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Article

Protection of Maritime Law on Fishery Zone at the Coast Border of West Sumatera

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Abstract

In the few months there is a high intensity of illegal fishing at Indonesian waters. The most potential area located in the coast border of West Sumatera facing the high seas and Indian Ocean that have long been a target from abroad fishing boats. Geographically, there are three areas located in strategic west coast of Sumatera such as Padang City, South Coast District, and Mentawai District. By the situation of opened-coast territorial geography, it is susceptible for illegal fishing of tuna by the local or abroad ships. The observed problems in this research are finding causing factors of illegal fishing in west coast of Sumatera to protect the waters environment under the local wisdom, how to implement the countermeasures of illegal fishing in the west coast of Sumatera. Moreover, there is a special attempt to find out the system and proper policy to cope with the potential happening often of illegal fishing that threatens the waters protection in west coast of Sumatera. The dominant method used in research is qualitative approach by implement two legal studies such as socio legal and normative legal study used in research on doctrines or useful principles of law. Moreover, characteristically this research categorized as the analytical descriptive.

INTRODUCTION

Territorially it is shows that Indonesia had potential wide waters of 7.9 million kilometers (including ZEE of Indonesia) or 81% of total state of Indonesia. As the second coastline in the world of 81.000 kilometers, there are 40 million people who living in this area. By total wide of sea with potential resources can develop to the fishery industrial, transportation, maritime industry, mining and energy, as well as waters tourism (Kartamihardja et al., 2017).

Indonesia has many areas with potential waters resource. One of them are West Sumatera that the area facing into the sea and directly adjacent to the Indian Ocean. Geographically, it is located in the middle west of Sumatera with 42.297,30 kilometers in wide. The province has a lowland in west coast and volcanic plateau generated by Bukit Barisan spreading from Northwest to the Southeast. The Mentawai Island site on “Indian Ocean Zone” belong to this region. The total coastline of West Sumatera in contact with the Indian Ocean are 375 kilometers in length. Comprehensively, waters width the province of West Sumatera including an Exclusive Economic Zone (EEZ) about 186.580 kilometers in square with coastline of 2.420.387 kilometers. The waters territory spreading in west coast of Sumatera consist of 375 big and small islands and has al a lot of potential natural resource and services (Fajrillah et al., 2022).

In so far, however, the waters have not managed properly and use in optimum thus the oceanic aspect especially in fishery do not provide the useful yet and the industry is stagnant. The fisherman who living in West Sumatera just doing their activity in the near coast than high seas (Indian Ocean) bordering the coastal area, precisely in Mentawai Island (Marelsa & Oktaviandra, 2019). Meanwhile, tuna fish is growing a lot in this area has not been utilized by fisherman because they are rarely fishing into the waters beside due to the inadequate facilities. Although, it is suspected that many abroad ships were infiltrate without permit of local government into the border zone of west coast of Sumatera around the Mentawai Island. They have fishing big tuna which local fisherman cannot do (Monika et al., 2022).

What they have done is known as the illegal fishing. It is suspect occurred in any several waters territorial of Indonesia and detrimental to the state as carried out in massive and suffering the domestic fishing industry. As a comparison, the result of illegal fishing by abroad ships in north of east Indonesia territory, total lost of benefit are 5 to 10 trillion Rupiah annually. Meanwhile, total loss of fish a year about 500 to 1000 tons. Therefore, by the calculation of potential, total loss of illegal fishing by abroad ships about one third to half of total potential fish in waters of Sulawesi, Maluku, and Pacific Ocean (Bendar, 2015; *Evaluasi Pemanfaatan Sumber Daya Ikan Tuna Dan Cakalang Di Perairan Samudera Hindia, Laut Sulawesi Dan Samudera Pasifik*, 2021; Pambudi et al., 2021).

By perspectives of fisherman and businessman, illegal fishing was threatened availability of fish, causing drop stock in massive. On industry and the business, it is lead to unfair climate of business competition, declining national fishery image, and potential embargo from importer countries to the fishing product of Indonesia (Risnain, 2017).

