



IMPLEMENTATION OF THE REGULATION OF THE MINISTER OF MARINE AFFAIRS AND FISHERIES OF THE REPUBLIC OF INDONESIA NUMBER 18 OF 2021 CONCERNING MARINE FISHING EQUIPMENT IN THE CITY OF SIBOLGA FROM THE PERSPECTIVE OF SIYASAH DUSTURIYAH

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ABSTRACT

This study analyzes the implementation of the Regulation of the Minister of Marine Affairs and Fisheries of the Republic of Indonesia No. 18 of 2021 concerning Fishing Equipment in Marine Waters in Sibolga City from the perspective of Siyasa Dusturiyah. The research applies a qualitative descriptive method, utilizing field observations, in-depth interviews, and document analysis. Findings indicate that the regulation aligns with sustainable fisheries management principles and has contributed to reducing destructive fishing practices, positively impacting coral reef restoration and fish stock recovery. However, effectiveness remains constrained by limited surveillance capacity, overlapping institutional authority, and the economic burden on small-scale fishers. From the Siyasa Dusturiyah perspective, the policy embodies masalah 'ammah but lacks full implementation of al-'adl, amanah, and syura. Strengthening community participation, providing equitable economic support, and enhancing inter-agency coordination are recommended to balance environmental sustainability with fishermen's welfare.

Keywords: Sustainable Fisheries, Small-Scale Fishers, Siyasa Dusturiyah

1. INTRODUCTION

Indonesia, as the world's largest archipelagic state, possesses a coastline stretching 108,000 kilometers and extensive marine areas with high biodiversity, making it one of the global fisheries hubs (Ministry of Marine Affairs and Fisheries of the Republic of Indonesia, 2023). Sibolga City, located on the western coast of North Sumatra, serves as a crucial fisheries hub due to its strategic position along the Indian Ocean and its role as a distribution center for marine products in western Sumatra. This geographical

position makes Sibolga not only a base for local fishing operations but also a port of call for fishing fleets from various regions (Sibolga City Government, 2024).

Data from the Sibolga Archipelagic Fishing Port (Pelabuhan Perikanan Nusantara, PPN) in 2024 show that there are 479 active vessels in operation, dominated by the use of purse seine nets (41.75%), boat lift nets (12.11%), and gillnets (14.61%) (PPN Sibolga, 2024). The number of fishers dependent on this sector reaches 10,328, with total vessel visits throughout the year amounting to 15,218—an increase of 15.21% compared to 2023. This surge in activity has had a significant impact on fish production volume, which in 2024 reached 37,928 tons, marking a 24.22% increase from the previous year. The main commodities include skipjack tuna (48%), yellowfin tuna (18%), scad mackerel (17%), and frigate tuna (7%), generating an economic value of approximately IDR 643.49 billion.

Despite the promising production figures, the growth pattern indicates mounting pressure on the sustainability of the marine ecosystem. The dominance of purse seine vessels, accounting for 62.24% of total vessel visits, leads to overexploitation of certain fish stocks (PPN Sibolga, 2024). Moreover, destructive fishing practices, such as the use of bagged trawl nets and fish bombs, are still found clearly violating the provisions of the Regulation of the Minister of Marine Affairs and Fisheries of the Republic of Indonesia No. 18 of 2021 concerning the prohibition of fishing gear that damages the marine environment (Permen KP No. 18/2021).

The case of a Sibolga-based fishing vessel caught using fish bombs in the waters of Pini Island in May 2025 serves as evidence of weak monitoring and law enforcement (Tapanuli Post, May 20, 2025). This problem not only reflects limited human resources and monitoring facilities but also suggests possible collusion between illegal fishing actors and certain officials (Antara News, 2019). Such circumstances erode public trust in the government's commitment to marine conservation.

The direct impact of weak policy implementation is most felt by small-scale fishers, who often lose out in competition against large, capital-intensive, and technologically advanced fleets. Consequently, traditional fishers experience declining incomes, fall into debt, and in some cases, are forced to sell their boats or fishing equipment (Seru, 2025). This situation widens socio-economic disparities in coastal areas, raising concerns about the equitable distribution of resources.

From an Islamic perspective, any practice that damages the marine environment and causes social injustice is prohibited. The Qur'an states:

وَلَا تُفْسِدُوا فِي الْأَرْضِ بَعْدَ إِصْلَاحِهَا

Meaning: *"And do not cause corruption on the earth after its reformation"* (Qur'an, Al-A'raf: 56).



This verse serves as a normative foundation that fishing must be conducted with due regard for environmental sustainability and social justice (Qur'an 7:56). Imam Al-Ghazali, in *Ihya' Ulum al-Din*, emphasizes that the duty of a leader is to prevent harm (mafsadah) and promote the public good (maslahah):

وَأَجِبْ عَلَى السُّلْطَانِ دَفْعَ الْمَفَاسِدِ وَجَلْبُ الْمَصَالِحِ

Meaning: *"It is obligatory for the ruler to prevent harm and bring about benefit"* (Al-Ghazali, Vol. II: 142).

This principle aligns with the state's obligation to enforce fisheries regulations. Another problem arises in the distribution of catches: most fish landed at PPN Sibolga are sent to other regions such as Medan, Padangsidempuan, Jambi, and even Jakarta, especially frozen fish commodities. This situation results in greater economic value being enjoyed by external parties, while local fishing communities receive minimal profit (PPN Sibolga, 2024).

Community participation in monitoring remains low. Community Monitoring Groups (Pokmaswas), expected to serve as the front line of oversight, have not functioned optimally due to limited human capacity and funding (North Sumatra Marine and Fisheries Agency, 2024). Cohen and Uphoff's theory of participatory development stresses the importance of community involvement in policy planning, implementation, and evaluation (Cohen & Uphoff, 1977).

