



# Social and Economic Impact of Measurable Fishing Policies on Fishermen in North Aceh Regency

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**Abstract:** The measured fishing policy, or catch share, aims to manage marine resources sustainably by providing special quotas to fishermen, but its implementation in North Aceh Regency shows complex social and economic impacts. While these policies can reduce overfishing and improve planning for fishers' activities, potential inequalities in quota distribution can exacerbate economic inequality, with large fishers better able to control quotas than small or traditional fishers. This can affect the social structure within the fishing community and create tension. While there is potential to strengthen cooperation between fishers and increase incomes, the success of these policies relies heavily on fair and inclusive planning to ensure optimal economic and social benefits and sustainability of marine resources. Theoretical perspective on the impact of socio-economic change. Data collection was carried out through Live in, observation, in-depth interviews and the use of documents. The data analysis process is carried out interactively through stages; Data collection, data verification, data patterns, data coding, data thematic networks, meaning and conclusion drawn. The results of this study show that the measured fishing policy in North Aceh aims to preserve marine resources through the regulation of catch quotas. Despite the impact on fishermen's income and society, this policy has the potential to provide long-term benefits if managed properly, through increased fish stocks, stable incomes, and fisher participation.

**Keywords:** Socio-Economic Impact 1; Policy 2; Fishing 3; Measurable 4; Fisherman 5;

## 1. Introduction

Fisheries are one of the important economic sectors for many countries, especially in coastal areas that depend on the sea for their livelihoods. However, overexploitation and unsustainable fishing practices have threatened the existence of fish stocks and marine ecosystems. In an effort to overcome this problem, various fisheries management policies have been introduced, one of which is the measured fishing policy. This policy aims to regulate and limit the number of fish that can be caught by each fisherman through a quota system that is determined measurably [1].

Measured fishing policies, or often referred to as "*catch shares*" offer a rights-based approach to fisheries management. This system gives fishermen specific rights or quotas, which allows them to catch a certain number of fish in a certain period of time [2] With this approach, it is hoped that there will be a reduction *in overfishing* and recovery of fish stocks, as well as an increase in efficiency in the use of marine resources. However, the implementation of this policy also has various social and economic impacts that need to be considered in depth.

From a social perspective, measured fishing policies can significantly affect the structure of fishing communities. Large fishermen who have the resources are more likely to buy or control larger quotas, while small or traditional fishermen may have difficulty competing. This can cause tension and injustice in the distribution of quotas, which has an impact on social relations in

coastal communities. However, there is also the potential to strengthen cooperation between fishermen and improve community welfare if this policy is implemented fairly and effectively.

Based on an interview with the commander of North Aceh Laot Tgk Hamdani (2024) economically, the measured fishing policy can affect the income and economic stability of fishermen. With clear quotas, fishermen can plan their activities better, which in turn can increase income and reduce the risk of losses due to fluctuations in fish stocks. However, there is also a risk that these policies could exacerbate economic inequality if access to quotas is not managed fairly. It is important to ensure that these policies are designed with various economic and social aspects in mind to achieve sustainability goals.

Overall, a measured fishing policy is an important step in sustainable fisheries management. However, the success of its implementation relies heavily on careful planning and attention to the social and economic impacts that may arise. Understanding the background and implications of these policies will help in formulating better strategies to support the sustainability of marine resources as well as the well-being of coastal communities.

This reality is interesting to study, the main objective of which is to find out how the implementation of measured fishing policies affects the social and economic conditions of fishermen in North Aceh Regency, with a focus on small and traditional fishers. It includes an analysis of how changes in the distribution of fish quotas affect the income, social structure, and general well-being of fishers within coastal communities. The findings of this study focus on identifying challenges that may arise during the implementation of measured fishing policies and the opportunities that exist to improve the effectiveness of those policies. This includes considering various aspects such as inequities in the distribution of quotas, impacts on social relations between fishermen, as well as strategies to maximize economic benefits and sustainability of marine resources through improvements in policy implementation.

## 2. Research Methods

This research was conducted in North Aceh Regency. This location was chosen because it is a coastal area and caught by fishermen. Informants for qualitative research can be selected from people who are considered to understand the research problem being studied (Hignett and McDermott 2015). The informants of this study consisted of fishermen, bench toke, Panglima laot lhok and regional commander. The data of this study includes visual *data (observations)*, spoken *data*, and written *data (documents)* [3]–[5] These various data were collected by means of non-participant observations, in-depth interviews, and the use of documents [6] Documents consisting of qanuns, memos, announcements, instructions, meeting reports, leadership decisions, journals, newspapers, newsletters and other notes relevant to the research theme are used as secondary data [7] These documents are critically reviewed to understand and become additional data and reinforcement to the primary data. This is done through the process of deconstruction, reconstruction and meaning.

## 3. Results and Discussion

### Social and Economic Impact of Measured Fishing Policies on Fishermen in North Aceh Regency

The measured fishing policy implemented by the Indonesian government, including in North Aceh Regency, aims to manage fish resources in a sustainable manner. This policy establishes a certain quota for fishermen to catch fish in certain waters. This aims to prevent overfishing that can threaten the sustainability of fish resources. While this policy has good long-term goals, its impact on fishermen in areas like North Aceh can be complex [8], [9].

