ms. Kambulu has applied her skills in various context in Zambia, particularly acting as theatre facilitator for the implementation of awareness raising, inclusion and empowerment initiatives targeting youth, women and marginalized groups, including children with disabilities.

**Dr. Moenieba Isaacs (PLAAS)** is the Academic Coordinator and Senior Researcher at the Institute for Poverty, Land and Agrarian Studies (PLAAS), University of the Western Cape. Her research focuses on blue justice for small-scale fishers, gender, fisheries reform, and the blue economy in Southern Africa. She has extensive experience working with fishing communities and civil society to influence policy and governance. Professor Isaacs leads and contributes to several international projects on small-scale fisheries, food systems, and conservation, and has served on global expert panels, including the UN Committee on Food Security's High-Level Panel of Experts.

**Moderator: Ms. Rachel Matheson** (FAO) is a Gender Specialist working in NFISG. Rachel holds a Bachelor's degree in Global Development Studies from Queen's University, Canada, and a Master's degree in International Development Studies from Dalhousie University, Canada. During her career, Rachel has focused on supporting gender equality and social inclusion across fisheries, aquaculture, and agricultural supply chains. As a member of NFISG, she is works on assessing and analyzing gender issues and contributing to mainstreaming gender in the Fisheries and Aquaculture Division of the FAO.

**Facilitators;**
**Ms. Jennifer Gee** (FAO)
**Mr. Matteo Luzzi** (FAO)

# Special Session 6:

# Exploring and Expanding Understandings of Gender Identity and Expression in Fisheries (FAO)

## Exploring and expanding understandings of gender identity and expression in fisheries

**Purpose:** LGBTQIA+ individuals in fisheries-dependent communities face compounded marginalization due to entrenched patriarchal norms and economic dependencies. Social visibility and activism often result in scapegoating, limiting advocacy efforts. This side event will leverage the GAF platform to highlight community-based resilience strategies and foster partnerships for more inclusive fisheries governance.

This event calls attention to the unique challenges faced by LGBTQIA+ populations in fisheries and aquaculture and identifies civil society organizations and other stakeholders actively working on inclusive practices within these sectors with the aim of building a multidisciplinary community of practice around these urgent issues.

The session aims to:

- Raise awareness about the unique challenges faced by LGBTQIA+ populations in fisheries and aquaculture.
- Highlight the work of civil society organizations and other stakeholders to promote inclusive practices in fisheries and aquaculture.
- Encourage reflection amongst gender practitioners about how to integrate LGBTQIA+ advocacy into their work.
- Identify opportunities for collaboration between stakeholder groups to foster a more inclusive, equitable sector.

**Moderator:** Ms. Jennifer Gee (FAO)

**Format:** The special session will be hosted as a roundtable discussion featuring civil society organizations, case study presentations on successful initiatives, and an interactive session to identify priority areas for collaboration and action.

This roundtable will provide an open and inclusive space to explore how LGBTQIA+ rights, representation, and empowerment intersect with the pursuit of gender justice in fisheries and aquaculture. Through short case presentations, moderated dialogue, video contributions and interactive group reflection, the session will highlight innovative grassroots initiatives, confront persistent challenges, and identify actionable pathways toward more inclusive policy, practice, and partnership.

***a. Welcome & Framing by Moderators (5 minutes)***

Overview of the session goals and format and framing the importance of LGBTQIA+ inclusion as part of a **gender-transformative agenda** in aquatic food systems.

***b. Case Spotlights: Stories of LGBTQIA+ Empowerment (20 minutes)***

Moderators and panelists will briefly share success stories or advocacy initiatives that have supported LGBTQIA+ individuals in fisheries/aquaculture contexts and will make use of video contributions to share voices and experiences embedding different gender identities and expressions in the fisheries sector.

***c. Moderated Roundtable Dialogue: Removing Barriers, Building Belonging (25 minutes)***

**Moderator-led discussion** with 4 expert panelists, as well as open interventions the

audience, exploring deeper insights around:

- Barriers facing LGBTQIA+ individuals in fisheries/aquaculture
- Intersectional approaches and inclusive policy frameworks
- Opportunities for cross-sector collaboration
- Roles of institutions, funders, and grassroots movements

This portion is structured as a **conversational exchange**, not a formal Q&A.

***d. Fostering collaboration and action (30 minutes)***

A general discussion with the audience where participants, panelists and moderator will reflect on key themes and action points to stimulate synergies according to the following guiding questions:

1. How can we adapt or adopt some of the strategies discussed?
2. What are the common points of action where we can ground collaboration and stimulate funding?
3. What practical steps can we take to support LGBTQIA+ inclusion in our institutions, networks, and advocacy?

**Panellists:**

- Dr Christina Kenny (UNE)
- Dr Carmen Pedroza Gutiérrez (UNAM)
- Dr. Malasri Khumsri (Thailand DoF)
- Ms. Jariya Sornkliang (SEAFDEC)

## Contributors (with short bios):

**Dr Christina Kenny (UNE)** (she/her) is a Senior Lecturer in Sociology at the University of New England, Australia, and lives and works on Anaiwan country in NSW. She works on issues of gender, human rights and development with a focus on colonial histories, gendered citizenship, and gender and sexuality rights in the Global South, and Kenya in particular. Her current work focuses on the experiences of people of diverse sexuality, gender identity and/or expression working in fisheries value chains in Samoa and India. Christina has also worked with a variety of human rights-based organisations in research, policy development and advocacy in Australia and sub-Saharan Africa including the Australian Human Rights Commission, the Women's Legal Centre (Cape Town) and the Kenya Human Rights Commission in Nairobi, to name a few.

**Dr. Carmen Pedroza Gutiérrez (UNAM)** is a Senior Researcher at the National School of Higher Education (ENES), Mérida Unit, of the Universidad Nacional Autónoma de México (UNAM). She holds a PhD in *Socioéconomie du développement* from the *École des Hautes Études en Sciences Sociales* (EHESS) in Paris, and two Master's degrees: one in International Relations from the University of Sussex, and another in Development Studies from the University of East Anglia, both in the United Kingdom. Her research focuses on gender in fisheries, particularly women's roles in fisheries activities, organizational dynamics in seafood trade, social networks, and supply systems in small-scale fisheries. She has authored more than 40 publications and has received international recognition through awards such as the Yamamoto Prize, the Rosemary Firth Award, and the Women in Seafood Video Competition.

