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Journal Homepage : <https://www.journal.unrika.ac.id/index.php/jurnaltriaspolitika>**RESPONSIBILIZATION IN MARINE RESOURCES MANAGEMENT:
A CASE STUDY OF FISHERY SECTOR IN THE SPECIAL REGION
OF YOGYAKARTA, INDONESIA****Kevin Arya Pranaja^{1*}, Rijal Ramdani²**^{1,2} Department of Government Affairs and Administration, Faculty of Social and Political Science, Universitas Muhammadiyah Yogyakarta, Indonesia

Abstract: : Indonesia is one of the world's third-largest fish-producing countries after India and China. In the context of Indonesia, the central government delegates the management of fisheries resources to the provinces or local governments. This study examines what responsibilities the province have and how the province carry out these responsibilities in managing fisheries in their regions. This study uses conceptual framework of responsabilization that focuses on agents, actions, and strategies. Qualitative research is fundamental in this study, where we collected the data through interviews with informants from The Department of Marine and Fisheries (DMF) of Yogyakarta Special Province. DMF of Bantul, DMF of Kulon Progo and DMF of Gunung Kidul and fishermen. We also conducted document analysis particularly from national and provincial regulations as well as strategic planning of marine and fishery development in Yogyakarta province. This study found that the (DMF) of Yogyakarta Special Province manages fisheries resources independently, without delegating responsibilities to the regencies. While tasks related to empowering fishermen and managing fish auction sites are transferred to the regencies along with human resources, the lack of clear responsibility-sharing creates significant challenges. Specifically, the unclear division of responsibilities hampers effective fisheries resource management and results in minimal monitoring by regional departments. Consequently, this lack of oversight allows non-local fishermen to exploit Yogyakarta's marine resources, negatively impacting the welfare of local fishermen. To address these issues, this research recommends revising current regulations to delegate fisheries monitoring responsibilities to the regencies, thereby enhancing resource management and safeguarding local fishermen's livelihoods.

Keywords : responsabilization; powers; fisheries resources; marine; yogyakarta.

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**INTRODUCTION**

With a 5.8 million square kilometer ocean area and an 81,000-kilometer coastline, Indonesia boasts the world's longest productive coastline with an impressive marine resource. The marine resources serves as a crucial national asset, contributing to transportation, trade, defense, security, and food sources (Itsaini, 2021). In line with the vastness of the ocean, Indonesia also holds significant potential in fish resources. In 2023, the country ranked third among the world's top fish-producing countries, after China and India, solidifying its position among the top 10 globally (Dewi, 2023). The Ministry of Maritime Affairs and Fisheries reports an estimated fisheries production volume of 24.85 million tons in Indonesia for 2022. This marks a significant 13.63% increase compared to the previous year, which recorded 21.87 million tons (Hidayah, 2023). Meanwhile in 2023, it was recorded that until the third quarter, January until September 2023, exports of Indonesian fishery products reached US\$ 4.1 billion,

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or Rp. 64.3 trillion. This result represents 53% of the aim established for this year, namely US\$ 7.6 billion. Meanwhile, the non-tax state revenue from the fisheries industry is IDR 1.1 trillion (Sandi, 2023).

However, Indonesia faces critical challenges in managing the sustainability of the fisheries sector. For example, a study by Liandi & Andryawan (2022) has shown that there were several challenges of the fishery sectors overfishing, illegal fishing techniques, pollution and environmental degradation. There is a need for cross-government collaboration and the involvement of stakeholders at the local level to overcome those problem (Grahadyarini, 2021). Governing fisheries resource necessitates a shared responsibility from the central government to local governments (Alains et al., 2009). While the central government plays a crucial role, resource management requires broader participation from the local elected governments, who have legitimation and support from their citizens in their territory (Ribot, 2011). Distributing responsibility from the central government to the local governments also ensures an equitable allocation of duties and authority (Nasution et al., 2018). Research has found that a responsible model of natural resource management presents new opportunities but may also introduce ambiguity in responsibilities, potentially burdening entities with insufficient resources (Mustalahti & Agrawal, 2020). In this context, the regional-level government is the primary authority that transfers responsibility for fish resource management within its jurisdiction. Typically housed in a specialized institution known as The Departement of Marine and Fisheries, this agency oversees fisheries-related affairs at the regional level.

