

The Impact Of The Moratorium And Transshipment Policies On The Tuna Fisheries Business In Bitung Indonesia

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Abstract: This study aimed to analyze the impact of the moratorium policy that contained in the Minister of Marine Affairs and Fisheries Regulation Number 56 of 2014 concerning Moratorium of Licensing of Capture Fisheries Business in the WPPNRI and Minister of Marine Affairs and Fisheries Regulation Number 57 of 2014 concerning the prohibition of fish catch landing from fishing vessels through transshipment to the tuna fishing business. The used method was descriptive analysis with a qualitative approach. The results showed a decrease in the capture number of tuna and skipjack tuna by (21%), a decrease in Fish Processing Unit (UPI) utilities (5%), a 21% decrease in the volume of tuna and skipjack tuna commodity exports and an increase in the import volume of tuna and skipjack tuna by 30%. In addition, there were Termination of Employment (PHK) of the vessel crew (ABK), company employees of 11,858 people and employees of fish processing units amounting to 8,110 people.

Index Terms: Bitung, Fisheries, Moratorium, Transshipment, Tuna

1 INTRODUCTION

Indonesia is the largest archipelagic country in the world with 17,504 islands and ocean with area of 6.8 million km². The coastline is 104,000 kilometers and the sustainable potential of fish resources is 12.54 million tons per year spread across eleven Fisheries Management Areas of the Republic of Indonesia (KKP 2017 and Bakosurtanal 2010). The economic potential of marine and fisheries resources that can be utilized in accelerating economic growth reaches USD 82 billion per year (Maradong 2016). Thus fishing business opportunities in Indonesia are very high. The enormous potential of fisheries can provide maximum benefits to businesses in a sustainable manner for the country and the people of Indonesia, if managed properly and responsibly. But until now there is still a lot of Illegal, Unreported and Unregulated (IUU) Fishing activities and overfishing in some Indonesian waters. Based on this situation, Ministry of Marine Affairs and Fisheries issue a moratorium policy that stated in the PERMEN KP Number: 56/PERMEN-KP/2014 concerning the moratorium on capture fisheries business permits in the WPPNRI. The transshipment policy stated in the PERMEN KP Number: 57/PERMEN-KP/2014 that regulates the prohibition of landing fish catch from fishing vessels through transshipment. One commodity that contributes to the fishing business is tuna. The potential of tuna fisheries in various Indonesian Fisheries Management Areas (WPPNRI), especially the eastern part of Indonesia. Indonesia supplies more than 16% of the world's tuna production at 7.7 million tons. Tuna is the second largest foreign exchange contributor after shrimp. In 2017 tuna commodities contributed 198,132.4 tons with an export value of USD 659.99 million or 18.38% of the total value of Indonesian fishery exports. The potential of tuna fisheries in Indonesia is in various Indonesian Fisheries Management Areas (WPPNRI), especially the eastern part of Indonesia. Bitung is known as the tuna fishing center or skipjack tuna city that supported by 54 fish processing units, 61 fishing companies and some traditional fufu skipjack processing.

2. LITERATURE REVIEW

2.1 Moratorium and Transshipment Policy

Minister of Maritime Affairs and Fisheries Regulation Number 56/PERMEN-KP/2014 concerning Moratorium of Capture Fisheries Business Permits in the Fisheries Management Area of Republic of Indonesia (stipulated on November 3, 2014). Contents of PERMEN KP No. 56 of 2014 is to temporarily suspend capture fisheries business licensing in the Fisheries Management Areas of Republic of Indonesia for fishing vessels that development is carried out abroad. Temporary termination of permits includes

- a. no issuance of new permits for Fisheries Business Permit (SIUP), Capture Fishing Permit (SIPI) and Fishing Transport Vessel Permit (SIKPI);
- b. no extension of SIPI and SIKPI which have expired;
- c. for SIPI or SIKPI that is still valid, analysis and evaluation will be carried out until the validity period of SIPI or SIKPI ends; and
- d. If violation of regulation are found based on the results of analysis and evaluation as referred to in letter c, administrative sanctions are imposed in accordance with the provisions of the legislation.

