



SOCIAL TENSIONS AMONG TRADITIONAL FISHERMEN IN THE SHADOW OF FISHERIES MODERNIZATION: A CRITICAL STUDY IN SERDANG BEDAGAI

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Abstract

This research analyzes the social tensions experienced by traditional fishermen in Serdang Bedagai Regency due to fisheries modernization. Modernization including new fishing technologies, large capital influxes, and regulatory changes are changing resource access, social structures, and work norms in coastal communities. Using a critical qualitative approach through interviews, participant observation, and policy analysis, this study found several forms of tension: competition between traditional fishermen and capital operators, shifts in social hierarchies due to unequal access to technology and capital, intra-community conflicts regarding profit sharing, and the marginalization of local knowledge in fisheries policy. Modernization provides efficiency benefits and increased income for some fishermen, but increases vulnerability for those who are unable to adapt. Recommendations include inclusive policies such as contextual technology assistance, access to micro capital, recognition of traditional fishermen's rights, and increased community participation in policy formulation to ensure fair modernization.

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1. INTRODUCTION

Fisheries modernization has become a major agenda in marine-sector development because it is considered capable of improving the productivity, efficiency, and economic competitiveness of coastal communities. This modernization is characterized by the use of larger motorized vessels, more effective fishing gear, navigation technologies, fish-detection devices, and fisheries business management systems that are increasingly integrated with market networks. From a development perspective, these changes are often understood as a form of progress because they accelerate fishing operations, expand fishing grounds, and increase production. However, fisheries modernization cannot be viewed merely as a technical transformation, because technological change invariably generates social consequences for the communities that adopt it. Clark (2022) emphasizes that blue-growth agendas and fisheries modernization often produce economic benefits while simultaneously reinforcing inequality when access to technology, capital, and resources is not equitably distributed. Fisheries modernization must therefore be understood as a non-neutral socioeconomic process involving power relations, resource distribution, and changes in the social structure of coastal communities.



Within the context of traditional fishing communities, fisheries modernization frequently creates an ambivalent situation. On the one hand, traditional fishers recognize the importance of technology in increasing catches and reducing uncertainty associated with working at sea. On the other hand, not all fishers possess the financial capacity to acquire modern vessels, high-powered engines, Global Positioning System devices, or fish-finding equipment. This unequal access means that modernization is more readily enjoyed by well-capitalized fishers, while traditional fishers continue to rely on simple fishing equipment and operate within limited fishing grounds. This condition demonstrates that modernization does not necessarily result in an equitable distribution of welfare; rather, it may create new forms of stratification between fishers who are capable of adapting to technological change and those who are left behind because of limited capital. Putma et al. (2025) demonstrate that changes in fishing gear within fishing communities can affect working patterns, social relations, and the economic structure of coastal societies. Consequently, fisheries modernization may become a source of social tension when technological changes are not accompanied by adequate protection policies for traditional fishers.

Serdang Bedagai Regency, particularly Sialang Buah Village in Teluk Mengkudu District, provides an important setting for examining this issue because the area illustrates the direct interaction between traditional and modern fishers within the same social space. The presence of approximately 1,151 traditional fishers and 2,547 modern fishers indicates that coastal communities in this region are not only experiencing technological transformation but are also confronting increasingly complex competition over access to fishing grounds, production outcomes, business capital, and marketing networks. Traditional fishers generally continue to rely on small boats, nets, fishing lines, longlines, traps, and local knowledge of weather conditions, currents, and fishing seasons. In contrast, modern fishers are supported by technologies that enable them to reach more extensive fishing areas and obtain larger catches. These differences in productive capacity make Serdang Bedagai particularly significant compared with other coastal regions, because modernization in this area is manifested not merely as a transformation of production equipment but also as an arena in which competition, social jealousy, shifting hierarchies, and potential conflict between fishing groups emerge.

