Asian Journal of Aquatic Sciences, April 2025. Vol 8, Issue (1) 33-40
e-issn: 2716-4608
p-issn: 2655-366X

ANALYSIS OF REGULATIONS FOR DETERMINING THE LIMITED PROTECTION STATUS OF TERUBUK FISH (*TENUALOSA MACRURA*) PERMEN-KP NO. 210 OF 2023 REFERRING TO NO. 58/PERMEN-KP/2020 CONCERNING CAPTURE FISHERIES BUSINESSES

Thamrin[1,2*], Irawan Harahap[2], Silm Oktapani[2]
[1]Department of Marine Science, Faculty of Fisheries and Marine,
Universitas Riau, Pekanbaru, 28293 Indonesia
[2]Master of Law, Faculty of Law, Universitas Lancang Kuning, Pekanbaru 28266 Indonesia
*thamrin@lecturer.unri.ac.id

ABSTRACT

This research aims to determine the form of analysis, as well as determine the obstacles and constraints in implementing the Decree of the Minister of Maritime Affairs and Fisheries of the Republic of Indonesia Number: PERMEN-KP No. 210 of 2023 if guided by PERMEN-KP No. 58 of 2020 concerning capture fisheries businesses. In scientific research using a qualitative approach with an interpretative normative paradigm, the available theories used for research are constructed as an imperfect building, and this research is descriptive. In implementing the Decree of the Minister of Maritime Affairs and Fisheries of the Republic of Indonesia Number: PERMEN-KP No. 210 of 2023 concerning Limited Protection of Terubuk Fish (*Tenualosa macrura*) has not been implemented in the socialization, sea patrol and monitoring activities carried out by the Government, Indonesian National Army, Police and community monitoring groups. If PERMEN-KP No. 210 of 2023 is guided by PERMEN-KP No. 58 of 2020 concerning capture fisheries businesses, there will be discrepancies between the rules made and the rules applied in the field. The effectiveness of the implementation of the Decree of the Minister of Maritime Affairs and Fisheries of the Republic of Indonesia on the availability of fish resources legally and seen from fishermen's catches has increased and is quite effective, but it is not yet significant because sanctions for violations have not been realized and the obstacles and obstacles to the implementation of the Decree when referring to PERMEN-KP No. 58 of 2020 should not be needed. Fishermen who have small boats (< 5 gross tonnage) are allowed to catch terubuk (*Tenualosa macrura*) in conservation areas following PERMEN – KP No. 58 of 2020.

Keywords: Implementation, Decision, Terubuk Fish

1. INTRODUCTION

Indonesia is an archipelagic country with a sea area covering 80% of its total land area. These vast waters are rich in marine resources and contain abundant potential fish stocks. These resources will not be depleted forever if they are used for the Indonesian people's welfare while considering sustainability and fairness. These various types of fish resources can be utilized to the fullest extent for the welfare and prosperity of the Indonesian people. However, these fish resources have not yet been able to improve the standard of living sustainably and equitably. Issues such as overfishing, illegal fishing, and the use of environmentally unfriendly fishing gear have been widely recognized for a long time.

Received: 5 February 2025
Accepted: 30 March 2025
ajoas.ejournal.unri.ac.id

Using unecologically friendly fishing gear has led to declining fish resources and threatens their sustainability. This situation will cause losses for the state and fishermen's interests. If this situation occurs, regulations and reconstruction of fishing gear that is environmentally friendly are required.

The purpose of regulations and reconstruction of environmentally friendly fishing gear is to protect fish resources. The tools used in fishing, especially small ones, are still widely used by local fishermen, such as gillnets and fish traps. These fishing tools are considered environmentally unfriendly. Therefore, fishing tools disrupt the environment and cause overfishing, leading to environmental damage. This condition will damage fish habitats, resulting in a decrease in fish quantities and even extinction. The ecological damage caused by these activities results in suffering for current and future generations, as they cannot consume fish, which is essential for human growth[1].

