Indonesia’s strategy on achieving the sustainable development goals: a case study on handling of illegal, unreported, and unregulated fishing

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Abstract. This research aims to describe the strategy of Indonesia in achieving the target of Sustainable Development Goals 14 Life Below Water. This research focuses on policies that are created by the Ministry of Marine and Fisheries in handling IUUF (Illegal, Unreported, Unregulated Fishing) in Indonesia. This research uses qualitative research type with secondary data type and data collection method of literature review through various literature related to the problems studied that were obtained from books, journals, documents, reports, and articles. Furthermore, in analyzing the data, it uses qualitative data analysis techniques and deductive writing methods. The result of this research indicates that the Indonesian government, through the Ministry of Marine and Fisheries, has been successful in handling IUUF. The handling of IUUF in Indonesia is conducted by implementing various policies related to marine and fisheries. Indonesian government policy has a positive impact on the marine and fisheries sector. This means Indonesia is committed to achieving the target Sustainable Development Goals 14, especially in handling IUUF.

1. Introduction

IUUF is one of the biggest threats to the marine ecosystem due to its strong ability to undermine national and regional efforts to manage fisheries sustainably. Aside from that, IUUF is also harmful to marine biodiversity conservation efforts. IUUF is found in all aspects of fisheries, both those occurring in the high seas and areas of national jurisdiction, involving all aspects and stages of fishing and oftentimes also associated with organized crime. Fisheries resources that are supposed to be for local fishers are being collapsed due to IUUF. Original products from IUUF can find a way to foreign trade markets, thus hampering the supply of local food. Therefore, the IUUF threatens livelihoods, exacerbates poverty, and worsen the food insecurity[1].

The problem of illegal fishing becomes a critical issue to be seriously discussed. This issue is related to the limited amount of available natural resources. Overexploitation can reduce the number of fish that is crucial for daily human needs. One of the countries that were also affected by IUUF was Indonesia. Based on data from the Food and Agriculture Organization, due to IUUF, Indonesia's losses are estimated at Rp. 30 trillion per year. Meanwhile, according to the Minister of Maritime Affairs and Fisheries, Indonesia's loss per year could reach Rp. 240 trillion. Based on this estimated amount of losses received by the state, it shows that it needs serious attention in dealing with the problem[2].
In dealing with these problems, Indonesia implements the principles of sustainable development in Indonesia's fisheries policy, and among these policies is the IUUF eradication policy that has been destroying marine ecosystems and depleting Indonesian fish resources. Indonesia is committed to achieving SDG No. 14 (Life Below Water), in which Minister Susi Pudjiastuti expressed the importance of utilizing three global platforms namely Our Ocean Conference, UN Ocean Conference, and High-Level Panel for Sustainable Ocean Economy to actualize sustainable development of the marine sector and achieve SDG No. 14. This goal aims to maintain and sustain the use of ocean and marine resources for sustainable development[1,2]. According to the United Nations Development Program (UNDP), Goal 14 Life Below Water explains that more than three billion people depend on marine and coastal biodiversity for their livelihoods. Marine pollution, mostly from land-based sources, is reaching alarming levels, with an average of 13,000 pieces of plastic waste found in every square kilometer of the ocean. SDGs aim to sustainably manage and protect marine and coastal ecosystems from pollution and overcome the effects of ocean acidification.

2. Methodology
The type of research used is qualitative as this study describes the strategy of achieving SDGs No. 14 Life Below Water in dealing with IUUF in Indonesia and the impact of the Ministry of Maritime Affairs and Fisheries’ policies implementation since 2014-2018. More specifically, the scope of the type of research used by the writer is descriptive type and uses a pattern of describing the state of empirical facts accompanied by relevant arguments. The results of the description are followed by analysis to draw analytic conclusions.

The data collection techniques used are a literature review, which is a way of collecting data by examining various literature related to research problems. The data analysis technique used is qualitative. In qualitative analysis techniques, problems are described and explained based on data and the interrelation of facts that exist with each other so that conclusions can be drawn.

