

Opportunities and Challenges for Local Governments in Increasing Local Revenues through Fisheries Trade System Reform Marine Capture in Bintan Regency

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ABSTRACT

This study aims to analyze the role of local government in utilizing marine capture fisheries potential to increase regional revenue in Bintan Regency, Kepulauan Riau Province. Employing a descriptive qualitative approach, the study illustrates the current conditions of marine and fisheries sector governance, while identifying institutional challenges and opportunities for trade system reform. The findings reveal that although capture fisheries production has steadily increased, its contribution to regional revenue remains significantly low. This is primarily due to suboptimal local governance, the absence of Fish Auction Centers (TPI), and the dominance of a closed distribution system controlled by middlemen (tauke), which weakens fishers' bargaining power and eliminates potential local revenue from levies. The local government faces multiple structural challenges, including weak regulatory frameworks, lack of integrated production data, and the institutional disempowerment of fisher communities. Nevertheless, there are strategic opportunities that can be leveraged through the professional development and management of TPI. These centers can serve as critical instruments for ensuring price transparency, strengthening production records, increasing local revenue through levies, empowering fishers' cooperatives, and breaking the dependency on the tauke system. The study recommends the need for integrated, institution-based, and context-specific policies to support a sustainable and inclusive reform of the capture fisheries trade system in Bintan Regency.

Keywords: Local Government, Regional Revenue, Capture Fisheries, Trade System Reform

INTRODUCTION

Bintan Regency is one of the strategic regions in the Kepulauan Riau Province, endowed with significant marine and fisheries potential. Geographically, Bintan is surrounded by the sea, with an extensive coastline and marine waters rich in living aquatic resources, particularly for the capture fisheries subsector (Puryono, 2016). This potential positions Bintan as a key contributor to marine fisheries production in western Indonesia and offers considerable opportunities for increasing regional revenue through the marine sector, especially marine capture fisheries (Nurlaela, 2023).

However, to date, the contribution of the marine sector specifically capture fisheries to regional revenue in Bintan Regency remains suboptimal (Saputra & Sidabutar, 2025). According to data from the Bintan Regency Marine and Fisheries Office over the past few years, although capture fisheries production has shown a quantitative upward trend, it has not significantly impacted local government revenue (Alfrianty et al., 2022). This indicates a

clear gap between the region's available potential and the extent to which it is being effectively utilized most likely caused by various factors, including weak local government governance, inadequate resource utilization policies, and inefficient and unsustainable fishing practices.

This situation highlights the urgent need to further examine the effectiveness of local government functions in managing marine resources (Alhusain, 2016). Within the framework of regional autonomy, local governments hold considerable authority in managing resources within their jurisdictions, including the development of the capture fisheries sector. Law No. 23 of 2014 on Regional Government stipulates that while marine affairs are primarily under provincial authority, district and municipal governments still play crucial supporting roles in sectoral development, including development planning, infrastructure facilitation, extension services and fisher empowerment, and strengthening local institutions (Panji & Indarja, 2016).

Unfortunately, the implementation of these roles in Bintan has been far from optimal. Field observations indicate that the capture fisheries sector continues to face serious challenges, such as the lack of adequate fishing port infrastructure (Amanda Dhea, 2019), limited adoption of fishing technology by local fishers, restricted access to pricing and market information, and the weak bargaining position of fishers' organizations against large-scale actors or *tauke* who dominate the seafood distribution chains (Nurdin et al., 2021). In addition, the absence of local regulations favoring small-scale fishers and the lack of inter-agency program integration further exacerbate the problem (Nurbani, 2024).

Fenomena dominasi pelaku usaha besar dan masuknya kapal-kapal dari luar daerah bahkan luar negeri ke perairan Bintan yang berdekatan dengan selat Malaka mengindikasikan bahwa pemerintah daerah belum cukup kuat dalam menerapkan kebijakan proteksi dan keberpihakan terhadap nelayan lokal (Kurniadi et al., 2024). This creates an unequal playing field in resource utilization and leads to regional economic leakage, as the fisheries value chain yields little benefit for the local population (Purbani & Aisyah, 2019).

Experiences from other regions, such as Banyuwangi Regency, Bitung City, and Natuna Regency, offer valuable lessons. These local governments have demonstrated strategic roles in optimizing the marine sector through integrative and collaborative governance. For instance, Banyuwangi succeeded in developing an integrated fishing port that supports the entire value chain from capture to distribution (Agustine et al., 2014). Bitung established a large-scale fisheries industry that drives local economic growth, while Natuna emphasizes the protection of local fishers and the optimization of the Exclusive Economic Zone (EEZ). A common thread among these success stories is the local government's effective role as regulator, facilitator, and accelerator in marine sector development (Arifnur et al., 2023).