Previous studies have extensively examined fisheries modernization, fisher poverty, changes in fishing gear, and resource conflicts within coastal communities. Yasir et al. (2019), for instance, explain that fisheries modernization may trigger conflicts among fishers when the use of new technologies alters patterns of access to marine resources. Wijaya and Fauzie (2020) similarly demonstrate that fisher poverty is not solely related to low income but is also associated with social structures, limited access to resources, and the ways in which fishers interpret their lives. Meanwhile, Tuwu (2025) emphasizes that social changes affecting traditional fishers may influence their welfare conditions and the sustainability of coastal livelihoods. Nevertheless, studies that specifically position Serdang Bedagai as a setting for analysing social tensions arising from fisheries modernization remain relatively limited. This research gap is particularly evident in the lack of studies explaining how traditional fishers experience, interpret, and respond to modernization as a process that affects social relations, the distribution of justice, and community solidarity.

A sociology of religion perspective is particularly relevant to this study because the lives of traditional fishers are shaped not only by economic and technological factors but also by religious values that influence how they understand risk, uncertainty, and social inequality. For fishing communities, fishing is a high-risk occupation because it depends on weather conditions, waves, occupational safety, and the uncertainty of catches. Under such circumstances, religion functions as a source of meaning, emotional reassurance, hope, and moral guidance in the construction of social relationships. Religious values are reflected in practices such as praying before going to sea, exercising patience when catches decline, participating in religious study gatherings, engaging in mutual assistance, and resolving community problems through deliberation. In the context of fisheries modernization, however, these religious values must also be understood as social mechanisms through which tensions caused by unequal access to capital and technology are moderated and interpreted. The sociology of religion perspective in this study is therefore not treated as a separate analytical domain but is employed to understand how fishing communities maintain solidarity, negotiate conflict, and assign meaning to the social injustices emerging from modernization.

Based on the preceding discussion, this study aims to analyse the social tensions experienced by traditional fishers in Serdang Bedagai Regency amid fisheries modernization. The research focuses on the forms of tension arising from unequal access to technology, capital, fishing grounds, government

assistance, and changes in social relations between traditional and modern fishers. It also examines the role of religious values and social solidarity within coastal communities in responding to these tensions. The novelty of this study lies in its attempt to integrate fisheries modernization, social inequality, and the sociology of religion within a single critical analytical framework situated in the local context of Serdang Bedagai. Accordingly, this study is expected to make a theoretical contribution to the development of the sociology of coastal communities, while also offering practical recommendations for local governments and policymakers to ensure that fisheries modernization is not exclusively oriented toward productivity growth but also addresses social justice, the protection of traditional fishers, and the sustainability of solidarity within coastal communities.

2. RESEARCH METHOD

This study employed a qualitative method with a critical study approach. The qualitative method was selected because the study sought to develop an in-depth understanding of the experiences, perceptions, and subjective meanings constructed by traditional fishers in responding to fisheries modernization in Serdang Bedagai Regency. Qualitative research enables researchers to examine social phenomena within their natural settings by interpreting the lived experiences of social actors (Creswell & Poth, 2018). Meanwhile, the critical study approach was used to uncover various forms of inequality, domination, marginalization, and social injustice resulting from disparities in access to technology, capital, fishing grounds, and fisheries policies. Accordingly, this study not only describes the social transformations experienced by fishing communities but also critically analyzes the power relations that emerge between traditional and modern fishers within the process of fisheries modernization (Denzin & Lincoln, 2018).

The study was conducted in Sialang Buah Village, Teluk Mengkudu District, Serdang Bedagai Regency, North Sumatra, Indonesia. The research site was purposively selected because it is a coastal area in which traditional and modern fishers coexist within the same social setting, making it particularly relevant for examining social tensions arising from fisheries modernization. Research informants were selected using purposive sampling, based on the consideration that they possessed relevant experience, knowledge, and direct involvement in the issues under investigation. The primary informants were traditional fishers who had directly experienced the effects of fisheries modernization. The study also involved modern fishers, leaders of fisher groups, community leaders, religious leaders, village officials, and other relevant stakeholders to obtain diverse perspectives and strengthen the understanding of the social dynamics of coastal communities. Purposive sampling is appropriate for qualitative research because it enables researchers to select informants who are most capable of providing rich and in-depth information relevant to the research focus (Patton, 2015).