In Indonesia, Law No. 31 of 2004[2] on Fisheries, as amended by Law No. 45 of 2009, states that the objectives of fisheries management include not only the economic utilization of fish resources but also ensuring the sustainability of these resources. This law grants authority to the Minister of Marine Affairs and Fisheries to determine the potential supply of fish resources, allocate fish resources, and set the permitted catch limits in the National Fisheries Management Area (WPPNRI). In implementing these decisions, the Minister recommends measures based on assessments conducted by the National Commission on Fish Resources (Article 7 of Law No. 31 of 2004). To reduce the impact of overfishing and habitat destruction, there is a need for law enforcement that is oriented toward the sustainability of fish resources.

Therefore, the Minister of Marine Affairs and Fisheries of the Republic of Indonesia issued Decision Number 210 PERMEN-KP of 2023[3] on the Designation of Limited Protection Status for the terubuk (*Tenualosa macrura*) in the waters of Bengkalis, Riau Province, which was issued on December 23, 2023. The regulation outlines the distribution area of the terubuk along its spawning migration route, aiming to preserve the terubuk and ensure its continued conservation.

Meanwhile, on the other hand, PERMEN-KP No. 58 of 2020[4] concerning Capture Fisheries stipulates that small-scale fishermen should not be penalized. Sustainability is not an end goal but a target that must be continuously negotiated. The sustainability of fish resources or the continuity of fish resources remains uncertain, given the ongoing environmental problems caused by the negative impacts of human activities (Manitoba Round Table on Environment and Economy, 1992). The negative effects of human activities must be stopped through law enforcement oriented towards the sustainability of fish resources and the reconstruction of fishing gear that is environmentally friendly[1]. In addition, the exploitation of terubuk fish has been carried out intensively for a long time. The population of terubuk was abundant in the 1960s, began to decline in the 1970s, and decreased significantly in the 1980s, as reflected in fishermen's catch results. The combination of high exploitation levels and habitat degradation led to the decline of terubuk resources in the Bengkalis region.

To anticipate the population decline that could lead to the extinction of the terubuk in Bengkalis waters, the Minister of Marine Affairs and Fisheries of the Republic of Indonesia issued PERMEN-KP No. 58 of 2020 on Fishing Operations. This Ministerial Decision includes regulations on the prohibition of fishing activities, which also intersect with dominant fishing seasons, thereby significantly impacting the availability of fish resources from an economic perspective. However, compared with PERMEN-KP No. 210 of 2023, there is a lack of synchronization. To address this inconsistency, it is necessary to review both regulations, namely PERMEN-KP No. 58 of 2020 and PERMEN-KP No. 210 of 2023. To ensure the sustainability of the terubuk fish,

what steps should local governments take to align the regulations issued by the central government (2011 and 2023) with local government policies so that the terubuk can also be enjoyed by future generations?

2. RESEARCH METHOD

This type of research is qualitative in nature. The main characteristic of a descriptive qualitative research approach with a normative interpretive paradigm is that this method is chosen to examine the reality behind the facts that appear on the surface and are observable. In scientific research that uses a qualitative approach with a normative interpretive paradigm, the theories that exist and are used in the study are constructed as an imperfect structure. This research is descriptive and qualitative in nature, describing how the implementation of the Decree of the Minister of Marine Affairs and Fisheries of the Republic of Indonesia Number: PERMEN-KP No. 210 of 2023[3] concerning the determination of limited protection status for terubuk and its impact on fishermen's income as well as the obstacles and constraints of its implementation. Meanwhile, the previous PERMEN No. PERMEN-KP No. 58 of 2020[4] is alleged to be inconsistent with PERMEN No. 210 of 2023. In this context, both regulations will be analyzed following the established limited protection status for the terubuk. The qualitative analysis will primarily involve data analysis methods, including graphical representations, mainly sourced from legal regulations, literature reviews, and empirical studies that serve as the research object. Essentially, this analysis presents theoretical frameworks from which conclusions can be drawn to address the issues identified in this study.