**Ms. Jennifer Gee (FAO)** is a Fishery Officer at FAO, leading gender work in the Fisheries and Aquaculture Division. With two decades of experience, she specializes in embedding gender equality in aquatic food systems, socio-economic data collection, and inclusive policy development. Her interdisciplinary background in environmental studies informs her work to empower women, promote equitable governance, and recognize the value of gender-responsive approaches in sustainable fisheries and aquaculture.

**Dr. Malasri Khumsri (Thailand DoF)** is an Aquaculture Technology Specialist in the Inland Aquaculture Research and Development Division, Department of Fisheries (Thailand). She holds a PhD and Master's degree in Aquaculture and Aquatic Resource Management at the Asian Institute of Technology (AIT) and has more than 28 years of working experiences with the Department of Fisheries, with about 5 years working as the Fisheries Management Specialist for the Fisheries Programme of the Mekong River Commission (MRC). She has working experience in the fields of inland aquaculture, aquaculture technology, as well as innovation, gender in fisheries, and community-based fisheries management.

**Ms. Jariya Sornkliang (SEAFDEC)** is a Fisheries Management Scientist at the Southeast Asian Fisheries Development Center (SEAFDEC), where she has served since 2004. With an academic background in Environmental and Resources Management, she has developed strong expertise in fisheries and coastal resource management. Throughout her career, Jariya has focused on small-scale fisheries, socio-economic analysis, and community-based management, while increasingly emphasizing gender equality and social inclusion in the sector. As SEAFDEC's Gender Focal Person, she plays a key role in promoting gender mainstreaming, empowering women in fishing communities, and documenting women's contributions to ensure their roles are recognized and valued.

# Special Session 7:

# Gender Justice in 2026: International Year of the Woman Farmer (FAO)

## Gender Justice in 2026: International Year of the Woman Farmer

*"Setting the Agenda: Gender Priorities in Fisheries & Aquaculture for 2026"*

**Purpose:** The year 2026 has been designated the International Year of the Woman Farmer—a historic milestone to recognize the crucial, yet often overlooked, contributions of women farmers- including those in aquaculture and fisheries. This roundtable provides a space to reflect on what gender justice should look like and how to elevate women's leadership, knowledge, and agency in both farming and fishing communities.

The special session on "Gender Justice in 2026: International Year of the Woman Farmer" will be the entry point for a series of webinars that will create participatory spaces for women engaged in fisheries and aquaculture to identify key target areas of work for achieving gender justice and tackle gender inequalities.

These areas of work will be discussed in tailored events in 2026 with the aim to drive momentum, build cross-cutting synergies and generate key message to be conveyed into a statement, or any other programmatic document based on what will be priorities identified by participants, that could be divulgated during a final event recurring at the end of the Year of the Woman Farmer.

The session will therefore foster a dynamic dialogue among experts and audience members to explore how policy, grassroots efforts, and institutional commitments can converge to support transformative and inclusive change in 2026 and beyond.

**Session Objectives:**
- Celebrate the designation of 2026 as the **International Year of the Woman Farmer** and increase recognition of women's contributions to aquaculture and fisheries.
- **To map and prioritize barriers**: Collaboratively identify and rank the most critical structural barriers hindering women's participation and leadership in aquatic food systems, considering both persistent historical and newly emerging challenges.
- **To map the landscape of solutions**: Collaboratively brainstorm and share initial ideas for change, helping us identify which strategies (e.g., community-led, policy-focused, market-based) are seen as most critical for a deeper dive.

These contributions will directly shape the key themes, topics, and pressing questions that will form the agenda for a subsequent webinar series dedicated for the development of more inclusive and transformative aquatic food systems and for the support. This initiative aims to enable conditions towards gender justice in fisheries and aquaculture.

**Moderator:** Matteo Luzzi – FAO

**Outline:**

***1. Welcome and Framing***

- Introduction to the International Year of the Woman Farmer and its relevance to aquatic food systems
- Framing the moment: why now matters for gender justice in fisheries and aquaculture
- Reflections on existing gaps and the potential for collective action

***2. Thematic consultation & Breakout Group Discussions***

Participants will have the opportunity to share their experiences about gender-related issues and potential opportunities to dismantle inequalities which will lead to the identification of key themes and the creation of related breakout groups.

Participants will be split into small groups that will:

- Discuss **which themes resonate most** based on lived experience or regional context with regards to gender issues
- Identify **any missing themes or cross-cutting issues**
- **Rank the themes** that have been identified during consultation and discuss priorities for 2026

During the discussions, **facilitators will share key snapshots** that will be grounding the group with a real-world example or ongoing research/policy issue, such as:

- **Raising women's decision-making power**: Gender perspectives in policies, legal frameworks and planning
- **Tackling women's invisibility**: Developing robust gender data and development strategies
- **Accessing markets and resources**: facilitating gender-responsive financing and entrepreneurship
- **Equality and safety**: unrooting GBV and addressing social norms in value chains
- **Collective action for equitable value chains**: women's organizations and intersectional leadership as drivers for transformational change

***3. Final Plenary Discussion***

Following group work, participants will return to plenary for a final discussion that will **set the way forward for action points and priorities towards 2026**, with specific focus on:

- Share insights, priorities, or new angles based on the ranking of themes performed during the breakout discussion
- Capture agreement or divergence on key themes
- Suggest framing language or gaps to explore further

***4. Closing & Next Steps***

- Summary of common themes and new ideas/key messages raised
- Outline how this input will inform the design of the webinar series and final statement
- Call to stay engaged throughout the year and encourage sign-ups for further consultation

## Contributors (with short bios):

**Panellists/Facilitators**:

**Lovin Kobusingye – President, African Women Fish Processors and Traders Network (AWFishNet):** Ms. Lovin Kobusingye is a Ugandan entrepreneur, advocate, and leader in the African fisheries sector. Ms. Kobusingye is currently President of the African Women Fish Processors and Traders Network. She is a vocal champion of women's empowerment, policy reform, and value chain equity in small-scale fisheries across the continent. Through her businesses, she has worked with over a thousand fish farmers on fish processing and value

addition. Ms Kobusingye is a passionate advocate for government support and enabling policies for women-led entrepreneurship in the fish farming sector in Uganda and throughout Africa, experiences which will be at the core of her activities as President of the AWFishNet.

**Hellen Guebama – African Union Inter-African Bureau for Animal Resources (AU-IBAR):** Ms. Hellen Guebama works in the African Union Inter-African Bureau for Animal Resources (AU-IBAR) as a Fisheries and Aquaculture Officer and Coordinator of the Animal Production Unit. She holds a Master's in Aquaculture Biology (University of Bergen, Norway) and has 15 years of experience in Aquaculture Development and Fisheries Management. She works to embed inclusive practices across African Union Member states and specialized regional fisheries institutions to promote women's leadership and equitable livelihoods in line with the Policy Framework and Reform Strategy for fisheries and Aquaculture in Africa (PFRS) and Comprehensive Africa Agriculture Development Programme (CAADP). Previously, she worked with the Ministry of Agriculture, Forestry and Fisheries in South Africa and Lerøy Seafood Group in Norway.