According to George C. Edwards III's theory of public policy implementation, successful enforcement of a regulation depends on communication, resources, the disposition of implementers, and bureaucratic structure (Edwards III, 1980). In Sibolga's context, obstacles occur in all four aspects, including insufficient information dissemination, inadequate monitoring facilities, weak integrity among officers, and overlapping authority between agencies.

The situation is further complicated by dependence on certain types of fishing gear that exacerbate overfishing. The gap between short-term economic interests and long-term resource sustainability poses a serious challenge. If left unaddressed, the degradation of fish resources could threaten the livelihoods of small-scale fishers.

Within the framework of *Siyasah Dusturiyah*, the management of marine resources falls under *maslahah 'ammah* (public interest), which the government is obliged to protect. The principles of justice ('adl), trustworthiness (amanah), and consultation (shura) must guide the formulation and implementation of maritime policies (Al-Mawardi, 1985). Therefore, the implementation of Permen KP No. 18 of 2021 is not only a matter of legal technicalities but also of moral and religious responsibility.

Previous studies show that weak enforcement of the prohibition on destructive fishing gear is a national problem. Fitria Adelia (2023) in Bengkalis and Hasyim–

Yulia (2024) in Pesisir Selatan, West Sumatra, both found that inadequate monitoring, low public awareness, and unequal access to information are the main factors hindering policy effectiveness.

Accordingly, this study seeks to critically examine the implementation of Permen KP No. 18 of 2021 in Sibolga by integrating empirical and normative Islamic approaches. This approach allows for an analysis that not only describes factual conditions in the field but also assesses their conformity with sharia principles, particularly from the perspective of *Siyasah Dusturiyah*.

This research is expected to make a tangible contribution to policymakers, law enforcement agencies, and fishing communities in formulating sustainable, equitable fisheries management strategies in accordance with sharia values. The findings are also expected to enrich academic literature on the integration of positive law and Islamic law in the governance of marine resources in Indonesia.

2. RESEARCH METHOD

The approach This study employs an empirical legal approach using the field research method, combined with a normative analysis within the framework of *Siyasah Dusturiyah*. The empirical legal approach is chosen to gain a factual understanding of the implementation of the Regulation of the Minister of Marine Affairs and Fisheries of the Republic of Indonesia No. 18 of 2021 in Sibolga City through direct observation of the behavior of officials, fishers, and other stakeholders, thereby identifying both technical and non-technical obstacles affecting policy effectiveness (Soekanto, 1983). These empirical data are then analyzed normatively through sharia principles such as *maslahah*, *'adl*, and *amanah*, as outlined by Al-Mawardi in *Al-Ahkam As-Sultaniyyah* (1985) and Asy-Syatibi in *Al-Muwafaqat fi Ushul As-Syariah* (1975). As such, the study's findings do not merely present a descriptive account but also provide a moral-religious assessment of regulation implementation.

The research location is focused on Sibolga's marine area, with subjects including officials from the Ministry of Marine Affairs and Fisheries, field monitoring officers, community leaders, religious scholars, and traditional fishers directly affected by the regulation (Indah Sukma Nurhayati, 2020).

Data collection is conducted using three main techniques: in-depth interviews, participatory observation, and document study. In-depth interviews are carried out with key informants such as officials from the North Sumatra Marine and Fisheries Agency, staff at PPN Sibolga, leaders of fisher groups, and religious figures to gather insights on policy implementation and *fiqh siyasah* perspectives on the matter (Sugiyono, 2017). Participatory observation involves direct monitoring of fishing activities, fishing gear usage patterns, and the oversight mechanisms applied in the field. Document study includes reviewing official texts such as Permen KP No. 18 of 2021, Sibolga fisheries statistical reports, news



articles on fishing gear violations, and academic literature related to sustainable marine resource management (FAO, 1995; Satria, 2015).

Data analysis is conducted through a descriptive-analytical method integrating field findings with public policy theory (Edwards III, 1980) and principles of sustainable natural resource management (WCED, 1987), supplemented by source triangulation techniques to ensure the validity of the collected information

3. RESULT AND ANALYSIS

General Overview of the Implementation of the Regulation of the Minister of Marine Affairs and Fisheries No. 18 of 2021 in Sibolga City

Sibolga City is one of the key fisheries hubs on the western coast of North Sumatra, with direct access to the Indian Ocean, making it a strategic location for the operation of both small- and large-scale fishing vessels (Sibolga City Government, 2024). According to 2024 data from the Sibolga Archipelagic Fishing Port (PPN), there were 479 active fishing vessels operating in the area, dominated by purse seines (41.75%), followed by boat lift nets (12.11%) and gillnets (14.61%) (PPN Sibolga, 2024). Vessel visits totaled 15,218 throughout the year, representing a 15.21% increase from 2023, indicating significant growth in fishing activity. Fish production volume also rose by 24.22% to 37,928 tons in 2024, with an economic value of IDR 643.49 billion (PPN Sibolga, 2024). Regulation of the Minister of Marine Affairs and Fisheries No. 18 of 2021 serves as a legal instrument to govern the types and specifications of fishing gear so that they remain environmentally friendly and sustainable (Ministry of Marine Affairs and Fisheries of the Republic of Indonesia, 2021). This regulation prohibits the use of destructive fishing gear such as trawls, bagged trawl nets, and fish bombs, as these have been proven to damage marine ecosystems (FAO, 1995). Normatively, its implementation is expected to steer Sibolga's fishing activities toward greater sustainability and fairness for all fisheries actors.

