

Fish Markets and Coastal Livelihoods in Vietnam: The Case of Giao Hai, Nam Dinh, Vietnam

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Abstract

This study examined the role of fish markets in sustaining and transforming coastal livelihoods in northern Vietnam, focusing on the case of Giao Hai, Nam Dinh. A mixed qualitative approach combining 27 in-depth interviews, participant observations, and secondary data was used. Key analytical lenses included the trader–fisher nexus, gendered division of labor, and informal institutional arrangements. The findings indicated that the Giao Hai fish market serves as both an economic hub and a social institution linking harvesting, trading, and processing through informal governance and social capital. While traders' advances and kinship-based ties provided stability, they also generated asymmetric dependencies and reproduced gender inequalities in access to income and decision-making. Emerging challenges included declining marine resources, price volatility, competition from external traders, and limited cold storage facilities. The study proposes context-specific policy solutions to improve the fishers' bargaining power, expand their livelihood options, and integrate local markets into sustainable fisheries governance.

Keywords

Small-scale fisheries, power, gender, social capital, informality

Introduction

Small-scale fisheries in Vietnam play a vital role in sustaining the livelihoods of millions of coastal residents, providing essential nutrition and generating both direct and indirect employment through support services, processing, and trade (Armitage & Marschke, 2013; FAO, 2021). However, the sustainability of these livelihoods is increasingly challenged by resource depletion, market volatility, and climate-related risks that threaten both ecological and socio-economic stability (World Bank, 2023). These pressures interact with

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institutional and gender dynamics that shape how benefits and risks are distributed along the fisheries value chain.

In this paper, three key concepts framed the analysis. “Fish markets” are understood not only as sites of commodity exchange but also as social arenas where trust, credit, and reputation structure economic behaviors (Granovetter, 1985). “Livelihoods” refer to the assets, capabilities, and activities that enable people to make a living (Allison & Ellis, 2001). “Organizing livelihoods” denotes the collective and institutional processes through which market, social, and ecological relations are coordinated to sustain these activities over time. Integrating these perspectives highlights that informal institutions and social capital—credit networks, kinship, and reputation—are central to livelihood resilience in small-scale fisheries. Recent scholarship on hybrid governance showed that informal norms and formal rules often coexist and jointly shape market behavior, compliance, and adaptive strategies (Ostrom, 1990; Cohen *et al.*, 2021). Situating the Giao Hai fish market within these wider debates allows for a deeper understanding of how coastal livelihoods are structured and transformed under environmental and economic changes.

In northern coastal regions, traditional fish markets represent a central node within the fisheries system, serving as points where marine products are aggregated, sorted, and distributed to wider consumer markets. Beyond their economic function, fish markets also act as “social spaces” in which economic relations are embedded in social capital, informal institutions, and community norms (Granovetter, 1985; Nguyen & Ruddle, 2015). These elements directly shape bargaining power and adaptive strategies, and benefit distribution among the key actors: traders, boat owners, hired laborers, and female retailers.

Research on coastal fisheries in Vietnam has traditionally focused on production, technology, and management policies (Pomeroy *et al.*, 2009), while social dimensions—such as power relations, dependency linkages, and gendered divisions of labor—remain underexplored at the micro level. The lack of such perspectives risks

producing ineffective policies that overlook informal mechanisms governing daily practices in fishing communities.

Accordingly, this study focused on two central research questions. First, how do fish markets, through their social and institutional structures, shape coastal community livelihoods in northern Vietnam? And second, in what ways do trader–fisher relations, gendered labor divisions, and informal rules affect power dynamics and adaptive strategies in small-scale fisheries?

By integrating climate change considerations from the outset, this analysis situated Giao Hai’s market within broader debates on sustainability transitions in small-scale fisheries. The study was expected to contribute to furthering our understanding of how traditional institutions mediate adaptation and inequality in a transforming socio-ecological system.

Materials and Methods

Research Site

Nam Dinh is a coastal province in the Red River Delta, with approximately 72 km of shoreline and three main coastal districts: Giao Thuy, Hai Hau, and Nghia Hung. The province has a long tradition of marine capture and aquaculture, contributing significantly to the local economy. As of 2021, Nam Dinh reported 1,874 fishing vessels with a combined capacity of 305,999 metric horsepower (CV). Among these, vessels with ≥ 90 CV accounted for the majority, reflecting a shift from nearshore to offshore fishing (Nam Dinh Statistical Yearbook, 2023).

The Giao Hai fish market (Figure 1) emerged in the late 1990s, coinciding with the transition from small-scale near-shore fishing to offshore fishing with larger, mechanized boats. Initially, trading was spontaneous, taking place on the beach near the river mouth where fishers sold directly to traders. In the early 2000s, the local government designated a centralized landing and trading site, which facilitated smoother operations for both traders and wholesalers.

