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PORTRAIT OF TRADITIONAL FISHERMEN: A SOCIO-ECONOMIC STUDY OF THE FISHING COMMUNITY IN SANGO, TERNATE, NORTH MALUKU

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ABSTRACT

The most prominent social stratification in fishing communities is stratification based on control of the means of production. Price determination greatly influences the socio-economic conditions of fishing communities. This gap is also seen in the fishing community in Sango Village, Ternate Island District, Ternate City. The purpose of this study is to determine how the socio-economic activities of fishing communities are related to the fishing system, organization and patterns of cooperative relationships between fishermen, profit sharing and marketing patterns and distribution of fishermen's catch. This research method uses a phenomenological study approach that places the meaning of understanding or comprehension of the object itself, through interview techniques, observation, and documentation and analyzed descriptively-qualitatively. Sango Village is a portrait of the life of a traditional fishing community. Some traditional fishermen who live in Sango Village almost lost their source of income to support their families, but over time their economic activities have improved because they still rely on their livelihoods as fishermen, and until now they still exist in developing their activities. The fishing system and tools used by the fishing community in Sango Village in general are 1. Coho nyao toma jala (catching fish with nets) 2. Coho nyao se tabadiku (catching fish with bamboo) 3. Hau/Mangail (Fishing). Organization and pattern of Cooperation Relations between fishermen there are Punggawa and juragan. The conclusion is that the social and economic activities of the fishing community in Sango Village grow and develop reciprocally with socio-cultural aspects seen from the fishing system at sea.

Keywords: Sango Community, Socio-Economic, Traditional Fishermen, Ternate
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INTRODUCTION

Traditional fishing communities are a social group that plays a strategic role in supporting food security and the economy of coastal areas in Indonesia (Agus et al., 2023; Fauzi & Rahman, 2025; Purwanti et al., 2023; Saksono et al., 2023; Stacey et al., 2021). As an archipelagic nation with vast marine resource potential, Indonesia relies heavily on small-scale capture fisheries for a significant portion of its economic activity. However, traditional fishermen generally face various limitations, such as the use of rudimentary fishing gear, dependence on seasonality, limited access to capital, and low bargaining power in the fisheries distribution chain. These conditions contribute to a relatively lower level of welfare for traditional fishermen compared to large-scale fisheries operators (Allison & Ellis, 2001; Bene, 2003; Stacey et al., 2021). Therefore, socio-economic studies are crucial for comprehensively understanding the dynamics of traditional fishermen's livelihoods in the local context.

Sango Village in Ternate City, North Maluku Province, is a coastal area where most of the population relies on traditional fishing. Geographically, this region has significant fishery resource potential due to its location in productive waters. However, this potential has not been fully reflected in the well-being of its fishing communities (Stacey et al., 2021; Susilowati et al., 2020). Factors such as fluctuating catches, climate change, limited fisheries infrastructure, unstable market access, and pressure on coastal ecosystems pose real challenges to the economic sustainability of fishing households. Furthermore, social factors such as education level, household structure, work patterns, and social networks also influence fishermen's capacity to adapt to environmental and economic changes (Alam et al., 2026; Allison & Ellis, 2001; Cinner et al., 2012; Nasrul et al., 2025; Nur et al., 2025).

Conceptually, socio-economic studies of traditional fishers not only highlight income levels but also encompass production cost structures, household consumption patterns, livelihood diversification, access to financial institutions, and forms of social capital developing in coastal communities (Anang et al., 2024; Fabinyi, 2024; Grantham et al., 2022;

Sun et al., 2024; Turner, 2025). This approach allows for a more holistic analysis of the vulnerability and resilience of fishing communities. In the context of coastal development, a deep understanding of the socio-economic characteristics of traditional fishers is essential for formulating evidence-based policies, particularly in efforts to alleviate coastal poverty, strengthen local institutions, and manage sustainable marine resources (Birdsong & Hunt, 2021; Boateng et al., 2025; Cossette-laneville, 2025; Luki & Tonkovi, 2018; Omer & Mohamoud, 2026; Soares et al., 2025).