**Stephanie Achieng – African Union Inter-African Bureau for Animal Resources (AU-IBAR), Gender Policy and Strategy Expert** : Ms. Stephanie Achieng is a Gender Policy and Strategy Expert at AU-IBAR with over 8 years' experience, specializes in integrating gender into aquatic biodiversity conservation and environmental management for inclusive blue economy development. With expertise in environmental management, policy development, and capacity building, she supports programs that strengthen ecosystem resilience and nature-based solutions. She engages stakeholders across Africa to advance reforms in the Blue Economy and biodiversity sectors. She holds an MSc in Environmental Management from the University of Cape Town, South Africa.

**Lilian J. Ibengwe – Ministry of Livestock and Fisheries, United Republic of Tanzania:** Ms. Lilian J. Ibengwe is a Principal Fisheries Officer at the Ministry of Livestock and Fisheries, Tanzania. Ms. Ibengwe's holds a MSc. in Environmental Management and a PhD in Fisheries from the University of Dar Es Salaam. She began her career in Fisheries Management within the Ministry 18 years ago, during which she worked in policy and planning to develop small-scale fisheries management strategies. In 2012, she won Yamamoto Prize from the Japan International Fisheries Research Society (JIFRS) for her work in developing strategies for responsible fishery management in Tanzania. Ms. Ibengwe has made stride in ensuring gender issues are considered in the Tanzania Fisheries Sector through her key contribution to the establishment of the Fisheries Gender Desk in the Ministry of Livestock and Fisheries.

**Angela Lentisco – FAORAP**: Ms. Angela Lentisco is a Fishery and Aquaculture Officer in the FAO Regional Office for Asia and the Pacific (FAORAP). Ms. Lentisco has more than 19 years of experience working with international development organizations, with a focus on the identification of climate-smart solutions supporting women's empowerment, community strengthening and the implementation of an ecosystem-approach to fisheries and aquaculture.

**Erika Valerio – FAO:** Ms. Erika Valerio is a gender and agri-food systems specialist currently working with FAO, with a strong interest in gender equality, women's empowerment and rural development. Dr. Valerio has been appointed as focal point for fisheries and aquaculture in the ESP division. She holds a PhD in Rural Development from Newcastle University and has previously worked with the International Fund for Agricultural Development (IFAD), before joining the University of New England as a Research Fellow.

**Moderator**:

**Matteo Luzzi – FAO:** Mr. Matteo Luzzi is a Gender Consultant working in NFISG based in the Headquarters of FAO. After graduating in International Relations, Matteo obtained a master's degree in International Cooperation and Development, with a specific focus on Economics for Development. After several experiences in international NGOs, he joined the Fisheries and Aquaculture (NFI) Division of FAO in March 2021 as a part of NFISG and has been contributing to the team's effort to mainstream gender and strive for gender equality in all NFI Division's technical and normative work.

**Facilitators:**
**Mercy Kambulu – Circus Zambia**
**Jennifer Gee – FAO**
**Rachel Matheson - FAO**

# Special Session 8:

# SEAFDEC's Initiative to Advance Gender Equality in the Fisheries Sector and Aquaculture in Southeast Asia

(SEAFDEC)

## SEAFDEC's Initiative to Advance Gender Equality in the Fisheries Sector and Aquaculture in Southeast Asia

### Introduction

The Southeast Asian Fisheries Development Center (SEAFDEC) has recognized the critical role of gender equality in achieving sustainable fisheries and improving the livelihoods of coastal communities. In response, SEAFDEC launched targeted initiatives to mainstream gender perspectives across its programs and activities in Southeast Asia. Beginning with capacity-building workshops and gender-sensitive policy advocacy in the early 2010s, SEAFDEC collaborated with member countries to integrate gender considerations into fisheries management, research, and development. These efforts include the development of tools such as the **Gender Analysis Toolkit for Fisheries** and promoting sex-disaggregated data collection to inform inclusive policymaking. By fostering institutional change and supporting grassroots participation, SEAFDEC aims to ensure that both women and men in the fisheries sector benefit equally from sustainable development efforts.

### Objectives

- To promote and institutionalize gender equality and women's empowerment in the fisheries and aquaculture sector of Southeast Asia
- To amplify gender sensitivity and responsiveness in Southeast Asia
- To foster regional cooperation and knowledge sharing on gender equality practices and innovations.

**Tentative Schedule**

| Time | Topic | Panelist |
|---|---|---|
| 15 min | Introduction<br>- Introduce the SEAFDEC Gender mainstreaming initiative.<br>- Introducing the session.<br>- Invite and introduce the panelist | Jariya Sornkliang (Moderator) |
| 30 min | Panelists' opening statement: The panelists will present their work and perspectives on Gender integration and women's empowerment for gender equality. | - Ms. Nurwanti (IFRMD)<br>- Dr. Arlene<br>- Ms. Hana Matsubara (University of Tokyo, Japan)<br>- FAO (not confirmed yet) |
| 20 min | Panel discussion | - Ms. Nurwanti (IFRMD)<br>- Dr. Arlene<br>- Ms. Hana Mustubara (University of Tokyo, Japan)<br>- FAO (not confirmed yet) |
| 15 min | Audience questions/discussion | - all |
| 10 min | Summary: Panelists will be requested to provide their views to strengthen gender equality | Moderator and Panelist |

**List of participants and short presentation details**

**Chair/Moderator:** Ms. Jariya Sornkliang, Fisheries management scientist and Gender focal person from the Training Department of Southeast Asian Fisheries Development Center

**Panelists:**

1. Representative from SEAFDEC, Inland Fisheries Development and Management (SEAFDEC/ IFRDMD) and representing the SEAFDEC member Country *Ms. Nurwanti Dewaggna,*

2. The SEAFDEC/IFRDMD projects encompass initiatives aimed at promoting gender equality within the fisheries sector of Southeast Asia. These initiatives particularly highlight women's involvement in inland fisheries in the Lao PDR and their participation in anguillid eel fisheries. During the Training Course, it was observed that women primarily engage in post-harvest activities, fish processing, and marketing. In contrast, men are mainly involved in fishing activities. However, the Training Course also acknowledged that some women participate in fishing, primarily for household consumption.

