



GENDER PARTICIPATION AND ACCESS TO FISHERY VALUE CHAINS IN PARTIDO AREA, PHILIPPINES

Hazel Jean C. Pesino

Partido State University – Main Campus

Camarines Sur, Philippines

Email: hazeljean.pesino@parsu.edu.ph

Sherry A. Combis

Partido State University – Main Campus

Camarines Sur, Philippines

Email: combis.sherry@parsu.edu.ph

Angela B. Zarcedo

Partido State University – Main Campus

Camarines Sur, Philippines

Email: angela.zarcedo@parsu.edu.ph

Corresponding Author

Hazel Jean C. Pesino

Partido State University – Main Campus

Camarines Sur, Philippines

Email: hazeljean.pesino@parsu.edu.ph

Abstract

The fisheries sector is central to the livelihoods, food security, and economic development of coastal communities, yet gender dynamics within fishery value chains remain inadequately documented. This study examined gender-specific participation, economic contributions, decision-making roles, and barriers to resource access within fishery value chains in the Partido Area, Camarines Sur, Philippines. Using a cross-sectional survey design, the study gathered data from 210 respondents (107 female, 103 male) engaged in fishing, processing, and vending across thirteen coastal barangays. Researchers selected respondents through convenience sampling, and they completed a structured questionnaire covering demographic characteristics, economic participation, household decision-making, resource access, and perceived challenges. Descriptive statistics analyzed participation patterns, income distribution, and gender-differentiated experiences. Results revealed a nearly balanced gender distribution (51% female, 49% male) and a predominance of joint household decision-making (51% at the individual level), alongside widespread economic vulnerability, with 77% of households earning less than PHP 10,000 monthly. Selling (52%) was the most common economic activity, followed by catching (43%) and processing (7%), suggesting substantial participation in post-harvest, value-adding roles. While fishing equipment was the most accessible resource (54%), access to training (3%) and financial services (15%) was markedly limited. Notably, 87% of respondents did not perceive gender as a barrier to resource access, even though structural patterns in the data suggest otherwise. These findings indicate that interventions in the Partido Area should prioritize addressing systemic resource constraints — particularly access to credit, training, and markets — while continuing to monitor for normalized gender inequities. The study contributes empirical evidence to inform gender-responsive fisheries policies and community-based development strategies in the Philippines.



Keywords: *gender participation; fishery value chains; women in fisheries; household decision-making; resource access; Partido Area, Philippines*



INTRODUCTION

The fisheries sector plays a crucial role in the livelihoods, food security, and economic development of coastal communities worldwide. In the Philippines, small-scale fisheries support millions of households through fishing, processing, and trading activities that sustain local food systems and rural economies. Despite this significance, the gendered dimensions of fishery value chains—who performs which tasks, who controls the resulting income, and who makes decisions about fishery-based livelihoods—remain poorly understood relative to their importance for equitable resource management and community resilience. To address this gap, this study examines the gender-specific roles, contributions, and barriers within fishery value chains in the Partido Area, with a view toward understanding how resources are utilized and how economic benefits are distributed among community members.

Global reviews of small-scale fisheries indicate that women's contributions have historically been undercounted and undervalued in formal fishery assessments. Kleiber, Harris, and Vincent (2015), synthesizing evidence from over one hundred small-scale fisheries case studies, argued for a broader accounting of women's fisheries work beyond direct catching activities. More recent global estimates by Harper, Adshade, Lam, Pauly, and Sumaila (2020) suggest that women constitute roughly 11% of small-scale marine capture fisheries participants worldwide, harvesting an estimated 2.9 million tonnes of seafood annually with a landed value of approximately USD 5.6 billion ($\pm$ 1.5 billion) — a contribution that remains largely invisible in official fisheries statistics.

Understanding gender dynamics is increasingly recognized as essential to improving both economic outcomes and equitable resource management in agriculture and fisheries. Johnson, Kovarik, Meinzen-Dick, Njuki, and Quisumbing (2016), examining eight agricultural development projects, demonstrated that closing gender gaps in access to productive assets can meaningfully enhance household welfare outcomes. Within aquaculture and fisheries value chains specifically, Kruijssen, McDougall, and van Asseldonk (2018) proposed a five-dimension analytical framework — covering the gendered division of labor, distribution of benefits, access to and control over productive assets, social norms, and governance — for examining how gender shapes participation and outcomes across the fisheries value chain.