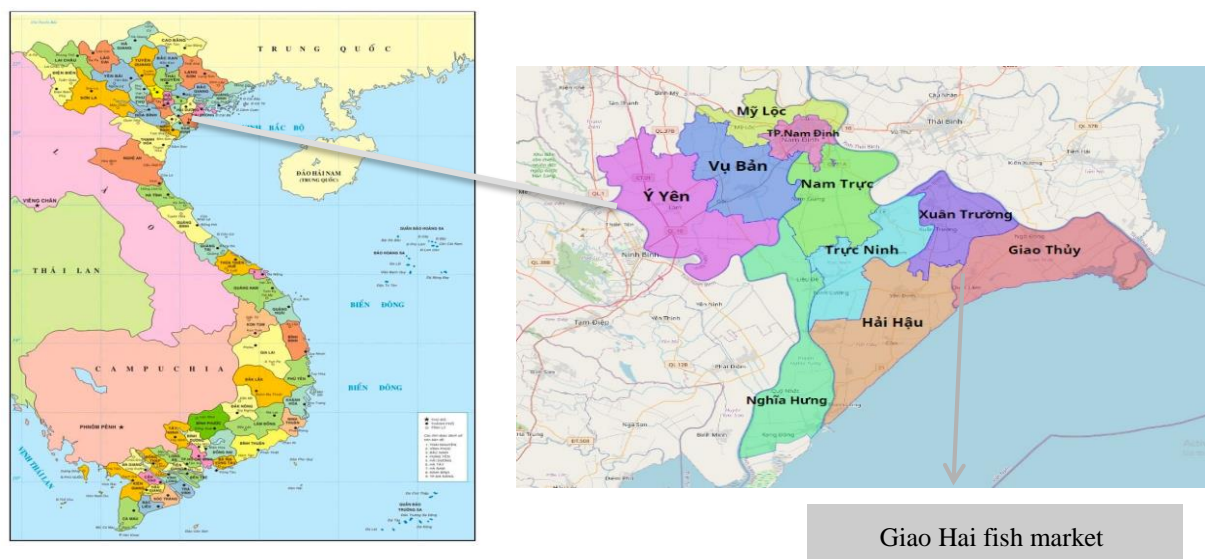


Figure 1. Location of the Giao Hai Fish Market

Since then, Giao Hai has become the largest fish market in Giao Thuy, receiving landings not only from local fleets but also from neighboring provinces such as Thai Binh and Thanh Hoa.

The market's growth has been closely tied to vessel mechanization and the expansion of fishing grounds, particularly under state-supported offshore modernization programs. Today, the Giao Hai market serves as a pivotal link in the regional seafood value chain. It functions not only as a place of commodity exchange but also as a social arena where distinctive economic-social relations are established and maintained among traders, boat owners, middlemen, and fishers.

Selecting Nam Dinh, and specifically Giao Hai, as the research site allowed for a nuanced understanding of both the dynamics of marine capture and the socio-economic interactions that underpin traditional coastal fish markets. In addition to drawing on household survey data, this case study primarily employed qualitative fieldwork methods, combining ethnographic observations with semi-structured interviews to uncover the social and economic mechanisms operating at the Giao Hai market.

Data collection methods

The study employed a mixed-methods qualitative design, combining semi-structured interviews, household survey data, and

participant observations. This research forms part of a larger project on gender and value chains in Nam Dinh fisheries.

Quantitative data were drawn from a household survey of 157 households (70 boat-owning and 87 trading/processing households), while qualitative data were derived from 27 semi-structured interviews representing the key actor groups: six traders, seven boat owners, eight hired laborers, and six female retailers. Purposive sampling was used to ensure diversity across gender, occupational roles, and dependence on fishing. This approach allowed for a detailed understanding of intra-community variation while maintaining the analytical focus on market relations.

All interviews were conducted between March and June 2025 and lasted 45–90 minutes each. Interviews were audio-recorded with informed consent, transcribed, and anonymized. The interview guides covered five dimensions: (1) income sources and employment, (2) credit and market relations, (3) decision-making and gender roles, (4) adaptation strategies, and (5) perceptions of change.

Participant observations took place at the market, landing sites, and local fishery club meetings. Field notes recorded interactional patterns, pricing behaviors, and social exchanges that could not be captured through interviews alone.

To measure the “role of fish markets” in organizing livelihoods, the study employed the following indicators: employment opportunities and labor division (by gender and occupation); household income and capital turnover; credit access and financial dependency (share of households receiving trader advances); participation in decision-making and social networks; and access to information and adaptive practices under climate stress.

The conceptual framework integrated three complementary approaches: (1) the livelihoods approach (Allison & Ellis, 2001) emphasizing asset interactions; (2) the trader–fisher nexus (Johnson, 2010; Ruddle, 2014) focusing on dependency and credit networks; and (3) gendered power relations (Frangoudes & Gerrard, 2019) linking labor roles to decision-making and income control. **Figure 2** illustrates how these three analytical pillars interact to shape market coordination, access to resources, and power relations in the Giao Hai fish market.