Within this national framework, Yogyakarta Province holds authority in managing fisheries resources in their territory and requires to transfer responsibility to regency governemnt due to its significant role in Indonesia's fisheries sector, despite having a relatively short coastline of approximately 110 kilometers. The province supports capture fisheries, which contribute to local food security and economic activities in Central Java. Furthermore Yogyakarta's capture fisheries sector benefits from its proximity to the Indian Ocean, providing access to a diverse range of marine fish species that sustain local fishing communities (KKP, 2023). In addition, the fisheries sector in this region is a priority sector for the government in improving the local economy. Fisheries resources in the Yogyakarta region show a significant trend compare to the other region in Central Java, with Kulon Progo as the area with the highest production, reaching 16,714 tons in 2024. Other regencies such as Bantul, Gunungkidul, and Yogyakarta City also contribute significantly to the production of cultivated fish, with total production reaching tens of thousands of tons each year. Data shows that in 2024 the Gunungkidul region recorded the highest results in the fisheries sector, namely 7,498.66 tons, Kulon Progo (7,122 tons) and Bantul (7,066 tons) (BPS Yogyakarta, 2024).

Previous research has studied the governance of fisheries resources in several clusters such as utilization of technology, international maritime law, fisheries management, blue economy and socio-ecological challenges. From a technological perspective, providing appropriate technology is essential to maintain the quality of the caught fish (Dewi et al., 2019). Arkham et al., (2020); Hidayah et al., (2020) found that the implementation of technology in resource-based capture fisheries can sustainably fulfil the requirements of fishermen. Additionally, the utilization of information technology is crucial in identifying fishing zones, which are specific aquatic areas targeted by fishermen for their activities. Sari & Rauf, (2020) found that the application of fisheries technology via fishing fleets substantially influences fishermen's income. Kristiyanti & Kundori, (2023) found that the utilization of technology significantly enhances fishermen's ability to procure higher grade fish more efficiently, economically, and sustainably.

Appropriate management is crucial in maintaining sustainable fisheries governance. Wibowo et al., (2021) found that a technique to manage fishery resources is to develop maritime infrastructure and safeguard these resources against illicit fishing activities. Ndraha

et al., (2022) found that The existence of proficient human resources is essential for maintaining the sustainability of fishing resources. Lowing, (2020) found that there is a need to enhance the capacity and capability of fishermen in catching fish to ensure sustainability. Wulandari et al., (2023) found that fisheries management is not only carried out by fishermen or relevant agencies but also needs to be undertaken by business actors, such as MSMEs, particularly in fish processing businesses. Kaya & Sajriawati, (2023) found that the concept of Social and Ecological Market Economy can be one of the effective ways to maintain sustainable management of fisheries resources.

This ties directly to the concept of the blue economy, which emphasizes the sustainable of fisheries resource. Anna, (2019) and Dafi et al., (2019) found that the use of fisheries blue economy models can be used to calculate the depletion value of fish resources and can facilitate the preparation of economic balances for fish resources which can be used as a reference in conservation and investment planning in the fisheries sector. Setyawati et al., (2021) found that the implementation of the blue economy is carried out through the prevention of excessive exploitation of fishery resources by establishing marine conservation areas. Sujiwo & Nurlaili, (2024) found that managing fisheries resources through commercial activities needs to be done in a way that is economically manner, promotes social inclusion and preserves healthy marine and coastal ecosystems. Wardani et al., (2024) found that educating coastal communities about the importance of preserving fishery resources to support the blue economy is crucial due to the pressure on marine ecosystems from human activities like overfishing, pollution, and climate change. The goal of this education is to raise awareness among coastal communities about the need to sustain fishery resources.