3. Partners (FAO and University of Tokyo, Japan)
   The Policy on Gender Equality underscores the significance of gender equality in achieving sustainable development. Its primary strategies involve incorporating gender considerations into all regional programs and projects, embedding gender perspectives in policies, advocating for technologies that benefit women, and fostering female leadership. Additionally, it addresses challenges like restricted access to resources and calls for the creation of more inclusive and gender-sensitive initiatives. The field project adopts a gender-inclusive approach to promote gender equality.

4. Dr. Arlene Satapornvanit, a Gender specialist with experience working with SEAFDEC.
   Dr. Satapornvanit worked on projects that focused on enhancing gender equality and social inclusion (GESI) in fisheries management across Southeast Asia and the Coral Triangle region. The most recent one was the USAID-funded activity, Sustainable Fish Asia Technical Support (SuFiA TS), which integrated GESI in its strategic approaches on strengthening regional sustainable fisheries policy frameworks and implementation, enhancing coastal livelihoods, climate change adaptation, private sector engagement, combating IUU fishing, and maritime security. Specifically, USAID SuFiA TS facilitated the establishment of regional hubs for Gender Equality, Small-Scale Fishers, and Youth Ambassadors in partnership with regional fisheries and civil society organizations. These initiatives aimed to foster inclusive fisheries management by involving marginalized groups, such as women, youth, small-scale fishers, and stateless fishers. Key challenges identified include cultural norms, a lack of awareness, and insufficient legal frameworks that support GESI within the agenda of various fisheries initiatives. The project addressed these challenges through capacity building, leadership visibility, partnerships, development of legacy knowledge products, and intergenerational mentorship to overcome these barriers and create sustainable, inclusive development in fisheries.

# Special Session 9:

# Community-led Oyster Farms in Fiji: A Case Study of Gender-responsive Aquaculture (IISD)

## Community-led Oyster Farms in Fiji: A Case Study of Gender-Responsive Aquaculture

**Purpose**: This panel will highlight gender-responsive nature-based aquaculture approaches in Fiji. Topics discussed include Fiji's approach to ensuring women are active participants in its burgeoning aquaculture industry, and examining how the government is working with NGO's, the private sector, and communities to enhance equitable access, decision-making, and benefits. A case study of nature-based aquaculture focused on community-led oyster farms will be featured as well.

**Chair/moderator:** Dr. Veronica Lo, Senior Policy Advisor, IISD

**Participants:**

**Prashneel Chandra**, Senior Research Officer (Aquaculture Division), Ministry of Fisheries, Fiji: Highlights of initiatives the Ministry of Fisheries in Fiji has been undertaking to elevate women's participation in aquaculture, the challenges they have faced, and the direction Fiji will be working towards in the future.

**Georgia Exell,** Policy Analyst, International Institute for Sustainable Development (IISD): Highlights from IISD's AQUAPearl Gender Gap Analysis, describing a synthesis of identified gender and climate vulnerabilities and risks for the aquaculture sector, the barriers for effective participation by women and the opportunities for equitable participation, and the effectiveness of existing aquaculture initiatives.

**Kinisimere (Rosi) Batibasaga,** Fisheries Officer, World Conservation Society - Fiji (WCS): Engaging with local communities as part of the Free, Prior and Informed Consent (FPIC) process is a key part of the AQUAPearl trust-building process. WCS will discuss how their work has evolved to understand the different roles in Fijian communities, how women are involved, and how they can continue to grow their role within the Fijian aquaculture industry.

**Justin Hunter**, Founder & CEO, J. Hunter Pearls: What role can the private sector play in enhancing women's roles in nature-based aquaculture? This presentation will examine how conservation and sustainability can only be successful when communities are involved, educated, and seen as partners in business, rather than a hurdle to work around.

**Roko Vuiyasawa** and **Sakiusa Niwa Kiti**, IISD Consultants: Quality assurance standards are necessary to ensure the safety of shellfish consumption in Fiji and ensure that there are markets to help sustain women's livelihoods opportunities from community-led shellfish initiatives. This talk will outline AQUAPearl's activities to encourage cross-sectoral collaboration.

### Contributors (with short bios):

**Dr. Veronica Lo, Senior Policy Advisor, IISD:** Veronica works for IISD on policy and practice for inclusive nature conservation and climate adaptation. Veronica has previously held roles with the Canadian Parks and Wilderness Society, Convention on Biological Diversity and with various United Nations agencies. Much of her work has focused on research and policy analysis on ecosystem-based adaptation and supporting partnerships to enhance synergistic implementation of the Rio Conventions. As an academic, she has worked

across disciplines and ecosystems, from experimental coastal field ecology to participatory approaches for protected areas management.

**Georgia Exell, Policy Analyst, IISD**: Georgia's work with IISD involves participation on the Canada Adaptation team, creating guidance and research into municipal- and watershed-level adaptation planning. Georgia also coordinates the AQUAPearl and Intersectional Climate Risk Assessment (iCRA) projects within the Resilience team. Prior to IISD, Georgia worked with the Canadian Beverage Container Recycling Association (CBCRA)'s Recycle Everywhere initiative, where she led outreach and engagement efforts for programming in post-secondary institutions, multi-family dwellings, and First Nations communities across Manitoba. She also served as an environmental planner with TERA Environmental Consultants, performing a variety of tasks, including supporting the development of applications for Environmental Assessment Certificates and providing datasets and analysis for over 300 communities. Georgia has a master's degree in geography from the University of Guelph and a bachelor's degree anthropology and environmental studies from the University of Victoria.

**Justin Hunter, Founder & CEO, J. Hunter Pearls**: Justin Hunter grew up in the small town of Savusavu in Fiji where his love for island life and the ocean began. Moving to the United States as a young man Justin completed his high school education and university in Washington State. After completing his marine science degree Justin began working for his family business, Taylor Shellfish, focusing on rearing edible oysters in Washington State and Hawaii. With over 10 years' experience working for the family-owned shellfish company, Taylor Shellfish, Justin returned to his hometown of Savusavu with a dream of cultivating one of the world's rarest pearls, Fiji Pearls. Aware of the obstacles pearl farmers in Fiji had faced before him Justin implemented new pearl farming techniques and establishing vital relationships with the local villages that would see him become a pioneer in the pearling industry in Fiji and establish Fiji Pearls as a global brand.