The livelihoods approach provided a lens to examine how natural, financial, physical, human, and social assets enable or constrain household strategies. Social capital included trust, kinship ties, reciprocity, and informal rules that mediate transactions and lower risks within a volatile small-scale fisheries environment. The trader–fisher nexus

explained the credit–market linkages and asymmetrical dependencies that influence bargaining power and income distribution.

By integrating these perspectives, the framework captured how informal governance mechanisms link market processes with gendered labor roles, adaptation strategies, and livelihood outcomes. This guided the thematic coding and interpretation of the empirical findings across the trader–fisher–laborer–retailer system.

Data analysis

Data processing followed a rigorous coding and triangulation protocol. Transcripts were coded thematically using MaxQDA software. Coding combined deductive categories derived from theoretical concepts (social capital, dependency relations, gendered division of labor, informal institutions) and inductive themes emerging from the field data. Triangulation was achieved by comparing the findings from the interviews, observations, and survey results. Inter-coder reliability was ensured through double-coding of 20% of the transcripts. This approach enhanced transparency and replicability of the qualitative analysis, addressing reviewers’ concerns on methodological rigor.

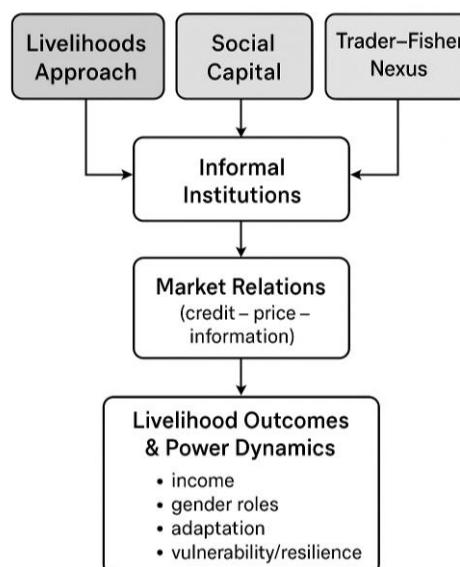


Figure 2. Integrated Conceptual Framework for Analyzing Market–Livelihood Relations in Giao Hai

Results and Discussion

Giao Hai fish market as a distribution center and hub in the coastal fisheries value chain

The Giao Hai fish market occupies a central position in the seafood distribution network of Nam Dinh's coastal zone. Its structural configuration reflects the typical features of small-scale, socially embedded markets in northern Vietnam. Approximately 30 to 50 boats land at the market each day during the peak season, managed by around 180 regular traders who maintain long-standing business ties with local fishers. The annual trading volume reaches between 7,000 and 8,000 tons, consisting mainly of fish, squid, mantis shrimp, and crabs. The organization of the market followed the Structure–Conduct–Performance (SCP) framework commonly used in agricultural and fisheries market analyses. Structurally, it is characterized by numerous small and medium traders rather than large wholesalers. Ownership and access were shaped by kinship and neighborhood ties, with limited external capital or corporate involvement. The conduct of market actors relied heavily on informal norms and personal trust. Transactions were rapid—often concluded within minutes after a vessel lands its catch—based on negotiated prices rather than auctions. Such immediacy stemmed from the perishability of seafood and the lack of modern preservation facilities. The market's performance, therefore, combined high speed and low transaction costs with structural vulnerability. While embedded social capital ensured coordination and reduces opportunism,

the absence of formal contracts and weak infrastructure constrain scalability and long-term efficiency. This configuration supports North's (1991) argument that informal institutions can substitute for formal rules but at the cost of expansion and modernization potential.

Table 1 summarizes the key operational indicators of the Giao Hai fish market, illustrating the rhythm and intensity of daily activities.

The temporality of exchange played a decisive role in market performance. Large volumes handled within short time frames were repeatedly emphasized by traders as a critical survival factor. *“As soon as the boat reaches the shore, the deal must be closed immediately; if you wait until the catch is unloaded, it may already be gone”* (TL-05, female, 42). This illustrates the phenomenon of a “time-sensitive market” (Armitage & Marschke, 2013), in which prices and bargaining power were shaped within narrow time windows, generating both pressure and opportunities for market actors. In comparison with the national fisheries sector, the average daily landing volume at Giao Hai market (8–10 tons day⁻¹) was modest, accounting for roughly 0.6–0.8 percent of the Red River Delta's total marine catch and less than 0.2 percent of Vietnam's national output in 2022 (*Vietnam Fisheries Administration, 2023*). Observations at Giao Hai suggested a comparatively higher transaction density and more frequent trading sessions than are typical in larger wholesale centers, though comparable quantitative data are limited. Giao Hai also demonstrated a faster trading rhythm, reflecting the efficiency and