Data were collected through observation, in-depth interviews, and documentation. Observation was conducted to examine fishing activities, patterns of social interaction, the use of fishing technologies, and the socioeconomic conditions of coastal communities. In-depth interviews were undertaken to explore the experiences and perspectives of informants regarding changes caused by fisheries modernization, including unequal access to technology, competition over fishing grounds, the distribution of government assistance, and the forms of social tension that emerged. Documentation was used to complement the primary data by examining village archives, fisheries statistics, photographs of community activities, and other supporting documents. The data were analyzed using the interactive analysis model developed by Miles, Huberman, and Saldaña, which consists of data condensation, data display, and conclusion drawing and verification (Miles et al., 2014). Data trustworthiness was maintained through source and methodological triangulation by comparing information obtained from interviews, observations, and documentation to ensure an adequate level of credibility in the research findings (Lincoln & Guba, 1985).

3. RESULT AND ANALYSIS

The findings demonstrate that fisheries modernization in Sialang Buah Village, Teluk Mengkudu District, Serdang Bedagai Regency, has brought substantial changes to the lives of fishers, particularly in relation to fishing technology, work patterns, and economic competition. The use of large motorized vessels, Global Positioning System devices, communication equipment, and fish-finding technologies has enabled some fishers to reach more extensive fishing grounds and obtain larger catches. However, these benefits have not been experienced equally by all fishers. Traditional fishers who continue to rely on

small boats and simple fishing equipment face considerable difficulties in adapting to technological developments because of their limited access to capital and production facilities. This condition indicates that fisheries modernization has not only increased productivity but has also created a widening disparity between modern and traditional fishers.

The field findings further reveal that unequal access to technology and capital has become a major source of social tension among fishers. Traditional fishers find it increasingly difficult to compete with modern fishers because of disparities in their capacity to locate fishing grounds, secure larger catches, and gain access to markets. Such competition does not always manifest itself in the form of overt conflict; rather, it is more commonly expressed through social jealousy, feelings of exclusion, and anxiety concerning the future of fishing as a livelihood. Several informants also reported disputes over fishing grounds, particularly as an increasing number of vessels operate within the same marine space. Although these disputes can generally be resolved through deliberation, their occurrence indicates that modernization has transformed social relations among fishers from patterns previously grounded more strongly in cooperation toward increasingly competitive interactions.

The findings also show that traditional fishers do not fundamentally reject fisheries modernization. They recognize that technology can improve work effectiveness and increase fishing yields. Nevertheless, they expect modernization to be implemented in a more equitable, inclusive, and contextually appropriate manner that corresponds to the needs of coastal communities. Government assistance in the form of fishing equipment, training, and empowerment programs is considered important; however, its implementation requires improvement to ensure that assistance reaches its intended beneficiaries and does not exclusively benefit particular groups. At the same time, social and religious values, including deliberation, mutual cooperation, patience, and solidarity, continue to play an important role in maintaining relations among fishers and preventing tensions from escalating into open conflict. These findings therefore confirm that fisheries modernization in Serdang Bedagai is an ambivalent process: on the one hand, it promotes advances in production, while on the other hand, it generates inequality and social tension when it is not accompanied by inclusive policies.

Fisheries Modernization in the Lives of Traditional Fishers in Serdang Bedagai Regency

Fisheries modernization in Serdang Bedagai Regency demonstrates that technological change not only affects the ways in which fishers harvest marine resources but also transforms the social structure and economic relations of coastal communities. The field findings indicate that the use of GPS devices, high-powered vessel engines, communication technologies, and fish-finding equipment has enabled some fishers to locate fishing grounds more effectively, expand their operational range, reduce fishing time, and increase production. However, these benefits are unevenly distributed because they are primarily accessible to fishers who possess sufficient capital. From a modernization perspective, technology is often regarded as an instrument of progress that enhances efficiency and productivity. Within the reality of coastal communities, however, technology may also become a new marker of social inequality when access to it is not distributed equitably (Yasir et al., 2019). Fisheries modernization in Serdang Bedagai, therefore, cannot be understood solely as a technical process; rather, it must be regarded as a social process that creates new divisions between fishers who are able to adopt technological developments and traditional fishers who continue to depend on simple fishing equipment.