**Prashneel Chandra, Senior Research Officer, Aquaculture Division, Ministry of Fisheries, Fiji:** Prashneel Chandra is a Senior Research Officer in the Aquaculture Division, for the Ministry of Fisheries in Fiji. Prashneel has been with the Ministry of Fisheries for 12 years. Prashneel has a Bachelor of Applied Science in Fishing and Fisheries Sciences and Management from the University of the South Pacific.

**Kinisimere (Rosi) Batibasaga, Fisheries Officer, WCS:** Rosi Batibasaga joined WCS in 2019 as an Intern and later progressed to her current role as a Fisheries Officer. Prior to this role, she volunteered with WWF and WCS and served as a Research Assistant for visiting PhD candidates from various universities. Rosi is deeply passionate about marine and terrestrial conservation, with a particular focus on using traditional ecological knowledge to enhance resilience in coastal communities. Her expertise spans turtle surveys, biological monitoring, socioeconomic surveys, community engagement, environmental awareness, and workshop facilitation.

**Roko Vuiyasawa, IISD Consultant:** Raiova (Roko) Vuiyasawa is currently the Lead Consultant for the AQUAPearl Quality Assurance Program, building on 6 years of experience working in marine studies and aquaculture. As an Aquaculture Assistant with SPC over two terms, Roko carried out water and biological sampling for testing, participated in consultations with stakeholders to develop a quality assurance protocol, and gained experience in eel aquaculture. Roko has a BA in Marine Affairs & Geography and a Postgraduate Diploma in Climate Change from the University of the South Pacific.

**Sakiusa Niwa Kiti, IISD Consultant:** Sakiusa Niwa Kiti, a current supporter of the AQUAPearl Quality Assurance Program (QAP) project, plans for sample transportation to lab facilities, assists with sampling in Savusavu, and schedules stakeholder meetings with relevant ministries and project partners. After graduating, Sakiusa began maintaining coral nurseries and assisting with reef conservation as a marine biology intern with Captain Cook Cruises. He later interned with the Pacific Community (SPC), where he gained knowledge of freshwater prawn cultivation, eel growth monitoring, and tilapia hatchery management. During SPC's early oyster testing phase, he also served as a field assistant, assisting with logistical planning, budgeting, and lab team communication. Sakiusa is dedicated to supporting community-based aquaculture and improving food safety regulations.

# Special Session 10:

# Gender Dynamics in Social Economies of Dried Fish in South & South East Asia (DFM)

# GENDER, SOCIAL ECONOMY, AND THE MAKING OF DRIED FISH IN ASIA

**Derek Johnson[1]*, Wae Win Khaing[2], Nikita Gopal[3], Anas Khan[4], Holly Hapke[5], Kyoko Kusakabe[6], Tara Nair[7] and Nireka Weeratunge[8]**

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Social economy has guided the Dried Fish Matters project since its inception. Yet, the project has shied away from a precise definition of the term, preferring instead to see social economy as point of connection between a variety of perspectives that argue for economic activity as fundamentally interwoven with other features of human life. Without this plural understanding of economy, economic motivations and practices in dried fish production don't make sense and economic development interventions risk failure or worse.

In this presentation, we reflect comparatively on the patterns of gender identity and gendered work in the making of dried fish in Sri Lanka, India, Bangladesh, Myanmar, Thailand, Cambodia, and the Philippines. The comparison foregrounds the contrasting variety in women's and men's work in and influence on dried fish production, distribution, and consumption. We address, in particular, how women's agency within dried fish social economies varies, the context that shapes that variation, and what the implications of women's varying power are for individual and collective wellbeing in our countries of focus.

# WOMEN AND ARTISANSHIP IN BONELESS DANGGIT (DRIED RABBITFISH) MAKING

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Gender equality has been a persistent challenge in the fisheries sector. While recent scholarship has increasingly highlighted various efforts and approaches to achieve gender equity (Kleiber et al. 2017; Rice et al. 2024), however, little attention remains on the artisanship of women engaged in post-harvest activities within small-scale fisheries. This paper aims to illuminate the techniques, embodied skills, and culturally embedded practices women employ in the boneless danggit industry. *Boneless danggit* refers to the deboned, salted, and dried rabbitfish (*Siganus* spp.), notably crafted in Bantayan Island and traded in the Philippines and overseas. To elucidate women's artisanship, this paper focuses on two processing steps integral to boneless danggit production: timplada and pukyad. *Timplada* denotes the nuanced technique of flavoring the fish, primarily through estimation and application of salt. *Pukyad* encompasses a sequence of transformative acts – namely, the dorsal split opening of the fish, degutting, and deboning – that convert fresh rabbitfish into a highly valued boneless danggit.

Women's artisanal labor, as manifested through the practices of timplada and pukyad, is instrumental to the widely acclaimed distinctive quality of boneless danggit produced in Bantayan. However, these artisanal skills and practices are often rendered invisible and undervalued in interventions that prioritize technological improvements in boneless danggit production. This study argues that by focusing on women's artisanship, we can better recognize and value their capabilities and agency as key actors in the post-harvest of small-scale fisheries. Foregrounding women's artisanal knowledge and practices shifts from reductive economic framings of their plight, which can lead towards achieving gender justice. The findings and analysis presented herein are grounded in sixteen months of ethnographic fieldwork at boneless danggit production sites in Bantayan Island, north of Cebu Province, in the Central Philippines.

# LIVELIHOODS IN TRANSITION – FEMALE FISH PROCESSORS AT THE TONLE SAP, CAMBODIA

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The Tonlé Sap, Southeast Asia's largest freshwater lake, is a significant fishery that supports millions of livelihoods. Over the past three decades, fish diversity and volume have declined due to overfishing, climate variability, damming, and agricultural intensification (Chevalier et al., 2023). More recently, aquaculture intensification has added pressure, as forage fish are increasingly used as direct feed in fish farming. Processed, dried fish products are a key livelihood for many low-income women around the lake. As wild stocks decline, women are changing how they create their livelihoods. Trey neat, (a salted, sun-dried fillet), is no longer produced at the lake and is now primarily made from aquaculture in urban areas. Many micro-scale processors are abandoning their businesses to work as laborers for other processors, while some are choosing to sell forage fish as aquaculture feed for immediate income.

Current development programs emphasize growth and profit, favouring medium and large enterprises while overlooking small-scale processors. These strategies reinforce structural inequalities by failing to address institutional and systemic gender issues. This research examines the shifting organization of women's livelihoods within the dried fish value chain and the unequal impacts of ecological and economic change. As the Tonlé Sap reaches a critical ecological juncture, the study asks: who benefits, who is left behind, and what do these transformations mean for the future of dried fish social economies?