In this context, a fundamental question arises: why has Bintan Regency, despite having similar potential, not achieved comparable outcomes? Is there a policy vacuum or institutional barrier preventing the capture fisheries sector from contributing more significantly to local revenue? Based on these problems, it is highly relevant to investigate the extent to which the local government has effectively managed and utilized the capture fisheries potential in Bintan Regency. This study is critical for evaluating the effectiveness of existing policies and programs and for identifying key challenges and opportunities in developing a marine-based local economy. The findings are expected to provide strategic, data-driven, and context-sensitive recommendations to enhance the role of local government in establishing inclusive, sustainable, and revenue-generating governance of the capture fisheries sector.

METHODOLOGY

This study employed a qualitative approach with a descriptive method to examine the role of local government in utilizing marine potential to enhance regional revenue, specifically from the marine capture fisheries sector in Bintan Regency. This approach was selected to gain an in-depth understanding of the dynamics of policy, program implementation, and

interactions among local government, fishers, and other relevant stakeholders. The research was conducted in Bintan Regency, Kepulauan Riau Province, with a focus on coastal districts such as East Bintan, Teluk Sebong, and Tambelan, which are known for their significant capture fisheries activities. These locations were chosen as they represent the diversity of marine resource management practices and active involvement of both the government and local communities.

Data were collected through in-depth interviews with key stakeholders, including representatives from local government, fish port authorities, fisheries entrepreneurs, and community leaders from fishing villages. Semi structured interview techniques were employed to allow for flexible exploration of information. Secondary data were obtained from regional planning documents, annual reports, statistical data from the Central Statistics Agency (BPS), as well as relevant scholarly literature and previous research. Data were analyzed thematically through processes of data reduction, display, and conclusion drawing, based on the main themes that emerged from the findings. The validity of the data was ensured through source and method triangulation, as well as by confirming interview results via member checking and discussions with academics and marine sector practitioners (Creswell & Creswell, 2018)

RESULTS AND DISCUSSION

1. Marine Capture Fisheries Resource Potential in Bintan Regency

Bintan Regency, as one of the strategic coastal areas in Kepulauan Riau Province, possesses substantial marine resource potential, particularly in the marine capture fisheries subsector. Located adjacent to the Natuna Sea to the north and the Strait of Malacca to the southwest, the region lies along an international shipping route and within a high-biodiversity fishing zone. This potential is reflected in the high catch volumes of several key commodities, including skipjack tuna (*Katsuwonus pelamis*), Spanish mackerel (*Scomberomorus* spp.), snapper (*Lutjanidae*), grouper (*Serranidae*), and squid (*Loligo* spp.).

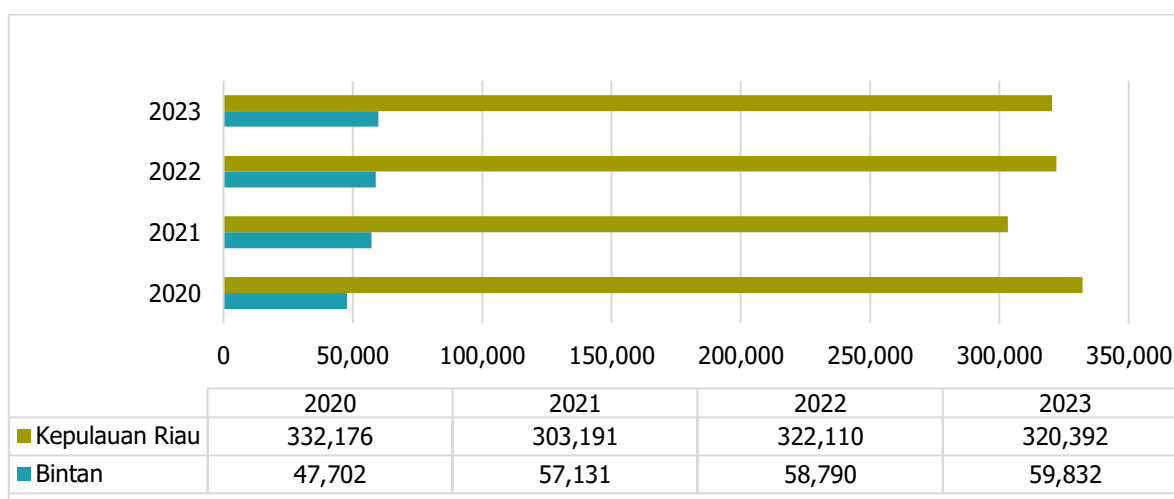


Figure 1. Marine Capture Fisheries Production (tons) 2020-2023

Source: Processed Researcher Data, (2025)