Unequal access to technology and capital constitutes an important finding demonstrating that fisheries modernization has occurred selectively. Modern fishers have greater financial capacity to purchase high-powered vessels, navigation equipment, and fishing-support technologies, whereas traditional fishers remain dependent on small boats, nets, fishing lines, longlines, traps, and local knowledge concerning weather conditions, currents, and fishing seasons. This condition reflects a disparity between the shared objective of improving welfare and the means available to achieve it. From the perspective of Robert K. Merton's social strain theory, strain emerges when individuals or groups share the same socially valued goals but lack equal access to the institutionally accepted means of achieving those goals (Merton, 1938). Both traditional and modern fishers seek to increase household income, yet only particular groups possess adequate access to technology, capital, and market networks. Consequently, modernization generates social pressure in the form of jealousy, feelings of being left behind, and perceptions of injustice among traditional fishers.

Economically, fisheries modernization has also created new forms of stratification within fishing communities. Fishers equipped with modern technologies tend to secure larger catches and more

stable incomes, whereas traditional fishers experience greater uncertainty because of limitations in equipment, operational range, and production capacity. This finding can be interpreted through conflict theory, which emphasizes that control over the means of production is a crucial factor in determining the social and economic position of a group within society (Marx, 1976). In the context of Serdang Bedagai, large vessels, powerful engines, GPS devices, and fish-finding equipment can be understood as modern means of production that are not equally owned by all fishers. When these productive resources are concentrated in the hands of capital-owning groups, social relations among fishers become increasingly hierarchical. Traditional fishers are not only technologically disadvantaged but also occupy a weaker bargaining position within the fisheries economy. Modernization, which is expected to provide a pathway toward collective welfare, may therefore widen the social distance between small-scale fishers and well-capitalized fishing groups.

The field findings also demonstrate that fisheries modernization has affected patterns of social relations among fishers. Before modern technologies became increasingly widespread, social relations within fishing communities were more strongly sustained by shared experiences, community solidarity, and cooperation in confronting the risks of working at sea. However, as the number of fishing vessels has increased and technology has enabled certain fishers to locate fish more rapidly, these relationships have gradually shifted toward competition. Competition over catches and disputes concerning fishing grounds indicate that modernization has transformed the sea from a shared space of livelihood into an arena of economic rivalry. In this context, social change is evident not only in the transformation of fishing equipment but also in the ways fishers perceive one another as partners, competitors, or groups possessing unequal advantages. This finding is consistent with the view that technological change in coastal societies can transform production patterns, economic structures, and the social networks of fishing communities (Putma et al., 2025; Tuwu, 2025). The resulting social tension, therefore, does not arise merely from differences in fishing equipment but from the transformation of social relations accompanying modernization.

Interpretively, fisheries modernization in Serdang Bedagai Regency reveals the dual character of development. On the one hand, modernization creates opportunities to improve productivity, operational efficiency, and the competitiveness of the fisheries sector. On the other hand, it generates new forms of vulnerability for traditional fishers who lack adequate access to capital, technology, training, and policy protection. The finding that traditional fishers do not reject modernization but instead demand a more equitable process indicates that the central problem lies not in technology itself but in the distribution of access and the policy mechanisms through which modernization is implemented. Fisheries modernization must therefore be directed toward an inclusive development model that not only pursues increased production but also guarantees an equitable distribution of benefits among traditional fishers. Local governments need to strengthen access to capital assistance, provide contextually appropriate technological training, protect traditional fishing grounds, and ensure transparent assistance distribution so that modernization does not become a source of marginalization. Fisheries modernization will ultimately become more meaningful when technological progress is effectively integrated with social justice for coastal communities.