Table 1. Basic information on the Giao Hai fish market

Indicator	Average value	Characteristics
Number of daily market sessions	2	05:00–07:00; 13:30–15:30
Trading volume per session	3–5 tons	Peak season
Number of boats landing per day	30–50 boats	Includes nearshore and midshore vessels
Income of loading laborers	300,000–500,000 VND day ⁻¹ (12–20 USD day ⁻¹)	Daily wage labor
Ice consumption per session	4–6 tons	Block ice and crushed ice
Seafood price range	Variable	Depends on size and season
Premium-quality outlets		Provincial restaurants, formerly exports to China

compactness typical of northern small-scale markets. This stemmed from the relatively short distance between nearshore fishing grounds and the market, which reduces transportation time, preserves product freshness, and accelerates capital turnover. Such dynamics aligned with the theory of “asset turnover in small-scale fisheries,” where shorter intervals between harvest and sale lower risks and increase profitability (Nguyen & Ruddle, 2015).

Seafood prices fluctuated not only by size but also by freshness and targeted markets. For instance, first-class mantis shrimp fetched 110,000-120,000 VND kg⁻¹ and were immediately sold to provincial restaurants, while third-class shrimp (40,000-50,000 VND kg⁻¹) were primarily sold in local markets. This grading system generated stratification within the same trading space, as access to premium products was often reserved for large-scale traders or those with trusted relationships with boat owners.

Thus, the Giao Hai market operated not only as a venue for seafood trade but also as a space where economic transactions were embedded in social relations, cultural practices, and interpersonal trust. This embeddedness explains the persistence of practices such as advance credit, deferred payments, and catch-sharing arrangements, which may not conform to pure market logic but remain crucial for sustaining livelihoods and stabilizing the fisheries value chain at the community level.

Social networks and financial–market linkages

The relationship between fishers and traders at Giao Hai epitomizes a patron–client system based on mutual dependence and social embeddedness. This structure has been well documented in central and southern Vietnam (Ruddle, 2014; Nguyen & Ruddle, 2015), but the case of Giao Hai revealed notable differences.

Survey data (**Table 2**) show that 50% of boat-owning households reported borrowing or receiving advances from traders before fishing trips, compared with only 23% of business-oriented households (non-fishing). A chi-square test ($\chi^2 = 12.44$; $P < 0.001$) confirmed this statistically significant difference, highlighting a higher level of financial dependence among households directly engaged in fishing.

Before each trip, many fishers receive advances ranging from 3-7 million VND to cover fuel, ice, and food. Once indebted, they are obliged to sell their catch to the advancing trader, typically at prices 2-5% below the market rate. This margin is relatively modest compared to central Vietnam, where credit debt often reduces fishers’ returns by 10-15% (Armitage & Marschke, 2013). The main reason was that fishing in Giao Hai is mostly nearshore (2-3 day trips) with lower operational costs, allowing fishers to sustain faster capital turnover and reduced dependence.

Importantly, these dependency relations were reinforced not only by economic necessity but also by social capital. Traders and fishers were often bound by kinship, village ties, or long-standing acquaintances enabling trust-based lending without formal documentation. *“We’ve been doing business for years, mostly among relatives. If I need an advance before a trip, I just call them. But when I land a good catch, I must prioritize selling to them. There are many forms—sometimes if they provide long-term advances, I guarantee them first access to my catch.”* (CT-02, male, 55).

Informal institutions based on personal trust can lower transaction costs and maintain stability in volatile markets (North, 1990; North, 1991). Moreover, beyond local traders, the Giao Hai market also attracts buyers from neighboring provinces such as Thai Binh, Thanh Hoa, and Ninh Binh. *“When I have good mantis shrimp, my regular buyers from out of town will call ahead, and I’ll go straight to the boats to secure*

Table 2. Household participation in credit/advance arrangements

Household type	With loans/advances (%)	Without loans/advances (%)	χ^2	df	P-value
Boat-owning households	50.0	50.0	12.44	1	<0.001
Business households	23.0	77.0	—	—	—

the catch” (female trader, 45). This indicates the expansion of dependency networks beyond local boundaries, intensifying competition and reshaping the balance of power within the value chain. Importantly, these networks were not gender-neutral: access to credit, market information, and trading opportunities often intersect with household gender roles, shaping who negotiates, who manages income, and who bears financial risks. This intersection provides the basis for examining the gendered division of labor within the Giao Hai market.

Gendered division of labor and power structures in the value chain

At Giao Hai, the division of labor was distinctly gendered, consistent with patterns documented by Kleiber *et al.* (2015) and Frangoudes & Gerrard (2019): men dominate harvesting and heavy transport, while women primarily handle sorting, preliminary processing, and retail sales.

Survey data from 2025 further illustrated these differences across household types. Among boat-owning households, 78.6% of the principal laborers were men, 0% were women, and 21.4% involved both genders working together. In contrast, in business households (non-fishing), women accounted for 55.3% of the main laborers, men only 12.9%, while 31.8% of households reported joint participation by both genders.