The local fisherman in this area, however, also unable to catch the fish thus the existing potential resource do not used in optimum, like a Skipjack in west Sumatera of 129.930 tons/year; that potential for sustainable fishing production has reach 50% only and Mackerel just 35% or 19.673 tons/year (Syahmin, 1988). Whereas, illegal fishing also is occurred in massive at the coast border of West Sumatera. Meanwhile fishing tuna by local fisherman in West Sumatera is rare and they have not pay attention a lot yet. Whereas, it is had a high price and potential commodity export. There are three potential areas in Indonesia related to the development of Tuna involving Padang City, South Coast District, and Mentawai District. The Pariaman City is the waters area with potential resources of Tuna (*Laporan Strategi Pengembangan Investasi Kota Padang (Perikanan Tuna Dan Ekonomis Tinggi)*, 2020).

In this case, Padang as the capital of West Sumatera province, beside located on the coast, it also had the suitable facilities in support of product selling (export) of Tuna into abroad. There is international airport of Bandar Iskandar Muda and harbor of Teluk Bayur, Bungus, etc. to develop the fishery in West Sumatera. Bungus, even was expect to be a Tuna center in the west of Indonesia. If looking closely, however, the volume of capital investment on fishery has not increase even though the facility and infrastructure has already. There are many traditional fishermen in the coast (including in Padang beach) carry out the fishing activity in sober without capacity to develop the process in large scale such as establish the fishing industry even export the product permanently (Burhanuddin, 2020).

When there is a comprehensive fishing industry in this area, not only for fishing but processing and canning, then the product can distribute in domestic and export, thus the fishery in West Sumatera will developed rapidly. Moreover, investor that do not put an interest to the sector contributed to the development progress in waters sector of West Sumatera.

RESULT AND DISCUSSION

Regulation of Exclusive Economic Zone

The waters territory of Indonesia in Exclusive Economic Zone is area with potential resource of fishery. The strategic position of Indonesia geography support of life and breeding of various types of fish. Therefore, the government issuing regulation to protect the conservation and processing of fish in Indonesian territory (including EEZ) under Article 1 Paragraph 1 of Act No. 45 of 2009 states that:

> "all activities related to the processing and useful of fish and the environment since preproduction, production, processing until marketing, arranged in the fishing business system."

Next, in Article 2 Paragraph 2, described that the fish are whole organism in all or part of the cycle exist in the water's environment. In correlation with the fishing; according to the Act in Article 1 Paragraph 5, the meaning of fishing is:

> "an activity to get the fish without breeding by instrument or any other manner in the waters, including activity by boat for loading, shipping, storage, freezing, handling, processing and/or preservation" (Undang-Undang (UU) Tentang Perubahan Atas Undang-Undang Nomor 31 Tahun 2004 Tentang Perikanan, 2009).

In the colonialism era, it was published regulation on waters named "*Territoriale Zee en Maritime Kringen Ordonnantie*" of 1939, Staatsblad No.442. By the rule the wide of waters territorial of Indonesia established of 3 miles and each islands had its own each waters width. The situation running for 12 years after the Proclamation of Independence. It is means that Indonesia do not implement the sovereignty in comprehensive toward the island and the waters among of them. The situation was end since Declaration of Djuanda in 13 December 1957 describe that all Indonesian island considered as one unit and waters among the island is inland waters (Soemarmi & Diamantina, 2019; Tsauro, 2017).