The novelty and urgency of this research lie in its specific focus on the socio-economic portrait of traditional fishermen in Sango, Ternate, which until now has received limited in-depth and contextual study. Most previous studies have been more general or focused on the regional scale without delving into the micro-dynamics at the community level. This research is important and urgent because the Sango fishing community faces dual pressures of economic uncertainty and increasingly complex coastal environmental changes. By presenting an analysis based on local empirical conditions, this study is expected to provide scientific contributions to the development of a contextual model for empowering traditional fishermen, while also providing the basis for policy recommendations for the local government in designing programs to improve the welfare and economic sustainability of coastal communities in Ternate City, North Maluku.

RESEARCH METHODS

Research Subjects

This research was conducted in Sango Village, Ternate Island District, Ternate City, North Maluku, and involved all fishermen in Sango Village. This research method used phenomenology, which focuses on the meaning and understanding of the object itself, through interviews, observation, and documentation, and descriptive-qualitative analysis. The subjects were selected based on the following criteria: (a) male fishermen aged 25–50 years; (b) fishermen with less than 20 years of fishing experience; (c) fishermen in the first stratum who own a boat; (d) fishermen in the second

stratum who lead the fishing; and (e) fishermen in the third stratum who rely on their own labor for fishing.

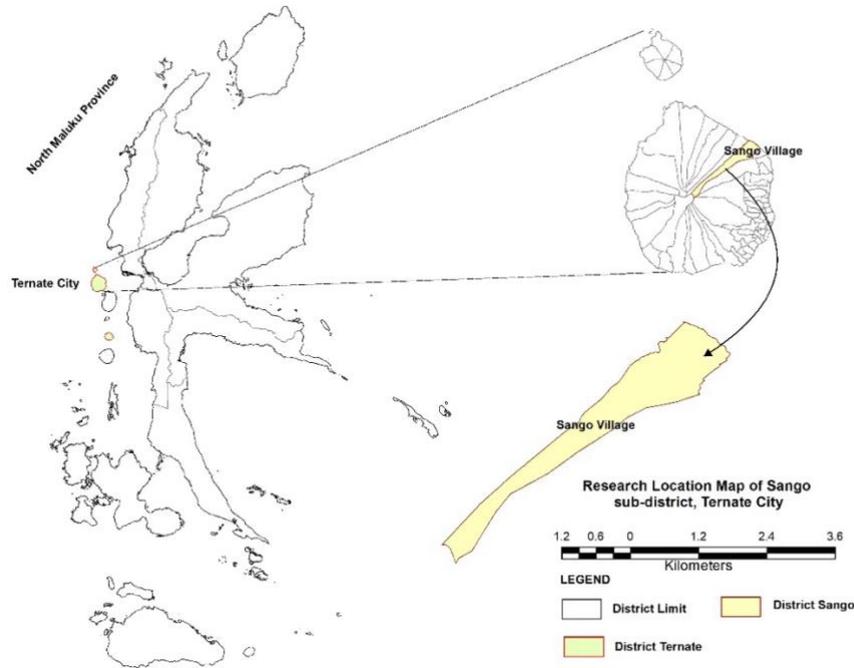


Figure 1. Research Location Map

Meanwhile, the research procedures implemented in this study are systematically organized and structured to ensure methodological rigor. Each stage of the process, from data collection to analysis and

interpretation, is designed to align with the research objectives. A detailed illustration of these procedures is presented in the following research flowchart.