The preliminary study from the Bogor Agricultural Institute (IPB) prior to the implementation of the moratorium policy provided information that there were 1,240 foreign-made vessels out of a total of 5,329 vessels over 30 GT in Indonesia. The dominant catch of ex-foreign vessels that measuring more than 30 GT is tuna Arthatianti dkk (2015). Minister of Maritime Affairs and Fisheries Regulation Number 57/PERMEN-KP/2014 concerning the second amendment to Minister of Marine and Fisheries Regulation Number 30/MEN/2012 concerning Capture Fisheries Business in the Fisheries Management Region Republic of Indonesia, this regulation regulates the Termination of Prohibition of Fish Catches Landing through the Transshipment in the Middle of the Sea (Defined 12 November 2014). According to Permen KP No.30 of 2012 the definition of transshipment is the transfer of captured fish to fishing capture vessels and/or to fishing transport vessels. In addition to transferring captured fish from fishing

capture vessels to transport vessels in the middle of the sea, at the same time the transport vessels are also in charge of supplying fuel and supplies to fishing capture vessels. According to Saptono (2015) the fishing vessel transshipment activities have long been carried out as part of a business strategy to reduce operating costs or obtain optimal profits. The fishing capture vessel does not need to return to the base after the fish load in the vessel hatch is full because there will be a transport vessel that supplies fuel and supplies as well as collecting the fish catch from several fishing vessels for later landing and further processing. Purnama et al (2016) transshipment activity is very important in maintaining the availability of fish supply, both as industrial raw materials and exports where tuna is a high-value export commodity. The two regulations are one of the government's efforts in overcoming the practice of Illegal, Unreported and Unregulated (IUU) Fishing in Indonesian waters. Some irresponsible fisheries activities such as violating the sovereignty of a country, not reporting or falsifying fish catch data, sea transshipment, practicing reflagging, and so forth. This was later known as illegal activities, unreported and unregulated fishing (IUU fishing).

2.2 Tuna Fisheries

Tuna is included in the scromboidae family. Tuna is a fast swimmer fish and continues to swim to meet oxygen needs and keep it alive (Dickson 1995). Found throughout the world except the Arctic Ocean (Olson and Boogs 1986). Different types of tuna are Bigeye tuna, Yellowfin tuna, Albacore, Skipjack tuna and southern blue fin tuna (KKP, 2018). Tuna is a limited type of highly migratory fish stocks/transboundary fish stocks between the Indonesian Exclusive Economic Zone (ZEEI) and the high seas (straddling fish stocks). Therefore management is carried out through regional and/or international cooperation through the establishment of the Regional Fisheries Management Organization (RFMO). Tuna management has been applied and adopted by the Indonesian government with the establishment of KEPMEN KP Number 107 of 2015 concerning the Management Plan for Tuna, Skipjack and Tongkol Fisheries.

3 RESEARCH METHOD

Research Sites

This research was conducted in Bitung, North Sulawesi, which focused on tuna fisheries. The time of research was conducted from June to September 2018.

Types and Data Source

The data used in this study are primary data and secondary data. Primary data is obtained through observation, focus group discussion and depth interviews using questionnaires with tuna fisheries businesses. Secondary data used are literature studies and relevant publications that issued by authorized government institutions.

Analysis Method

The method used is descriptive analysis with a qualitative approach. Analyzing research results by grouping data, determining numbers and values, presenting them in the form of tables, images and graphs

4 RESEARCH RESULT

Tuna Fishing Business in Indonesia

Total tuna production in Indonesia fluctuated from 2010 to 2017 with a tendency to increase. Increased trends occurred from 2010 to 2014, but in 2015 to 2016 tend to decrease, and began to increase again in 2017. Tuna production in 2010 amounted to 910,645 tons and increased to 1,188,576 tons in 2016. The highest production occurred in 2014 amounted to 1,324,162 tons and the lowest production in 2010 was 910,645 tons. Tuna producers in Indonesia are mostly produced in eastern Indonesia. North Sulawesi is the province that has the largest tuna production in Indonesia for the past eight years with an average production of 18,252 tons until 2016 or 19.7% of total tuna production in Indonesia. In addition, Maluku and North Maluku province are also the second and third largest tuna producers in Indonesia with an average production of 120,273 tons and 101,878 until 2017, contributing 11.7% and 10.9% of total tuna production in Indonesia. The type of captured tuna in Indonesia by 37.9% is skipjack tuna. This also happens in all tuna producers in the world which shows that the largest capture is 52% of skipjack tuna, 27% of yellowfin tuna, 7% of Bigeye tuna, 6% of Frigate and Bullet tuna, 4% of long tail tuna and 4% of other tuna (FAO, 2017). The level of fish consumption for all commodities increases every year. The increase in Indonesian fish consumption indicates that the absorption or demand for fisheries commodities is increasingly high, so that fisheries production is better absorbed by the market. In 2017, tuna and skipjack tuna were consumed as much as 6.76 kg/cap/year or 14.3% of the national consumption figure of 47.34 kg/cap/year. Export data shows that Indonesia exports fresh, frozen and processed tuna. The exported processed tuna consists of fillet tuna, tuna loin, canned tuna, smoked tuna, katsuobushi and tuna steak. The biggest export contributors in Indonesia are DKI Jakarta, North Sulawesi, Bali and East Java. The main destination countries for tuna exports in Indonesia in 2017 are Japan, Thailand and the United States. Indonesia exported to Japan amounted to 31.408 tons or 22% of Indonesia's total tuna exports, followed by exports to Thailand of 28.867 tons (20%) and United States of 24.056 tons (16%).