3. Results and discussion
3.1. IUU fishing problems in Indonesia
As an archipelagic country, 70% of Indonesia’s territory is an ocean and certainly has enormous marine and fisheries resource potential. Ideally, this potential should be relied upon to sustain the nation's economy. However, this potential is not utilized properly and maximally; therefore, it does not contribute significantly to the nation's development. In fact, the state tends to be disadvantaged due to various irresponsible practices of exploitation of marine and fisheries resources[3]. Indonesia’s losses due to IUUF have been calculated by the World Bank and FAO of approximately 20 billion US dollars or the equivalent of Rp. 240 trillion per year. A fishing boat with a capacity of 100 Gross Tons (GT) can make a profit of 2-2.5 million US dollars per year because what they catch is not only tuna but also shellfish, sea cucumbers, and lobster[4]. In addition to that, despite having abundant marine wealth, most Indonesian fishers actually live in poverty. Hence, the contribution of fisheries production, on average, is only 3.2% of Indonesia's gross domestic product (GDP). This figure is very unnatural for a maritime country[4].

IUUF can be categorized into three groups:
   a) Illegal Fishing is fishing conducted in the territorial waters or EEZ of a country or does not have a permit from that country.
   b) Unregulated fishing is a fishing activity in the territorial waters or EEZ of a country that does not comply with the rules in that country.
   c) Unreported Fishing, namely fishing activities in territorial waters or EEZ of a country that is not reported both in terms of operations and vessel data and number of catches[5].

The impact caused by IUUF is a decrease in the number of fishermen's catches and catching areas that are increasingly expanding into the high seas. As a result, many traditional fishers switch to using non-environmentally friendly fishing gear such as trawlers and cantrang to reach the area[4].
3.2. IUU fishing negative implications

In addition to experiencing losses in the macroeconomic aspect, IUUF can also threaten the livelihood of small-scale fishers because they cannot compete with foreign fishing vessels on a larger scale. This condition can reduce the catch per unit of fishing businesses due to damage to fish resources and their habitat. On a larger scale, it causes a decrease in the workforce of the national fisheries sector, including fish collection and management efforts.

IUUF activities have serious impacts on fishing and marine areas. That is because of the use of fishing gear such as trawling. The use of fishing gear that is not environmentally friendly can cause marine waters to be damaged. If the seawater habitat is damaged, the amount of fish production can also decrease. The practice of IUUF can be done because of many factors, such as the increasing number of fish demand and not accompanied by a balanced amount of production, especially in countries with less fishing resources. Because of these conditions, there are many foreign ships that try their luck in Indonesian waters that are rich in marine resources. Unfortunately, the perpetrators of IUUF are not only from other countries but are also commonly found from Indonesia itself.

Based on BPS (Badan Pusat Statistik), from 2003 to 2013, the number of fishing households decreased from 1.6 million to 800,000. As many as 115 national fish processing companies went out of business as a result of not getting fish supply since illegal fishing vessels immediately brought their stolen fish abroad[4]. This is proving that IUUF certainly gives a huge loss to the national fishermen.

3.3. Indonesian government’s policy in handling IUU fishing

Seeing the problem of IUUF, Indonesia does not remain silent and tries its best to combat illegal practices. In the 13th Sustainable Development Solution Network meeting in New York, the Government, through the Minister of Maritime Affairs and Fisheries, stated that Indonesia is committed to achieving the SDGs 14. As mentioned in Target 14.4 regarding Sustainable Fishing, it is expected that by 2020 all member states have to effectively regulate harvests and end overfishing, IUUF, destructive fishing practices and carrying out science-based management plans in order to restore fish stocks in a short time, at least at a level that can produce maximum sustainability.