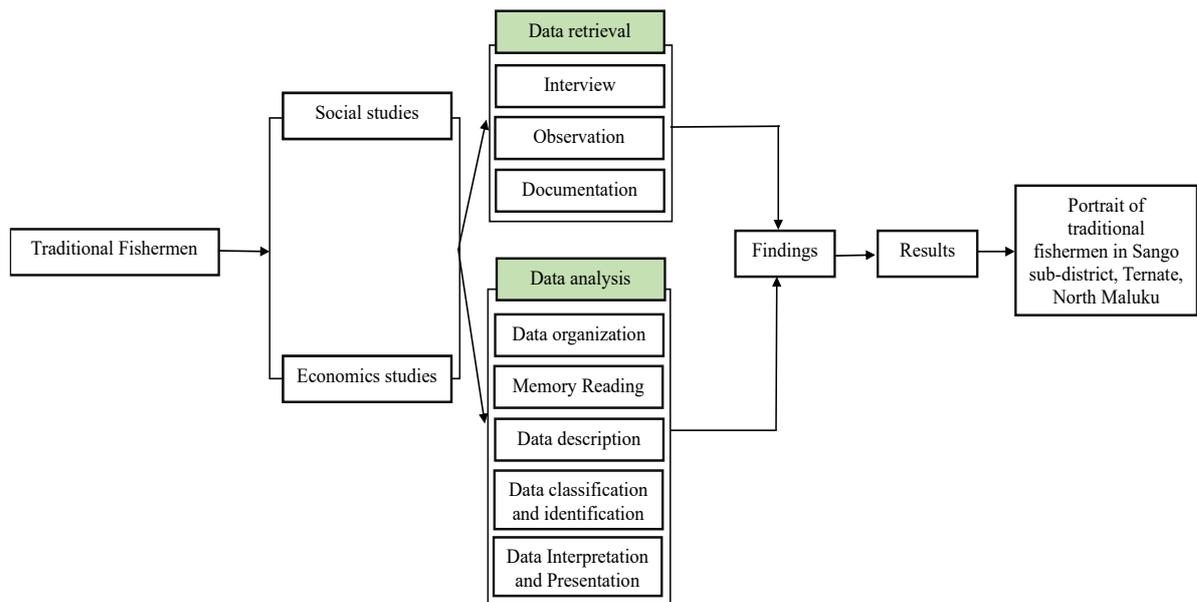


Figure 2. Research Flowchart

Research Data Collection Techniques

The data collection techniques used in this study were as follows:

- a. Structured interviews, a technique in which the researcher uses a list of questions or a questionnaire during the interview, aiming to obtain information directly from respondents verbally through a question-and-answer process.
- b. Observation, a data collection tool, involves systematically observing and recording the phenomena to be investigated. This data collection technique involves the researcher visiting the research location directly.
- c. Documentation in this study consists of descriptive data in the form of portraits of traditional fishermen in Sango Village, based on field conditions.

Data Sources for Analysis

The data in this study are sourced from primary and secondary data. The primary and secondary data referred to are as follows:

- a. Primary Data Sources. Data obtained from research subjects through interviews and direct observations. In this case, there are two types of primary data: data from the main/key informant and supporting/additional informants. The subjects in this study were traditional fishermen in the Sango sub-district of Ternate.
- b. Secondary Data Sources. Secondary data is data obtained indirectly. Secondary data can be used as research data sources in the form of books, literature archives, or research documents such as photographs.

Data Analysis Techniques

The data analysis technique in this study used qualitative data analysis techniques through a phenomenological analysis approach with the following stages: (1) organizing data; (2) reading memorization; (3) describing data into codes and themes; (4) classifying and identifying facts and their meaning in the field findings; and (5) interpreting and presenting data in narrative form about the essence of the findings in tables, figures, and discussions.

RESULTS

Social Aspects of the Sango Traditional Fishing Community

The Fisherman Profession as a Hereditary Social Identity

In-depth interviews revealed that the fishing profession in Sango Village is not understood solely as an economic activity, but rather as a social identity passed down through genealogy. Most informants stated that involvement in fishing activities begins in childhood through informal learning within the family. This process forms a pattern of professional socialization that occurs naturally and sustainably across generations.