Tuna Fishing Business in Bitung

The potential for the fisheries business development in Bitung is supported by 61 fishing companies with various fishing gear, 54 processing units and 10 traditional processing groups, namely processing of smoked skipjack (cakalang fufu). There are eight types of fishing fleets used in Bitung which are dominated by fleets with hand line fishing gear, purse seine, and pole and line. Purse seine to catch skipjack, baby tuna and laying fish, pole and line to catch skipjack and hand line to catch tuna. 54 fish processing units consist of 7 fish canning factories, 5 katsuobushi factories, fresh tuna processing factories and 30 fish freezing/storage factories. The number of fishermen in Bitung currently as many as 12,366 people and coastal communities as many as 187,652 people. The volume of the landing capture fisheries production in Bitung during 2017 was recorded at 45,528.90 tons with production values reached Rp 1,828 Trillion. The main commodities of

the catch are tuna (*Thunnus* spp), cakalang (*Katsuwonus pelamis*) and layang (*Decapterus* spp). Mostly of tuna and skipjack are for the raw materials of tuna loin processing, canned fish, katsuobushi and traditional processing of smoked fish while some skipjack and layang fish become local market supply. The commodities that are the mainstay of exports are canned fish, katsuobushi and tuna loin.

Impact of Moratorium and Transshipment Policy

Data from PPS Bitung (2018) shows that the number of vessels affected by the moratorium, especially foreignmade vessels (ex-foreign), was 87 ships with ownership of domestic (WNI) entrepreneurs and Indonesian-flagged vessels. The ex-foreign ship consists of 6 (six) fleets that have departed abroad (Philippines), 52 vessels that have not submitted/approved the removal process from the Indonesian vessel list/scraping process, 13 vessels that have been occupied/scraped, 16 ships that have been get a deletion agreement from the Indonesian vessel list so that the total number of ex-foreign vessels that are still in Bitung is 68 vessels or 39.4% of the total vessels in Bitung (PSDKP Bitung 2018). The vessels are made up of 37 units of transporting/collecting vessels, 14 units of light ship types and 36 types of fishing capture vessels.

Impact to Fishing Capture Business

In general, the impact of moratorium and transshipment policies on fishing businesses in Bitung is the inoperability of fishing capture vessels and fishing transport vessel, causing work termination for vessel crew (ABK) and capture company employees as many as 11,858 people. The volume of capture fisheries production based on the commodity of tuna and skipjack tuna (TTC) over a period of six years (2012-2017) in Bitung shows that production fluctuates with decreasing trend. Based on data in Table 1, tuna production in Bitung in 2013 was 64,035 tons and increased to 99,567 tons in 2014 but its production decreased to 36,187 tons in 2017. Production dropped dramatically in 2015 to 36,726 tons. Based on table 4, in terms of TTC production the most dominant commodities in Bitung are skipjack and yellowfin tuna. This shows that the period before the moratorium increased by 99% and after the moratorium there was a decrease of (21%). The current average price for tuna is Rp. 70,000 - 80,000/kg, Skipjack is 20,000 - 23,000/kg or has increased by 27.78% from the previous year.

Table 1 Production of Tuna Fisheries in Bitung North Sulawesi Year 2012-2017

Type of Fish	Year (Ton)					
	2012	2013	2014	2015	2016	2017
Cakalang (Skipjack tuna)	20,612	47,597	68,755	18,263	14,779	16,402
Madidihang (yellowfin tuna)	4,592	11,303	21,894	9,546	11,538	16,802
Tuna mata besar (Bigeye tuna)	-	11	88	116	37	164
Albakora (Albacore)	1	-	-	-	-	4
Tongkol	1,232	5,123	8,830	8,800	11,845	2,814
Total	26,437	64,035	99,567	36,726	38,200	36,187

Source : PPS Bitung 2018

There are four types of fishing gear used in capturing tuna and skipjack tuna commodities in Bitung, namely purse seine, pole and line, hand line and long line. Based on the used fishing gear, it shows that in the 2014-2017 period the number of fishing gear operating decreased by (2%) as in table 2. Based on the results of interviews with several business actors it can be seen that the decrease in operations was due to higher operational costs that not balanced with the obtained results due to the absence of transport vessels.