# SELLING POWER: A FEMINIST GEOGRAPHICAL ANALYSIS OF SPATIAL ACCESS AND SOCIAL POSITIONING IN FISH MARKETS IN NEGOMBO AND PHNOM PENH

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This paper examines the role of social positioning and social networks in shaping access to, and participation within, fish markets in Negombo, Sri Lanka and fish processing markets in Phnom Penh, Cambodia. Drawing on feminist geography—particularly Doreen Massey's conceptualization of space as relational, socially constructed, and imbued with power—the paper explores how gendered, location-based, and ethnically-shaped social relations mediate market actors' ability to navigate and claim space in these urban economic environments. In both locations, fish markets operate as crucial economic and social hubs that are simultaneously shaped by broader socio-political histories and micro-scale everyday negotiations of power. Applying Massey's feminist geographical lens allows us to understand these market spaces not as neutral economic arenas but as arenas of ongoing spatial negotiation, where power is continuously (re)produced, negotiated and contested. This study argues that access to market space is not solely determined by economic capital but is deeply intertwined with social capital—constructed through networks of kin, ethnicity, religion, and gendered labour histories and roles. Moreover, the articulation of these networks is deeply spatial: power relations manifest through who can occupy central stalls; the permanent buildings, who must remain mobile and occupy the corridors, and who can engage with particular market actors including suppliers from outside the district.

Through comparative immersive fieldwork, in-depth interviews and semi-structured interviews with sellers, conducted between 2019-2020 in Cambodia and 2022-2023 in Sri Lanka, this paper highlights how spatial access in fish markets is both a product and a producer of social inequalities. By foregrounding the experiences of women and marginalized actors, it reveals the gendered geographies of informality and the everyday spatial politics of survival and resistance. In doing so, the paper contributes to broader discussions within feminist geography about how spatial justice, access, and mobility are negotiated within uneven urban landscapes shaped by both local histories and global economic pressures.

# GENDER ROLES AND OCCUPATIONAL HEALTH RISKS TO WOMEN DRIED FISH PROCESSING WORKERS: A CASE OF NAZIRARTEK, BANGLADESH

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This study examines gender roles and occupational health in the dried fish processing sector of Nazirartek, Cox's Bazar, Bangladesh—one of the country's largest dried fish production sites. Grounded in a feminist political ecology (FPE) framework, the research explores how governance structures and khola (yard) level management practices shape the gendered division of labour and influence health outcomes among workers, especially women. Using ethnographic methods, the study draws on participant observation, semi-structured interviews, key informant interviews, and oral histories to capture the lived experiences and intersectional vulnerabilities of both men and women engaged in fish processing. Findings reveal a stark gender divide in roles and responsibilities. Women are overwhelmingly concentrated in physically demanding, low-paying jobs with little or no control over working conditions, while men dominate supervisory and managerial positions that come with greater security and decision-making power. This asymmetry not only reinforces existing social hierarchies but also results in unequal exposure to occupational health risks. Women face a range of health hazards, including prolonged exposure to the sun, inadequate access to clean water, lack of sanitation facilities, and absence of protective equipment. These risks are further exacerbated by socio-cultural norms around menstruation, pregnancy, and childcare, which are neglected in workplace policies and infrastructure design. Moreover, women's exclusion from formal decision-making processes and the lack of collective bargaining power further limit their ability to negotiate safer, more equitable working conditions. The study calls for the urgent implementation of gender-responsive governance reforms, including recognition of women's informal labour, improved workplace infrastructure, and participatory mechanisms that include women in decision-making. Policy interventions must move beyond surface-level welfare initiatives to address the structural inequalities that underpin poor occupational health and safety standards in the sector. Strengthening institutional accountability and ensuring targeted support for women workers are essential steps toward building a more just, inclusive, and sustainable small-scale fisheries sector in Bangladesh.

# "PATRIARCHAL BARGAINING" – EXPLORING WOMEN'S AGENCY

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The agency of female labourers in Teknaf dried fish value chains is far more constrained than women involved in fisheries in some other parts of the world. Nonetheless, women dried fish labourers in Teknaf continually bargain with, resist, and sometimes outwit the patriarchal constraints they face. Female labourers' negotiation strategies are their choice of course, which is the core factor of agency. Patriarchal bargaining is interlinked with everyday engagements and patriarchal constraints, because female labourers' patriarchal bargaining strategies are visible in their everyday engagements and in responses to the patriarchal constraints they face within the dried fish value chains in Teknaf. They have specific bargaining strategies for the specific patriarchal constraints they face. They produce, modify, and engage with the existing social structure while bargaining with the patriarchy within the dried fish value chains in Teknaf, Bangladesh. Their bargaining and negotiation with the patriarchal Teknaf society within the dried fish value chains is to achieve subjective, objective, and relational wellbeing. The patriarchal bargaining strategies of the female labourers include and relate to numerous facets of their lives. The aspects of their lives that were most apparent during my research: female laborers' skills and knowledge, networking capabilities, women's associations, laborer scarcity, age, habits, clothing, place of residence, savings in the form of belongings, single women as heads of the family, negotiation of wife of the owner, women's perspectives regarding their contribution, and everyday resistance. These various patriarchal bargaining strategies are not separate from each other but are used to negotiate for women's collective agency in different times and situations. Through patriarchal bargaining, women in Teknaf continue their engagements with the dried fish value chains after facing different kinds of patriarchal constraints, which become the source of patriarchal bargaining for other women to engage in dried fish value chains in Teknaf.

# EXPLORING CAPABILITIES IN THE INFORMAL ECONOMY: WOMEN PROCESSORS IN THE DRIED FISH VALUE CHAINS OF ANDHRA PRADESH, INDIA

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This paper applies the Capability Approach, developed by Amartya Sen and further elaborated by Martha Nussbaum, to examine the entrepreneurial livelihoods of women engaged in dried fishprocessing in Andhra Pradesh, India. These women operate informal, home-based micro- enterprises and are best understood not merely as workers but as entrepreneurs who take on economic risks, make key decisions, and actively manage their livelihood activities. Despite their entrepreneurial agency, they face a range of structural constraints, including limited access to capital, market information, infrastructure, and formal recognition that restrict their ability to expand and sustain their enterprises. The Capability Approach, with its emphasis on individual's real freedoms to achieve valued ways of living, provides a useful lens to assess how these women convert available resources into meaningful capabilities and functionings. Drawing on qualitative primary data, the study explores how intersecting structures of gender, caste, and informal institutional arrangements, including market imperfections, influence both opportunities and constraints for these women within the dried fish value chain. The study observes that these structural factors influence access to raw material, market spaces, mobility, and decision-making power, often reinforcing women's marginal status despite their central role in the sector. While capability deprivations are evident, the analysis also highlights the women's adaptive strategies and resilience in navigating these barriers. The findings underscore the need to recognise and support women's capabilities in ways that address structural and institutional barriers as a pathway to more inclusive and equitable development.