SA (52) years old said:

"Saya dari kecil ikut bapak ke laut. Di sini rata-rata begitu. Anak laki-laki pasti diajar melaut." (Indonesian Language)

"Since I was little, I've been going to sea with my father. That's the norm here. Boys are always taught to go fishing."

This statement indicates that the regeneration process of fishermen occurs through a family-based knowledge transmission mechanism. Fishing is not only learned as a technical skill, but also as part of the formation of masculine identity and social responsibility within coastal family structures. Therefore, the choice to become a fisherman is not merely a rational-economic decision, but rather the result of internalizing community values and norms.

Phenomenologically, experiences at sea from an early age shape a collective awareness that the sea is a living space that is integral to the community's social life. The identity of a fisherman is deeply embedded in the individual's self-construction and influences work orientation, social relationship patterns, and economic aspirations. In this context, the fishing profession serves as a symbol of the continuity of tradition and a mechanism for the social reproduction of coastal communities.

Field observations also show that the involvement of family members—whether in the fishing, processing, or marketing of the catch—strengthens internal social cohesion. This collective participation fosters family and community solidarity, which serves as social capital in the face of economic uncertainty. Thus, the fisherman identity not only represents a profession but also serves as the foundation for the social structure and stability of the Sango coastal community.

Family-like and Egalitarian Work Relations

The social structure of fishermen in Sango Village can be formally classified into three strata: boat and fishing gear owners (first stratum), fishing operation leaders or bosses (second stratum), and fishermen's laborers or laborers (third stratum). However, interviews and field observations indicate that this division of strata does not create a rigid and hierarchical power relationship, as is typical of the classic patron-client pattern in fishing communities in general.

MR (55) as an informant stated:

"Di sini tidak ada bos yang cuma suruh-suruh. Kalau punya perahu, tetap ikut turun. Semua kerja sama." (Indonesian Language)

"Here there are no bosses who just give orders. If you have a boat, you still come down. Everyone works together."

This statement indicates that ownership of the means of production does not automatically create social distance between capital owners and labor. Boat owners remain directly involved in fishing activities, so the employment relationship is more participatory than subordinate. From a phenomenological perspective, this collective work experience fosters a shared perception that success at sea is the result of the contributions of all group members.

This finding suggests that the social relations system of Sango fishermen is more collective and familial than an exploitative patron-client system. Social capital in the form of trust, close kinship ties, and intensive interaction in daily life serve as the primary foundation for maintaining stable employment relationships. Economic relations are not solely determined by capital ownership, but also by the values of solidarity and togetherness that exist within the community.

Group work in net use (Coho Nyao Toma Jala) demonstrates a role-sharing mechanism based on experience, skill, and physical ability, rather than solely ownership status. This process strengthens social cohesion while minimizing internal conflict. Thus, the social structure of fishermen in Sango can be categorized as semi-egalitarian, where economic and social dimensions intertwine to form a relatively harmonious pattern of work relationships.

The Value of Solidarity as a Strengthened of Social Stability

In-depth interviews revealed that social solidarity is a fundamental element in the lives of fishing communities in Sango Village. Mutual aid practices emerge primarily during times of crisis, such as declining catches, bad weather, or periods of inability to go to sea. This solidarity is not formally regulated through any specific institution but rather grows from collective awareness and long-standing social bonds within the community.

MR (55) and SA (52) as an informant stated:

"Kalau ada yang tidak dapat ikan, biasanya teman lain bantu. Tidak mungkin kita biar sendiri." (Indonesian Language)

"If someone doesn't catch any fish, usually other friends help. There's no way we can leave it alone."

This statement reflects the existence of informal redistribution mechanisms based on empathy and social closeness. Assistance can take the form of sharing a portion of the catch, labor support, or loans for daily necessities. From a phenomenological perspective, this sharing experience is not viewed as an economic burden, but rather as part of the moral responsibility within coastal communities.