Fisheries Policy in Serdang Bedagai Regency from the Fishers' Perspective

Fisheries policy in Serdang Bedagai Regency is generally understood by fishers as part of a modernization agenda aimed at increasing productivity, work efficiency, and the welfare of coastal communities. Programs involving the provision of fishing equipment, training in the use of technology, capacity building for fishers, and support for modern fishing activities indicate the government's orientation toward transforming the fisheries sector from traditional practices into a more advanced production system. However, the field findings demonstrate that the meaning of policy is determined not only by the formal objectives designed by the government but also by the concrete experiences of fishers as policy recipients. From a policy implementation perspective, the success of a policy cannot be measured merely by the existence of programs, but by the extent to which such policies reach target groups equitably and address actual problems in the field (Grindle, 1980). Fisheries policy in Serdang Bedagai must therefore be understood not only as an instrument for increasing production but also as an arena for distributing access, benefits, and social protection among traditional fishers.

The field findings show that fishers do not reject fisheries modernization but question the unequal distribution of access to technology and government assistance. GPS devices, larger vessel engines, and fish-finding equipment are acknowledged as capable of accelerating the identification of fishing grounds and increasing production. Nevertheless, such technologies are more readily accessible to well-capitalized fishers, whereas traditional fishers continue to face financial constraints in

purchasing, maintaining, and operating modern equipment. This condition reveals a disparity between policy designs oriented toward increasing production capacity and the socioeconomic realities of small-scale fishers who lack the prerequisites needed to participate in modernization. From the perspective of distributive justice, an equitable policy should give greater consideration to the most vulnerable groups so that the benefits of development are not enjoyed exclusively by those who are already economically advantaged (Rawls, 1971). The criticism expressed by fishers toward fisheries policy should therefore not be interpreted as resistance to progress, but as a demand for modernization to be implemented through more inclusive, proportionate, and pro-traditional-fisher schemes.

The distribution of government assistance constitutes one of the most important issues shaping fishers' perceptions of fisheries policy. Informants acknowledged the availability of assistance in the form of fishing equipment, training, and empowerment programs, but considered such assistance to be unevenly distributed and not always aligned with actual needs in the field. Interpretively, this issue indicates a gap between policy formulation and policy implementation. A policy that appears well designed at the planning stage may lose its effectiveness when mechanisms for beneficiary identification, recipient selection, mentoring, and evaluation are not implemented transparently. According to the theory of street-level bureaucracy, policy implementation is strongly influenced by frontline officials who possess discretionary authority in determining how policies are translated and delivered to society (Lipsky, 2010). When such discretion is not accompanied by accountability and fisher participation, policies may generate perceptions of injustice, social jealousy, and tensions among fishing groups. The issue of government assistance, therefore, is not merely a technical matter of distribution but is also closely related to policy legitimacy in the eyes of coastal communities.

Fisheries modernization policies have also contributed to increasing competition over the utilization of marine resources. The use of technology enables some fishers to locate fish more rapidly and reach more extensive fishing grounds. For traditional fishers, however, this condition narrows their competitive space because they do not possess equivalent technological capacity. The intensification of competition indicates that fisheries policy has not yet fully regulated the relationship between increased productivity and the protection of small-scale fishers' access to marine resources. From the perspective of common-pool resource governance, the sea is not merely an economic space but also a social domain that requires collective rules to prevent domination by groups possessing greater technological capacity (Ostrom, 1990). When regulations governing fishing grounds are perceived by fishers as unclear or inequitable, modernization may transform the sea from a shared livelihood space into an arena of competition that intensifies inequality. Fisheries policy should therefore focus not only on the provision of technology but also on the governance of resource access in ways that protect the livelihood sustainability of traditional fishers.

