

Economic Analysis of Law on Catch Quota Based Measured Fishing Regulations in Indonesia

Masitha Tismananda Kumala*, Titik Suharti, Ria Tri Vinata*****

*Law Faculty, Wijaya Kusuma Surabaya University (Jl. Dukuh Kupang XXV No. 54, Surabaya 60225, Indonesia) <https://orcid.org/0000-0003-1651-2193>

**Law Faculty, Wijaya Kusuma Surabaya University (Jl. Dukuh Kupang XXV No. 54, Surabaya 60225, Indonesia) <https://orcid.org/0000-0002-7875-6612>

***Law Faculty, Wijaya Kusuma Surabaya University (Jl. Dukuh Kupang XXV No. 54, Surabaya 60225, Indonesia) <https://orcid.org/0009-0003-4711-5569>

ABSTRACT

The measured fishing regulation is a fisheries management regulation that maximizes the utilization of fishery resources without disrupting their sustainability which is regulated through Government Regulation Number 11 of 2023 concerning Measured Fishing (Measured Fishing Regulation) and Regulation of the Minister of Marine and Fisheries Affairs Number 28 of 2023 concerning the Implementing of Government Regulation Number 11 of 2023 (Implementing Regulation of Measured Fishing). Measured fishing in Indonesia is carried out based on a catch quota system which aims to improve the welfare of fishermen. The urgency of this study is to determine the results of the economic analysis and the economic impact of Measured Fishing Regulation and Implementing Regulation of Measured Fishing because this policy will affect the livelihoods of fishermen whose numbers are very high in Indonesia. The aim of this study is to analyze and evaluate the regulation of measured fishing in Indonesia using the Economic Analysis of Law approach and theory. There are two things studied in this study, namely First, the regulation of catch quota based measured fishing in Indonesia. Second, Economic Analysis of Law on catch quota based Measuring Fishing Regulations in Indonesia. This study uses an empirical research method by making law the object of research by considering related data. The results of the study show that fishing in Indonesia is based on a catch quota system given to each fishing vessel. The catch quota given is transferable both between fishing vessels in the same and different Fisheries Business Permit. Referring to the theory taught by Richard A. Posner, it can be said that the quota-based Measuring Fishing Regulations in Indonesia regulated through PP No. 11 of 2023 do not meet the elements of value, utility and efficiency.

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Introduction

Sustainability of fish resources is one of the problems in the Indonesian fisheries sector (Imelda, 2019). Based on the Minister of Maritime and Fisheries Affairs Decree Number 28 of 2022 concerning the Estimation of Fish Resources Potential, Total Allowable Catches, and the Level of Utilization of Fish Resources in the Fisheries Management Area of the Republic of Indonesia (MMAF Decree No. 19 of 2022), the estimated potential of fish resources in 2022 has decreased since 2017. Not only that, in every Fisheries Management Area of the Republic of Indonesia (FMARI) there are fish species that have over-exploited status because their utilization level has a value of more than one.

The sustainability of fisheries is disrupted due to several things. The first cause is the high level of Illegal, Unregulated, and Unreported Fishing (IUUF) in Indonesian waters (Agus, 2018). Fishing vessels that carry out IUUF are not always foreign-flagged vessels, but many Indonesian-flagged vessels also carry out IUUF (Indonesia Ocean Justice Initiative, 2022). IUUF is very detrimental to Indonesia because it makes fishing unmeasured properly and disrupts the validity of the estimated data on fisheries potential and production (Kusdiantoro et al., 2019).

The second cause of the disruption of fisheries resource sustainability is the use of destructive fishing gear that has an impact on the ecosystem and biodiversity in the sea.