Comparative evidence further suggests that gender roles within fisheries and aquaculture vary considerably across geographic and cultural contexts, with women assuming more prominent roles in some communities' post-harvest and aquaculture activities while remaining more constrained by traditional norms in others (Kruijssen et al., 2018).

Within the Philippines and similar small-scale fisheries settings, women are heavily engaged in processing, marketing, and household-level fisheries management, yet these roles are frequently excluded from formal definitions of “fisher” and are consequently underrepresented in economic assessments of fishery productivity (Kleiber et al., 2015; Harper et al., 2020). This underrepresentation matters because women's involvement in small-scale fisheries has been shown to meaningfully enhance household income and food security, even as their specific contributions and economic impact remain undervalued or invisible in traditional productivity assessments.

The economic benefits of women's participation in fisheries and aquaculture continue to be constrained by systemic inequalities and cultural norms that prioritize men's involvement in these sectors. Kruijssen et al. (2018) identify unequal access to and control over productive assets as a persistent barrier across aquaculture value chains, while Ramírez and Ruben (2015), studying the Chilean salmon industry, found that gendered labor-market structures continue to limit women's bargaining power and economic mobility even within commercially dynamic fisheries sectors. Addressing these barriers is therefore critical to enhancing gender equity, improving fisheries productivity, and strengthening household economic outcomes in the Partido Area. By quantifying gender-



differentiated participation, income, decision-making, and resource access within local fishery value chains, this study seeks to clarify the dynamics underlying gendered participation and its economic implications. The findings are intended to provide empirical evidence to inform gender-inclusive fisheries policies and development strategies, contribute to strategies for improving food security and nutritional outcomes in the Partido Area, and support a more inclusive approach to resource management and economic development in the local fisheries and agriculture sectors.

Objectives

Guided by this rationale, the study pursued four specific objectives: (1) to analyze demographic characteristics and participation patterns of fisheries stakeholders by gender; (2) to assess economic contributions and income distribution across different fisheries activities; (3) to examine the decision-making roles and gender dynamics within fisheries households; and (4) to identify barriers to resource access and perceived gender-related challenges.



METHODOLOGY

Research Design

This study employed a cross-sectional survey design to examine gender participation, economic contributions, decision-making roles, and resource access within fishery value chains in the Partido Area. The descriptive design allowed for the systematic characterization of participation patterns, income distribution, and gender-differentiated experiences at a single point in time.

Research Locale

Data were collected from thirteen coastal barangays across the Partido Area in Camarines Sur, Philippines: Sabang, San Jose; Dolo, San Jose; Telegrafo, San Jose; Tagas, San Jose; Soledad, San Jose; Dahat, Lagonoy; Nato, Sagnay; San Antonio, Tigaon; Casuna, Tigaon; Poblacion, Tigaon; San Isidro, Goa; Gimaga, Goa; and the town proper of Goa, Camarines Sur. These barangays represent coastal communities with active engagement in small-scale fishing, fish processing, and fish vending.

Respondents and Sampling Procedure

A total of 210 respondents (107 female, 103 male) engaged in fisheries-related activities — including catching, processing, and vending — participated in the study. Respondents were selected based on their active participation in the local fish value chain (e.g., vending, processing, catching). Respondents were further categorized by education level, age group, occupation type, and years of experience in the fisheries sector.

Research Instrument

Data were collected using a structured questionnaire covering five domains: demographic information, economic participation, household decision-making roles, access to fisheries-related resources, and perceived challenges.

Data Analysis

Descriptive statistical analysis — frequencies and percentages — was used to examine participation patterns, income distribution, and gender-differentiated experiences across the fisheries value chain.



RESULTS

The study revealed a complex socio-economic landscape within the Partido Area's fisheries sector, characterized by persistent economic vulnerability, evolving gender dynamics, and significant resource access challenges that collectively shape participation patterns and livelihood outcomes. Findings are presented below according to the study's four objectives.