These activities supplemented household income and reduce vulnerability during off seasons, yet they rarely translate into authority over resource allocation. Approximately two-thirds of the surveyed women stated they had “partial or no say” in major investment decisions such as equipment purchase or credit use.

Figure 3 illustrates these asymmetries. Men retained control over strategic financial decisions on boat maintenance, gear purchase, or large loans while women manage the day-to-day spending and marketing. Such a division reflected a complex form of negotiated patriarchy, where women exert operational influence but limited strategic authority. “*I handle money every day, but when it comes to buying engines or new nets, my husband decides,*” (BL-05, age 38). “*We both discuss things, but when it comes to dealing with officials, it’s always him who attends the meetings,*” another respondent explained (TH-04, age 41).

These accounts demonstrate that gendered social capital was bifurcated: women maintained dense local peer networks that support trade and information sharing, while men access institutional networks, cooperatives, local authorities, and credit providers where formal power resides. The coexistence of these two spheres sustained market functionality but perpetuates unequal access to resources and recognition. This finding aligns with recent

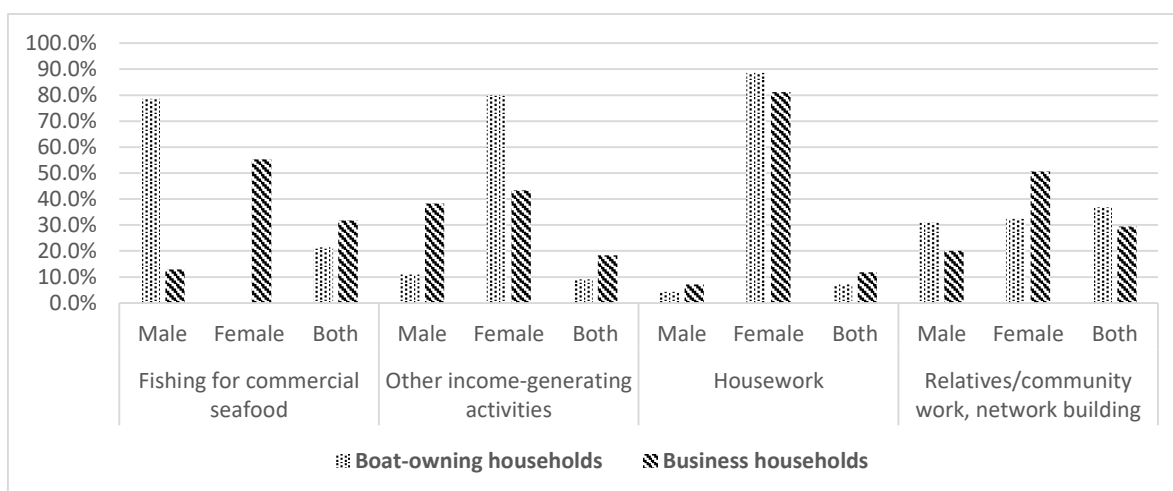


Figure 3. Decision-making power over key household activities (%)

Source: Household survey (2025)

scholarship emphasizing that economic participation alone does not guarantee empowerment (Kleiber *et al.*, 2017; Frangoudes & Gerrard, 2019).

Socio-Economic impacts and the restructuring of coastal livelihoods

The Giao Hai fish market functions not only as a site of commodity exchange but also as a livelihood system in the sense described by Scoones (1998) and Allison & Ellis (2001), where natural, human, social, and financial capitals intersect, restructuring labor relations and redistributing benefits.

In terms of direct income, the market creates employment opportunities for multiple actor groups. Porters and loaders, who are mainly young men or migrant workers from neighboring provinces, earn daily wages of 300,000–500,000 VND (12–20 USD) during the peak season (March–August). Although relatively high compared with rural non-farm wages, the seasonal nature of this work forces them to seek alternative jobs during stormy months. This reflects the livelihood vulnerability described by Béné (2003), where income sources are highly dependent on natural variability.

For large-vessel owners (over 100 CV), monthly profits during favorable seasons may reach 80–120 million VND (320–480 USD). By contrast, small-scale vessels (24–32 CV) earn only 500,000–1,000,000 VND per trip (20–40 USD), indicating significant economic stratification within the fishing community. This mirrors Armitage & Marschke's (2013) observation of polarization in Vietnam's small-scale fisheries. While higher incomes are concentrated among a minority of large vessel owners, the majority of small boats and hired laborers remain highly vulnerable. Unlike southern Vietnam—where large vessel owners are closely tied to processing enterprises—Giao Hai's boat owners often maintain multi-channel trading relations, selling to different traders depending on price conditions.