In the Declaration of Djuanda 1957, size of waters of Indonesia territory has change from 3 to 12 miles measured by the line connecting the outer edges of islands in Indonesia. Moreover, the declaration introducing concept of Archipelago Formula; Indonesian territory is a unity. In 18 February 1960, since pending season for more than two years, regulation of Indonesian waters that was establish in Declaration of 13 December 1957 depicted as an act by using of government regulation in lieu of law, the Act No.4 Prp of 1960. In the ratification of United Nation convention law of the sea (Unclos) 1982, Indonesia becomes a member who accept (*United Nations Convention on the Law of the Sea*, 2019; *United Nations Convention on the Law of the Sea of 10 December 1982*, 2022). It is requiring ratification to enter into force in Indonesia. In the third Unclos of 1982, Indonesia was ratified under Act No. 17 of 1985, requiring Indonesia to carry out determination, arrangement, and organization the state maritime boundaries (sea territorial, continental shelf, and EEZ). As the implementation of Unclos 1982 issued an Act No. 6 of 1996 on Indonesian waters and Government Regulation No. 61 of 1998 on best point and baseline around the Natuna Island and the last the government issuing Regulation No. 38 of 2002 on list of geographic coordinates of baseline points of Archipelago. By enactment of Law No. 6 of 1996 on Indonesian waters, Act No.4 Prp of 1960 do not valid any longer (Peraturan Pemerintah (PP) Tentang Daftar Koordinat Geografis Titik-Titik Garis Pangkal Kepulauan Indonesia, 2002; Peraturan Pemerintah (PP) Tentang Daftar Koordinat Geografis Titik-Titik Garis Pangkal Kepulauan Indonesia Di Laut Natuna, 1998; Undang-Undang (UU) Tentang Perairan Indonesia, 1996).

General Review on Fishing

In this case, before discussing on illegal fishing, it is required to consider the meaning and definition of "fish" in any regulations of Indonesia and the understanding in wide as follows:

1) Act No.9 of 1985 on fisheries. In Article 1 point 2, the resources of fish are all type of fish including other aquatic biota, has changed by Act No. 31 of 2004 on fisheries. In Article 1 point 2, the resources of fish are all type of potential fish; point 4, fish is all type of organism that all or part of living cycle in the water's environment; Article 7 point 5 of Ministry establish the kind of fish and each protected waters territory, including national park of sea for science, culture, tourism and/or preservation of fish resource and/or the environment. Then, it is amended by Act No. 45 of 2009 on amendment of Act No. 31 of 2004 on fisheries. In Article 1 point 2, the resource of fish is all kind of potential fish, point 4, fish is comprehensive organism for all or part of the living cycle in the water environment, Article 7 point 6 of Ministry establish that all kinds of protected fish and conservation area of waters for science, culture, tourism, and/or preservation of fishing resources and/or the environment. Moreover, Regulation No.60 of 2007 on conservation of fisheries resource. In the Article 1 point 5, fisheries resources are all potential kind of fish, point 6, the fish is comprehensive organism for all or part of the living cycle in the water environment.
2) Act No. 16 of 1992 on animal quarantine, fish and vegetation. In Article 1 point 10, fish is all aquatic biota that all and/or part of living cycle were in the water, live or dead, including the parts. Reinforced by Act No. 15 of 2002 on fisheries quarantine. In Article 1 point 7, fish is all aquatic biota that all and/or part of living cycle were in the water, live or dead, including the parts.
3) Act No.21 of 2009 on agreement of provisions implementation of United Nation Conversion on law of the sea of 10 December 1982 in correlation with the conversion and management of restricted-migration fish availability and the highly-one. In Article 1 point c, the fish including Mollusca and crustacea except the kinds of sedenter.
4) Another free definition of fish is anything comes from aquatic biological resources, whether in process or not, are beneficial for food of human consumption, including food additive, food stuff, etc. that used in preparation, processing, and/or food and beverage production.

In general, kinds of favorite fish for fisherman existing in EEZ of Indonesia especially in Indian Ocean territory is Tuna. It is one of the most popular bony fish in the world and good for commercial haul. They are the fastest swimmer in the world that potential catch in fast the prey in the water. Size and speed of the surfacing fish has made Tuna able to adaptation and earned a nickname as the wandering fish. The conical and slender body has made Tuna can maximize the efficiency in swimming. They are nomadic in wide range. Tuna can find in whole world at tropic and subtropic waters and migrated routinely in particular moment into the warm waters and turn back into the Indian Ocean, Atlantic, Pacific or Mediterranean waters (Firdaus, 2019; Talib, 2017). In Unclos 1982, Tuna categorized as the highly migration species.