# GENDER DYNAMICS IN THE DRIED FISH VALUE CHAINS: SCANNING THE POLICYSCAPE IN INDIA

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The literature on women and gender studies in fisheries is replete with detailed enquiries into the role of women in fisheries economics. Yet, women's concerns are priorities that are seldom addressed in larger analyses of the political economy of fisheries. Policies and programmes continue to normalise and reinforce the asymmetric distribution of power and resources in favour of men and their activities. A gendered value chain approach can deal with this paradox by acknowledging gender norms, roles and relations and how they impact access, ownership and control of fishery resources (fishing gear, fishing grounds, and income) by women and men. More specifically, the value chain approach helps assess fisheries policies and practices from the point of view of women's rights in the fish value chain activities and services spanning fish production to marketing. Such assessment is a precursor to further analysis of the outcomes of women's participation in the fisheries value chains, especially the feminisation of low-value activities.

In this paper, we examine the fisheries policies of India by using value chain approach with a gender lens and drawing from a detailed scoping study of the dried fish sector done in the Western state of Gujarat. In India, dried fish sector mainly employs traditional knowledge and minimum skills and depends pervasively on women's labour at the extremes of the value chain. In upstream operations, they contribute to post-harvest processing like sorting, cleaning and drying. Their contribution to processing activities is usually assumed away in the commercial valuation of dried fish as a component of unpaid family labour. There is an implicit assumption that such labour has insignificant or no opportunity cost which arises from the dominant social norms that undervalue women's work as a natural extension of 'normal domestic' duties. Thus the critical labour put in by women and young girls in the fisher households to process the harvest timely to prevent it from losing market value is seldom accounted for while determining the prices and margins. Their labour at best is a concealed subsidy that can add to the bottom line of dried fish markets.

In the downstream of the value chain, women actively participate in the retail marketing of dried fish. The retail fish markets are highly competitive and dominated by women from socio-economically disadvantaged communities and households. While market participation brings them economic rewards, they operate under binding institutional constraints posed by the prevailing community gender norms about their conduct, mobility and opportunities as well as administrative commands that are blind to their specific needs and priorities. Added to these are the risks and vulnerabilities associated with the uncertain nature of fisheries activity, especially under increasingly volatile climate conditions. The empirical core of the paper is constituted by the data collected through structured and semi-structured interviews conducted with retail dried fish sellers in Veraval and small fish processors in Jafrabad (both on the Saurashtra coast) and Mundra coast (on the northern shore of the Gulf of Kutch).

# HUMAN RIGHTS IN INDIAN SMALL-SCALE FISHERIES: INSIGHTS FROM A SOCIAL ECONOMY MAPPING OF GENDERED WORK IN A DRIED FISH VALUE CHAIN IN VALSAD

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The SSF Guidelines are explicitly rooted in the realization of a human rights–based approach to governing and developing small-scale fisheries value chains. In contextualizing international human rights standards to the case of small-scale fisheries, the Guidelines recognize that these value chains are embedded in traditional systems, reflect legal pluralism, and are shaped by power imbalances between and among actors. One of the 13 guiding principles mentioned in the Guidelines is 'gender equality and equity' with an acknowledgment of the role played by women in small-scale fisheries value chains. A key aspect of the human rights–based approach is the identification and prioritization of the unique barriers faced by marginalized and vulnerable individuals, communities, and groups and the commitment to addressing these barriers in their daily struggles. Therefore, operationalizing the SSF Guidelines and implementing human rights through policy, advocacy, or legal action requires context-sensitive and gender-sensitive approaches that specifically identify and prioritize vulnerable and marginalized actors within small-scale fisheries value chains.

Dried Fish Matters' social economy approach is one such approach providing context-specific, actor-oriented and gender-sensitive insights through mapping of dried fish value chains. This paper explores how using this approach to map one localized dried fish value chain in Valsad, India, has helped to identify the unique barriers and challenges to human rights faced by women in the processing and retail segments. This paper draws on findings from six months of field research conducted as part of my master's study, followed by validation research, on a coast-to- forest dried fish value chain.

Localized dried fish economies like the one in Valsad are generally absent from meaningful policy discourse in Gujarat, largely because the small-scale fisheries that sustain them are overlooked in the State's export-oriented image of fisheries and in its push for port-based industrialization. The consequences of this neglect are felt differently and often unequally by actors in the dried fish value chain. For example, women processors and retailers face disproportionate challenges in exercising their rights to health, sanitation, and market access. These challenges faced by women processors and retailers are further exacerbated by an intersection of factors such as caste, place of origin, social status, economic status, and linguistic identity. The barriers to human rights in such contexts are therefore not only confined to formal institutions but also deeply gendered, intersecting with caste, language, and migration status, and the power imbalances that result from them. Through insights generated by mapping the value chain using a social economy lens, this paper further explains how recognition of these situated barriers enables the implementation of human rights not only through targeted gender-sensitive public policy by duty-bearers, but also by highlighting where civil society action can most effectively contribute to human rights realization.

# Special Session 11:

# Gender in Freshwater Fisheries (TNC)

# WOMEN IN FRESHWATER FISHERIES IN SOUTH ASIA: SCOPING CASE STUDIES FROM INDIA AND BANGLADESH

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India and Bangladesh are two important South Asian countries which are rich in freshwater resources and where freshwater fisheries constitute an important facet of livelihood for small-scale women fishers, who either do subsistence fishing or assist their families in ancillary activities. However, they have received little attention, in spite of the different ways that women engage in freshwater fisheries and different issues they face, in contrast to women in coastal fisheries. This study analyzes (i) women's role in freshwater fisheries comprising lakes, reservoirs, floodplain wetlands, and rivers, (ii) women's contribution in post-harvest activities, and (iii) women's position vis-à-vis policies and regulations, in both the countries, as a part of an emerging global effort to provide a better focus on women's contribution and their status in freshwater fisheries.

In India, women participate in freshwater fisheries in lakes, rivers, and floodplain wetlands, often exhibiting similar engagement patterns along with some habitat-specific activities. They typically form small fishing groups and are involved in community fishing, post-harvest activities such as drying and processing fish, and marketing, besides engaging in door-to-door sales. Their contributions also include fabricating fishing gear, collecting bait, handling coracles, canoes and nets when fishing with their husbands in reservoirs, and harvesting molluscs and aquatic plants from wetlands and lakes. Most importantly, women play a vital role in enhancing the nutritional security of their households by catching small indigenous fish from wetlands. Despite such vital contributions, women rarely hold leadership positions, limiting their influence in management decisions.