Fisheries resources are closely related to international maritime law, which governs the rights and responsibilities of states in managing and utilizing marine resources in order to maintain sustainability. Pinem, (2019) found that The United Nations Agreement on Fish Supplies aims to conserve and manage fish resources in the high seas to protect and preserve them, ensuring that fish remain available for the benefit and well-being of both current and future generations. Jamilah & Disemadi, (2020) found that the United Nations Convention on the Law of the Sea (UNCLOS) serves as an international legal framework that broadly regulates law enforcement in a country's territorial waters and exclusive economic zones. This is implemented in national law through legislation to protect fisheries resource. Soplera et al., (2021) found in the conflict over the utilization of fisheries resources between Indonesia and China contrary to UNCLOS as a rule of international law triggered by the use of the Nine-dash line as a line to determine the width of the exclusive economic zone which then has an impact on Indonesia's exclusive economic zone and understanding of traditional fishing grounds which are not regulated in UNCLOS. Silalahi, (2023) found in principle of it relation to the management of fisheries resource, there are 3 types of sea. First, sea areas with full sovereign rights for Indonesia. Second, sea areas with sovereign rights over the natural resources they contain and sea areas in which Indonesia has an interest but does not have territorial sovereignty.

Although international maritime law establishes a legal framework for regulating fisheries resources, its implementation is often intersected with complex socio-ecological challenges. Kusdiantoro et al., (2019); Yunita et al., (2024) found that challenges in fisheries resources arise due to massive pressure on resources such as: illegal fishing and the use of fishing gear that damages coral reefs which can reduce the quality of the marine environment. Pradana, (2019) found that inadequate technology is also a challenge in managing fisheries resources as it can hinder the ability to effectively monitor and manage fisheries activities. Nusantara et al., (2023) Finding weak policies and management is also a challenge in fisheries resources such as policy imbalances that often do not consider the interests of fishermen and weak management also makes it difficult to implement appropriate regulations. Aminuddin &

Burhanuddin, (2023) found that in the global context, maritime border disputes, marine resource exploration rights and fisheries policy are challenges for fisheries resources in the world of diplomacy and international relations.

Fisheries resource governance is closely linked to technology use, resource management, the blue economy, international maritime law, and socio-ecological challenges. However, a critical gap remains in understanding how provinces carry out responsibility for managing fisheries within their regions, as previous studies have primarily focused on other aspects. Governance in this sector is multifaceted and can be analyzed through various conceptual frameworks. Hardin's, (1968) tragedy of the commons highlights the risk of overexploitation when individuals act in self-interest, while Ostrom's, (2002) common-pool resource framework emphasizes how communities can sustainably manage shared resources. Forst's, (2009) Integrated Coastal Zone Management framework underscores the need to balance development and conservation through multi-sectoral coordination. To examine how governments delegate responsibility in fisheries management, this study adopts the concept of responsabilization (Mustalahti & Agrawal, 2020). This framework enables an analysis of responsibility transfers across different government levels, focusing on (1) agents, (2) actions and strategies, and (3) the outcomes of well-being and well-doing.

Conceptual Framework

Responsibilization can be understood as the process of transferring duties and responsibilities in form of powers carried out by powerful actors to the lower level. Existing research of responsabilization conducted across various fields. For example Erbaugh, (2019) in Indonesia's forestry management has found that the central government transfers forest management responsibilities to local user-groups as part of sustainability of forestry. Renaud et al., (2020) in cyber security has found that responsabilization refers to the process by which governments allocate the responsibility of managing cyber risks to individual citizens. Macheridis & Paulsson, (2021) in education found that responsabilization refers to the process where teachers are empowered to interpret and incorporate sustainability into their courses, allowing for openness and freedom in defining sustainability. Murjiyanto et al., (2023) in Corporate Social Responsibility has found that responsabilization utilized as a governance strategy where the state shifts environmental and social obligations onto private corporations.