Indonesia, also has become the member of UNLOS 1982 and ratifying the convention by issuing specific regulation under the Act No. 5 of 1983 on Exclusive Economic Zone (Collette & Nauen, 1983). In the Chapter II Article 2 of Act No. 5 of 1983 described that:

"Exclusive Economic Zone of Indonesia is lane outside and bordering the Indonesian territorial waters as determined based on the applicable law on Indonesian waters including

seabed, land in below, and the water above with outermost limit of 200 nautical miles measured from territorial sea baseline of Indonesia."

The Exclusive Economic Zone of Indonesia including in the Indian Ocean (near the District of Mentawai Island) is the potential territory to the Tuna fishing. Tuna is one of the most popular bony fish in the world and good for commercial haul. They are the fastest swimmer in the world that potential catch in fast the prey in the water. Size and speed of the surfacing fish has made Tuna able to adaptation and earned a nickname as the wandering fish. The conical and slender body has made Tuna can maximize the efficiency in swimming. They are nomadic in wide range. Tuna can find in whole world at tropic and subtropic waters and migrated routinely in particular moment into the warm waters and turn back into the Indian Ocean, Atlantic, Pacific or Mediterranean waters (Kunarso et al., 2005; Wujdi et al., 2015).

Tuna is family of *Scombridae* from *Tnunnus* genus with 7 species involves: madidihang or Yellowfin Tuna*/T. Albacares*, Big Eye Tuna*/T. Obesus*, Southern Bluefin Tuna*/Thunnus Maccoyii*, Albacore*/T. Alalunga*, Longtail Tuna*/T. Tonggol*, Nothern Bluefin Tuna*/T. Thynnus* dan Blackfin Tuna*/T. Atlanticus*. There are five from sevent species of Tuna can find in Indonesia waters. Nothern Bluefin Tuna can found only in south of Japan (North Pacific) and becomes the largest one with the total length of 304 centimeters and 679 kilograms in weight. While the sevent tuna was caught in Atlantic Ocean with the size of 100 centimeters in length and 20 kilograms in weight (Evaluasi Pemanfaatan Sumber Daya Ikan Tuna Dan Cakalang Di Perairan Samudera Hindia, Laut Sulawesi Dan Samudera Pasifik, 2021).

The Southern bluefin tuna/*Thunnus maccovii* (Castelnau, 1872) called Jabrig in local name (PPN Palabuhan Ratu), Bluefin tuna (PPP Pangembangan), Bluefin (PPN Bitung), Bluefin tuna (PPN Prigi) spread up in high seas and around the coast. It has description as Scombridae Family of *Genus Thunnus*. Elongated body like a torpedo and round (cross section). It is a large tuna. Gill filter on first gill arc 19-26. Big head and eyes. The first dorsal fin has 12-13 rays and 14 weak rays on second dorsal fin with 9 additional rays. The anal fin 14 weak rays with additional rays. There are two lobes among the belly fin. Small scales cover the body. Scale on the corselet is larger but almost unnoticeable. The keel on tail shaft flanked by two small one at the rear end. There is no air buble. Living on the coast and always avoid the low salt estuary. It is categorized as the wild fish, eat the small fish, squid, and shrimp. This species have greenish blue color on top, white silver in bottom; white spots on stomach; secon dorsal fin tip and anal is yellowish; additional fin rays is yellow with the ends are gray. The size could be 105 centimeters, 40-70 in common.

The five species of tuna caught in Indonesian waters are main commodity export of fishery. The first three of tuna are large fish and had the size until 200 centimeters wit 180 kilograms in weight. The Albakora and gray species have a maximum size of 30 centimeters only with 40 kilograms in weight; the most caught have a size of 100-110 centimeters with 22-25 kilograms in weight, while the gray tuna just for local consumption only. The EEZ of Indonesia is high seas with sovereign right on it for exploration, exploitation, and useful for potential economic. One of fisheries resource is Southern Bluefin Tuna. Geographically, beside in Indian Ocean, the catchment area involves the Atlantic and Pacific Ocean. Meanwhile, the difference between Bluefin tuna in Pacific and Atlantic to the Bluefin tuna in Indian Ocean lies in the shape, catchment area, taste and name. The Bluefin tuna of Atlantic and Pacific called Northern Bluefin Tuna (NBT), while in Indian Ocean known as Southern Bluefin Tuna (SBT). However, both of them almost known as the Bluefin tuna only.