According to statistical data from the Kepulauan Riau Provincial Marine and Fisheries Office and the Ministry of Marine Affairs and Fisheries, the marine capture fisheries production in Bintan Regency has shown a consistent upward trend over the past four years. In 2020, the total catch was recorded at 47,702 tons, rising to 57,131 tons in 2021, and further increasing to 59,832 tons by 2023. This growth has positioned Bintan as one of the leading contributors to capture fisheries production in the province, with its share rising from 14.3%

in 2020 to 18.7% of the provincial total in 2023. This increase reflects dynamic economic activity within the marine sector and highlights a significant potential that could be optimized by local governments in formulating effective resource management and revenue enhancement policies. Nevertheless, in practice, this rise in production has not been matched by a corresponding increase in regional economic value, particularly in terms of contributions to Local Own-Source Revenue (PAD) or other legitimate regional income sources.

2. The State of Fisheries Trade Governance in Bintan Regency

The fisheries trade system in Bintan Regency is currently dominated by informal mechanisms operating beyond the oversight of formal government administrative structures. Based on in-depth interviews with key local stakeholders including fisher groups, fisheries entrepreneurs, village officials, and technical personnel from the Department of Marine Affairs and Fisheries it can be concluded that the absence of a government-managed Fish Auction Center (Tempat Pelelangan Ikan or TPI) is a root cause of several fundamental problems in the governance of the capture fisheries sector.

The lack of a TPI means that all fish transactions take place off the record, without standardized pricing, and without the imposition of formal local levies. In an ideal fisheries governance model, the TPI serves as a central node in the marine commodity supply chain. It functions not only as a marketplace for transactions between fishers and buyers, but also as a vital instrument for recording production data, establishing fair market prices, and initiating legally sanctioned local revenue collection. Without an operational TPI, local governments lose the opportunity to collect legitimate fiscal revenues from valuable strategic commodities.

Moreover, the absence of formal catch records presents a major challenge for local authorities in accessing accurate and up-to-date production data. Such data should serve as the foundation for planning, policy evaluation, budget allocation, and setting regional revenue targets. Without data, planning becomes speculative, policy outcomes are difficult to assess, and performance reporting lacks the evidence base necessary for effective governance. This is particularly unfortunate given Bintan's substantial capture fisheries potential, both in terms of fisher population, maritime area, and the economic value of daily catches.

This situation is further exacerbated by the widespread dominance of closed distribution systems controlled by *tauke* local large scale fish traders or patrons. In this system, the *tauke* serve not only as exclusive buyers but also as providers of capital, fuel, supplies, and market access. Small-scale fishers lacking the capital to fish independently are compelled to enter into dependent relationships with *tauke*, who offer loans or fishing provisions under binding agreements. Fishers are usually required to sell their catch directly to the *tauke* at predetermined prices, leaving no room for negotiation or reference to open market prices.

Such patron client systems create an asymmetric economic relationship in which fishers are placed in subordinate positions, deprived of access to open markets and unable to determine the value of their own labor. Fishers receive only a fraction of the true economic value generated from their catch, while most of the value-added benefits are captured by the distribution networks controlled by the *tauke*. This system not only weakens the bargaining power of fishers but also traps them in cycles of debt, capital scarcity, and social marginalization.

Beyond the negative impacts on fishers, this informal system systematically erodes the region's fiscal potential. Every day, large volumes of fisheries products leave Bintan for destinations such as Batam, Tanjungpinang, and even Singapore and Malaysia, without any official mechanism in place to record the volume, type, or value of the commodities exported. This results in substantial revenue leakage, where potential levies that could support regional development particularly infrastructure and public services in coastal communities are lost.

The absence of a formal channel such as a TPI does not merely represent lost income, but also reflects an institutional vacuum in the fisheries trade system of Bintan. In the context of regional autonomy, district governments are expected to build sovereign, transparent, and inclusive local economic systems. However, without a functioning TPI, local authorities lack the tools necessary to intervene in markets, stabilize prices, protect fishers from monopolistic practices, or create economic equity in this strategic sector.