Previous research on responsabilization has primarily focused on forestry management, cybersecurity, education, and corporate social responsibility. However, a significant gap remains, as little attention has been given to fisheries management. Therefore, this study aims to address this conceptual gap by analyzing responsabilization in the context of fisheries management. This research adopts the conceptual framework of responsabilization by Mustalahti & Agrawal, (2020) to analyze fisheries management, particularly how provincial governments carries out responsibilities in governing fisheries resources within their territories. As defined by Mustalahti & Agrawal, (2020) it involves the delegation of powers from governments, organizations, and agencies to lower-level actors, including communities and decision-making entities. However, effective delegation requires not only the transfer of responsibilities but also transfer of power in form of capabilities, knowledge, and resources. Rather than being concentrated within the state, power is redistributed to agents such as non-governmental organizations, local communities, and individuals. The concept of responsabilization is structured around three analytical building blocks: agents involved in sharing responsibility, their actions and strategies, and the resulting outcomes, particularly in terms of well-being and well-doing. In this study, the focus is on how provincial governments (as powerful actors) transfer responsibilities in fisheries governance to lower levels, such as regencies or communities, and how the actions and strategies among agents influence the outcomes. Each agent within fisheries management operates through distinct actions and

strategies, influencing not only governance outcomes but also broader social well-being and ecological sustainability.

Based on the background and conceptual framework above the focus of this research is to investigate how the provincial carries out responsibilities in governing fisheries resource in their territory by transferring to the regencies. This research takes case study in The Special Region of Yogyakarta in terms of fishery resources management. Specifically more focus in government agency in The Special Region of Yogyakarta, namely Departement of Marine and Fisheries as one of the regional-level agencies tasked with managing fisheries resources by applying conceptualize of responsabilization by Mustalahti & Agrawal, (2020) to understand the relationship between The Departement of Maritime and Fisheries in Special Region of Yogyakarta and government agencies, government officials and fishing communities in dividing tasks and responsibilities in managing fisheries resources in Yogyakarta.

METHODOLOGY

This research uses a qualitative research method with a case study approach. According to Denzin & Lincoln (2005) qualitative research is an attempt to rationalize and interpret the reality of life based on what is understood by the researcher. However, (Creswell, 2014) stated that case study is a qualitative design in which a program, event, activity, process of individuals are thoroughly examined by the researcher. Researchers use a range of data collection techniques over an extended period to gather thorough information about the case, which are constrained by time and activity. Using a case study approach in qualitative research is advantageous when the objective is to gain a deep understanding of a specific case within its real-life context. Applying this approach can be operationalized into research through data collection method by interview and documents analysis to analyze a case based on the applied conceptual framework. This research focuses on the fisheries resources in Yogyakarta, as despite its smaller scale compared to other regions, focusing on it allows researchers to conduct more detailed and hands-on research. Being close to the area helps researchers interact directly with local stakeholders, observe their practices, and better understand how governance and involvement are connected.

The data collection in this research utilizes both primary and secondary data through document analysis and interviews. Document analysis involves examining written, visual, and electronic materials (Nilamsari, 2014) to identify the division of tasks and responsibilities between the central and provincial governments in regulating fisheries in Yogyakarta. Key documents analyzed include Law No. 23 of 2014, Regional Regulation No. 5 of 2023 on Spatial Planning, and Government Agency Performance Reports, focusing on the transfer of responsibilities across governance levels. Interviews were conducted with Departement of Marine and Fisheries (DMF) of Yogyakarta, Bantul, Kulon Progo, Gunung Kidul and fishermen (see Figure 2) to gather detailed insights unavailable from other sources. Secondary data was obtained from relevant articles, news, books, and literature reviews. These techniques were employed to collect essential information aligned with the research objectives.

Table 1. The Number of Informant

Informant	Posisition	N
Departement of Marine and Fisheries (DMF) of Yogyakarta	Head of fishery capture	1
Departement of Marine and Fisheries (DMF) of Bantul	Head of fishery capture	1
Departement of Marine and Fisheries (DMF) of Kulon Progo	Head of fishery capture	1
Departement of Marine and Fisheries (DMF) of Gunung Kidul	Head of fishery capture	1
Fishermen	Leader of Bantul Fisherman	1
	Leader of Kulon Progo Fisherman	1
	Leader of Gunung Kidul Fisherman	1
N Total		7

Source: processed by author

Then the data obtained is analyzed through four stages of analysis namely: first, the analysis process begins by reviewing all the data that has been obtained (data processing stage),

second, carrying out data reduction, namely to map and select data that suits research needs, thirdly, data presentation, namely writing down the results of mapping and selecting data that focuses on research problems and finally drawing conclusions, namely to find out the results of research related to the division of responsibilities of The Departement of Marine and Fisheries in terms of fisheries resource management.