The third cause is the disproportionate distribution of Indonesian fishermen and fishing vessels. The majority of fishermen live in coastal areas with seas that have been crowded with fishing vessels so that fishing activities increasingly cause the number of fishermen's catches degradation (Ariadno & Amelina, 2016). Based on data released by the Ministry of Maritime and Fisheries Affairs (MMFA), until 2022, the 5 (five) provinces with the most fishing vessels are Central Java (71,285 vessels), East Java (71,027 vessels), Maluku (64,591), South Sulawesi (56,250), and Southeast Sulawesi (53,532) (Ministry of Maritime and Fisheries Affairs Data, n.d.). If we look at the FMARI then fishing vessels in Central Java and East Java are most likely to catch fish in FMARI 712, 713, and 573, where there are many species groups that have over-exploited status.¹

In addressing the threat to the sustainability of fishery resources, in 2023 the Indonesian Government launched the Measured Fishing Policy. Measure fishing is regulated through Government Regulation Number 11 of 2023 concerning Measured Fishing (Measured Fishing Regulation) and Regulation of the Minister of Marine and Fisheries Affairs Number 28 of 2023 concerning the Implementing of Government Regulation Number 11 of 2023 (Implementing Regulation of Measured Fishing). Measure fishing is also intended to improve the welfare of fishermen, provide expansion and employment opportunities in the fisheries sector, increase added value and competitiveness of fishery products, business certainty, contribution to the business world and the state itself.

The fisheries sector is a high-value sector. The economic aspect cannot be separated from the process of legal rule formulating including fisheries management regulations. One of the sustainable development goals in General Assembly Resolution A/70/L.1 Transforming Our World: the 2030 Agenda for Sustainable Development (SDGs) is to sustainably manage and protect marine and coastal ecosystems, protect the marine and coastal environment from pollution, and enhance conservation and sustainable use of marine resources. Sustainable development in the marine and fisheries sector is achieved by advancing three aspects at once, namely the economy, social, and environment aspects related to the marine and fisheries sector. It showed that the economic aspect cannot be ignored in the formulation of a fisheries management regulation. Looking at the background description above, there are two things that are studied in this study, namely First, Regulation of catch quota based measured fishing policy in Indonesia. Second, Economic Analysis of Law on Regulation of catch quota based measured fishing in Indonesia.

Methodology

This study used an empirical research method. The research was conducted not only on the legal regulations but also linked to data related to the fisheries sector and economic aspects in the fisheries sector such as fisheries production value, fisheries export value, fishermen's welfare level, and state income from the fisheries sector.

This study used the statute approach (Aziz et.al, 2021) by analyzing the regulation of measured fishing, both Measured Fishing Regulation and Implementing Regulation of Measured Fishing. This approach is carried out for the purpose of knowing the ratio legis of the formulation of the regulation. This approach is also carried out in analyzing the regulation of measured fishing based on the Economic Analysis of Law. This study also used a conceptual approach by analyzing several concepts in this study (Wilis, 1935). The concepts

¹ Based on Ministerial Decree Marine and Fisheries Affairs No. 19 of 2022, there are 2 groups of species that are over-exploited in FMARI 712, there are 5 groups of species that are over-exploited in FMARI 713, and there are 4 groups of species that are over-exploited in FMARI 573.

that be analyzed in order to answer the problem formulation are measured fishing, economic analysis of law, catch quotas, and sustainable development.

1. Theory

Measured Fishing

Fishing activities in Indonesia are regulated based on quotas based on Measured Fishing Regulation and Implementing Regulation of Measured Fishing. Previously, fishing activities were regulated based on the Total Allowable Catches (TACs), but since the enactment of the two regulations, fishing activities are not only based on the determination of TACs but also individual catch quotas. Individual catch quotas approach is used for sustainably capturing each species (Kasim et.al, 2024).

Measured Fishing is controlled fishing carried out based on certain zones and catch quotas in order to maintain the sustainability of fish resources and their environment, provide business opportunities, improve justice and the welfare of fishermen. Based on the meaning of measured fishing, it is known that the purpose of the program is not only the issue of preserving fishery resources and the marine environment, but also improving the welfare of fishermen and increasing justice in the fisheries sector. It can be said that the environmental aspect is not the only goal in measured fishing policy.

Measured fishing is carried out in the Measured Fishing Zone. The term Measured Fishing Zone is a new term introduced by Measured Fishing Regulation, which based on previous fisheries management regulations only recognized FMARI. Measured Fishing Zone itself is FMARI plus the high seas which is managed for the utilization of fish resources with measured fishing. Measured Fishing Zone consists of Zone 1 to Zone 6, where each zone consists of one or more FMARI. FMARI in sea waters are further divided into fishing areas and limited fishing areas. The Minister of Marine and Fisheries Affairs (MMFA) determines whether the fishing area is included in the limited fishing area category or not based on several considerations such as the amount of fish resources in the area; fish resource environment; socio-economic fisheries; and / or fisheries governance. Limited fishing areas can only be utilized by small scall fishermen and/or individuals, the Central Government, or Regional Governments who carry out activities for non-commercial purposes.