Normatively, this condition reflects a weak state presence in regulating and serving coastal communities. A TPI should embody the presence of the state in the maritime economy not merely as a marketplace, but as a symbol of distributive justice, production accountability, fiscal protection, and social intervention. In the absence of this institution, the marine economy remains under the control of informal market forces that often do not align with the interests of small-scale fishers or local fiscal needs.

Therefore, it can be concluded that the current fisheries trade system in Bintan Regency is in a state of institutional crisis that demands comprehensive restructuring. Establishing a TPI is not merely a technical requirement but a critical institutional and fiscal policy strategy. Without this intervention, Bintan's fisheries potential will continue to be exploited by informal networks and external actors, while the local government and coastal communities remain spectators to the wealth of their own maritime resources.

3. Challenges Faced by Local Government in Managing Marine Capture Fisheries

Institutionally, the Bintan Regency Government has identified the marine and fisheries sector as one of the region's priority sectors, as reflected in key development planning documents such as the Regional Medium-Term Development Plan (Rencana Pembangunan Jangka Menengah Daerah, RPJMD) and the Strategic Plan (Renstra) of the Department of Marine and Fisheries. These documents highlight marine resource management, the enhancement of fisher productivity, and the optimization of capture fisheries yields as strategic priorities for regional economic development.

However, in practice, the implementation of these institutional commitments faces various structural and systemic challenges. Based on document reviews and in-depth interviews with local stakeholders, it is evident that the local government's role in establishing productive, inclusive, and competitive fisheries governance remains limited. The government has not yet effectively exercised its functions of planning, organizing, executing, and supervising fisheries sector development in an integrated manner.

Programs implemented to date such as boat grants, aquaculture training, fishing gear distribution, and fuel subsidies have largely been technical-operational and sporadic in nature. These programs often lack continuity within the regional policy cycle and are frequently ceremonial or limited to annual projects, without being supported by strong and measurable monitoring and evaluation (M&E) systems. As a result, the effectiveness of government interventions in sustainably improving fisher productivity remains low.

Furthermore, inter-agency coordination within the Bintan Regency Government has proven to be a fundamental issue. The Department of Marine and Fisheries, as the leading agency in this sector, is not systematically integrated with other key agencies such as the Regional Development Planning, Research, and Innovation Agency (Bappelitbangda) or the Regional Revenue Agency (Bapenda). Consequently, the abundant marine resources are not fully captured in regional planning information systems or fiscal databases.

For instance, there is still no standardized mechanism for reporting or recording the volume and types of fish catches that could serve as a basis for fiscal policy formulation. Consistent recording of marine production is a prerequisite for estimating regional revenue projections from the fisheries sector and for calculating potential fiscal incentives from the

central government. The lack of integrated data also hampers collaboration with the private sector and financial institutions in supporting fisheries investment.

From a regulatory standpoint, the Bintan Regency Government currently lacks local regulations (Peraturan Daerah or Perda) specifically governing fish auctions, TPI management, or the protection of small-scale fishers from monopolistic trade practices. This regulatory vacuum has allowed fish trading activities to continue informally and undocumented, ultimately limiting the government's fiscal space to collect levies or taxes from this economic activity. This is at odds with the empirical reality on the ground, where capture fisheries activities continue to increase annually in both volume and economic value.

The absence of legal instruments also weakens the local government's bargaining position in regulating dominant economic actors such as *tauke* (large-scale fish traders), who control the distribution and marketing of marine products. Without a legal framework, local authorities lack the authority to regulate prices, mandate auctioning processes, or enforce distribution mechanisms that protect the interests of small-scale fishers.

Another critical challenge lies in the institutional capacity of fisher organizations themselves. Weak fisher cooperative structures and minimal support for strengthening local economic institutions hinder the development of a healthy and competitive fisheries ecosystem. Many fisher cooperatives are inactive or only function during aid distribution, rather than operating within productive business models. Consequently, when the establishment of a TPI is planned, local governments face difficulties in identifying suitable institutional partners capable of managing the facility professionally and accountably.

In summary, the main challenges faced by the Bintan Regency Government in managing marine capture fisheries go beyond technical and financial limitations. They are rooted in systemic issues, including weak coordination among government agencies, the absence of enabling regulations, poor production data recording, and low institutional capacity among fisher groups. Unless these challenges are addressed through an integrated policy approach, the marine sector which holds considerable potential will remain trapped in an informal economic system that contributes little to regional revenue and does not significantly improve the livelihoods of coastal communities.