RESULTS AND DISCUSSION

Responsibilization in managing fisheries resource in The Special Region of Yogyakarta

The results of data and interviews show that in managing fisheries resources at the provincial level, The Yogyakarta Provincial Government has the responsibility given by the central government to regulate fisheries areas through Law Number 23 of 2014 (Article 14 paragraph 1), which states that the implementation of government affairs in the fields of forestry, energy and fisheries resources is divided between the central government and the provincial government. It also is regulated by the Government Regulation Number 27 of 2021 concerning the Implementation of the Marine and Fisheries Sector. For this reason, The Yogyakarta Provincial Government formed a special agency managing the fisheries sector, namely the Departement of Marine and Fisheries (DMF). In carrying out its duties, DMF is authorized in the form of human resources by the provincial government to carry out its responsibilities in managing fisheries resources. The power in human resources is field fisheries extension workers, where fisheries extension workers are government employees under the auspices of the Ministry of Maritime Affairs and Fisheries are placed in the Regency /City. This is the mandate of Law No. 23/2014 on Regional Government. Second, independent fisheries extension workers are people or business actors in the marine and fisheries sector who are successful in their business and are consciously willing and able to become fisheries extension workers.

On the other hand, as the highest agency at the provincial level in managing the fisheries sector at sea, DMF Yogyakarta does not give responsibility or power to other agencies or actors, especially DMF at the regency level. The absence of division of responsibilities by the province to the regency in managing fisheries at sea is due to referring to Law 23 of 2014, which states that in the division of affairs in the field of marine and fisheries, the provincial government is authorized to manage fisheries resources such as fishing in the sea area up to 12 miles, issuing fishing business licenses for fishing vessels measuring above 5 GT up to 30 GT and determining the location of development and management of provincial fishing ports.

Although the province entirely manages fisheries at sea, the province still gives responsibility to regencies in managing land areas, more precisely in fish auctions and empowering small fishermen in each region. This responsibility is provided through the transfer of human resources by the province to the regency. In this case, DMF Yogyakarta conducts training on fisheries extension and fish auction management to DMF at the regency level through the capture fisheries sector. This aims to enable regencies to optimally empower local fishermen by encouraging sustainable fishing and improving the management of fish auction sites to be more structured and efficient.

Mustalahti & Agrawal, (2020) argues that responsibilization shows how powerful actors give the power to the lower level. Powerful actors come from the central government, which delegates power to the lower level of government or local institutions so that power is not centralized within the state or its institutions but delegated to NGOs, local communities, and individuals. In this study, the central government acts as a powerful actor, giving responsibility to the province in managing fisheries resources through Law No. 23/2014 (Article 14 paragraph 1) and Government Regulation No. 27/2021, as well as transferring power in the form of human resources to the province by providing fisheries extension training by the Ministry of Marine Affairs and Fisheries. As a powerful actor at the regional level, the province does not give

power to the regency to manage fisheries resources at sea. In this case, DMF Yogyakarta does not delegate power to DMF at the regencies level. Meanwhile, the province is only limited to giving responsibility to regencies in managing land areas, such as managing fish auction sites and empowering local fishermen by training regencies to empower local fishermen and the management of fish auction sites.

As explained above, the responsabilization process is followed by the delegation of powers; this is in line with the principle of responsabilization by Mustalahti & Agrawal (2020). Although the province does not give responsibility to regencies in managing fisheries at sea, the province gives responsibility to regencies in terms of empowering local fishermen and managing fish auction sites by transferring human resources in providing knowledge to regencies to increase knowledge capacity for fishermen and optimize fish auction sites in each regency. This transfer of human resources aims to improve the knowledge capacity and competence of both regencies and local fishermen. Thus, the regency is expected to empower fisher communities more effectively while optimizing the management of fish auction sites in each regency to function optimally in supporting the sustainability of the local fisheries sector.