Demographic Characteristics and Participation Patterns

Table 1. Gender Distribution of Respondents (N = 210)

Gender	Percentage
Female	51%
Male	49%

Table 2. Educational Attainment of Respondents

Educational Attainment	Percentage
Elementary education	40%
No formal education	9%
Tertiary education	7%
Other / not specified in original data	44%

Table 3. Age Distribution of Respondents

Age Bracket	Percentage
31–40 years	35%
41–50 years	22%
Other age brackets / not specified in original data	43%

Table 4. Occupation Type of Respondents

Occupation	Percentage
Sellers	50%
Fishers	44%
Processors	6%

Findings revealed a relatively balanced gender distribution among fisheries stakeholders in the Partido Area, with women comprising 51% of respondents and men comprising 49% (Table 1). Educational attainment varied considerably: two in five respondents (40%) had only elementary education, while 9% had no formal education and just 7% had reached tertiary education (Table 2). In terms of age, the largest concentration of respondents fell within the 31–40 bracket (35%), followed by the 41–50 bracket (22%) (Table 3). Occupationally, sellers were the largest group (50%), followed by fishers (44%), with processors comprising a smaller segment (6%) of respondents (Table 4).

Economic Contributions and Income Distribution

Table 5. Primary Economic Activity of Respondents

Economic Activity	Percentage
Selling	52%
Catching	43%
Processing	7%

Table 6. Years of Experience in the Fisheries Sector

Years of Experience	Percentage
More than 10 years	43%
6–10 years	27%
1–5 years	24%
Other / not specified in original data	6%

Table 7. Weekly Working Hours

Weekly Working Hours	Percentage
Less than 10 hours	25%
10–20 hours	30%
Other / not specified in original data	45%

Table 8. Monthly Household Income

Monthly Income (PHP)	Percentage
Less than 5,000	43%
5,001–10,000	34%
Above 10,000 / not fully specified in original data	23%

In terms of economic activity, selling was the most common activity among respondents (52%), followed by catching (43%) and processing (7%) (Table 5). Experience levels varied considerably: 43% of respondents had more than ten years of experience in the fisheries sector, 27% had six to ten years, and 24% had one to five years (Table 6). Weekly working hours were similarly varied, with 25% of respondents working less than ten hours and 30% working ten to twenty hours weekly (Table 7).

Income analysis revealed substantial disparities across fishing households in the Partido Area. Forty-three percent of respondents earned less than PHP 5,000 monthly, and 34% earned between PHP 5,001 and PHP 10,000 monthly — together indicating that 77% of fisheries households in the study earned less than PHP 10,000 (approximately USD 170) per month (Table 8). This concentration of low household incomes points to widespread economic vulnerability within the sector, potentially constraining households' ability to invest in improved equipment, diversify livelihood activities, or build resilience against market fluctuations and environmental shocks. The prevalence of such low incomes may perpetuate cycles of poverty and limit the sector's capacity for innovation and growth, with implications for both current livelihoods and future sector viability. The dominance of selling over catching activities further suggests substantial participation in post-harvest, value-adding activities — a pattern that may offer more flexible working arrangements, particularly for women, but potentially lower profit margins given sellers' position downstream in the value chain. This concentration in downstream activities may also reflect limited access to fishing assets and to traditionally male-dominated catching roles, offering opportunities for skill development in marketing and customer relations while creating dependencies on fish suppliers and limiting direct control over product quality and pricing.



Decision-Making Roles and Gender Dynamics

Table 9. Household-Level Decision-Making Patterns

Decision-Making Pattern	Percentage
Joint decision-making	40%
Male primary decision-maker	20%
Other / not specified in original data	40%

Table 10. Individual-Level Decision-Making Roles

Decision-Making Role	Percentage
Joint decision-making	51%
Sole decision-maker	41%
Minimal involvement	3%
Other / not specified in original data	5%

Decision-making patterns within fisheries households revealed a nuanced, mixed-gender picture. At the household level, joint decision-making was the most common pattern (40%), followed by male-primary decision-making (20%) (Table 9). When decision-making roles were examined at the individual level, joint decision-making again predominated (51%), followed by sole decision-making (41%), with minimal involvement in decision-making reported by a small share of respondents (3%) (Table 10). The prevalence of joint decision-making suggests a relatively collaborative household dynamic that challenges traditional assumptions about strictly patriarchal structures in fishing communities. However, the continued presence of male-primary decision-making, alongside comparatively limited reporting of female sole decision-making, suggests that ultimate authority over fisheries-related decisions may still skew toward men even as consultative, joint decision-making has become more common. This pattern may reflect a transitional stage in gender relations, in which women's economic contributions are increasingly recognized and consulted, while traditional authority structures remain partially intact.