The meaning of solidarity revealed from the informants' experiences indicates that the value of togetherness functions as a social buffer against economic risks. In the context of a fisheries economy heavily influenced by natural factors and seasonal uncertainty, social solidarity is a crucial instrument for maintaining the stability of fishing households. In other words, social cohesion acts as social capital that strengthens community resilience to external shocks.

These findings demonstrate that the social and economic dimensions of the Sango fishing community cannot be separated dichotomously. Economic practices are not solely based on individual profit calculations but are also influenced by collective norms and an ethic of togetherness. This integration of social solidarity and economic activity is a crucial foundation for maintaining the sustainability of traditional fishing communities amidst the uncertainties of the coastal environment.

Economic Aspects of the Sango Traditional Fishing Community

Local Knowledge-Based Production Systems

Field observations and in-depth interviews indicate that the fisheries production system in

Sango Village is still dominated using traditional fishing gear such as nets (Coho Nyao Toma Jala), tabadiku, and fishing lines (hau/mangail). The use of these gears does not merely reflect technological limitations but rather represents historical adaptation to the ecological conditions of local waters and the economic capacity of fishing households.

Most informants stated that the choice of fishing gear considers factors such as capital availability, the risk of gear damage, and the uncertainty of the catch. KO (48) stated:

"Kalau pakai alat besar butuh modal besar. Kami biasa pakai yang sudah ada saja, yang penting bisa dapat ikan." (Indonesian Language)

"Using large equipment requires significant capital. We usually just use what we have, as long as we catch fish."

This statement indicates that technological decisions within the production system are rational-contextual. Fishermen consciously choose technologies appropriate to their business scale and financial capacity. From a phenomenological perspective, traditional fishing gear is understood not as a symbol of backwardness, but as instruments that have been tested through collective experience and are considered in harmony with natural rhythms and local seasonal patterns.

Furthermore, local knowledge-based production systems demonstrate an integration of empirical experience, reading natural signs, and risk management strategies. Fishermen adjust their fishing times to suit wind and current conditions and determine fishing locations based on inherited experience. These practices demonstrate that local ecological knowledge functions as cognitive capital in maintaining production sustainability.

In an economic context, the use of traditional fishing gear also serves as a cost-minimization strategy. With relatively low investment, fishermen can mitigate the risk of loss when catches decline. Therefore, the Sango production system can be categorized as an adaptation-based small-scale production system, where business sustainability is prioritized over aggressive capital expansion.

Flexible Profit-Sharing System

In-depth interviews revealed that the income distribution mechanism for fishermen in Sango Village is implemented through a flexible

profit-sharing system. Distribution is made after the entire catch is sold and operational costs, such as fuel, food during fishing, and other technical needs, are deducted. This scheme is implemented collectively based on a prior agreement among group members.

DU (45) explained:

"Kalau sudah jual ikan, baru dihitung biaya. Sisanya dibagi sesuai kesepakatan." (Indonesian Language)

"Once the fish are sold, the cost is calculated. The remainder is divided according to the agreement."

This statement indicates that the profit-sharing system is not based on a fixed wage system, but rather on a proportion of net profits (net revenue sharing). Boat and fishing gear owners generally receive a larger share because they bear the investment risk and operational costs. However, workers still receive a share deemed fair and equitable by community norms.

Phenomenologically, profit-sharing is interpreted not simply as an economic transaction, but as a form of collective responsibility for the risks and success of the business. This system reflects the principle of risk-sharing, where all group members share the burden when catches decline and the profits when yields are abundant. Thus, income fluctuations due to seasonal and weather uncertainties are not entirely borne by one party.

Economic Vulnerability to Seasons and Weather

In-depth interviews revealed that seasonal dynamics and weather conditions are determinants that directly influence the stability of fishermen's income in Sango Village. Most informants emphasized that wind intensity, high waves, and changes in ocean currents determine the frequency and success of fishing activities.