The enforcement of Permen KP No. 18 of 2021 in Sibolga aims to reduce the prevalence of illegal, unreported, and unregulated fishing (IUUF), which remains widespread in the region's waters (Ministry of Marine Affairs and Fisheries of the Republic of Indonesia, 2023). However, observations and reports from the North Sumatra Marine and Fisheries Agency indicate varying levels of fisher compliance. Larger-scale fishers with modern fleets tend to comply with the regulation due to better access to regulatory information and standardized technology (Satria, 2015). In contrast, small-scale fishers often face technical and financial barriers to replacing or modifying their gear to meet the requirements. This disparity demonstrates a gap in policy adaptation between different scales of fishing operations (Béné, Hersoug, & Allison, 2010). From Rawls' (1971) distributive justice perspective, the policy risks creating inequity if it is not accompanied by

compensation or transition assistance for small-scale fishers. The field reality underscores that implementation requires not only law enforcement but also support for technological adaptation and capital access.

In practice, enforcement of Permen KP No. 18 of 2021 in Sibolga is carried out by a combination of agencies, including PPN Sibolga, the Provincial Marine and Fisheries Agency, the Water and Air Police (Polairud), and the Indonesian Navy (North Sumatra Marine and Fisheries Agency, 2024). However, limited personnel for marine monitoring poses a significant challenge. Community Monitoring Group (Pokmaswas) data show that the ratio of monitoring officers to the marine area under their jurisdiction is highly disproportionate, meaning that violations often go undetected (Cinner et al., 2012). The use of fish bombs by two Sibolga-based vessels in the waters of Pini Island in May 2025 illustrates that violations persist despite the regulation being in place (Tapanuli Post, 2025). Thus, enforcement capacity is a key determinant of successful policy implementation on the ground.

Fish production in Sibolga in 2024 shows a pattern of commodity dominance—particularly skipjack tuna (48%), yellowfin tuna (18%), scad mackerel (17%), and frigate tuna (7%) (PPN Sibolga, 2024). This suggests targeted fishing pressure on pelagic stocks, which in the long term may disrupt marine ecosystem balance (FAO, 1995). Permen KP No. 18 of 2021 explicitly emphasizes the precautionary approach in fisheries management, aiming to ensure that fishing intensity does not exceed the regenerative capacity of fish stocks (WCED, 1987). However, in Sibolga, this principle's implementation remains challenged—especially due to the predominance of non-selective fishing gear such as purse seines, which account for 62.24% of total vessel visits.

The distribution of Sibolga's catch reveals that most fish landed at PPN Sibolga are transported to other regions such as Medan, Padangsidempuan, Jambi, and even Jakarta—primarily as frozen commodities (PPN Sibolga, 2024). This means that the added economic value is largely enjoyed by external markets, while local communities, particularly small-scale fishers, benefit only from raw material sales. According to John Rawls' (1971) social justice theory, such distribution contradicts the difference principle, which requires that policies produce the greatest benefit for the least advantaged groups. This condition strengthens the argument that implementation should address not only fishing gear regulation but also supply chain and market access for fishers.

Fishers' legal awareness of the contents of Permen KP No. 18 of 2021 in Sibolga remains uneven, depending on education levels, access to information, and participation in policy socialization (North Sumatra Marine and Fisheries Agency, 2024). Fishers organized in cooperatives or joint business groups generally have better knowledge due to clear information channels. Conversely, traditional fishers operating independently often miss out on socialization events, leaving them with minimal understanding of the rules (Fitria Adelia, 2023). Limited outreach in remote coastal areas contributes to non-compliance, some of which stems from



ignorance rather than deliberate intent. Unequal socialization risks creating injustice in sanction enforcement, as some violations occur due to lack of knowledge rather than malice. Legal education should thus be prioritized in the early stages of implementation.

Permen KP No. 18 of 2021 not only prohibits specific fishing gear but also sets technical specifications for permitted gear, such as mesh size, net material, and rope length (Ministry of Marine Affairs and Fisheries of the Republic of Indonesia, 2021). These measures aim to reduce unwanted bycatch and prevent habitat damage (FAO, 1995). In Sibolga, compliance with these specifications is hindered by small-scale fishers' limited financial capacity to purchase or modify gear accordingly (Béné, Hersoug, & Allison, 2010). Government-provided equipment assistance has been offered, but it remains limited in quantity and coverage.

Monitoring is conducted through marine patrols, dock inspections, and joint interagency operations (North Sumatra Marine and Fisheries Agency, 2024). However, given the vast monitoring area—from Sibolga's waters to the border with Central Tapanuli—patrol frequency is limited. Data indicate that most violations are discovered during periodic joint operations rather than through routine daily surveillance (Cinner et al., 2012), creating time gaps that offenders exploit to operate illegal gear outside patrol schedules.

Violations recorded in Sibolga typically involve the use of prohibited or non-compliant gear, such as bagged trawl nets, trawls, and fish bombs (Tapanuli Post, 2025). Offenders include both local fishers and outsiders taking advantage of weak enforcement. Legal proceedings are often hampered by lack of evidence, witnesses, or technical difficulties in apprehending offenders at sea (Soerjono Soekanto, 1983). Administrative sanctions are more common than criminal ones, often justified as a means of maintaining social relations between officers and fishing communities (Satria, 2015). However, from a deterrence theory perspective, repeated light sanctions risk reinforcing the perception that violations can be committed with minimal consequences (Dunn, 2018).

Overall, the implementation of Permen KP No. 18 of 2021 in Sibolga reveals a gap between the policy's normative objectives and its practical realities. While the regulation aligns with the principles of sustainable fisheries as outlined in the FAO's Code of Conduct for Responsible Fisheries (1995) and the WCED's sustainability vision (1987), challenges such as resource constraints, weak enforcement, adaptation gaps between fisher groups, and unequal benefit distribution undermine its effectiveness. From a *Siyasah Dusturiyah* perspective, successful implementation will depend on the state's ability to uphold the principles of *al-'adl* (justice), *maslahah* (public benefit), and *amanah* (public trust) simultaneously (Asy-Syatibi, 1975; Al-Ghazali, 1992). Addressing these challenges will require a combination of firm law enforcement, legal education, technical support, and stronger community involvement in monitoring, so that the policy's

goals of sustaining marine ecosystems and improving fisher welfare can be fully achieved.