Agents, action and strategies

Even though the province does not give responsibility to the regency to manage fisheries in the sea and only gives responsibility in the land area, each agency still has its roles, actions, and strategies in managing fisheries resources in the Yogyakarta's Sea area. The actions and strategies of each agency can be seen in the table below.

Table 2. Agents and their actions and strategies in managing fisheries resource in Yogyakarta

Table 2: Agents and their actions and strategies in managing fisheries resource in Yogyakarta		
Agents	Actions	Strategies
DMF The Special Region of Yogyakarta	Capture fisheries management program	Fishing permits for vessels from 5 GT to 30 GT
		Development and management of fishing ports
		Establishing a turtle conservation area
		Socialization of environmentally friendly fishing gear to The Departement of Marine and Fisheries (regency)
	Fisheries resource monitoring program	Monitoring of fish capture
		Monitoring the strengthening of the competitiveness of fishery products
		Handling of marine and fisheries criminal offenses
	Fishery product processing and marketing program	Development and quality testing of fishery products
		Training on information technology transfer related to fish processing methods
		Processing Feasibility Certification and provision of fishery product quality testing services
DMF of Bantul	Management of fish auction places and empowerment of local fishermen	Adding fish storage units and Socialization of environmentally friendly fishing gear
DMF Kulon Progo		Fishery product processing training
		Adding fish storage units and Socialization of environmentally friendly fishing gear
DMF Gunung Kidul		Guidance on the application of requirements or standards in micro and small scale management and marketing businesses
		Adding fish storage units and Socialization of environmentally friendly fishing gear
		Distribution of raw materials for the fish processing industry

Source: Processed by author

The table above shows the actions and strategies of each actor in managing fisheries resources in Yogyakarta. Each actor has different actions and strategies in managing fisheries resources. First, at the provincial level, the Yogyakarta's DMF has various actions in managing fisheries resources, such as creating capture fisheries management programs, monitoring marine and fisheries resources, and fisheries processing and marketing programs. Strategies in the capture fisheries management program, which is a provincial government program that

supports the fisheries sector, include issuing fishing licenses for fishing vessels measuring above 5 GT up to 30 GT, establishing locations for the development and management of fishing ports, building turtle conservation areas, conducting socialization of environmentally friendly fishing gear to DMF regency. This is a form of sustainability efforts in the utilization of fisheries resources. With the issuance of fishing licenses for vessels of 5 GT to 30 GT, the government can control the number of vessels operating, ensure compliance with catch quotas, and reduce the risk of overexploitation of fish stocks. Determining the location of fishing port construction and management also plays a role in improving the efficiency of the fisheries supply chain, providing better facilities for fishermen. Meanwhile, the establishment of a turtle conservation area located in Bantul was made to preserve turtle biota because turtles are very important in maintaining the cleanliness of the marine ecosystem because the turtle's job in the marine ecosystem is to eat algae, etc. which can threaten the health of fish. Then the socialization aims to encourage local fishermen to use environmentally friendly fishing gear.

Then the strategy in the marine and fisheries resources monitoring program is a provincial government program implemented to oversee the use of fisheries resources in accordance with applicable laws and regulations, which includes activities: supervision of fishing, supervision of strengthening the competitiveness of fishery products, and handling fisheries crimes. Fishing supervision focuses on monitoring the activities of fishermen and fishing vessels to ensure they comply with catch quotas, allowable fish sizes, and the use of environmentally friendly fishing gear. This is done to avoid overexploitation that can damage the balance of marine ecosystems. In the aspect of strengthening the competitiveness of fishery products, supervision is conducted to ensure that fishery products meet the quality standards set for both the domestic and export markets. Handling fisheries crimes is an important part of this surveillance strategy, with the aim of eradicating illegal activities such as illegal fishing that can harm marine ecosystems and the regional economy.