Women involved in small-scale retail and preliminary processing represent another group indirectly benefiting from the market. While

their absolute profits are smaller than those of large traders, they maintain autonomy over pricing and distribution. *"Retailing brings smaller margins, but it's more flexible. I can buy at dawn, sell by noon, and still have the afternoon for household work."* (BL-05, female, 38). This supports Frangoudes & Gerrard's (2019) argument that a woman's participation in post-harvest activities contributes not only to household income but also to the consolidation of social capital.

From a community perspective, the fish market also strengthens social cohesion. Kinship, neighborhood, and occupational ties enable mutual support in emergencies (engine failure, net entanglement, storms, or sharing knowledge of fishing grounds). Many fishers emphasized the role of cooperatives and fisheries clubs as platforms for sharing market prices, weather forecasts, and emergency assistance. This aligns with Ostrom's (1990) framework of informal institutions that enable communities to self-govern resources and distribute risks.

Another distinctive feature of Giao Hai is the moderate prevalence of debt bondage. According to a local commune officer, only about 20–30% of vessels rely on long-term trader advances, compared with 80–90% in Kien Giang (Armitage & Marschke, 2013). This is largely due to the short nearshore fishing cycles, lower costs, and rapid local market absorption, which allow fishers greater independence from credit-based dependency.

Challenges and transformations in the context of integration and climate change

Despite generating significant socio-economic benefits, the Giao Hai fish market faces multiple challenges, ranging from resource fluctuations to structural shifts in market dynamics.

First, dependence on trader-based advance credit channels limits the fishers' bargaining power, particularly during low seasons. This reflects the asymmetric nature of dependency relations, in which weaker actors (fishers) must accept unfavorable terms of trade in exchange for guaranteed market access (Béné, 2003; Ruddle, 2014).

A SWOT (strengths, weaknesses, opportunities, and threats) analysis (**Figure 4**) highlights that while Giao Hai possesses considerable strengths—such as its strategic location near fishing grounds, embedded social networks, and rapid capital turnover—it also suffers from structural weaknesses, particularly in terms of its inadequate preservation infrastructure, dependence on informal finance, lack of contractual security, and difficulties accessing formal loans.

At the same time, emerging opportunities include the potential for community-based

tourism linked to the fish market, market diversification through traceability and e-commerce, and supportive government policies for sustainable fisheries. Yet long-term threats remain pronounced: declining marine resources, climate change impacts, intensifying competition from external traders and larger fish ports, as well as price volatility.

The survey results from the 157 households revealed distinct differences in livelihood vulnerabilities (**Figure 5**). For boat-owning households, weather and environmental risks emerged as the most significant challenges, with