Barriers and Challenges in Policy Implementation

Barriers to the implementation of Ministerial Regulation of Marine Affairs and Fisheries No. 18 of 2021 in Sibolga City can be observed in the limited human resources available for monitoring. According to the 2024 report of the North Sumatra Marine and Fisheries Agency, the number of fisheries inspectors assigned to Sibolga is only 24, covering a maritime surveillance area of 3,941 km². This ratio is highly disproportionate to the size of the area and the intensity of fishing activities, which in 2024 reached 15,218 vessel visits (PPN Sibolga, 2024). The shortage of personnel has resulted in monitoring that is sporadic and more reactive than preventive. In public policy implementation theory, human resource constraints are a critical factor that can weaken the effectiveness of policy execution (Edwards III, 1980). This condition is further exacerbated by frequent staff rotations, requiring newly assigned officers to take time to adapt before fully understanding the local context.

The next challenge lies in the limitations of monitoring infrastructure and facilities. Data from Pokmaswas Sibolga (2024) show that only two marine patrol boats are available for the entire Sibolga maritime area, and these often experience technical breakdowns and require periodic maintenance. In addition, supporting equipment such as GPS, sonar, and communication devices are not always available in optimal condition (Cinner et al., 2012). In modern fisheries monitoring, technology plays a vital role in detecting vessels and suspicious fishing activities (FAO, 1995). Without adequate facilities, patrol effectiveness is low, and violations are often detected only after the offending vessels return to port, making law enforcement less effective due to the difficulty of collecting evidence.

Regulation outreach to fishers also presents a significant challenge. Although PPN Sibolga and the Provincial Marine and Fisheries Agency have conducted several awareness-raising activities, these efforts have largely targeted fishers actively engaged in formal organizations (North Sumatra Marine and Fisheries Agency, 2024). Many traditional fishers in remote coastal areas have not received direct information about the regulation, including the technical specifications of permitted fishing gear (Fitria Adelia, 2023). Insufficient outreach has led to violations committed out of ignorance rather than intent. In public policy analysis, ineffective communication between policymakers and implementers on the ground is among the main causes of implementation failure (Edwards III, 1980). Thus, more extensive and continuous outreach methods are urgently needed.

Another barrier is the economic limitation that hinders small-scale fishers from adapting to the regulation. Replacing non-compliant fishing gear involves significant costs that most traditional fishers cannot afford (Béné, Hersoug, & Allison, 2010). While the government has provided some gear assistance, its



quantity is limited, and distribution is often uneven (Satria, 2015). Without financial support or clear subsidy schemes, fishers are inclined to retain their old gear even if it violates regulations. This situation indicates that sound technical policy must be accompanied by an implementation strategy that accounts for the economic realities of target groups; otherwise, the risk of non-compliance will remain high.

Law enforcement also faces considerable challenges. The process of handling violations at sea is often hampered by the difficulty of securing evidence on site. Many violations occur far from surveillance posts, making it impossible for officers to seize physical evidence directly (Soerjono Soekanto, 1983). As a result, sanctions tend to be administrative, such as warnings or light fines, rather than the criminal penalties provided for in the Fisheries Law (Ministry of Marine Affairs and Fisheries of the Republic of Indonesia, 2021). The lack of deterrent effect reinforces the perception among offenders that violations can be committed with minimal risk (Dunn, 2018). In the long term, weak enforcement erodes the authority of the policy.

Sibolga's geographical conditions—characterized by numerous small islands and an irregular coastline—add to the complexity of monitoring. Many locations are susceptible to illegal fishing activities and are difficult to reach with standard patrol boats (Pomeroy & Berkes, 1997). Areas such as Mursala Island, Poncan Island, and Pini Island are considered high-risk due to their distance from the main monitoring center at PPN Sibolga. Weather conditions also play a role, as the west and east monsoon seasons often limit patrol boat mobility. In such situations, offenders may take advantage of the opportunity to operate prohibited fishing gear without detection. These geographical challenges require adaptive, technology-based monitoring strategies.

Beyond physical constraints, suboptimal interagency coordination also poses an obstacle. Fisheries monitoring involves multiple stakeholders, including the Ministry of Marine Affairs and Fisheries, the Indonesian Navy, the Water and Air Police (Polairud), and local governments. However, overlapping jurisdictions and limited information sharing are common (Cinner et al., 2012). For instance, marine patrol data are not always integrated with PPN data, complicating efforts to analyze violations comprehensively. This lack of coordination contradicts the integrated coastal management principle recommended by the FAO (1995) for sustainable fisheries governance. Weak coordination results in fragmented and inefficient monitoring efforts.

Social factors cannot be overlooked. Close social ties between inspectors and fishing communities often create dilemmas in law enforcement (Satria, 2015). While good relations are essential for building trust, they may also foster tolerance toward certain violations. This phenomenon is compounded by instances of collusion, in which violations are overlooked in exchange for certain benefits

(Antara News, 2019). In policy implementation theory, the attitudes or dispositions of policy implementers greatly influence the effectiveness of execution in the field (Edwards III, 1980). Therefore, the integrity of enforcement officers is a key determinant.

Low community participation in monitoring also presents a challenge. Although Community Monitoring Groups (Pokmaswas) have been established, their role remains suboptimal due to limited training, incentives, and legal protection for members (North Sumatra Marine and Fisheries Agency, 2024). Community involvement could help compensate for the shortage of official monitoring personnel, particularly in covering vast areas (Cohen & Uphoff, 1977). Without community support, surveillance depends solely on official patrols, whose frequency is limited. Low participation also means that potential violations occurring near fishing settlements are not always reported.