From a sustainable livelihoods perspective, the problems experienced by fishers in Serdang Bedagai cannot be reduced solely to their limited ownership of technology. Weather uncertainty, high fuel costs, vessel maintenance expenses, fluctuations in fish prices, weak access to capital, and the declining interest of younger generations in fishing indicate that the vulnerability of coastal communities is multidimensional. The sustainable livelihoods framework explains that the sustainability of community livelihoods depends on the ability to access various forms of capital, including natural, financial, human, social, and physical assets (Scoones, 1998). In this context, fisheries policies that emphasize only the provision of fishing equipment are insufficient to address the structural problems experienced by traditional fishers. More comprehensive policies are required, including microfinance support, targeted operational subsidies, accessible technological training, stronger fisher cooperatives, protection against unstable fish prices, and programs to support the regeneration of the fishing profession. Without a comprehensive approach, modernization may improve production-related aspects but will not automatically strengthen the economic resilience of fishing households.

Overall, fishers' perspectives on fisheries policy in Serdang Bedagai Regency demonstrate that modernization will gain social acceptance only when it is implemented equitably, participatively, and in accordance with the needs of coastal communities. Fishers generally understand the benefits of technology and support efforts to strengthen the capacity of the fisheries sector, yet they reject forms of modernization that cause traditional fishers to fall further behind. Fisheries policy must therefore be directed toward a governance model that involves fishers in the planning, implementation, and evaluation of programs. The fisheries co-management approach emphasizes the importance of collaboration among governments, fishing communities, and local actors in managing resources more equitably and sustainably (Jentoft, 2005). By involving fishers as policy subjects rather than merely as

recipients of assistance, the government can develop policies that are more responsive to local needs. Fisheries policy in Serdang Bedagai should thus pursue not only technological modernization but also equitable access, the protection of traditional fishers, and the sustainability of social solidarity within coastal communities.

Fisher Conflicts in Serdang Bedagai Regency in the Shadow of Fisheries Modernization

Conflicts among fishers in Serdang Bedagai Regency do not always take the form of physical disputes or overt confrontation; rather, they are more frequently manifested as latent social tensions embedded in the everyday lives of coastal communities. The field findings indicate that fisheries modernization has transformed relations among fishers through the introduction of technologies such as GPS devices, high-powered vessel engines, and fish-finding equipment. Although these technologies increase productivity for fishers who are able to access them, they simultaneously create social distance from traditional fishers who continue to depend on simple fishing gear. From the perspective of conflict theory, changes in the means of production can generate inequalities in social position because groups that control economic and technological resources possess greater power in determining access to production outcomes (Marx, 1976). Therefore, fisher conflicts in Serdang Bedagai are not caused merely by differences in fishing gear, but by shifts in the structure of economic power resulting from the unequal distribution of modernization.

Unequal access to technology constitutes a primary source of social jealousy and feelings of marginalization among traditional fishers. Modern fishers are able to reach more extensive fishing grounds, locate fish more rapidly, and secure more stable catches, whereas traditional fishers face limitations in operational range, greater dependence on weather conditions, and persistent uncertainty regarding their catches. This situation reflects a disparity between the social goals that fishers seek to achieve and the means available to attain them. According to Robert K. Merton's social strain theory, strain arises when members of society share similar goals but lack equal access to legitimate means of achieving those goals (Merton, 1938). In this context, all fishers share the objective of improving their family welfare, yet only some possess sufficient capital, technology, and production networks. Consequently, modernization creates psychological and social pressure for traditional fishers, who perceive themselves as participating in an unequal arena of competition.

Conflict also emerges through competition over catches and disputes concerning fishing grounds. Modernization has made marine space increasingly competitive because larger and more technologically advanced vessels can operate across wider areas with substantially greater production capacity. For traditional fishers, this condition generates a sense that their livelihood space is becoming increasingly restricted. The sea, which was previously understood as a shared space sustaining community life, has gradually been transformed into an arena of economic competition characterized by competing interests. From the perspective of common-pool resource governance, marine resources constitute common-pool resources that can be collectively utilized but are also vulnerable to conflict when access rules, territorial boundaries, and monitoring mechanisms are not governed equitably (Ostrom, 1990). The disputes over fishing grounds identified in this study can therefore be interpreted as an expression of weak collective governance of marine space amid the growing pressures of modernization.