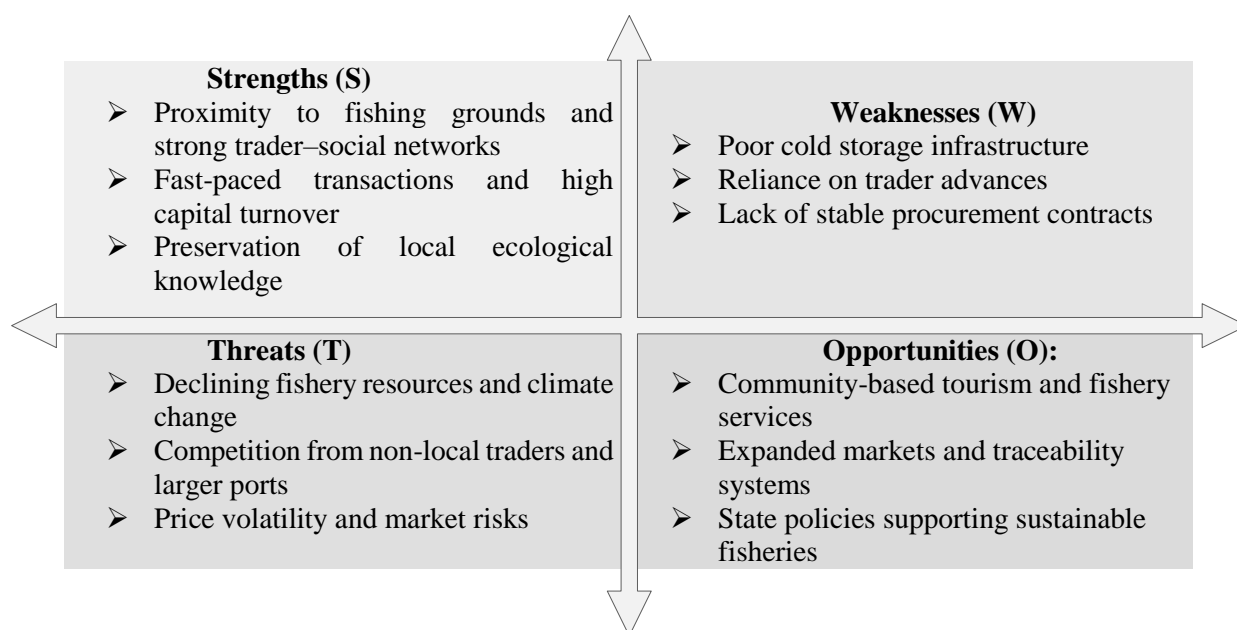


Figure 4. SWOT Analysis of the Giao Hai Fish Market in Sustaining Livelihoods

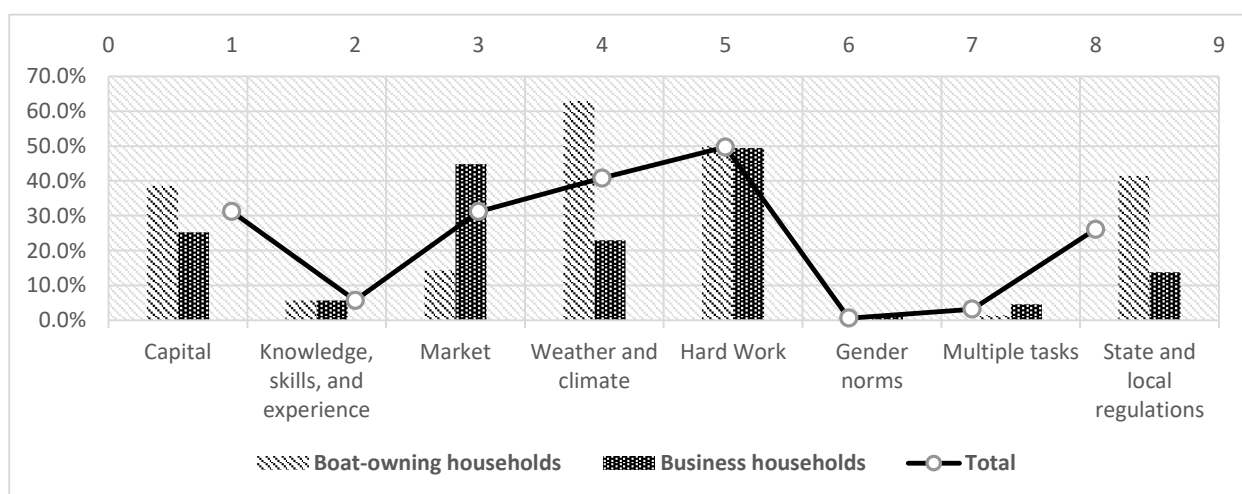


Figure 5. Household-Reported Challenges to Sustaining Livelihoods (%)

Source: Household survey, 2025

nearly half citing storms, monsoons, and climate variability as the primary obstacles. In contrast, business households expressed greater concern over market uncertainties and price fluctuations, reflecting their intermediary position in the value chain. Seasonality and weather directly influence both catch volumes and income. During oversupply periods (e.g., the May–June anchovy season), prices can drop by 30–40%. *“Sometimes we return with a big catch, but prices collapse, and sales barely cover fuel costs.”* (CT-07, male, 50). This exemplifies the market volatility typical of small-scale fisheries, which FAO (2022) identifies as a key factor undermining coastal livelihood sustainability.

Approximately one-third of the households surveyed reported difficulties accessing capital and credit, particularly due to continued reliance on trader advances in the absence of accessible bank loans. Government regulations were also cited as a challenge, especially regarding stricter capture management and food safety standards. Interestingly, issues such as gender bias and limited technical skills were rarely mentioned by the households themselves, though these factors represent latent vulnerabilities not yet fully acknowledged at the community level.

Infrastructure constraints remain a critical bottleneck. Without large-scale cold storage facilities, the Giao Hai supply chain is highly dependent on immediate transactions, relying almost exclusively on block ice—about 4–6 tons per session—to preserve freshness. This “time-sensitive” supply model accelerates capital turnover but increases exposure to risks from transport delays or market disruptions.

Finally, climate change and resource depletion pose long-term threats. Many fishers reported that average catches have declined by 10–15% over the past five years, especially for high-value species such as squid and mantis shrimp. These observations are consistent with national fisheries monitoring data (WB, 2023). Without effective resource management and livelihood diversification, the socio-economic benefits generated by the Giao Hai fish market are at risk of significant erosion.

The characteristics of the Giao Hai fish market shared similarities with small-scale fish

markets in other Vietnamese coastal regions but also exhibit distinct features that reflect local socio-institutional conditions. For example, studies in central Vietnam (Armitage & Marschke, 2013) and southern provinces such as Kien Giang and Ca Mau (Ruddle, 2014; Marschke & Vandergeest, 2016) showed a stronger dependency of fishers on traders through long-term advance credit, often ranging from 10–15% price deductions. In contrast, Giao Hai’s shorter fishing cycles and proximity to landing sites resulted in only 2–5% dependency margins, giving fishers comparatively greater autonomy. Meanwhile, relative to international cases, such as the Philippines, Indonesia, and Malaysia, Giao Hai resembled “socially embedded” markets where trust-based transactions, kinship ties, and informal enforcement shape bargaining power and compliance (Pauly *et al.*, 2018; Bennett, 2019). However, unlike Indonesia where trader cooperatives increasingly influence price settings, Giao Hai remained dominated by fragmented, household-based trading networks. These comparisons highlight that while Giao Hai reflects wider Southeast Asian market patterns, its livelihood vulnerabilities are shaped by unique combinations of social capital, gender roles, and nearshore fishing dependence.