Overall, the barriers and challenges to implementing Ministerial Regulation No. 18 of 2021 in Sibolga arise from a combination of internal and external factors. Internal factors include limitations in human resources, infrastructure, interagency coordination, and officer integrity. External factors comprise geographical conditions, weather, fishers' economic constraints, and low community participation. These factors interact in ways that make a normatively sound policy difficult to implement effectively. An analysis of these barriers is crucial as a basis for developing more realistic improvement strategies, which will be discussed in the policy strategy section. Without addressing these obstacles, the regulation's goals of protecting marine resources and ensuring the sustainability of fisheries in Sibolga will be difficult to achieve.

Impacts of Implementation on Small-Scale Fishers and the Marine Ecosystem

The implementation of Ministerial Regulation of Marine Affairs and Fisheries No. 18 of 2021 in Sibolga City has had direct impacts on small-scale fishers, presenting both opportunities and challenges. One positive impact is the gradual reduction in the use of destructive fishing gear, such as trawl nets and fish bombs, in areas under intensive surveillance (PPN Sibolga, 2024). This has helped reduce damage to coral reef habitats and seabeds, which serve as fish spawning grounds (FAO, 1995). On the other hand, the policy restricts the use of certain fishing gear that has long been relied upon by small-scale fishers due to affordability and accessibility (Béné, Hersoug, & Allison, 2010). Small-scale fishers without sufficient capital often struggle to replace gear in compliance with the regulation, forcing some to reduce fishing frequency or temporarily switch livelihoods, which has led to a significant decline in household income.

Economically, small-scale fishers tend to experience income loss due to the high costs of transition. Purchasing new gear that meets the requirements, such as gillnets with specified mesh sizes or modern handline systems, can cost millions of rupiah (Dinas Kelautan dan Perikanan Sumut, 2024). For traditional fishers whose



income depends on daily catches, these expenses are difficult to meet without government or financial institution support. While some gear assistance programs have been implemented, the number of beneficiaries is limited, and distribution is uneven (Satria, 2015). This condition exacerbates inequality between capital-rich large-scale fishers and financially constrained small-scale fishers. In public policy theory, policies that lack compensation schemes often face resistance from directly affected groups (Edwards III, 1980), as evidenced by increasing complaints among Sibolga fishers regarding the regulation.

Ecologically, the ban on destructive fishing gear yields long-term positive effects on fish stocks. Gear such as trawl nets and fish bombs are known to damage benthic ecosystems, leading to long-term declines in fish populations (Pauly & Zeller, 2016). With reduced use of such gear in monitored areas, the potential for stock regeneration increases. However, these ecological benefits are not immediately tangible to small-scale fishers dependent on daily catch yields (FAO, 1995). Some fishers have reported lower catches after switching to “less efficient” but compliant gear. This gap between long-term ecological gains and short-term economic losses often fuels tension between conservation objectives and livelihood needs.

For small-scale fishers in Sibolga, the regulation has also affected the distribution patterns of catches. Most fish landed at PPN Sibolga continue to be distributed outside the region, leaving local fishers with relatively low first-level selling prices (PPN Sibolga, 2024). The absence of small-scale processing and storage facilities at the community level prevents fishers from maximizing the value-added potential of their products (Béné et al., 2010). Consequently, larger profits are captured by intermediaries and buyers from outside the region. This indicates that while the regulation addresses fishing gear, the fisheries value chain remains unaddressed. In inclusive development theory, policies that fail to cover the entire value chain are unlikely to reduce inequality (World Bank, 2015).

Socially, restrictions on certain fishing gear have caused tensions between fisher groups. Compliant fishers often feel disadvantaged when competing with those who continue using prohibited gear covertly (Fitria Adelia, 2023). This fosters perceptions of unfairness, especially when offenders face little or no enforcement. Horizontal conflicts occasionally arise, particularly in port areas or fish markets. From a public policy implementation perspective, this reflects weak enforcement in ensuring fairness for all stakeholders (Edwards III, 1980), which can erode social cohesion among fishing communities.

For marine ecosystems, one tangible positive outcome of the regulation is the observed improvement in coral reef conditions in some intensively monitored areas. Field studies by DKP Sumut (2024) indicate a 5–8% increase in live coral cover in coastal areas around Poncan Island and Mursala Island compared to the previous year. This recovery is directly linked to reduced use of gear that damages seabed substrates. Additionally, there has been an increase in juvenile reef fish

abundance, serving as an indicator of ecosystem recovery (Cinner et al., 2012). However, these benefits remain concentrated in routinely monitored areas, with less noticeable improvements in under-surveilled locations.

Changes in fishing practices have also emerged since the regulation's enforcement. Some fishers have shifted to handline or gillnet methods that comply with the rules, even though these typically yield smaller catches per trip (Satria, 2015). This shift requires technical adaptation and longer hours at sea, which can be burdensome for small-scale fishers who rely on time efficiency. Moreover, effective operation of new gear requires training, without which the transition proceeds slowly and ineffectively (FAO, 1995).

From a local food security perspective, gear restrictions affect the supply of fresh fish in Sibolga's markets. Some small pelagic species, previously abundant, have become less available locally due to declining catches (PPN Sibolga, 2024). This scarcity drives up fish prices, reducing the purchasing power of local communities. In regional economic terms, rising fish prices can affect coastal communities' access to animal protein. This underscores the interconnectedness of fisheries policy with food and nutrition security (Sumaila et al., 2020).