In present, catchment of SBT carried out by any methods and modern instrument. It is not wondering that in recent years total catchment of SBT was decrease. It is can found since the last three years that total production of 3.9 tons in 1999 into 3.6 tons only in 2002. In

addition, there was a trend of decreasing fish weight; average was 37 kilograms in 1973 into 26 kilograms only in 1999. It is shows that total population of tuna was decreased due to overfishing. The population of tuna in nature decrease continually and threatening the population. According to the Convention on International Trade in Endangered Species on Wild Fauna and Flora (CITES) of 1992 was described that Bluefin tuna is an endangered species.

The catchment by tuna longline can reach four species involves Madidihang (*Thunnus Albacares*), Big Eyes (*Thunnus Obesus*), Albakora (*Thunnus Alalunga*), and Southern Bluefin (*Thunnus Maccoyii*). Meanwhile the Cakalang (*Katsuwonus Pelamis*) on east Indonesia caught by huhate and ring trawl; in Pelabuhan Ratu and CIlacap, small Cakalang and Madidihang caught by gill net. By using of Fish Aggregating Device (FADs) called *payoas*, the small fisherman can used handline to caught the middle or big Madidihang and Big Eyes, meanwhile the ring trawl used by big industry in the Indian Ocean of South Java and North of Sulawesi and Pacific Ocean.

To determine of catchment area of tuna used sensing data by using of satellite image according to the parameter physics, chemical and biology of waters. The most important to do is monitoring sea surface temperature, increasing mass of water, encounter two different water masses and chlorophyll content in the waters. The observation result described in contour map to predicted the fertility of location and suitability of waters with the favorite habitat for schoaling of tuna according to the longitude and latitude coordinates. The sensing method used to determine of catchment area can arranged by cooperation with related parties. The satellite image can be analyzed to determine of potential catchment area. Next, the information must distribute to the fisherman, businessman, etc.

Causing Factors of Illegal Fishing on Fishery Activities in The Coast Border of West Sumatera

There is a large potential resource of fishery in Indonesia. The National Fish Stock Commission declares that stock of national fishery resource predicted about of 6.4 million tons annually. However, total potential has not useful in optimum to the social welfare. The main problem faced is illegal fishing by abroad ship, overfishing, marine pollution, illegal dumping, and environmental habitat degradation.

On the other side, almost potential fishery exists in EEZ as the place of breed and living of huge colony. Moreover, there is potential fishery in territorial waters area even if the total not as much in EEZ. The potential resources make the abroad ship put an interest to invade the area without permit. It is known as the illegal fishing. It is suffering the states as it arranged in massive and will destructing the domestic fisheries industry. As comparison, based on data of Marine and Fisheries Department of 2009, consequence of illegal fishing by abroad ship on east Indonesia at the north was result in loss of 5 to 10 trillion rupiah annually.

Moreover, the loss value calculated by illegal fishing are 500 to 1000 tons annually. Therefore, the estimation of potential fishery has found that fish stolen by abroad ship from Indonesian waters are one third to half of total potential fishery. From the fisherman and businessman interest, illegal fishing threatening potential fishery supply and result in decrease the stock massively. By industrial and fishery business, it is causing unfair competition climate, decreasing national fishery image, and potential embargo from importer states to the national product. Moreover, the term of illegal is come from English meaning invalid. Therefore, an illegal fishing does not suitable to the valid regulation and called illegal fishing. The activity carried out by abroad fisherman in Indonesian waters territory especially at the EEZ of Indonesia.

At present, the illegal fishing categorized as a criminal thus if any abroad fishermans enter and carry out this activity, they can be arrest and punished. There are many cases of arresting of abroad fisherman from Malaysia, Thailand, Philipine and other who carry out illegal fishing by coastguard patrol of Indonesian Navy. The illegal action contravenes to the Act No.5 of 1983 on Indonesian EEZ and Act No. 45 of 2009 on Fisheries. The government put a huge interest to the illegal fishing by consider the detrimental impact thus in the Fisheries Act established the Court around the trial court to examine, judge, and decide a case of fisheries. The arrested abroad fisherman and sentenced could be processed in further according to the Act No. 8 of 1981 on Criminal Code Procedure.