Economic inequality generated by modernization further intensifies latent conflict within fishing communities. Fishers who possess modern technology tend to earn higher incomes, whereas traditional fishers remain in vulnerable positions because of limited capital and low production capacity. These income disparities create a new form of social stratification within coastal communities, separating capital-owning fishers from small-scale fishers. According to Dahrendorf (1959), social conflict emerges from unequal relations in the distribution of authority, opportunity, and resources. Among fishing communities in Serdang Bedagai, such inequality is reflected in control over technology, access to government assistance, the capacity to purchase productive equipment, and bargaining power within fisheries-related economic activities. Thus, the conflicts that occur cannot be understood merely as personal disputes between individuals, but rather as consequences of a socioeconomic structure that places traditional fishers in a subordinate position relative to groups with greater capital and technological capacity.

The field findings also reveal that fisher conflicts are associated with perceptions of injustice regarding government policies and the distribution of assistance. The provision of fishing gear, training, and empowerment programs is fundamentally expected to help traditional fishers adapt to modernization. However, when such assistance is perceived as unevenly distributed, poorly targeted, or more readily accessible to particular groups, public policy may itself become a source of social jealousy.

From the perspective of distributive justice, public policy should provide greater support to the most vulnerable groups so that the benefits of development are not enjoyed exclusively by those who already possess resource advantages (Rawls, 1971). Accordingly, conflicts within fishing communities are related not only to competition over fish stocks or fishing grounds but also to policy legitimacy. When traditional fishers perceive that they are not treated equitably, modernization is no longer regarded as a pathway toward collective welfare, but as a process that reproduces existing inequalities in new forms.

Nevertheless, fisher conflicts in Serdang Bedagai have not developed into social disintegration because local mechanisms continue to function as instruments for reducing tension. Deliberation, kinship relations, community solidarity, and religious values constitute forms of social capital that enable fishers to resolve disputes without allowing them to escalate into prolonged open conflict. According to Coser (1956), conflict is not always destructive; it can also clarify competing interests, reinforce internal solidarity, and encourage the restructuring of social relations when managed through appropriate mechanisms. In the context of Serdang Bedagai, conflicts arising from modernization demonstrate the need to establish fisheries governance that is more equitable, participatory, and sensitive to the position of traditional fishers. Conflict resolution, therefore, cannot rely solely on informal deliberation but must be supported by structural policies that promote equitable access to technology, protect traditional fishing grounds, ensure transparency in the distribution of assistance, strengthen access to business capital, and involve fishers directly in the formulation of fisheries policies.

4. CONCLUSION

This study concludes that fisheries modernization in Serdang Bedagai Regency has generated ambivalent consequences for the livelihoods of traditional fishers. On the one hand, the use of technologies such as large motorized vessels, GPS devices, communication equipment, and fish-finding technologies has improved work efficiency and increased the productivity of some fishers. On the other hand, modernization has not been implemented equitably, as traditional fishers continue to face limited access to capital, technology, government assistance, and fairly allocated fishing grounds. These inequalities have produced various forms of social tension, including jealousy, economic competition, disputes over fishing areas, feelings of marginalization, and the weakening position of small-scale fishers within the fisheries economy. Nevertheless, these tensions have not developed into open conflict because local social mechanisms, including deliberation, solidarity, mutual cooperation, and religious values, continue to play an important role in mitigating disputes. Fisheries modernization, therefore, should not be directed solely toward increasing productivity but must also be implemented inclusively through equitable access to technology, strengthened business capital, transparent distribution of government assistance, protection of traditional fishing grounds, and the active involvement of coastal communities in policy formulation. In this way, fisheries modernization can function as a development instrument that not only promotes economic growth but also safeguards social justice, livelihood sustainability, and solidarity among fishing communities in Serdang Bedagai Regency.

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