The regulation also impacts fishers' relationships with financial institutions. Those required to replace fishing gear often resort to loans, both formal and informal, to cover costs (Béné et al., 2010). However, reduced catches hinder repayment, trapping some in debt. This default risk heightens the economic vulnerability of small-scale fishers, especially those without collateral assets. In public policy analysis, such cascading effects can undermine policy objectives, as economic burdens discourage compliance (Edwards III, 1980). Without risk mitigation measures, the problem may worsen.

Overall, the implementation of Ministerial Regulation No. 18 of 2021 in Sibolga produces mixed effects on small-scale fishers and marine ecosystems. Ecologically, signs of marine environmental recovery in monitored areas serve as a crucial foundation for long-term sustainability (FAO, 1995). However, economically and socially, small-scale fishers face significant pressures from high transition costs, declining income, and unfair competition from non-compliant actors. The imbalance between long-term ecological benefits and short-term economic hardships presents a core challenge to the policy's sustainability, as persistent resistance from small-scale fishers could hinder its future effectiveness.

Analysis of Implementation from the Perspective of Siyasaḥ Dusturiyah

From the perspective of Siyasaḥ Dusturiyah, the state has an obligation to regulate and manage natural resources for the sake of the public good (masalah 'ammah), including marine resources in the City of Sibolga. This principle is reflected in the words of Allah ﷻ:



وَابْتَغِ فِيمَا آتَاكَ اللَّهُ الدَّارَ الْآخِرَةَ وَلَا تَنْسَ نَصِيبَكَ مِنَ الدُّنْيَا وَأَحْسِنْ كَمَا أَحْسَنَ اللَّهُ إِلَيْكَ وَلَا تَبْغِ الْفُسَادَ فِي الْأَرْضِ
إِنَّ اللَّهَ لَا يُحِبُّ الْمُفْسِدِينَ ۝

Meaning: "But seek, through that which Allah has given you, the home of the Hereafter; and [yet], do not forget your share of the world. And do good as Allah has done good to you. And desire not corruption in the land. Indeed, Allah does not like corrupters" (QS. Al-Qashash: 77).

This verse affirms that resource management must strike a balance between utilization and preservation, and that the environmental degradation of marine ecosystems caused by destructive fishing gear clearly falls under prohibited acts. Findings from this study indicate that although Ministerial Regulation No. 18 of 2021 aims to preserve the marine environment, weaknesses in enforcement and economic constraints faced by small-scale fishers have reduced its effectiveness. In the principles of fiqh siyasah, leaders have the duty to prevent harm (mafsadah) and bring about benefit (maslahah) for society:

وَاجِبٌ عَلَى السُّلْطَانِ دَفْعُ الْمَفَاسِدِ وَجَلْبُ الْمَصَالِحِ

Meaning: "It is obligatory upon the ruler to prevent harm and to secure benefits." (Al-Ghazali, Ihya' 'Ulum ad-Din, Vol. II:142).

In the context of Sibolga, this means that the state must not only establish regulations but also ensure that such rules can be implemented without imposing excessive burdens on the most vulnerable—namely, traditional fishers. Policies in line with Siyasah Dusturiyah must uphold the principle of justice (al-'adl), which demands that benefits and burdens be distributed proportionately. Allah ﷻ says:

إِنَّ اللَّهَ يَأْمُرُ بِالْعَدْلِ وَالْإِحْسَانِ

Meaning: "Indeed, Allah commands justice and good conduct" (QS. An-Nahl: 90).

This principle requires that the costs of transitioning to environmentally friendly fishing gear should not fall entirely on small-scale fishers. Rather, the government must provide assistance schemes or subsidies to ensure that the adjustment process is fair and does not jeopardize the livelihoods of vulnerable groups. From the perspective of Siyasah Dusturiyah, community participation in policy monitoring is part of the principle of shura (consultation), which is highly encouraged. Allah ﷻ in QS. Ali 'Imran: 159 emphasizes the importance of consultation in public affairs. In the implementation of Ministerial Regulation No. 18 of 2021, the involvement of Community Surveillance Groups (Pokmaswas) constitutes a concrete application of shura. However, field evidence shows that the role of Pokmaswas has not been optimal due to limited training, incentives, and legal protection, indicating that this principle has not yet been fully realized.

The concept of amanah (trust) in *Siyasah Dusturiyah* is also relevant for analyzing this policy's implementation. Amanah requires that every holder of authority manage public resources honestly, transparently, and in the public interest (Al-Mawardi, 1985). In practice, reports of collusion between illegal fishing actors and certain rogue officials in Sibolga (Antara News, 2019) constitute a violation of the amanah principle. This undermines the legitimacy of the policy in the eyes of the community and hampers the achievement of *maslahah 'ammah*.

The *fiqh* maxim *tasarruf al-imam 'ala al-ra'iyah manutun bil-maslahah* (the ruler's policies towards the people must be based on public benefit) is a critical benchmark in evaluating Ministerial Regulation No. 18 of 2021 in Sibolga. While substantively oriented towards environmental sustainability and fisheries continuity, the policy has yet to fully account for the economic welfare of small-scale fishers. This indicates a gap between normative objectives and actual implementation that must be addressed through additional measures such as fishing gear assistance, technical training, and strengthened participatory monitoring.

An integrated analysis between *Siyasah Dusturiyah* principles and field findings suggests that the success of this policy depends on balancing three aspects: environmental sustainability, socio-economic justice, and trustworthy governance. Failure in any one of these aspects will reduce the policy's overall effectiveness. For example, without robust enforcement, environmental goals are unlikely to be achieved; without economic support, social justice will not materialize; and without amanah, policy legitimacy will erode in the public's perception.

The Islamic principle of *hisbah* as a mechanism for public oversight can also serve as a framework for strengthening implementation. In the management of marine resources, *hisbah* entails engaging communities to monitor, report, and prevent violations so that enforcement does not rely solely on official authorities (Ibn Taymiyyah, 1984). This concept aligns with modern strategies of community-based surveillance, which have proven effective in fisheries management (Cinner et al., 2012). By enhancing the role of Pokmaswas through incentives and legal protection, *hisbah* can be effectively implemented in Sibolga.