The Indonesian government uses a fishing quota mechanism to ensure the implementation of Measured Fishing. Based on Measured Fishing Regulation and Implementing Regulation of Measured Fishing, there are three types of catch quotas, namely industrial quotas, local fishermen quotas, and non-commercial activity quotas. Each of these catch quotas is used by the Indonesian government as a mechanism to ensure that fishing activities do not damage the sustainability of fishery resources and the marine environment, as well as provide business opportunities and improve the welfare of fishermen.

Economic Analysis of Law

Economics and law are related to each other. Economic analysis of law is important to do considering that the implementation of the law will affect the economic aspect. The economic aspect is related to the law not only the process of implementing the legal rules, but from the process of formulating legal rules to the evaluation of the legal rules themselves.

Fisheries management regulations cannot ignore economic considerations because the fisheries sector has high economic value. Data from the Ministry of Maritime and Fisheries Affairs, the Gross Domestic Product (GDP) value of the fisheries sector in 2021 was more than 469 trillion rupiah. This figure exceeds the GDP value of the forestry, agriculture, and livestock sectors (Ministry of Maritime and Fisheries Affairs Data, 2022). The high economic

value of the fisheries sector does not necessarily make fishermen prosperous. The results of research conducted by the Faculty of Fisheries and Marine Sciences, Padjadjaran University, actually showed that the profession of fishermen is the poorest profession in Indonesia. As many as 11.34 % of people in the fisheries sector are classified as poor. This figure is higher than in the restaurant service sector (5.56 %), building construction sector (9.86 %), and waste management sector (9.62 %) (Anna, 2019).

Economic analysis of law first emerged through the utilitarianism thought taught by Jeremy Bentham. According to this theory, an act is good if it brings benefits to society as a whole, which is formulated in the criteria of the act "the greatest happiness of the greatest number" (Bertens, 2000). Economic Analysis of Law is the application of economic principles as rational choices to analyze legal issues. Richard A. Posner is one of the figures who initiated the Economic Analysis of Law systematically, but actually this theory already existed and was developed first by utilitarians such as Jeremy Bentham and John Stuart Mill (Wiarti, 2017).

According to the book (Posner, 1992) that written by Richard A. Posner, the emergence of an economic approach to law in the early 1960s in the United States through works written by Ronald Coase and Guido Calabresi. Ronald Coase wrote about social costs (The Problem of Social Cost). In addition to Ronald Coase, Guido Calabresi also discussed torts in the early 1960s. These writings attempted to conduct a systematic economic analysis of legal problems that actually had nothing to do with regulating economic problems.

According to Posner's theory, in studying the role of law, must examines in terms of value, utility and efficiency. Posner also expressed his views on the use of economic theory in law by saying "*many of the doctrines an institution of the legal system are best understood and explained as efforts to promote the efficient of resources' and that 'the common law is best explained as a system for maximizing the wealth of society'*" (Posner, 1992). From Posner's opinion, it is implied that based on the Economic Analysis of Law, there are two conditions for realizing good law, namely when it can increase resource efficiency and maximize society welfare.

2. Discussion

Catch Quota Based Measured Fishing Regulation

Measured Fishing Regulation and Implementing Regulation of Measured Fishing regulate catch quota system in Indonesia. The regulation of catch quotas is a manifestation of the regulation of fishing rights. The catch quota is the allocation of fish resources or the number of fish that can be utilized by measured fishing program. The catch quota in the Measured Fishing Zone is divided into industrial quotas, local fishermen quotas, and non-commercial activity quotas. This quota is determined by considering the number of fishermen, the number and size of fishing vessels, and fishing gear.