DU (45) and AD (38) stated:

"Kalau angin barat kuat, torang tidak bisa melaut. Jadi tidak ada pemasukan." (Indonesian Language)

"If the westerly winds are strong, we can't go out to sea. So, there's no income."

This statement illustrates a high dependence on ecological conditions. During periods of westerly winds and high waves, fishing activity decreases drastically or even stops. Field observations show that during certain seasons,

fishing boats are more likely to be anchored offshore, while economic activity stagnates.

Analytically, this condition indicates structural vulnerability in the traditional fishing economy. Sole reliance on the capture fisheries sector results in fluctuating income and lack of certainty. This economic pattern creates a cycle of surpluses during the fishing season and deficits during the lean season.

However, field findings indicate that fishing communities are not entirely passive in the face of these risks. Social solidarity serves as an informal social safety net. The practice of mutual assistance, sharing catches, and flexibility in profit-sharing systems serve as collective strategies to mitigate household economic pressures.

Phenomenologically, dependence on nature is not only understood as an economic constraint but also as part of the reality of life that is accepted and adapted to through social mechanisms. Thus, the social and economic aspects of the Sango fishing community are integrated into an adaptive system based on shared values.

DISCUSSION

Social Aspects of the Sango Traditional Fishing Community

The findings of this study indicate that the traditional fishing community in Sango Village exhibits interconnected social interactions and economic dynamics, where cultural practices and social relational structures play a central role in the socio-economic resilience of the fishing community. In coastal community studies, social structures not only reflect the division of production tasks but also form the basis for the formation of identity, solidarity, and adaptive strategies to environmental and economic uncertainty.

The fishing profession is understood as a social practice inherited through family mechanisms and becomes part of the community's social identity from an early age. This finding is consistent with the concept of local ecological knowledge, where coastal communities develop patterns of knowledge and practices based on inherited experiences to understand the marine environment and develop strategies for adapting to changing natural conditions (Ramadhany, 2025). This reinforces that children's involvement in sea activities is not just about technical skills, but

also a process of internalizing community values that shape the collective identity of fishermen.

Familial and semi-egalitarian work relationships reflect a more advanced form of social economy than traditional patron-client dominance. International studies on the social and solidarity economy in small-scale fisheries show that collective interaction patterns and the principle of shared work responsibilities can contribute to a community's adaptive capacity to socio-economic risks and equality in access to resources and benefits (García-lorenzo et al., 2024). This finding is relevant to the Sango study, where the involvement of capital owners in production activities and the equitable distribution of profits strengthen social cohesion and a sense of ownership in economic activities. This suggests that social capital, such as trust and kinship ties, serves as collective capital, strengthening social networks and protecting community members from the risks of uncertain catches.

Social solidarity plays a crucial role in maintaining the socio-economic stability of traditional communities. Solidarity, fostered by collective concern for members experiencing hardship, not only strengthens social cohesion but also serves as a buffer against the economic vulnerability of fishing households. Social studies examining fishing solidarity in other contexts indicate that forms of mutual cooperation and collective values contribute to the formation of strong social bonds within fishing communities, particularly when facing economic and environmental challenges (Sastia et al., 2025). The sharing practices identified in this research reflect the altruistic and collective values central to the livelihood strategies of Sango's traditional coastal communities.

Furthermore, flexible labor patterns and profit-sharing systems indicate that income distribution mechanisms within traditional fishing communities transcend mere market dynamics; they are fundamentally rooted in the principle of shared risk. These findings align with literature positioning small-scale fisheries within the social and solidarity economy framework, where community-based distributive patterns prioritize collective welfare over purely economic efficiency (García-lorenzo et al., 2024). This kind of profit-sharing system allows community members to face fluctuations in catch and

operational costs with strong social support, so that dependence on fixed wages or a hierarchy of financiers can be minimized.