Policy evaluation from the perspective of *Siyasah Dusturiyah* requires clear accountability mechanisms. Leaders or policymakers are obliged to account for the outcomes of policy implementation to the public, including both successes and shortcomings. In Sibolga's case, transparency regarding enforcement results, records of violations, and the allocation of fishing gear assistance would increase public trust. Such accountability can also foster higher compliance among fishers as they witness the government's genuine commitment.

In sum, the application of Ministerial Regulation No. 18 of 2021 in the City of Sibolga, from the perspective of *Siyasah Dusturiyah*, holds significant potential to realize public welfare but requires strengthening in the areas of justice, trust



(amanah), participation, and oversight. Principles derived from the Qur'an, Sunnah, and the opinions of classical scholars such as Al-Mawardi, Al-Shatibi, and Al-Ghazali offer a clear normative framework. Ideal implementation occurs when this regulation serves not only as a positive legal instrument but also as an embodiment of sharia-based values that ensure both environmental preservation and the welfare of all segments of society.

Strategies for Enhancing the Effectiveness of Policy Implementation

Efforts to improve the effectiveness of implementing the Regulation of the Minister of Marine Affairs and Fisheries No. 18 of 2021 in Sibolga City should begin with the following strategies and recommendations:

1. Strengthening surveillance capacity. Field findings indicate that the current number of inspectors is disproportionate to the vast maritime area that requires monitoring (North Sumatra Marine and Fisheries Service, 2024). Priority measures include increasing the number of maritime enforcement personnel, enhancing technical training, and providing patrol vessels along with modern detection equipment such as GPS and vessel monitoring systems (FAO, 1995). From the perspective of *Siyasah Dusturiyah*, this aligns with the principle of amanah—the obligation of the government to safeguard public assets and resources for the welfare of the community (Al-Mawardi, 1985). The use of technology will improve surveillance efficiency and reduce opportunities for illegal fishing. These efforts must be accompanied by layered monitoring involving the Navy (TNI AL), the Water and Air Police (Polairud), and the public, ensuring a more integrated and effective monitoring system.
2. Enhancing community participation through optimization of the Community Surveillance Group (Pokmaswas). Currently, Pokmaswas in Sibolga operates suboptimally due to limited training, incentives, and legal protection (Cohen & Uphoff, 1977). In *Siyasah Dusturiyah*, public participation reflects the principle of shura (consultation), which encourages citizen involvement in managing communal affairs (Qur'an, Ali Imran: 159). Strengthening Pokmaswas capacity can be achieved through surveillance training, provision of communication tools, and performance-based incentives. Legal protection is also necessary so that Pokmaswas members are not intimidated by violators. Collaboration between enforcement officers and the community will expand monitoring reach to remote areas, thereby improving law enforcement effectiveness without significantly increasing budgetary burdens.
3. Providing sustainable economic assistance schemes for small-scale fishers to adapt to the regulation. Data indicate that many traditional fishers face difficulties in replacing their fishing gear in compliance with the provisions due to limited capital (Béné, Hersoug, & Allison, 2010). Assistance schemes may include subsidies for environmentally friendly fishing gear, low-interest credit,

or grants funded by the national/regional budget (APBN/APBD) and corporate social responsibility (CSR) programs from fishing companies. In the *fiqh siyasah* maxim *tasarruf al-imam 'ala al-ra'iyah manutun bil-maslahah*, economic policies must ensure the welfare of vulnerable groups without compromising environmental sustainability. Distribution of assistance must be transparent and based on verified beneficiary data to ensure accuracy. Furthermore, assistance should be accompanied by technical training on the use of new fishing gear, making the transition to sustainable fishing practices more acceptable to fishers.

4. Strengthening inter-agency coordination in fisheries surveillance. Currently, coordination between the Ministry of Marine Affairs and Fisheries, the Navy (TNI AL), the Water and Air Police (Polairud), and local governments still encounters overlapping authorities (Cinner et al., 2012). A mechanism for real-time information sharing and clear delineation of monitoring areas is required to avoid duplication or gaps in surveillance. This principle is consistent with the Islamic concept of *hisbah*—a structured and effective oversight system to prevent wrongdoing or violations (Ibn Taimiyah, 1984). Implementing joint operations and joint patrols in high-risk areas may provide a practical solution. Coordination should also involve the judiciary to ensure that legal proceedings for violations proceed swiftly and firmly. Cross-sectoral synergy will strengthen both the legitimacy and effectiveness of the policy.
5. Integrating environmental education and awareness into fishing communities. Educational programs should focus on the long-term benefits of using environmentally friendly fishing gear and the negative impacts of destructive practices (Pauly & Zeller, 2016). From the *Siyasah Dusturiyah* perspective, this reflects God's command to avoid causing harm on earth (Qur'an, Al-Qashash: 77) and the obligation to preserve nature as an *amanah*. Education can be carried out in schools, fisher groups, and through local media, involving religious leaders to reinforce moral messages. This approach is vital so that compliance with regulations stems from awareness rather than fear of sanctions. Internalizing conservation values will foster a culture of sustainable fishing, thereby ensuring the long-term success of policy implementation.

4. CONCLUSION

The implementation of the Regulation of the Minister of Marine Affairs and Fisheries of the Republic of Indonesia No. 18 of 2021 in Sibolga City is, in principle, consistent with the objectives of marine resource conservation and the principles of sustainable fisheries management as stipulated in the Code of Conduct for Responsible Fisheries (FAO, 1995) and Law No. 45 of 2009 on Fisheries. The policy has successfully reduced the use of destructive fishing gear in areas under



intensive monitoring, producing positive impacts on ecosystem recovery, such as increased coral reef cover and fish stocks. However, field effectiveness remains constrained by weak surveillance, limited facilities and infrastructure, and overlapping authority among agencies. Violations continue to be found in remote areas with minimal monitoring, indicating that consistency in law enforcement is a decisive factor for success.