Before the implementation of the Measured Fishing Regulation, a catch quota had been set for each FMARI which was determined through the Decree of the Director General of Capture Fisheries of the Ministry of Maritime and Fisheries Affairs (Director General of Capture Fisheries). Director General of Capture Fisheries determines the fishing quota for the central government and local government in each FMARI. Such a fishing quota can be equated with the overall TACs for certain fish species groups in each FMARI. That is different with the catch quota regulated in Measured Fishing Regulation and Implementing Regulation of Measured Fishing because this catch quota is divided into three types of catch quotas.

The first type of catch quota is the industrial quota. According to Article 8 of Measured Fishing Regulation, the industrial quota is given in each Measured Fishing Zone outside

12 nm. The industrial quota is given by the Minister of Maritime Affairs and Fisheries to individuals and legal entities (limited liability companies and cooperatives) based on the catch quota applications. This raises the question of whether such catch quotas are individual (given to each individual or legal entity based on an application), or whether the industrial quota is set globally or as a whole in each Measured Fishing Zone outside 12 nm which can be used by all fishing vessels that operate in that fishing zone through applications. The validity period for the use of the industrial quota is during the validity period of the fisheries business permit except for small fishermen. Small fishermen can use the industrial quota while carrying out fishing activities. The granting of small scale fishermen to utilize the industrial quota which is carried out in the FMARI outside 12 nm, means that small scale fishermen will also be in the same zone with much bigger tonnage fishing vessels.

The next type of quota is the local fishermen quota. The local fishermen quota is a fishing quota given in each Measured Fishing Zone up to 12 nm. The local fishermen quota is given by the governor to local fishermen, both individuals (small scale fishermen and non-small scale fishermen) and legal entities (limited liability companies with domestic capital and cooperatives). The local fishermen are fishermen who are domiciled in the province in the Measured Fishing Zone according to their Identity Card or domicile letter. The validity period for the use of the local fishermen quota is during the validity period of the fisheries business permit, except for small scale fishermen, namely while conducting fishing business.

The last type of catch quota regulated in Measured Fishing Regulation is the non-commercial activity quota. This type of quota is utilized in the Measured Fishing Zone up to 12 nm or outside 12 nm. The non-commercial activity quota can be utilized by everyone, the Central Government, and Regional Governments that carry out activities for education, training, research, or other scientific activities, including tourism.

The catch quota in the Measured Fishing Zone is utilized within a one-year fishing season period and is limited by the fishing quota given each year. The utilization of industrial quotas, local fishermen quotas, and non-commercial activity quotas are subject to fisheries levies or Non-Tax State Revenue (NTSR) except for small scale fishermen.

The establishment of a new mechanism in fisheries management in the form of dividing the types of catch quotas into industrial quotas, local fishermen quotas, and non-commercial activity quotas is a visionary step by the Indonesian Government. The establishment of catch quotas is one form of a measured fishing program that aims to ensure the sustainability of fish resources is maintained, provide welfare for fishermen, provide expansion and employment opportunities, increase added value and competitiveness of fisheries products, business certainty, contribution to the business world and the state itself.

The visionary step taken by Indonesian Government by regulating measured fishing based on catch quotas still leaves questions as to whether such a catch quota is an individual catch quota; what about the mechanism for determining the catch quota; and whether the application procedure for obtaining a catch quota is the same as the application procedure for a business permit for the capture fisheries sub-sector. Further regulations are needed regarding the determination and implementation of catch quotas in Indonesia as stated in Articles 8 to 10 of Measured Fishing Regulation that further provisions regarding the provision of fishing quotas will be regulated through the Ministerial Regulation.

In September 2023, the Minister of Marine and Fisheries Affairs authorises the Regulation of the Minister of Marine and Fisheries Affairs of the Republic of Indonesia Number 28 of 2023 concerning the Implementing Regulation of Government Regulation Number 11 of 2023 concerning Measured Fishing (Implementing Regulation of Measured Fishing)

as an implementing regulation that regulates the technical implementation of the fishing quota system. In this regulation, the procedures for applying for and utilizing fishing quotas can be found.

Economic Analysis of Law on Catch Quota Based Measured Fishing Regulations

Economic analysis of law is actually difficult to do for legal experts because this approach requires quite complicated calculations. However, the use of the basic values, utility and efficiency indicator as taught by Posner does not have to be based on complicated theories and calculations, but can be used in a simple way (Yuwana, 2002).