However, it should be noted that these traditional socio-economic practices also have limitations when faced with broader social changes, such as fisheries modernization or changes in the labor market. Several studies have shown that fisheries modernization can impact the social structure and work patterns of traditional fishing communities by strengthening work hierarchies and reducing collective solidarity (Alam et al., 2026; Wibowo et al., 2025). Although findings in Sango indicate strong kinship patterns, future uncertainty due to modernization of fishing gear, market penetration, and demographic changes may create new dynamics that alter social structures and the distribution of benefits.

Thus, these findings emphasize the importance of understanding traditional fishing communities through the lens of holistic socio-economic interactions. Cultural values, social identities, collective work systems, and shared solidarity mechanisms are not merely descriptive phenomena but also constitute crucial social capital for community resilience and sustainability amidst constantly changing environmental, economic, and social challenges.

Economic Aspects of the Sango Traditional Fishing Community

Research findings indicate that the traditional fishing economic system in Sango is a form of small-scale production based on local knowledge that is adaptive to capital constraints and ecological dynamics. The use of traditional fishing gear such as nets, *tabadiku*, and fishing lines is not simply a reflection of technological backwardness, but rather a rational-contextual strategy to minimize investment risk in an uncertain environment. This aligns with the Allison & Ellis (2001) and Saksono et al. (2023) global report on small-scale fisheries, which asserts that small-scale fishers tend to maintain low-cost technology to maintain business sustainability and avoid the debt trap. The study by García-lorenzo et al. (2024) in Ocean & Coastal Management also shows that traditional fisheries economic practices are often within a social and solidarity economy framework, where production rationality is not only based on efficiency, but also community

sustainability. In addition, Qurniati et al. (2024) research on local ecological knowledge confirms that empirical experience in reading natural signs functions as cognitive capital in maintaining production stability. Thus, the production system in Sango can be understood as an economic adaptation strategy that combines collective experience and locally based risk management.

Sango's flexible profit-sharing system further emphasizes the integration of economic rationality and social solidarity. The revenue-sharing mechanism, after deducting operational costs, reflects the principles of net revenue sharing and risk-sharing arrangements common in small-scale fisheries globally. García-lorenzo et al. (2024) show that risk-sharing schemes in fisheries solidarity economies increase the stability of employment relationships and strengthen group cohesion. Other recent literature, such as Salmi et al. (2024), also shows that collective work structures in small-scale fisheries contribute to increased economic resilience to market and catch fluctuations. In the Sango context, this risk sharing prevents the concentration of losses on a single actor and strengthens the socio-economic stability of the working group.

On the other hand, high dependence on seasons and weather indicates structural vulnerabilities in the traditional fishing economy. Research by Kapapa et al. (2024) in Marine Policy confirms that climate variability significantly impacts the frequency of fishing trips and the stability of household incomes of fishermen. Nevertheless, findings in Sango suggest that social solidarity serves as an informal safety net that strengthens the community's economic resilience, as confirmed in a study on community-based resilience in small-scale fisheries (Ferguson et al., 2022). Thus, the Sango fishing economy is an adaptive system that is relatively stable within a traditional context yet remains vulnerable to technological modernization and market changes. Therefore, policies to empower fishermen's economies need to integrate strengthening income diversification, formal social protection, and preserving social capital as a foundation for long-term resilience.

CONCLUSIONS

This study concludes that the traditional fishing community in Sango has developed an

integrated and adaptive socio-economic system, where the fishing profession serves as both a hereditary social identity and the basis for household economic sustainability. The semi-egalitarian work structure, local knowledge-based production system, and flexible profit-sharing mechanisms demonstrate that fishing economic practices are driven not solely by market rationality but also by values of solidarity and risk-sharing that strengthen community cohesion. However, the high dependence on seasonality and weather conditions places the fishing economy in a structurally vulnerable position with recurring patterns of income fluctuations. Therefore, the sustainability of the Sango fishing community is supported by a combination of strong social capital and adaptation strategies to ecological dynamics. Therefore, empowerment policies need to be directed at strengthening economic diversification, formal social protection, and preserving social capital as the foundation for long-term resilience of coastal communities.

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