Table 2 Type of Fishing Gear that operate in year 2014-2017

Type of Fishing Gear	Year			
	2014	2015	2016	2017
Purse Seine	5363	7207	3987	3057
Pole and Line	565	420	531	614
Hand Line	4404	4378	3474	5171
Long Line	43	42	21	162
Jumlah/Total	10375	12047	8013	9004

Source : PPS Bitung, 2018

Impact to Fish Processing Business

As a consequence of this moratorium and transshipment, companies cannot operate their vessels so that there are no inputs for processing raw materials. The Fish Processing Unit in Bitung City consists of 7 (seven) fish canning factories with a capacity of 640 tons per day, 5 (five) katsuobushi wood fish factories with an installed capacity of 210 tons per day, 12 (twelve) factories of fresh tuna processing with installed capacity of 175 tons per day and 30 (thirty) fish freezing/storage factories with an installed capacity of 389 tons per day.

Table 3 Impact of Permen 56 and Permen 57 Year 2014 to Fish Processing Business in Bitung

Description	Year				Change
	2014	2015	2016	2017	
Utility (%)	50.6	17.7	6.4	13.2	(5%)
Production Volume (Ton/day)	715	250	90	190	(4%)
Production Value (Rp Million/day)	10,010	3,575	1,620	4,085	(5,925)
UPI Labor (People)	13,850	8,563	6,252	5,740	(8,110)

*growth rate

Source: DKP Bitung 2017

In general, UPI utilities have decreased starting in 2015 and increased in 2017 compared to 2016 due to the supply of raw materials of 90 tons per day from Muara Baru (DKI Jakarta). This is in line with the increase in TTC import data as shown in Figure 1b. This decrease in UPI utility causes Termination of Employment (PHK) to employees. Before the moratorium there were 13,850 and after the moratorium there were 8,110 were laid off. The operationalization of UPI certainly has a direct impact on fisheries exports in Bitung as in Figure 1 which shows a decline. The tuna export volume in the 2012-2017 period fluctuated with a tendency

to decline by (21%) (Figure 1a). The exported tuna in 2012 was 24,843 tons and in 2017 it decreased to 4,895 tons. The highest exports occurred in 2014 amounting to 25,422 tons and the lowest exports in 2017 of 4,895 tons. Whereas tuna imports in Bitung also showed an increase of 30% (Figure 1b). The 2014-2017 period up to June 2018 was recorded to increase to 108,110 tons compared to the same period in 2017.

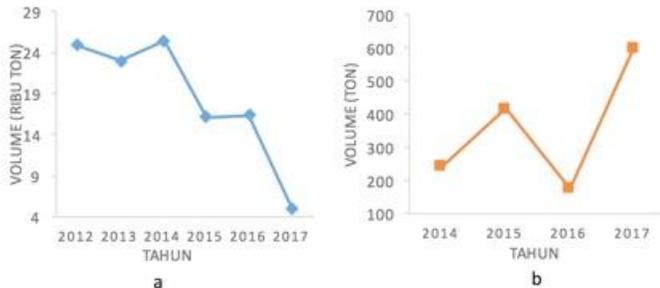


Figure 1 Development of (a) export volume and (b) TTC imports volume in Bitung

5 CONCLUSION AND SUGGESTION

Conclusion

1. There are 87 foreign-made vessels consisting of 37 units of transporting/collectors, 14 types of lightvessel units and 36 types of fishing capture vessels. Until now there are 68 vessels in Bitung and are not operating
2. Production of tuna and skipjack tuna before the moratorium period increased by 99% and after the moratorium there was a decrease of (21%).
3. Based on the used fishing gear shows that in the 2014-2017 period the number of fishing gears in operation decreased as much (2%)
4. Decreasing utility of fish processing units by (5%) and causing termination of employment (PHK) to employees as much as 8,110 people.

Suggestion

Based on the analysis of the impact of the moratorium and transshipment policies, it is expected that the government evaluates the moratorium and transshipment policies to be right on target and support the sustainable fisheries business. Need to increase supervision at sea by involving all stakeholders related with Illegal, Unreported, Unregulated (IUU) Fishing

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