3. RESULT AND DISCUSSION

The terubuk fishing group found in Bengkalis has been operating for quite some time, since 2011, with the Decree of the Minister of Marine Affairs and Fisheries Number Kep. 59/MEN/2011[5] until now, with the enactment of the Decree of the Minister of Marine Affairs and Fisheries Number KEP. 210/MEN/2023. However, this regulation has not been implemented in the Bengkalis fishing area. The habitat of the terubuk is found in the estuarine waters of Bengkalis District, Meranti Islands District, and Siak District in Riau Province. The Minister of Marine Affairs and Fisheries Decision No. 210/MEN/2023[3] on the designation of limited protection status for the terubuk fish species appears inconsistent with Ministerial Decision No. 58 of 2020 on Fishing Operations.

The Decision of the Minister of Marine Affairs and Fisheries of the Republic of Indonesia No. 210/KEPMEN-KP/2023[3] on the limited protection of the terubuk fish should be implemented broadly and sustainably. To achieve the effectiveness of the implementation of the Minister of Marine Affairs and Fisheries of the Republic of Indonesia's Decision No. 210/KEPMEN-KP/2023 on the Limited Protection of the terubuk regarding the availability of resources, the government's promises to the fishing communities should be fulfilled, whether in the form of assistance or in the form of money that has been promised to the fishing communities. Some fishermen have side jobs, while many rely solely on fishing for their livelihood. It is hoped that the assistance provided, whether in the form of fishing equipment or infrastructure, will be implemented following the local wisdom of the fishing communities.

On the other hand, Ministerial Regulation of the Ministry of Marine Affairs and Fisheries of the Republic of Indonesia No. 58/PERMEN-KP/2020[4] on Fishing Operations, Article 98: (1) Size limits for fishing vessels: a. Fishing vessels with a gross tonnage of up to 10 (ten) are granted fishing areas in waters up to 12 (twelve) nautical miles; b. Fishing vessels with a gross tonnage of more than 10 (ten) gross tons up to 30 (thirty) gross tons are allocated fishing areas in the sea area beyond 4 (four) nautical miles up to 12 (twelve) nautical miles; c. Fishing vessels with a gross

tonnage of over 30 (thirty) gross tons are allocated fishing areas in the sea area beyond 12 nautical miles, subject to the following conditions:

1. Fishing vessels with a gross tonnage of 100 (one hundred) GT are allocated fishing areas in archipelagic waters, the Exclusive Economic Zone (ZEE), or the high seas; 2. Fishing vessels with a GT of over 100 (one hundred) are allocated fishing areas in the ZEE or the High Seas; 3. Fishing vessels with a GT of over 300 (three hundred) are allocated fishing areas in the ZEE 150 (one hundred fifty) nautical miles and beyond and the High Seas; and 4. Fishing vessels with a GT of over 300 (three hundred) are assigned fishing areas in the ZEE. (2) The maximum size of fishing vessels in marine conservation areas is 10 (ten) GT. (3) The provisions regarding the fishing area referred to in paragraph (1)(a) are exempted for Small-Scale Fishermen.

The Decision of the Minister of Marine Affairs and Fisheries of the Republic of Indonesia No. 210/KEPMEN-KP/2023[3] concerning the Limited Protection of the terubuk should be preceded by evaluation activities and discussed with stakeholders so that the desired objectives can be achieved following the intended purpose. In this context, institutional optimization that is targeted and effective is required to ensure benefits for all Indonesian citizens, particularly fishermen, especially those in the Bengkalis Regency. However, if we look at Article 98 Paragraph (1) and Paragraph (2) of the Regulation of the Ministerial Regulation of the Ministry of Marine Affairs and Fisheries of the Republic of Indonesia No. 58/PERMEN-KP/2020[4] on Fishing Operations it states that fishermen are not required to refrain from catching Terubuk when the season arrives. This is because, according to this provision, the prohibition on catching terubuk fish applies to vessels with a GT of 10 (ten) tons, while the largest ships used by fishermen in the Bengkalis waters have a GT of only 5 (five) tons. Generally, each fisherman only has the capacity for vessels with an average GT of 2 (two) tons. Moreover, if we refer to Article 98, Paragraphs (1) and (2), there is no restriction on fishermen in the Bengkalis waters from catching terubuk based on the vessels they use.