From an economic perspective, this policy has a direct impact on fishermen's income. With the fishing quota, fishermen who usually catch as many fish as possible without restrictions now

have to adjust their activities to the allowed amount. For fishermen with large fleets, this may not have much of an impact, but for small fishers or traditional fishermen who rely on daily catches to make ends meet, these restrictions can reduce their income significantly [10], [11]. This affects the purchasing power of the fishing community and increases their economic burden.

In addition, restrictions on the number of fish catches can lead to tighter competition between fishermen to obtain fishing permits. In some cases, fishermen who are unable to meet the set quotas or do not have enough equipment to catch fish in accordance with this policy may be forced to find side jobs that are not directly related to the fisheries sector. This can lead to a reduction in the number of fishermen who focus on fisheries, leading to reduced employment in this sector.

However, measured fishing policies also have a long-term positive impact on the fisherman's economy. With more measured fish management, the sustainability of fish resources can be maintained, which means there will be more fish stocks to catch in the future. If this policy goes well, in the long run, fishermen in North Aceh can enjoy a more abundant and stable catch, which in turn can increase their income. This can also strengthen food security in the region.

From the social side, this policy has the potential to cause tension between fishermen. For some fishermen, limiting the number of catches can be seen as a threat to their livelihoods, leading to social discontent. In some cases, misunderstanding or disapproval of this policy can lead to protests or conflicts among fishing groups. Therefore, it is important for the government to conduct intensive socialization about the goals and benefits of this policy and provide training to fishermen so that they can make better use of this policy.

On the other hand, if this policy is accompanied by the active involvement of fishermen in the planning and supervision process, negative social impacts can be minimized. Through a participatory approach, fishers can be given a better understanding of the importance of sustainability of fishery resources and how these policies can benefit them in the long run. Cooperation between the government, fishermen, and local communities is key in creating fair and effective policies.

Overall, although measured fishing policies pose challenges for fishermen in North Aceh Regency, especially in the short term, the long-term impact can be very positive if managed properly. Education and training for fishermen, as well as close monitoring of policy implementation, will be crucial in ensuring that these policies provide maximum social and economic benefits to fishing communities. With proper management, this policy can support the sustainability of natural resources and improve the welfare of fishermen in the long term.

### **Challenges and Opportunities for Fishermen in the Implementation of Measured Fishing Policy in North Aceh**

The implementation of the measured fishing policy in North Aceh Regency presents a number of challenges and opportunities for local fishermen. This policy is designed to preserve fish resources by regulating the number of catches allowed, as well as to keep marine ecosystems from being damaged by overfishing. Fishermen in North Aceh face various challenges in implementing measured fishing policies [12]. One of the main issues is the limited understanding of these policies, as many fishermen are unclear about catch quotas, fishing gear regulations, and the restrictions on fishing times and areas.

The lack of effective socialization or limited access to information makes it difficult for these policies to be properly implemented. Additionally, the new policies require fishermen to change their fishing habits and patterns. Previously accustomed to catching large amounts of fish without concern for quotas or sustainability, many fishermen now face resistance to adapting to the new restrictions. This process of adjustment requires time and support. Furthermore, the

region's infrastructure and technological limitations present further challenges. The lack of effective extension facilities and the inability to use technology to monitor and measure fish catches makes it difficult to supervise and enforce the policies, potentially reducing their effectiveness.

Another significant obstacle is the heavy reliance of fishermen in North Aceh on fish catches for their income. The imposition of catch quotas could adversely affect their livelihoods, especially if the policies are not accompanied by support measures like alternative livelihoods or economic assistance. This dependence on the fisheries sector complicates the implementation of the policies. Despite these challenges, the measured fishing policies present a valuable opportunity for the long-term sustainability of marine resources. Stricter regulations can help preserve the marine ecosystem in North Aceh, ultimately benefiting the fisheries industry. Fishermen who successfully adapt to these changes may experience more stable and increasing catches in the future.

### **Improving Fish Quality and Economic Value**

With more measured management, the quality of fish caught in North Aceh can improve. Fish that are healthier and have a well-maintained ecosystem will be more valuable in the market, both locally and internationally. This opens up opportunities for fishermen to obtain better prices on their catch, as long as they can follow existing regulations and operate in accordance with sustainability principles. Government Support and Collaboration with Other Parties

Another opportunity is the support from the government and various related institutions in the implementation of this policy. Local governments, along with the private sector and non-governmental organizations, can work together to provide training, technology, and socio-economic assistance to fishermen. This collaboration will accelerate the adaptation of fishermen to the policy and increase the effectiveness of its implementation in the field.

Overall, despite significant challenges in the implementation of the measured fishing policy in North Aceh, it offers great opportunities in terms of marine ecosystem sustainability and economic improvement for fishermen who can adapt to the changes. Good assistance and supporting policies will be very important in maximizing the existing potential.

### **4. Conclusion**

The measured fishing policy in North Aceh aims to conserve fish resources and marine ecosystems by regulating catch quotas. While it provides long-term benefits for fisheries sustainability and food security, it has an impact on the fisherman economy, especially smallholder fishers who depend on daily catches. Quota restrictions can lower revenue and create tighter competition. On the social side, this policy can cause tension if fishermen do not understand the impact. Socialization, fisherman participation, and government support are essential to reduce conflict. With good management, this policy can increase fish stocks and fishermen's welfare.

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