In Bangladesh, traditionally, women's participation in freshwater fisheries is witnessed in collecting aquatic plants and snails in wetlands. Significant participation of women was observed in activities such as fish sorting and grading, cleaning and salting but is often accompanied by discriminatory practices in terms of pay. The way climate change is affecting freshwater ecosystems in Bangladesh is posing major socio-economic challenges for women who rely on them.

There are regional variations in women's participation in freshwater fisheries across the countries, which are influenced by cultural, traditional and societal norms. A significant policy issue is access to fishing rights, considering gendered fishing practices, spaces, and gears. Government policies and programmes should be sensitive to address women's practical and strategic needs for gender transformative changes to happen.

# GENDER DYNAMICS AND WOMEN'S EMPOWERMENT CHALLENGES IN PERU FRESHWATER FISHERIES

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Freshwater fisheries in Peru - particularly in the Amazon Basin and Lake Titicaca—are vital to rural livelihoods, food security, and local economies. Despite women's significant and diverse contributions across the fisheries value chain, from subsistence harvesting to ornamental fish trade and processing, gender inequalities persist and are deeply embedded in social, legal, and cultural structures.

This study presents a gender analysis of Peru's inland fisheries based on an extensive literature review of national census data, academic research, and field reports. Women represent 14% of inland fishers, with participation concentrated in regions such as Loreto, San Martín, and Puno. However, their involvement is often constrained by traditional gender roles, low education levels, limited access to credit, and exclusion from formal decision-making spaces. In Amazonian contexts, cultural beliefs associate fishing with masculinity and restrict women's access to key fishing areas. These challenges are exacerbated by widespread informality, with over 85% of fishers lacking permits and most women excluded from formal representation or social protections.

Yet, documented examples of women's leadership in local management, market engagement, and environmental defense challenge prevailing norms. From organizing fishery cooperatives to leading community responses to ecological crises, women are increasingly asserting roles that reshape the social and political contours of inland fisheries. Their contributions remain largely unrecognized in official policy, which continues to focus on extraction while overlooking pre- and post-harvest labor where women are most active.

This review underscores the importance of recognizing and addressing gendered inequalities in freshwater fisheries and calls for inclusive governance and equitable support systems to empower women in Peru's small-scale fisheries.

# GENDER AND CLIMATE CHANGE IMPACT ON FISHER FOLK LIVELIHOODS: EVIDENCE FROM NIGERIA AND CAMEROON

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Fishing is among the most prominent and accessible economic activities for people in inland and coastal fishing communities around the world, but particularly in sub-Saharan Africa, where it provides livelihoods and essential nutrition to over 200 million people. However, numerous compounding threats limit ocean ecosystem services along the west African coast. In particular, the combination of climate related stressors exacerbates challenges to livelihoods, food security, and wellbeing of millions of fishers and women fisherfolk. This study aims to enhance the resilience of marine ecosystem services for sustainable livelihoods under climate change scenarios; it investigates the socio-economic attributes of small-scale fishing communities in Nigeria and Cameroon, with detailed references to their vulnerability to climate change stressors, gender roles and strategies adopted for resilience to multidimensional poverty to attain sustainable livelihoods. This research adopts a mixed-methods approach, combining quantitative and qualitative methods with an ethnographic focus. It incorporates theories from the Sustainable Livelihoods Approach to address the resilience and livelihood requirements of fisherfolk. Findings indicate that fisherfolk employ diverse coping and adaptation strategies, involving a dynamic interplay of actions influenced by their available resources, skills, beliefs, socio-cultural context, and past experiences with challenging circumstances. These strategies encompass survival, economic, physiological, social, institutional, and religiosity-psychological aspects. However, the research reveal that climate change impacts disproportionately affect women fisherfolk compared to fishers across five key livelihood areas. The findings will provide key information for policies and programs to build resilience to climate change in sub-Saharan Africa, address major challenges, and empower fishing communities in Nigeria and Cameroon.

# EQUITY IN FRESHWATERS: ADDRESSING GENDERED GAPS FROM SUBSISTENCE TO COMMERCIAL FISHING IN SUB-SAHARAN AFRICA

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In sub-Saharan Africa, women are pivotal in freshwater fisheries, making indispensable contributions to food security and local economies. Their roles span from household subsistence fishing to small-scale commercial practices and cross-border trading. However, by addressing the barriers they face related to tenure, management, and conservation planning, their contributions and agency within the fisheries systems and economies could be greatly enhanced.

This study synthesizes findings from peer-reviewed articles and technical reports to unequivocally highlight gender roles in fishing practices, resource access, and decision-making. It is a crucial part of a global initiative that seeks to elevate the recognition of women's contributions to the fishing sector. Fisheries statistics clearly demonstrate that women involved in freshwater subsistence fishing are exceptionally impactful, with participation rates surpassing those of men. Remarkably, women's involvement in subsistence fishing is seven times greater than that of women engaged in small-scale commercial fishing and more than three times higher than that of women in marine subsistence fishing.

Across six selected freshwater fisheries—the African Great Lakes, Congo River Basin, West Coastal River, Volta River Basin, Nile River Basin, and the Sahel—women deploy low-capital fishing techniques such as damming, baskets, traps, and various nets (including mosquito nets) to effectively catch small fish and invertebrates in shallow waters. Often working in small groups or alongside their children, collective fishing delivers significant social, cultural, ecological and household benefits.

Women are also essential in the creation, repair, and financing of fishing gear. While post-harvest activities are dominated by women, men participate as well. However, entrenched gender and social inequalities within commercial fisheries supply chains—especially those targeting export markets—continuously challenge food security and livelihoods. Inadequate infrastructure, time limitations, restricted access to credit, and cultural norms significantly undermine women's participation and bargaining power.

While the information gathered in this research was robust, there are still gaps in information, particularly about women's subsistence fishing that is often not considered in studies on small-scale fisheries. Comprehensive research on women's roles and the fish species they target is crucial to fill critical knowledge gaps and to inform conservation planning, tenure and fishing rights and policies. Gender transformative policies, although often inadequately developed or poorly implemented, present a significant opportunity to make freshwater fisheries more gender-equitable. Furthermore, a deeper understanding of gendered livelihood strategies will enable effective changes in inclusive fisheries management and promote sustainable, resilient fisheries.