The Giao Hai case aligned with broader accounts of fisheries as systems where economic activities are deeply embedded in social relations (Granovetter, 1985; Béné, 2006). Social capital—expressed through trust, reciprocity, kinship, and long-term familiarity—acts as a regulatory mechanism that supplements or substitutes for formal governance (Nguyen & Ruddle, 2015). These mechanisms influence not only price setting and access to credit but also reputational sanctions, dispute resolution, and the pace of transactions. The Giao Hai market thus functions as a socially ordered space where coordination is achieved through informal norms rather than formal contracts. The trader–fisher dependencies observed in Giao Hai also reflect regional patterns previously described in other parts Southeast Asia, though the intensity and form of dependency differ. While traders provide working capital and market information, the

shorter trip cycles reduce the duration and severity of indebtedness, generating a more dynamic—but still asymmetrical—relationship structure (Johnson, 2010; Ruddle, 2014). This variation highlights how ecological conditions (nearshore fishing grounds), technological factors (mid-capacity vessels), and market geography shape the contours of dependency.

Gendered divisions of labor further illustrate how local norms intersect with market structures. Women dominate sorting, retailing, and household-level processing, whereas men control capture activities and high-capital investments. This gendered allocation of roles mirrors findings across Vietnamese and global small-scale fisheries (Frangoudes & Gerrard, 2019; FAO, 2021), indicating that labor organization is strongly shaped by cultural expectations and the physical demands of fishing work. The resulting segmentation produces differentiated access to income, information, and decision-making authority within the value chain. Finally, the Giao Hai case exhibits characteristics of hybrid governance, where informal institutions coexist with state policies. Reputation-based enforcement, trust-based lending, and kinship networks operate alongside regulatory requirements on food safety and fishing permits. This interplay reflects theoretical insights from Ostrom (1990) and more recent work by Cohen *et al.* (2021), which emphasize how informal and formal rules jointly structure behavior and compliance in small-scale fisheries. The hybrid governance observed at Giao Hai suggests that market coordination is produced through layered institutional arrangements rather than a singular regulatory source.

Conclusions and Policy Implications

The study of the Giao Hai fish market provides a detailed insight into how small-scale fish markets in northern Vietnam function simultaneously as economic mechanisms and social institutions. Through the interaction of traders, fishers, and processors, the market coordinates the flow of goods, credit, and information, thereby structuring local livelihoods. Its organization is sustained less by

formal contracts than by social capital as trust, kinship, and reciprocity that enable rapid and reliable exchanges in a volatile environment.

Empirical findings have shown that fish markets are not simply places of trade but central organizers of livelihood systems. They generate employment, create linkages among actors, and sustain community cohesion. However, the same social mechanisms that ensure coordination also produce dependency and inequality. Trader advances remain the dominant source of working capital for many fishers, leading to limited bargaining power and partial loss of autonomy. Similarly, gendered divisions of labor persist, as women manage daily trades and household incomes but are excluded from strategic decision-making and access to formal credit. These structural asymmetries constrain both economic efficiency and social equity, challenging the long-term sustainability of coastal livelihoods.

The Giao Hai market demonstrates that the sustainability of small-scale fisheries depends not only on resource management but also on the social organization of markets. Recognizing and empowering these informal yet indispensable institutions is essential for achieving both livelihood security and coastal resilience in Vietnam's fisheries sector.

Beyond the case of Giao Hai, several recommendations have broader relevance for small-scale fish markets across Vietnam and comparable coastal contexts. First, formalizing trader–fisher credit arrangements through transparent contracts or community-based monitoring could strengthen bargaining power and reduce exploitative dependence in areas where long-term advances remain pervasive (e.g., Kien Giang, Phu Yen). Second, promoting women's leadership within cooperatives and fishery clubs has the potential to address gendered inequalities identified not only in northern Vietnam but also in central and Mekong Delta fisheries. Third, investments in cold storage, ice-making, and traceability systems can enhance product quality and lengthen marketing windows for small-scale markets nationwide. Finally, integrating local fish markets into co-management and climate-resilience planning,

including early warning systems, financial protection schemes, and livelihood diversification funds, which can support coastal communities facing increasing environmental and economic uncertainty. These wider recommendations offer scalable insights for policymakers seeking to strengthen resilience and equity within Vietnam's small-scale fisheries sector.

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