Economic Analysis of Law seeks to answer two fundamental questions about the rule of law. First, what is the impact of regulations on the related actors behavior. Second, is the impact of these regulations socially desirable. The use of economic theory as a consideration in testing and analyzing fisheries management regulations if carried out by a legal expert cannot be done in depth because of the differences in the fields of science they have. On the other hand, law and economics cannot be separated at all considering that the fisheries sector is a sector with high economic value that affects national economic conditions.

The intersection between law and economics is not new. There are areas of law that aim to regulate activities in traditional economic markets. The "old" law and economics focused on these areas. Corporate law and tax law are a few examples of branches of law that are relevant to the realm of traditional economic markets (Salzberger, 2007).

There is a development of a new economic approach, namely the "new" law and economic. This approach does not only focus on legal analysis of the economic area, but also economic analysis of the legal area. The analysis is not limited to branches of law that directly regulate or handle economic problems. The roots of the new law and economic can actually be found in the 18th century which can be found in the writings of several figures such as Adam Smith, Cesar Beccaria, Marquis de Condorcet and Jeremy Bentham. An important development of this approach came in the 1970s with the popular book by Richard Posner entitled "The Economic Analysis of Law" (Salzberger, 2007).

In the last fifty years, the scope of economics has expanded rapidly beyond the explicit domain of traditional economic markets. In its development, there are now economic theories about property rights; firms and organizations; government and politics; education; the family; crime and punishment; anthropology; history; information; racial and sexual discrimination; privacy; and even animal behavior that actually have nothing directly to do with economics (Posner, 1987).

Before Posner, the development of the new law and economics began with articles written by Ronald Coase in the early 1960s in which he wrote about social costs (the Problem of Social Cost) and Guido Calabresi who used an economic approach to the problem of torts. This was the first modern attempt to apply economic analysis systematically to a field of law that was not directly related to economics (Posner, 2014). After Ronald Coase and Guido Calabresi used an economic approach to legal issues, Richard Posner published his book entitled Economic Analysis of Law which later became a theory in legal science (Murni, 2012).

According to Posner, in assessing the law, it must be seen from the perspective of value, utility and efficiency (Posner, 1992). For Posner, it is necessary to use the principles of Economics in the application of law because "*...economic is a powerful tool for analyzing a vast range of legal questions...*" (Yuwana, 1998) which if interpreted freely means that economics is a powerful tool for analyzing various kinds of legal questions. Based on Posner's opinion, economics can be used as an approach in studying the legal rules of fisheries management in Indonesia and become one approach in answering legal problems.

In assessing whether catch quota based measured fishing regulations are good laws and have good economic impacts, three parameters taught by Posner can be used, namely based on economic value using three aspects, namely in terms of value, utility and efficiency. Catch quota based fisheries management regulations will be assessed whether they can increase the value of the fish resources themselves so that the welfare of fishermen can increase. The second parameter is whether this regulation has utility for society in general and especially for fishermen. If the implementation of this regulation can improve the welfare of fishermen, then it can be said to fulfill the utility aspect in assessing the law.

The next indicator in assessing the law with economic considerations according to Posner is efficiency. Posner defines efficiency as: "...that allocation of resources in which value is maximized" (Yuwana, 1998). Posner's efficiency principle is influenced by the Utilitarian Theory taught by Jeremy Bentham which prioritizes the principle of usefulness and benefit. Efficiency according to economic analysis focuses on ethical criteria in the context of making social decisions related to regulations that affect the welfare of society. Efficiency for Posner is related to increasing one's wealth without causing losses to others (Handayani et al., 2020).

There are several things that need to be considered regarding catch quota regulations because they will greatly affect the achievement of improving fishermen's welfare, so it is necessary to analyze these regulations based on the theory taught by Richard A. Posner. One of the objectives of creating quota-based fishing regulations is to improve fishermen's welfare, so it is closely related to the economic aspect.