Meanwhile, if we look at Regulation of the Ministerial Regulation of the Ministry of Marine Affairs and Fisheries of the Republic of Indonesia No. 58/PERMEN-KP/2020[4]on Fishing Operations, Article 98 Paragraph (1) on the size limits of fishing vessels: a. fishing vessels with a GT of up to 10 (ten) are permitted to fish in waters up to 12 (twelve) nautical miles; (2) The size limit for fishing vessels in marine conservation areas is a maximum of 10 (ten) GT. (3) The fishing area provisions referred to in paragraph (1) letter a are exempted for small-scale fishermen.

Meanwhile, the fisheries department sometimes warns fishermen who catch lomek, biang, buntal, and silver pomfret, as fishermen also catch these fish during the terubuk season. This is because the mesh size of their nets is the same as the size of lomek, biang, Silver Pomfret, buntal, etc. However, according to the Ministerial Regulation of the Ministry of Marine Affairs and Fisheries of the Republic of Indonesia No. 58/PERMEN-KP/2020[4] on Fishing Operations, Article 98 Paragraphs (1) and (2), fishermen in the Bengkalis waters should not be prohibited from catching terubuk fish in the conservation area.

Article 98 (1) and (2) of Regulation of the Ministerial Regulation of the Ministry of Marine Affairs and Fisheries of the Republic of Indonesia No. 58/PERMEN-KP/2020[4]on Fishing Operations should not prohibit traditional fishermen from catching terubuk fish during their season. However, it should be the local government (Governor's Regulation) or the relevant district head's regulations that should be more careful in formulating subsidiary laws or ministerial rules if they wish to ensure the sustainability of the terubuk fish population so that our grandchildren in the future can still enjoy the terubuk fish that the fishermen and the knowledge are currently hunting, This

prohibition is the result of their accumulated knowledge about the dynamics of natural resources, which has been studied and passed down through generations. However, such local institutional wisdom is increasingly disappearing among traditional communities in Indonesia and Southeast Asia due to factors such as institutional restructuring during the colonial era, technological modernization, or increased awareness of the state[6].

In the 1970s, large quantities of terubuk fish were caught, and fishermen often had to cut their nets because they could no longer fit in their boats. In the 1980s, fish were still caught in large quantities, but not as many as in previous years. In the 1990s, fish catches declined significantly, with fishermen only catching 5-10 fish per trip. In the 2000s, fish catches decreased further, with fishermen catching 3-5 fish per trip and sometimes none. Sampling results from August to November 2012 yielded 1,534 terubuk fish, and sampling results from the same period in 2013 showed a population of 3,554 terubuk fish[7]. To anticipate the population decline that could lead to the extinction of terubuk fish in Bengkalis waters, the Bengkalis Regency Government issued a regulation in the form of Regent Regulation No. 15/2010 on the terubuk fish sanctuary in the Bengkalis Regency area.

Some other reasons are that fishermen still catch terubuk fish, especially those that are spawning, because of their high selling price and economic needs. Meanwhile, caught fishermen can be threatened with Law Number 45 of 2009 on local fishermen. Article 100 states, "Any person who violates the provisions set forth (protected fish species) shall be punished with a maximum fine of IDR 250,000,000 (two hundred fifty million rupiah)," and Article 100C states, In the case of criminal acts committed by small-scale fishermen and/or small-scale fish farmers, the penalty is Rp. 100,000,000 (one hundred million rupiah). In addition, the decline in terubuk fish is not only due to fishing but also influenced by increased vessel traffic in the waters of Bengkalis and pollution entering the area[8].