Finally, the fishery product processing and marketing program is a provincial government program implemented to support efforts to process and market fishery products, which includes campaign activities for the Socialization of Eating Fish Movement to the community, training in information technology transfer related to fish processing with various product variations to the community, Certification of Processing Feasibility and providing fishery product quality testing services through the Fishery Product Quality Development and Testing laboratory. The provincial government strives to increase the added value of fishery products by introducing more modern and efficient processing technology. The training provided not only focuses on basic fish processing techniques, but also on fishery-based product innovation, such as diversification of processed fish products with high economic value. For example, products such as shredded fish, fish nuggets and fish crackers are increasingly being developed to expand the market and increase fish consumption in the community. In addition, certification of processing feasibility is an important step in ensuring food safety and quality of fishery products. With this certification, fishery products produced can meet national and international standards, thus opening up greater opportunities for local products to compete in the export market. The government also provides quality testing services through specialized laboratories to ensure that fishery products circulating in the market have met the established health and food safety standards.

Meanwhile, at the regency level, the actions taken in managing fisheries resources are only focused on managing fish auction sites and empowering small-scale fishers, where each actor has strategy in carrying out these actions, namely conducting socialization as well as training to local fishers in terms of environmentally friendly fishing gear and adding storage units at each fish auction site. This strategy aims to improve the sustainability of fisheries resources by ensuring that fishing practices carried out by fishermen are more environmentally friendly and efficient in storing catches. As for now, with the socialization and training on

environmentally friendly fishing gear, fishers have switched from fishing methods that damage the ecosystem to the use of proper fishing gear. Like fishermen in the Bantul and Kulon Progo regions who used to use the *pukat harimau* in catching fish, but after socialization by the DMF regency, they no longer use these dangerous tools and replace them with fishing gear called *bubu*. In Gunung Kidul, before using *rumpon*, fishermen used explosives, which are very harmful to the marine ecosystem. In addition, the addition of fish storage units in form of warehouse and cooler box at auction sites aims to improve the quality of the catch so that it stay fresh and keep longer. Each DMF have been add additional fish storage in every fish auction sites. For example in Bantul, particularly in *Mina Bahari* fish auction site they add 4 warehouse, then in Kulon Progo, they add 2 warehouse and 15 cooler box in Trisik beach fish auction site. In Gunungkidul they add a warehouse at the Baron and Ngerenehan fish auction site.

Moreover, each of the departments also has other strategies taken to enhance the development of the fishery sector and improving the businesses. In Bantul, fishery product processing training is conducted to improve the skills of local producers, ensuring higher-quality products and better market competitiveness. In Kulon Progo, guidance on the application of requirements or standards in micro and small-scale management and marketing businesses is provided, aiming to strengthen compliance with industry regulations and improve business sustainability. Meanwhile, in Gunung Kidul, the distribution of raw materials for the fish processing industry is facilitated, ensuring a steady supply chain that supports local and outsider fishery businesses.

According to Mustalahti & Agrawal, (2020), agents are places where people can take responsibility for their well-being and improve social outcomes. These agents will then create several actions and strategies to improve the welfare and quality of the community and maintain the sustainability of the results achieved. Based on the results of the description above related to the agents in terms of fisheries resource management in Yogyakarta, it can be seen that each agent has had actions and strategies in managing fisheries, improving the facilities as well as educating the fisherman. Thus, the agents above have the same goal in managing fisheries resources; each agency carries out specific and targeted strategies according to local needs and socio-economic conditions of fishermen in their area.

The outcomes of wellbeing (the outcome for the organization) and well doing (socio ecological condition/ fishery conditions)

The data revealed that the absence of responsibility sharing by provinces to regencies and the full power of provinces in managing fisheries at sea resulted in impacts on both local agencies and social and ecological conditions. Institutionally, this affects the ability of the regency DMF to monitor the condition of fisheries in each region. This inability could potentially cause several problems for fishermen and fisheries. When the provincial DMF fully holds the power to manage fisheries, the regency DMF cannot monitor and evaluate the condition of fisheries' resources in each water area.