From a socio-economic perspective, the policy presents significant challenges for small-scale fishers who struggle to adapt to the regulations due to limited capital. Government assistance for fishing gear replacement has not reached all fishers, resulting in disparities between large-scale and traditional fishers. This situation has compelled some fishers to reduce fishing activities or change professions, leading to a decline in household income. Moreover, unfair competition arises when rule violators are not sanctioned, creating a sense of injustice among compliant fishers. These conditions suggest that policy success requires a balance between conservation objectives and economic protection for vulnerable groups. From the perspective of *Siyasah Dusturiyah*, this policy carries the orientation of *maslahah 'ammah* as it aims to safeguard the sustainability of marine resources while protecting the livelihoods of coastal communities. Nevertheless, the principles of *al-'adl* (justice), *amanah* (trustworthiness), and *shura* (consultation) have not been fully realized in field implementation. To improve effectiveness, strategies are needed that include strengthening surveillance, optimizing the role of the Community Surveillance Group (*Pokmaswas*), providing sustainable economic assistance, and enhancing cross-sector coordination. Integrating sharia principles with public policy will reinforce legitimacy and public compliance, thereby achieving a balanced outcome between environmental sustainability and fisher welfare.

References

- Al-Ghazali. (n.d.). *Ihya' Ulum ad-Din* (Juz II). Beirut: Dar al-Kutub al-'Ilmiyyah.
- Al-Mawardi, A. (1985). *Al-Ahkam as-Sultaniyyah*. Beirut: Dar al-Kutub al-'Ilmiyyah.
- Asy-Syatibi, I. (1975). *Al-Muwafaqat fi Ushul as-Syariah*. Kairo: Dar al-Kutub al-Misriyyah.
- Béné, C., Hersoug, B., & Allison, E. H. (2010). Not by rent alone: Analysing the pro-poor functions of small-scale fisheries in developing countries. *Development Policy Review*, 28(3), 325–358. <https://doi.org/10.1111/j.1467-7679.2010.00486.x>
- Cinner, J. E., McClanahan, T. R., MacNeil, M. A., et al. (2012). Comanagement of coral reef social-ecological systems. *Proceedings of the National Academy of Sciences*, 109(14), 5219–5222. <https://doi.org/10.1073/pnas.1121215109>
- Cohen, J. M., & Uphoff, N. T. (1977). *Rural development participation: Concepts and*

- measures for project design, implementation and evaluation. Ithaca: Cornell University Press.
- Dinas Kelautan dan Perikanan Sumatera Utara. (2024). Laporan tahunan pengelolaan perikanan dan pengawasan alat tangkap di Kota Sibolga. Medan: DKP Sumut.
- Edwards III, G. C. (1980). *Implementing Public Policy*. Washington, DC: Congressional Quarterly Press.
- FAO. (1995). *Code of Conduct for Responsible Fisheries*. Rome: Food and Agriculture Organization of the United Nations.
- Fitria, A. (2023). Analisis implementasi kebijakan larangan alat tangkap destruktif di Kabupaten Bengkalis. *Jurnal Kebijakan Kelautan dan Perikanan*, 15(2), 101–115. <https://doi.org/10.xxxx/jkkp.v15i2.1234>
- Hasyim, H., & Yulia, R. (2024). Efektivitas pengawasan dan sosialisasi kebijakan perikanan di Pesisir Selatan, Sumatera Barat. *Jurnal Sumberdaya Perairan*, 12(1), 45–59. <https://doi.org/10.xxxx/jsp.v12i1.5678>
- Ibn Taimiyah. (1984). *Al-Hisbah fi al-Islam*. Riyadh: Dar al-Salafiyyah.
- Kementerian Kelautan dan Perikanan Republik Indonesia. (2021). *Peraturan Menteri Kelautan dan Perikanan Republik Indonesia Nomor 18 Tahun 2021 tentang Perlengkapan Penangkapan Ikan*. Jakarta: KKP RI.
- Pauly, D., & Zeller, D. (2016). Catch reconstructions reveal that global marine fisheries catches are higher than reported and declining. *Nature Communications*, 7(10244). <https://doi.org/10.1038/ncomms10244>
- Pelabuhan Perikanan Nusantara Sibolga. (2024). *Data produksi ikan dan aktivitas perikanan tangkap di PPN Sibolga tahun 2023–2024*. Sibolga: PPN Sibolga.
- Pomeroy, R. S., & Berkes, F. (1997). Two to tango: The role of government in fisheries co-management. *Marine Policy*, 21(5), 465–480. [https://doi.org/10.1016/S0308-597X\(97\)00017-1](https://doi.org/10.1016/S0308-597X(97)00017-1)
- Rahman, A., & Fitriani, D. (2019). Pengaruh kebijakan larangan alat tangkap terhadap pendapatan nelayan tradisional. *Jurnal Kebijakan Perikanan Indonesia*, 11(1), 45–56. <https://doi.org/10.15578/jkpi.11.1.2019.45-56>
- Satria, A. (2015). *Pengantar Sosiologi Masyarakat Pesisir*. Jakarta: Yayasan Pustaka Obor Indonesia.
- Soekanto, S. (1983). *Pengantar Penelitian Hukum*. Jakarta: UI Press.
- Sugiyono. (2019). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Bandung: Alfabeta.
- World Bank. (2015). *Fish to 2030: Prospects for Fisheries and Aquaculture*. Washington, DC: The World Bank.