4. Dependency, Inequality, and Vulnerability Among Fishers

The dependency of fishers on *tauke* (local financiers or middlemen) represents a deeply rooted structural issue in the capture fisheries economy of Bintan Regency. This dependency not only affects local fiscal capacity through lost revenue from potential levies and official taxation but also generates complex, multidimensional socio-economic challenges.

Based on in-depth interviews with fishers and relevant stakeholders, it was found that most fishers lack the freedom to determine the selling price of their catch. Prices are unilaterally set by the *tauke*, who simultaneously act as financiers, fuel suppliers, and sole buyers of marine products. Fishers are excluded from market valuation processes and often remain unaware of where and at what price their catch is resold whether at the provincial, national, or export level. This condition reflects a structural imbalance in the fisheries value chain, where the primary producers the fishers receive the smallest share of the generated economic value. In contrast, distribution actors such as the *tauke*, who control market access and logistics, capture a disproportionate profit margin. This disparity is not merely a matter of income inequality but represents a broader power asymmetry that perpetuates poverty cycles among fishers.

Moreover, the system creates a patron–client relationship in which fishers become indebted, lack alternative distribution channels, and lose sovereignty over their labor output. In the long term, such dependency diminishes fishers' bargaining power in both price negotiations and policy dialogues. Even when export market prices rise, fishers often fail to

benefit, as local *tauke* maintain control over pricing. Without state intervention or the establishment of formal institutions such as Fish Auction Centers (TPIs), this dependency will continue to reproduce inequality and vulnerability.

Another consequence of this system is the lack of upward economic mobility for fishers. They are unable to access formal financing from banking or microfinance institutions due to the absence of official production records documents essential in modern economies to assess creditworthiness. In the absence of such records, fishers are deemed “unbankable” and must continue to rely on *tauke* as their sole source of capital.

Even more concerning, this lack of official data excludes fishers from social protection programs and public services such as fisher insurance schemes, fuel subsidies, and capacity-building initiatives. Government agencies require accurate data for targeted program delivery, but in the context of Bintan, the absence of a TPI and formal catch documentation renders fishers “invisible” within public service systems. This imbalance also affects intergenerational continuity in the fisheries sector. Younger generations in coastal villages are increasingly abandoning fishing due to the lack of income security, limited access to capital, and the challenges of operating in an unregulated environment without institutional support. In the long term, this may reduce the supply of productive labor in the fisheries sector and threaten the sustainability of coastal economies.

Therefore, the issues of dependency, inequality, and vulnerability faced by fishers in Bintan Regency are not merely economic in nature. They are also tied to power structures within the trade system, access to state services, and the right to local economic sovereignty. These conditions call for the presence of the state particularly local government to develop a fair, transparent, and institutionally-based fisheries distribution system, with the establishment of TPIs as a critical first step. Without such intervention, fishers will remain trapped in disempowering cycles of dependency, while the region’s fiscal and economic potential continues to be lost without meaningful local contribution.

5. Opportunities for Local Government in Reforming the Fisheries Trade System

Based on empirical field findings, the establishment of Fish Auction Centers (Tempat Pelelangan Ikan, or TPI) in Bintan Regency emerges as the most urgent and strategic intervention needed by the local government. TPIs are not merely marketplaces for marine commodities, but pivotal institutions within the maritime economy, integrating fiscal systems, logistics, and data recording mechanisms. The TPI can serve as an instrument to:

- a. Ensure Price Transparency and Fair Market Competition; A key opportunity for local government lies in creating a transparent pricing mechanism for fishers’ catch. In the absence of a TPI, fish sales are conducted privately between fishers and *tauke* (middlemen), without market-standardized prices or fair bargaining. Through a formal TPI, fish catches are auctioned publicly under the supervision of the government or fishing cooperatives, enabling prices to be determined through fair market supply and demand. This mechanism fosters a healthy business climate, promotes market efficiency, and prevents price exploitation by dominant actors. Local government may further support this by publishing daily or weekly price standards based on local production data and export demand.
- b. Generate Real-Time and Accurate Fisheries Production Data; TPIs also present a vital opportunity to establish a reliable, integrated fisheries data system. Currently, the lack of accurate data on fish species, catch volumes, and landing locations leads to speculative, non-evidence-based policy making. A well-managed TPI allows for digital recording of all landings through e-auction or e-logbook systems managed by the Department of Marine Affairs and Fisheries or cooperative partners. This verified data becomes a cornerstone for planning development programs, allocating aid to fishers, and reporting the fisheries

sector's contribution to regional economic growth. Furthermore, robust data systems strengthen Bintan's position in accessing central government support, participating in national programs by the Ministry of Marine Affairs and Fisheries (KKP), and attracting fisheries investment.