Marine conservation is an effort to balance marine resources' protection and sustainable use. Marine conservation is carried out to prevent overexploitation of marine resources, thereby preserving marine and ocean ecosystems. The habitat of the terubuk conservation area, which consists of the sub-areas of the Bengkalis Strait, Padang/Pakning Strait, the mouth of the Siak River, and the Lalang Strait, is not only a fishing ground for fishermen but also serves as a maritime transportation route and for other economic activities. The Padang/ Pakning Strait, in front of the Siak River estuary, serves as an anchorage and fueling point for tanker ships. Meanwhile, as an anchorage for tanker ships, the Lalang Strait also houses an oil drilling platform. These activities contribute to water quality degradation through turbidity and oil contamination[9].

When compared with the Ministry of Marine Affairs and Fisheries Regulation of the Republic of Indonesia No. 58/PERMEN-KP/2020 on Fishing Operations, specifically Article 98 Paragraph (1) on the Size Limits of Fishing Vessels: a. Fishing vessels with a GT of up to 10 (ten) are permitted to operate in fishing areas within 12 (twelve) nautical miles of the coast; (2) The size limit for fishing vessels in Marine Conservation Areas is a maximum of 10 (ten) gross tonnage. (3) The fishing area provisions referred to in paragraph (1) letter a are exempted for Small-Scale Fishermen. Therefore, the size limit for fishing vessels in Conservation Areas is a maximum of 10 (ten) GT, while fishermen in Bengkalis Regency have an average of around two GT, and those that the author has consistently observed are only 1 (one) GT.

The Ministerial Regulation No. 210 of 2023[3] on Marine Fisheries Conservation and the Ministerial Regulation No. 58 of 2020[4] cannot be separated because all three are interrelated. Under Article 98, Paragraphs (1) and (2), the Ministerial Regulation of the Ministry of Marine Affairs and Fisheries of

the Republic of Indonesia No. 58/PERMEN-KP/2020 on Fishing Activities should not prohibit traditional fishermen from catching terubuk during their seasonal migration. This is because, in practice, fishermen in Bengkalis generally have vessels with a gross tonnage of less than 5 tons. Meanwhile, vessels permitted to catch fish in the conservation area must also be smaller than 10 GT (see Article 98, Paragraphs 1 and 2), which states that fishermen with vessel size limits in marine conservation areas must not exceed 10 (ten) gross tonnage. (3) The provisions regarding fishing areas, as referred to in paragraph (1)(a), are exempted for small-scale fishermen.

Referring to Article 98, Paragraphs 1 and 2 of PERMEN No. 58 of 2020[4], fishermen operating in the Bengkalis conservation area do not need to be subject to further security. The largest vessels fishermen use in Bengkalis waters have a GT of approximately 5, with an average of 1 and 3 GT. Referring to PERMEN No. 85 of 2020, fishermen should not be prohibited from fishing in the Bengkalis Regency area, including Siak Regency and Tebing Tinggi Regency. Meanwhile, the author, who has accompanied fishermen in catching terubuk fish in Dompas waters, only has a vessel with a capacity of 1 GT.

Regulation No. 58 of 2020[4] on Fishing Operations, Article 98 Paragraph (2) states that the maximum size of fishing vessels in marine conservation areas is 10 (ten) gross tonnage. (3) The fishing area provisions referred to in paragraph (1) letter a are exempted for small-scale fishermen. Therefore, it can be concluded that terubuk fishermen do not need to make excuses and can continue fishing because the size of their vessels does not violate any regulations.