The first provision that needs to be analyzed is related to the limitations of fishing vessels that have utilized their entire quota. Article 39 paragraph 4 of Implementing Regulation of Measured Fishing regulates that in the event of an excess of the total catch, the excess difference is calculated as the utilization of the catch quota for the following year, except for small scale fishermen. This provision creates an opportunity for fishermen to continue fishing even though they have met the quota because the excess catch will be calculated as the utilization of the quota that will be given in the following year. This will violate the essence and purpose of catch quota determination. The parties who benefit from such regulations are the owners of large fishing vessels because it creates opportunities for them to continue fishing even though they have utilized the entire quota. If large vessels have a wide opportunity to utilize fishery resources by continuing to catch fish even though the quota given has been fully utilized, it will reduce the opportunity for fishermen with much smaller fishing vessels to utilize the quota they have. Small scale fishermen will find it difficult to improve their welfare so it will make the bigger the social and economic gap between small fishermen and fishermen or fishing companies that have large vessels.

Referring to the three indicators in assessing the law taught by Posner, the provision that allows fishing vessels to continue fishing even though they have utilized all their quota does not meet the indicators of value, utility, or efficiency. This regulation can actually reduce the income value of small scale fishermen so that the economic gap between fishermen becomes wider. It can also be said that this regulation has low utility for small scale fishermen. In terms of efficiency, such regulations cannot increase the efficiency of the utilization of fishery resources. This is because the catch quota should be an instrument to ensure the sustainability of fishery resources, but this regulation does not explicitly regulate catch restrictions.

The second provision that needs to be analyzed is the provision regarding the catch quota transfer. Based on Article 41 and Article 50 of Implementing Regulation of Measured Fishing, industrial quotas and local fishermen's quotas can be transferred either from fishing vessels under one Fisheries Business Permit or from fishing vessels with different Fisheries Business

Permits. Industrial quotas and local fishermen's quotas that can be transferred has several risks, such as the sale and purchase of catch quotas among fishermen. The sale and purchase of fishing quotas among quota recipients will give rise to a catch quota mafia. In the end, catch quotas will be owned by certain parties who have large fishing vessels. The parties who benefit are fishermen or companies that have large fishing vessels. Catch quotas will be concentrated on certain parties.

Another impact of the quota transfer regulation is the increase in unemployment due to the transfer of fishing quotas. If many quota recipients sell their fishing quotas to other parties, such as fishing vessels's owners who rent their fishing vessels to fishermen will make the fishermen who rent their fishing vessels will stop fishing.

In such conditions, referring to the theory taught by Posner, the regulation on catch quota transfer does not fulfill the elements of value, utility and efficiency. In terms of value, regulations that allow catch quota transfers are able to increase the income value of certain parties only, namely fishermen or companies that have high capacity in catching fish. On the other hand, many small scale fishermen experience a decrease in income so it can be said that this regulation cannot increase the income value of small fishermen.

Regulations on catch quota transfers meet the indicator of utility only for certain fishermen who are able to catch fish in large quantities. For small fishermen, especially labor fishermen or fishermen who catch fish by renting fishing vessels, this regulation is prejudice to them. The transfer of quotas by ship owners will stop the work activities of labor fishermen or fishermen who rent the boat to catch fish. The result is the emergence of unemployment. Regulations on catch quota transfers make the utilization of fishery resources inefficient because they are only economically beneficial for certain parties and are not evenly distributed proportionally for all fishermen. It means that this regulation makes certain parties richer but on the other hand also increases unemployment and poverty among fishermen.

The last provision that needs to be analyzed is related to supervision of the utilization of fishery resources. Quota recipients who have utilized the catch quota are required to create data on the utilization of the catch quota. Based on Article 63 and Article 68 of the Implementing Regulation of Measured Fishing, everyone who receives catch quota is required to report quota utilization data based on the log book reported by the ship's captain. The ship's captain/fishermen filled in the catch log book for fish caught data based on the results of calculations by the ship's captain/fishermen independently (self-assessment).

Filling in the log book based on self-assessment without supervision from the government regarding the calculation of the number of catches will disrupt the accuracy of the total data on the number of catches. The government needs to be careful in implementing the utilization of catch quotas, especially regarding the number of catches because data accuracy plays an important role as a form of monitoring and evaluation of the implementation of fishing quotas. The results of this monitoring and evaluation are certainly a consideration for the ministry in providing quotas in the following year. The accuracy of the total data on the number of catches each year will make fisheries management policies inappropriate. As a result, the sustainability of fishery resources is disrupted and the ideals of improving welfare for fishermen will be difficult to achieve.