- c. Increase Legitimate Local Revenue through Official Levies; One of the most tangible fiscal benefits of establishing a TPI is the potential to increase local government revenue through service-based auction fees. Currently, fishery transactions that occur outside formal channels are unrecorded and untaxed, resulting in substantial fiscal leakage. A properly administered TPI allows for the collection of service fees or levies as stipulated in local regulations (Peraturan Daerah, or Perda), thus contributing to locally generated revenue (Pendapatan Asli Daerah, PAD). The government may design fair and progressive levy schemes, for example, based on fish tonnage, species, or auction value. This would not only improve fiscal income but also provide a foundation for strengthening sector-specific budgets in marine and fisheries governance.
- d. Empower Fisher Cooperatives as Market Operators and Value Chain Stakeholders; Another opportunity is positioning fisher cooperatives as primary partners in managing TPIs. The local government need not operate TPIs directly, but rather promote a partnership model involving the government (as regulator and infrastructure provider), cooperatives (as operators), and private sector (as auction buyers). This model aligns with the principles of people's economy empowerment outlined in Presidential Regulation No. 17 of 2023 on Cooperative Strengthening. With TPIs functioning as distribution hubs, cooperatives can play a key role in aggregating, sorting, auctioning, and distributing fish catches. The government's role would be to provide oversight and support through managerial training, business capital facilitation, and access to domestic and export markets. This model ensures that the added value of the fisheries economy is not monopolized by large capital owners but is also equitably shared with local fisher groups.
- e. Break Fishers' Dependency on the Tauke System That Undermines Local Economic Contribution; Fisher income in Bintan Regency has long been shaped by the tauke system a patron client relationship in which fishers rely on middlemen for fuel, fishing supplies, and market access. This system erodes fishers' bargaining power and operates outside formal economic channels, providing no incentive for tauke to contribute to local revenue, as all transactions remain undocumented and often cross regional boundaries.

The establishment of TPIs presents a clear opportunity for the local government to restructure these economic relationships and open wider, more competitive market access for fishers. With mandatory auctioning through the TPI, all landings would be recorded formally, allowing fishers to sell directly to buyers, cooperatives, or exporters without reliance on *tauke*. This would strengthen fisher independence while enabling the local government to effectively regulate the trade system. For this to function, supporting regulations must be enacted such as a regional ordinance (Perda) on marine product auctions that mandates all landed catches be sold through the TPI prior to regional distribution. Furthermore, the TPI should be managed under a public-private partnership (PPP) framework, involving local cooperatives and private actors to ensure efficiency and reduce dependence on local government budgets (APBD).

CONCLUSION

Based on the findings of this study, it can be concluded that the role of the Bintan Regency local government in harnessing the potential of the marine capture fisheries sector remains suboptimal in contributing to regional revenue generation. Despite the continuous increase in fisheries production, its fiscal contribution to local government income remains disproportionately low. This is largely due to weak trade governance, the dominance of informal systems controlled by tauke (middlemen), and the absence of formal institutions such

as Fish Auction Centers (Tempat Pelelangan Ikan, or TPI) that serve critical functions in recording production, managing distribution, and collecting official levies.

The local government currently lacks the regulatory framework and institutional capacity required to effectively and equitably intervene in the fisheries market. However, there is significant potential for improvement through institutional and trade system reforms, particularly by establishing TPIs that are co-managed with fisher cooperatives and private sector stakeholders. A well-functioning TPI can serve as an open auction platform, a reliable source of production data, and a legitimate mechanism for enhancing local revenue. Strengthening fisher cooperatives as TPI operators also represents a strategic approach to empowering the local economy and dismantling fisher dependency on the tauke-dominated system.

Therefore, policy interventions must be grounded in robust legal frameworks, inter-agency coordination, institutional capacity building for fisher organizations, and strong political commitment from the local government. These efforts are essential to realize an inclusive, transparent, and competitive maritime economic system. Without such strategic reforms, the vast potential of the capture fisheries sector in Bintan Regency will continue to be constrained by an informal economic structure that disadvantages both fishers and the region's fiscal capacity.

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