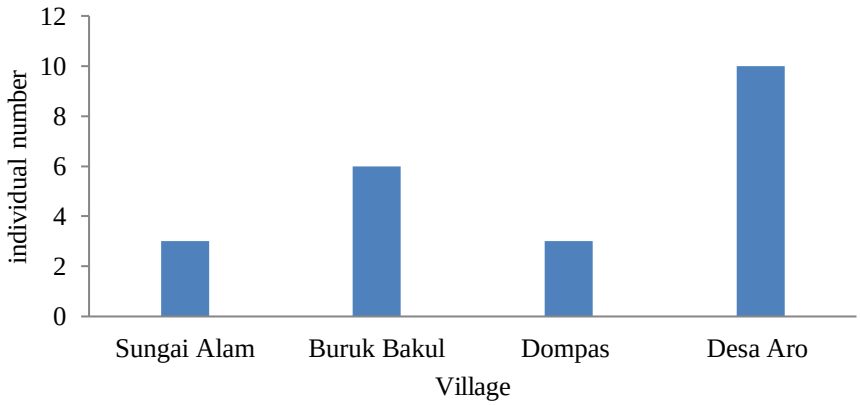

Figure 1. The number of fishermen catching terubuk fish in the Bengkalis and Siak areas.

The number of active fishermen in the sampling area ranged from 3 to 10 people. Meanwhile, in Dompas, only three fishermen are left because one of them was involved in an accident; his boat caught fire before the author arrived in the field. Similarly, in Sungai Alam Bengkalis, there are only three fishermen left, while in Buruk Bakul, there are six fishermen; in Kayu Ara, there are still 10 fishermen, with an average of 5.5 or rounded up to 6 fishermen per village. Therefore, there are currently only two areas with three boats. This data shows that the closer to the city center, the fewer people are working as fishermen today. This vastly differs from sixty years ago (around the 1970s), when each area had over 20 fishermen. In terms of numbers, the number of fishermen involved in terubuk fishing has decreased significantly, so continuing to catch terubuk fish would not disrupt the terubuk population.

If the government wishes to protect the terubuk fish fully, it should establish a Regional Regulation (Perda) or regulations from the local government to complement the Ministerial Decree. Local governments must be more diligent in creating regulations or ministerial decrees related to the law if they wish to ensure the sustainability of the terubuk fish. This is so that our children and grandchildren can still enjoy the terubuk fish

that fishermen are currently hunting in the future. The regulations from the central government have been issued, but local governments have not responded to the rules issued by the central government. For example, PERMEN No. 210 of 2023 has not been followed by any local regulations to date. Similarly, PERMEN No. 58 of 2011 has also not been followed by local regulations.

The utilization of natural resources and environmental conservation are two inseparable aspects, as evidenced by the saying, "There is no development without environmental damage or pollution." Although these two aspects cannot be separated due to their interdependence, their regulations or normative frameworks can be divided to prevent overlap and confusion in implementation[10]. (Some of the damage and pollution caused by using natural resources are issues that should be avoided as much as possible, as this is essential for the sustainability of human life in the future.

Therefore, the preservation and principles of natural resource utilization with a sustainable system are currently hot topics that continue to be pursued. Indonesia is one of the countries that has realized the importance of preservation and sustainability in utilizing existing natural resources. This development in understanding has led to the formulation of several regulations regarding procedures for using natural resources, whether owned by the community, individuals, communities, or the state. Empowerment is crucial for enhancing the most effective and prudent utilization of natural resources. Empowerment is a process through which individuals, organizations, and communities are guided to gain control over or influence their lives[11].

Therefore, it is imperative to apply the principles of conservation and sustainability in Indonesia's fisheries sector. These conservation and sustainable development principles apply to all resource utilisation processes, including the utilization of natural resources in aquatic areas such as the sea, rivers, and others. One of the natural resources that can be produced from these waters is fish. In this case, fish is one of the natural resources owned by the country that is an important element in supporting human life or as a food supply for humans, contributing about one-fifth of all animal protein in the human diet[12]. The habitat of the terubuk fish is found in the estuarine areas of Bengkalis District, Meranti Islands District, and Siak District in Riau Province[13]. This ministerial decision regulates the prohibition of catching terubuk fish during the spawning season in the bright month of August to November on the 13th, 14th, 15th, and 16th of the Hijri calendar, and the prohibition of catching terubuk fish during the spawning season in the dark month of August to November.