Fisheries management regulations that actually disrupt the sustainability of fisheries resources and cannot improve the welfare of fishermen do not meet the three indicator to become good laws. These regulations are unable to increase the income and welfare of fishermen, especially small fishermen. Such regulations also do not have maximum use

for both the marine environment and the interests of fishermen. In terms of efficiency, such regulations also make catch quota utilization inefficient because they damage the accuracy of data on the amount of fisheries utilization and the accuracy in making fisheries management policies.

The Indonesian Government's policy to regulate the utilization of fisheries through a catch quota based measured fisheries is a good and visionary step. The accuracy of catch quota regulations is the main capital in realizing the goals of fisheries management, namely the sustainability of fisheries resources and improving the welfare of fishermen. Based on the economic approach taught by Posner, there are several provisions in the quota-based measured fisheries regulation that do not meet the three benchmarks, namely value, utility, and efficiency. Several changes are needed in the provisions related to the prohibition of fishing for vessels that have utilized all of their quotas, provisions regarding quota transfers and filling in quota utilization data log books based on self-assessment.

Conclusions

The utilization of fishery resources in Indonesia is based on the Measured Fishing Regulation and Implementing Regulation of Measured Fishing. Fishing in Indonesia is no longer only based on the determination of the Total Allowable Catches (TACs) and fishing business permits but also on the quota system given to each vessel. Each vessel will be given a catch quota certificate according to the type applied for. The government determines three types of catch quotas, namely industrial quotas, local fishermen quotas, and non-commercial activity quotas. The catch quotas given are transferable both between vessels in one Fisheries Business Permit and different Fisheries Business Permits. Referring to the theory taught by Richard A. Posner, it can be said that the catch quota based measured fishing regulation in Indonesia regulated through Measured Fishing Regulation does not meet the indicators of value, utility and efficiency, especially the provisions regarding restrictions for fishing vessels that have utilized all of their catch quotas; catch quota transfer; and filling in the catch quota utilization data log book. The revisions of the regulation are needed to these provisions so that quota-based measured fisheries regulations can have a positive economic impact by increasing the welfare of fishermen, being useful for fishermen and the government, and making the use of fisheries resources efficient.

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Кумала М. Т., Сухарті Т., Віната Р. Т. Економічний аналіз законодавства Індонезії про квоти на вилов риби, базованого на правилах вимірюваного рибальства. – Стаття.

Правила вимірюваного рибальства встановлюють механізм управління виловом рибних ресурсів, завдяки якому забезпечується їх максимально ефективна та стійка експлуатація. В Індонезії ці правила запроваджено відповідно до Постанови Уряду № 11 від 2023 р. про вимірюване рибальство (Положення про вимірюване рибальство) та Постанови Міністра з морських справ і рибальства № 28 від 2023 р. про введення її у дію (Правила імплементації). Вимірюване рибальство базується на системі квот, спрямованій на підвищення добробуту рибалок. Актуальність дослідження зумовлена необхідністю аналізу економічного впливу зазначених документів, оскільки запроваджувана ними політика матиме значний ефект для рибальського сектора Індонезії. Метою статті є аналіз та оцінка регулювання вимірюваного рибальства з використанням методу економічного аналізу права. Авторами розглянуто регулювання квот на вилов риби та здійснено економічний аналіз правил вимірюваного рибальства, базованих на таких квотах. У дослідженні

використано емпіричний метод, а правові норми охарактеризовано з урахуванням пов'язаних даних. Підсумовано, що рибальство в Індонезії ґрунтується на системі квот, що надаються кожному рибальському судну. Надана квота може передаватися між рибальськими суднами, що мають такий самий або інший дозвіл на рибальство. Посилаючись на теорію Р. А. Познера, автори відзначають, що базовані на квотах правила вимірюваного рибальства в Індонезії, урегульовані Постановою № 11 від 2023 р., не відповідають критеріям цінності, корисності та ефективності.

Ключові слова: економічний аналіз, квота вилову, вимірюване рибальство, регулювання рибальства, індонезійське законодавство, рибні ресурси.