Barriers to Resource Access and Perceived Challenges

Table 11. Access to Fisheries-Related Resources

Resource	Access Rate
Fishing equipment	54%



Resource	Access Rate
Market access	25%
Financial resources	15%
Training and workshops	3%

Table 12. Perceived Effect of Gender on Resource Access

Perception	Percentage
Gender does not affect resource access	87%
Gender is perceived as a barrier	11%
Other / not specified in original data	2%

Table 13. Most Significant Challenges Reported

Challenge	Percentage
Limited resources	48%
Market issues	37%
Lack of training	3%
Gender discrimination	3%
Other / not specified in original data	9%

Table 14. Support Preferences of Respondents

Support Preference	Percentage
Access to financial resources	50%
Training programs	29%
Improved market access	20%



Access to fisheries-related resources was highly uneven. Fishing equipment had the highest reported access rate (54%), followed by market access (25%) and financial resources (15%), while access to training and workshops was minimal (3%) (Table 11). Notably, the large majority of respondents (87%) did not believe that gender affected their access to resources, while only 11% perceived gender as a barrier (Table 12). In terms of the most significant challenges faced, limited resources (48%) and market issues (37%) were most frequently cited, while lack of training (3%) and gender discrimination (3%) were less commonly reported (Table 13). When asked about support preferences, access to financial resources was the top priority (50%), followed by training programs (29%) and improved market access (20%) (Table 14). This distribution suggests that basic productive assets, such as fishing equipment, are more readily available than development-oriented resources — training and financial services — that could enhance productivity and income generation. The low reported perception of gender discrimination contrasts with the structural patterns evident elsewhere in the data, suggesting a potential normalization of gender-differentiated experiences within the community.



DISCUSSION

The near-balanced gender distribution and prevalence of joint decision-making observed in this study point to a more gender-integrated fisheries sector in the Partido Area than traditional assumptions about fisheries as a male-dominated domain might suggest (cf. Kleiber et al., 2015). At the same time, the wide variation in educational attainment — with a substantial share of respondents having only elementary education or no formal education, and few reaching tertiary levels — signals a workforce with limited access to formal education, which may constrain diversification into higher-value or more technical roles within the value chain.

The concentration of low incomes identified in this study — with 77% of households earning less than PHP 10,000 monthly — indicates substantial economic vulnerability within the Partido Area's fisheries sector, consistent with global evidence that small-scale fisheries workers, and women in particular, often occupy lower-return segments of the value chain (Harper et al., 2020). The dominance of selling over catching activities among respondents aligns with the broader literature's finding that women are more heavily represented in post-harvest, value-adding fisheries work, which frequently yields lower and less secure returns than primary catching activities (Kleiber et al., 2015; Kruijssen et al., 2018). This pattern suggests that women's economic contributions, while substantial, may be structurally positioned to yield comparatively limited financial returns — a dynamic with direct implications for household income security and, by extension, food security in the Partido Area.

The mixed picture of decision-making found in this study — extensive joint decision-making alongside a persistent, if reduced, pattern of male-primary authority — is broadly consistent with international evidence on gendered household decision-making in fisheries and agriculture. Ramírez and Ruben (2015), for example, found that even in commercially advanced fisheries sectors, women's growing economic participation does not automatically translate into equivalent decision-making authority. This may reflect a transitional stage in gender relations within the Partido Area, in which women's economic contributions are increasingly recognized and consulted, while men continue to hold disproportionate final decision-making authority in many households.

The disjuncture between the low proportion of respondents who perceived gender as a barrier to resource access (11%) and the structural patterns evident in the data — particularly the concentration of respondents in lower-return selling and processing roles and the very limited access to training reported across the sample (3%) — suggests that gender-differentiated constraints in the Partido Area may be normalized rather than absent. This pattern echoes Kruijssen et al.'s (2018) observation that restrictive social norms often operate implicitly, shaping access to assets, training, and decision-making without being consciously identified as gender-based discrimination by those affected. Rather than reflecting an absence of gender-related constraints, the low perceived-discrimination rate may instead indicate that inequitable access to training, credit, and markets has become an accepted feature of everyday fisheries livelihoods in the Partido Area.

CONCLUSION AND RECOMMENDATIONS

This study found that the fisheries sector in the Partido Area is characterized by relatively balanced gender participation and predominantly collaborative household decision-making, set against a backdrop of significant economic vulnerability, uneven resource access, and limited support infrastructure. Although structural inequalities — particularly the concentration of respondents in lower-return, post-harvest activities and universally limited access to training — appear to persist, these inequalities are largely unrecognized or normalized within the community, as reflected in the low proportion of respondents who perceived gender as a barrier. These findings suggest that interventions in the Partido Area should prioritize addressing systemic resource constraints that affect all fisheries stakeholders, while remaining attentive to the ways in which these constraints may disproportionately affect women's economic mobility.