President Joko Widodo has a vision in the maritime field that places the sea as the nation's future and is packaged in the spirit of Nawa Cita. The goal is to make Indonesia the world's Maritime Axis in a broad sense. One of the Nawa Cita points that is directly related to marine and fisheries is to strengthen identity as a Maritime State. In realizing this, the government and the society must work together to maintain the marine and fisheries resources they have so that they remain abundant, secure, and sustainable. The Vision of the Ministry of Maritime Affairs and Fisheries (KKP) is then described in three mission pillars, namely the Sovereignty, Sustainability, and the Prosperity mission[4].

In combating the practice of IUUF, the Ministry of Maritime Affairs and Fisheries issued Regulation of the Minister of Maritime Affairs and Fisheries of the Republic of Indonesia No. 56/Permen-KP/2014. The contents of the regulation are about the moratorium on the licensing of fisheries business in the territory of the Republic of Indonesia. The termination is done by not issuing new permits for Fisheries Business Permit (SIUP), Fishing License (SIPI), and Fishing Vessel License (SIKPI). If the SIPI and SIKPI have expired, then there will be no extension. The evaluation of SIPI and SIKPI is carried out until the validity period. If a violation is found in SIPI and SIKPI, a sanction will be given (Permen/KP, 2014). KKP also issued KP Regulation No. 57/2014 concerning the prohibition of transshipment in the middle of the sea. The policy was issued because many transshipments were misused by bringing fish catches abroad without reporting to local authorities. Since transshipment has been banned, fish supply to the processing industry in several countries has dropped dramatically. This proves that most of the fish supply to neighboring countries is the result of illegal fishing from Indonesian waters[4].

The government also issued a policy on fishing products other than fish through Permen KP No. 731/PERMENKP/2015 concerning the capture of lobster (Panulirus spp), crabs (Scylla spp) and rajungan (Portunus pelagicus spp)[3]. The policy was adopted by the government to maintain marine and fisheries resources to remain sustainable. Managing the environmental damage, the government
also issued Permen KP No.2/PERMENKP/2015 on the Prohibition of the Use of Trawls and Seine Nets in the Fisheries Management Area of the Republic of Indonesia which has resulted in decreasing fish resources and threatening the sustainability fish resource environment. The Ministry of Maritime Affairs and Fisheries is committed to implementing Ministerial Regulation KP No. 2/2015, which bans the full use of the two fishing gear in 2018[6].

A firm strategy also supports Indonesia's main policy in eradicating IUUF. This main policy is to sink foreign fishing vessels that conduct illegal fishing. The burning and sinking of illegal fishing vessels is not a new foreign fishing policy. The practice of burning and sinking ships is regulated in Article 69, Paragraph 4 of Law No. 45/2009 concerning fisheries[4]. The sinking of the ship's policy carried out by the Ministry of Maritime Affairs and Fisheries is not a new policy made by the Indonesian government. The sinking of the ship had been carried out several years ago by the relevant ministries. In fact, from 2007 to 2012, the KKP, in this case, the Directorate General of PSDKP had drowned around 38 MCHs that were proven to have stolen fish[3]. The process of annihilation or sinking carried out by the Indonesian government has a strong legal umbrella. Therefore, there is no reason for other countries to object to the decisive actions taken by the Indonesian government against IUUF. Law enforcement efforts on Indonesian waters and seas are expected to continue and expected to be able to provide a deterrent effect on criminals in Indonesian waters. The sinking of the ship provides benefits to Indonesia, where the government has a role in stopping fish theft activities.

President Jokowi also endorsed Presidential Regulation No. 15 of 2015 concerning the Task Force on Combating Illegal Fishing on October 19, 2015, to support efforts to increase law enforcement against violations and crimes in the field of fisheries, especially illegal fishing. The Task Force is known as "Satgas 115" which is a one-roof enforcement system consisting of the Indonesian Navy, Police, BAKAMLA, and the Attorney General's Office of the Republic of Indonesia. In addition to that, the Task Force also cooperates with state partners and international organizations such as Norway, the United States, Australia, INTERPOL, and UNODC. The purpose of the collaboration is to obtain intelligence about foreign ships entering Indonesian waters. Through cooperation with international organizations, Satgas 115 successfully captured the VV Viking and the FV Hua Li 8, which were international chase targets. Furthermore, President Jokowi issued Perpres 44/2016 on the negative list of foreign investment with fishing businesses declared closely linked to foreigners. In other words, capital for the fishing business must come 100% within the country. Whereas to attract foreign investment, it is permissible to invest 100% in a fish management business[4]. The policy was implemented so that foreign ships could no longer operate in Indonesian waters, so fishing vessels that may operate in Indonesian waters are Indonesian ships themselves.