In correlation with the illegal fishing especially carried out by abroad ship in present, the similar situation also occurred in coast border of West Sumatera. The potential illegal fishing of tuna in this territory is massive. It is because the territory is open sea that making easy for abroad ship to enter.

Recently, the population of fish in the world getting smaller whether in quantity or quality. Total reduction of fish caused by massively fishing without considering monitoring and control. Therefore, the fish has become a contested commodity by many states because the population demand for fish was increase. Total population of people in the world tends to increase periodically also has shown escalation of fishery consumption.

Therefore, the territorial with potential fishery will be find and being an interest to the abroad ship. The coast border of West Sumatera is potential waters of fishery. It is result in abroad ship attempt to entry and caught the fish in this area. There are any causing factors resulting in illegal fishing in the coast border of West Sumatera:

1) Span of control and wide of surveillance area is inequal to the capability

Wide of coast border of West Sumatera especially as it faced into the Indian Ocean almost becomes a trouble to the Navy patrol in supervision and control. When it considered, the waters of West Sumatera province especially those bordering the Mentawai Island is high seas geographically. Meanwhile, the potential fisheries that can found in the coast especially in Mentawai Island that directly adjacent to the Indian Ocean is Tuna as the favorite of abroad and local ship.

2) Restricted capacity of facility and surveillance fleet

Total Navy ship fleet in patrol at the coast border of West Sumatera is restricted. It is result in difficulty for surveillance in order and continuously. Moreover, the many fleets used are outdate. Meanwhile, the abroad ship that stolen fish have a new technology and high speed complicate to Navy patrol in pursuit when they found enter to the west coast territory. It is the reason for abroad ship carrying out illegal fishing easy in and out of coastal border of West Sumatera.

3) A weak human resource of Indonesian fisherman and businessman with economic rent-seeking mentality or broker

Capability of fishing by the local fisherman is weak in average and unable to process the potential fishery in optimum. It is caused by the ship, fishing facility, and capital. Thus, do not wondering when almost local fisherman can catch the small fish only, while the large one likes Pelagis required high capability and particular instrument. To the local fisherman with a weak financial and economy trapped precisely by moneylender and businessman that loan the capital for them to caught the fish. But the result achieved by fisherman is inequal to the provided capital. By attention, the fisherman on coast of West Sumatera is still weak even worst in economic. The fishing activity just can used to cover the necessities of life. The

situation used by abroad ship with illegal fishing to work on potential fishery that local fisherman cannot do. By the large ship with modern facilities and instrument, they capable in massive fishing and targeting large fish likes Tuna and other. Obviously, by the fishing they can get the large benefit and it result in illegal fishing massively.

4) A weak law enforcement

The law enforcement toward illegal fishing by abroad ship do not implement in optimum yet. By many cases, there is only small number of cases successfully brought to the court. Low awareness in law enforcement also caused by lack of officer firmness in taking action for violation. In addition, a weak coordination and commitment among the law officer. Sometimes, problem solving made easier by paying some money. This has resulted in continuous illegal fishing.

Thus, the activity of illegal fishing by abroad ships in actual causing great loss to the states especially government and local people. The potential fisheries that must belong to us and used in optimum decreased by the illegal fishing. Absolutely, in this case, the benefit of fisheries for government and local people of coast border of West Sumatera. Therefore, it is required an attempt to cope with the illegal fishing so as not to further harm the government and common.

CONCLUSION

An increasing of prevalence of illegal fishing by abroad ship in coast border of West Sumatera caused by any factors such as the span of control and surveillance area is not comparable to the existing capabilities, restricted facility and infrastructure of fleet in the sea, a weak human resource of Indonesian fisherman and businessman with economic rent-seeking mentality or broker, and the most important is weakness of law enforcement.

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