Accordingly, the researchers recommend the following:

1. Develop accessible microfinance and credit programs specifically designed for fisheries stakeholders, particularly those engaged in selling and processing.
2. Strengthen market infrastructure — including direct market access mechanisms — to reduce fisheries households' dependence on intermediaries.
3. Establish a comprehensive training program covering technical fishing and processing skills, business management, and market linkages, given the very limited current access to training (3%).
4. Facilitate access to modern fishing equipment and processing technologies through cooperative arrangements and subsidy programs.
5. Integrate these findings into broader fisheries management and coastal development policies, including support for the development of strong fisheries cooperatives and educational pathways connecting formal education with fisheries sector opportunities.



REFERENCES

- Harper, S., Adshade, M., Lam, V. W. Y., Pauly, D., & Sumaila, U. R. (2020). Valuing invisible catches: Estimating the global contribution by women to small-scale marine capture fisheries production. *PLoS ONE*, 15(3), e0228912. <https://doi.org/10.1371/journal.pone.0228912>
- Harper, S., Grubb, C., Stiles, M., & Sumaila, U. R. (2017). Contributions by women to fisheries economies: Insights from five maritime countries. *Coastal Management*, 45(2), 91–106. <https://doi.org/10.1080/08920753.2017.1278143>
- Johnson, N. L., Kovarik, C., Meinzen-Dick, R., Njuki, J., & Quisumbing, A. (2016). Gender, assets, and agricultural development: Lessons from eight projects. *World Development*, 83, 295–311. <https://doi.org/10.1016/j.worlddev.2016.01.009>
- Kassam, L., & Dorward, A. (2017). A comparative assessment of the poverty impacts of pond and cage aquaculture in Ghana. *Aquaculture*, 470, 110–122. <https://doi.org/10.1016/j.aquaculture.2016.12.017>
- Kleiber, D., Harris, L. M., & Vincent, A. C. J. (2015). Gender and small-scale fisheries: A case for counting women and beyond. *Fish and Fisheries*, 16(4), 547–562. <https://doi.org/10.1111/faf.12075>
- Kruijssen, F., McDougall, C. L., & van Asseldonk, I. J. M. (2018). Gender and aquaculture value chains: A review of key issues and implications for research. *Aquaculture*, 493, 328–337. <https://doi.org/10.1016/j.aquaculture.2017.12.038>
- Macusi, E. D., Maynawang, I. S., Katikiro, R. E., Suyo, J. G., & Macusi, E. S. (2023). Women lead small-scale fisheries to sustainability in Surigao del Sur, Philippines. *Marine Policy*, 155, 105768. <https://doi.org/10.1016/j.marpol.2023.105768>
- Masset, E., Haddad, L., Cornelius, A., & Isaza-Castro, J. (2012). Effectiveness of agricultural interventions that aim to improve nutritional status of children: Systematic review. *BMJ*, 344, d8222. <https://doi.org/10.1136/bmj.d8222>
- Morgan, M., Terry, G., Rajaratnam, S., & Pant, J. (2017). Socio-cultural dynamics shaping the potential of aquaculture to deliver development outcomes. *Reviews in Aquaculture*, 9(4), 317–325. <https://doi.org/10.1111/raq.12137>
- Phillips, M., Subasinghe, R. P., Tran, N., Kassam, L., & Chan, C. Y. (2016). Aquaculture big numbers (FAO Fisheries and Aquaculture Technical Paper No. 601). Food and Agriculture Organization of the United Nations.
- Ramírez, E., & Ruben, R. (2015). Gender systems and women's labor force participation in the salmon industry in Chiloé, Chile. *World Development*, 73, 96–104. <https://doi.org/10.1016/j.worlddev.2014.11.003>
- Ramirez, P. J. B., Narvaez, T. A., & Santos-Ramirez, E. J. (2020). Gender-inclusive value chains: The case of seaweed farming in Zamboanga Peninsula, Philippines. *Gender, Technology and Development*, 24(1), 110–130. <https://doi.org/10.1080/09718524.2020.1728084>
- Torell, E., Castro, J., Lazarte, A., & Bilecki, D. (2021). Analysis of gender roles in Philippine fishing communities. *Journal of International Development*, 33(1), 233–255. <https://doi.org/10.1002/jid.3520>