Socially and ecologically, it impacts fishermen by creating conflicts related to the influx of fishermen from outside the region into Yogyakarta waters, especially in the Gunung Kidul and Bantul area. This phenomenon, which is one of the main problems, has a negative impact on local fishermen. The presence of strange fishermen not only threatens the sustainability of fisheries resources through potential overexploitation but also creates social tensions due to competition in utilizing resources. In addition, strange fishermen are afraid of using dangerous tools to catch fish. This indeed results in losses for the fisheries ecosystem, which has decreased in quality, and losses to local fishermen who experience a decrease in fish catches, adversely affecting fishermen's welfare. Meanwhile, centralization of power also hinders the sustainability of the fisheries ecosystem. If the power is given to the regency DMF, they can

better understand local fisheries conditions, including problems such as the influx of strange fishers. This allows faster and more appropriate responses to prevent resource exploitation and negative impacts such as declining fish populations.

Meanwhile, the transfer of human resources from the province to local agents has positively impacted institutions, socially and ecologically. Institutionally, the training from the DMF Province to the regency DMF has positively impacted the regency DMF ability to empower local fishermen and manage fish auction sites. The training is in the form of environmentally friendly fishing techniques and operational management of fish auction sites. This training provides fishermen with in-depth knowledge about managing ecologically friendly fishing gear, such as replacing tiger trawls that damage fisheries ecosystems with more selective fishing gear that does not harm fisheries habitats. This shows the program's success in changing fishermen's behavior towards more sustainable fishing practices. In addition, training related to fish auction site management also impacts the capacity of logistics management and facilities, such as adding storage and cooling units that can increase sales capacity. With more storage space, the number of fish that can be accommodated and sold also increases, ultimately increasing fishermen's income. Ecologically, this training is essential in maintaining fisheries sustainability because fishermen are taught to avoid using fishing gear that damages the seabed ecosystem. Using more environmentally friendly fishing gear can minimize negative impacts on fisheries biota and help protect fisheries biodiversity.

Mustalahti & Agrawal, (2020) Defines that the transfer of responsibility from powerful actors to lower parties in responsabilization allows for better governance conditions. In this case, in addition to the problems that occur due to the absence of a division of responsibility in managing fisheries by the province to the regency, the transfer of power in the form of human resources by the provincial DMF to local agents has a good impact on the ability of the regency DMF and fishermen to maintain the fisheries ecosystem by changing dangerous fishing gear to environmentally friendly fishing gear to avoid damage to fisheries habitats and support sustainable fisheries ecosystems. Then, the addition of facilities at the fish auction site also impacts fishermen's welfare.

CONCLUSION

This research discusses the concept of responsabilization in the governance of fisheries resources in Yogyakarta, which found several findings, including: First, this study shows that there is no transfer of responsibility from the provincial to the regency in managing fisheries resource. Because this is under Law Number 23 of 2014. The absence of this division of responsibility causes a lack of supervision by each DMF in each region, resulting in strange fishermen entering the waters of Yogyakarta, which can harm local fishermen. Second, although the provincial DMF fully manages fisheries resource, they transfer human resources to the regency to empower fishermen and manage fish auction places, positively impacting both parties and the environment. Third, each actor has actions and strategies for managing fisheries resources in each region.

It is expected that this research can contribute as a recommendation for the Provincial Government to give responsibility for fisheries management to the Regency Government to strengthen coordination between agencies and improve fisheries supervision at the local level through DMF. In addition, the implications of this research are expected to revise and adjust policies related to fisheries resource governance that can be reviewed to allow for the division of specific responsibilities to the regency. Therefore, the researcher recommends that more studies related to fisheries resource management policies be conducted in the future, especially on the effectiveness of implementing Law No. 23 of 2014. Further research can explore how this law is implemented in various regions in fisheries management. Focus can be given to how

coordination between the provincial and regency governments can be improved to overcome problems such as lack of supervision and the entry of strange fishermen.

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