4. CONCLUSION

From the analysis conducted, it can be concluded that when considering the tonnage of fishing vessels that catch terubuk fish, there is no need to ban them from fishing, as the average size of fishing vessels is only around 2 (two) gross tons, while those banned have a size greater than 10 (ten) gross tons (Ministerial Decree No. 210 of 2020). If there is a desire to restrict the fishing of terubuk fish, it would be advisable to compensate the fishermen, especially since their numbers are insignificant. The Ministerial Regulation No. 210 of 2020 should be supplemented with at least a local regulation (PERDA) to clarify and strengthen the rules established by the central government.

REFERENCES

1. Rochmani R. Penegakan Hukum yang Berorientasi pada Keberlanjutan Sumber Daya Ikan. *Media Hukum*, 2014; 21(1).
2. Undang-Undang Republik Indonesia Nomor 31 Tahun 2004 Tentang Perikanan, 2004.

3. Keputusan Menteri Kelautan dan Perikanan Nomor KEP. 210/MEN/2023 Tentang Penetapan Status Perlindungan Terbatas Jenis Ikan Terubuk (*Tenualosa macrura*).
4. Peraturan Menteri Kelautan dan Perikanan Republik Indonesia Nomor 58/PERMEN-KP/2020 Tentang Usaha Perikanan Tangkap.
5. Keputusan Menteri Kelautan dan Perikanan Nomor KEP.59/MEN/2011 Tentang Penetapan Status Perlindungan Terbatas Jenis Ikan Terubuk (*Tenualosa macrura*).
6. Pomeroy, R.S. Community-based and co-management institutions for sustainable coastal fisheries management in Southeast Asia. *Ocean &Coastal Management*, 1995; 27(3): 143-162.
7. Bleber, S.J.M., Fry, G.C., Milton, D.A., van der Velde, T. The life history of *Tenualosa macrura* in Sarawak further notes on protandry in the genus and management strategies. *Fisheries Management and Ecology*, 2005; 12(3):201 – 210.
8. Efizon, D. Road map strategi dan rencana aksi pengelolaan ikan terubuk (*Tenualosa macrura*) di Provinsi Riau. Paparan disampaikan pada FGD Penguatan Kelembagaan Pelestarian Jenis Ikan Terubuk di Pekanbaru, 19 April 2014).
9. Amri, K., Winarso, G., Muchliza, M. 2018. Kualitas Lingkungan perairan dan potensi produksi ikan kawasan konservasi terubuk Bengkalis (*Tenualosa macrura* Bleeker, 1852). *Jurnal Penelitian Perikanan Indonesia* (JPPI), 2018; 37-49.
10. Kunarto, K. Pemanfaatan sumber daya alam dan pelestarian lingkungan hidup. *Jurnal Hukum dan Dinamika Masyarakat*, 2019; 17(1): 39-46.
11. Sulistiono, S. Edukasi pelestarian sumberdaya dan lingkungan pantai pada nelayan perikanan bagan. *Jurnal Pendidikan dan Pemberdayaan Masyarakat*, 2018; 5(2): 180-190.
12. Wuryandani, D., Meilani, H. Kebijakan Pengelolaan sumber daya perikanan laut untuk menunjang ketahanan pangan di Indonesia. *Jurnal Ekonomi & Kebijakan Public*, 2011; 2(1): 395- 422.
13. Hidayat, T.A., Lestari, M.M., Diana, L. Implementasi sanksi pidana dalam perlindungan terbatas jenis ikan terubuk di Provinsi Riau. *Jurnal Hukum Respublica*, 2021; 21(1): 1-13