3.4. The results of policy
In 2017, KKP successfully inspected 3,727 fishing vessels at sea, consisting of 3,636 Indonesian fishing vessels and 91 foreign fishing vessels. Based on the number of fishing vessels inspected, as many as 130 vessels were captured consisting of 45 Indonesian vessels and 85 foreign fishing vessels. The country of origin of the captured vessel consisted of 5 Philippine ships, 68 Vietnamese ships, 11 Malaysian ships, and 1 East Timorese ships. The data above also shows that the number of Indonesian vessels inspected from 2015-2018 was 14,351 ships more than the number of foreign vessels, totaling 302 units. 116 Indonesian fishing vessels were captured in 2015-2018 and 285 foreign fishing vessels. The number of vessels inspected in these three years was 14,653 ships, and the number of vessels captured was as many as 4021 vessels. The number of illegal vessels submerged in the 2015-2018 period shows quite a large number, with the increasing number of ships being sunk as many as 100 ships each year. The Ministry of Maritime Affairs and Fisheries monitors the movement of fishing vessels through the Vessel Monitoring System (VMS) technology. The VMS system is a form of surveillance in the field of fishing using satellite-based fishing vessel monitoring equipment. The aim is to ensure fishing vessels' compliance with fisheries resource management provisions[6].
3.5. The Impact of the Implementation of the Ministry of Maritime Affairs and Fisheries Policy in Handling IUUF in Indonesia

According to the 2017 KKP Annual Report, the amount of Indonesian fisheries production from 2014 to 2017 shows a continuous increase. In 2014, total fishery production amounted to 20.94 million tons and then increased to 24.21 million tons in 2014. This can then prove that the performance of KKP has proven to be serious with the increase in fisheries production. Besides, to increase fisheries production, Indonesia has also experienced a drastic increase in Non-Tax State Revenues (PNBP). In 2013, the total PNBP was valued at 227.56 billion, while in 2017, Indonesia received 491.08 billion from PNBP. With this increase in PNBP, the maritime and fisheries sector has made a major contribution to national development[6].

Fisheries GDP in 2017 also reached the highest value since 2014 and has increased by 5.95% from 2016. The development of the marine sector not only has an impact on the economic sector but also has an impact on fish consumption patterns on society. If the fishery production increases, it will certainly have an impact on the fish available in the market in the form of fresh fish and other sorts of fish products. This then succeeded in other KKP programs that increased the amount of fish consumption in Indonesia. In 2017, the amount of fish consumption in Indonesia had increased by 47.34 kg/capita/year[6]. The increase in fish consumption shows that the demand for fish is also increasing. The demand for fish shows that fish is one of the producers of protein sources that are needed by the community.

4. Conclusion

In conclusion, the strategy undertaken by Indonesia in dealing with IUUF is an effort to maintain the sovereignty of the territory of the Republic of Indonesia. This strategy is then implemented through policies made by the Ministry of Maritime Affairs and Fisheries. The Government of Indonesia in implementing the policy of handling IUUF, through the Ministry of Maritime Affairs and Fisheries, participated in achieving the Sustainable Development Goals, especially in fisheries sustainability. Throughout the policy made and implemented by the Ministry of Maritime Affairs and Fisheries since 2014-2018, it has created beneficial impacts on fisheries in Indonesia, especially in fisheries production. The policies made by the Ministry of Maritime Affairs and Fisheries are very appropriate in Indonesia, given the enormous potential of Indonesian fishing resources. Therefore, commitment to preventing IUUF needs to be continued in Indonesia.

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