Indonesian Lobster Seed Trade Export to Vietnam in 2014-2019

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Abstract. This research is dedicated to addressing the approach taken by Indonesia to tackle the trade of lobster seeds to Vietnam. Employing a qualitative methodology alongside descriptive analysis, this study draws upon literature review techniques to comprehensively depict and assess the unfolding dynamics of Indonesia's strategies concerning the expanding lobster seed trade. The theoretical framework utilized here pertains to international trade policy, specifically focusing on Trade Protectionism. The findings of this investigation reveal that the Ministry of Marine Affairs and Fisheries established specific policies, as encapsulated in Ministerial Regulation No. 1 of 2015 and Ministerial Regulation No. 56 of 2016. However, the implementation of these regulations has not yet effectively curbed the prevalent issues of smuggling and exploitation. The challenge persists, and public consciousness regarding the excessive depletion of lobster resources remains inadequate.

Keywords: Lobster Seed Export, Smuggling, Exploitation.

1 Introduction

Marine Indonesia is famous for the abundance of marine biota diversity including shrimp species[1]. With this wealth of natural resources, Indonesia uses it to support the country's economy by doing shrimp export activities. Export production of shrimp species caught in the sea of Indonesia are fluctuate, but mostly increasing as shown in the Table 1. [2].

Table 1. Export production of shrimp species of Indonesia

Year	Volume Export (kg)
2014	148,519,400
2015	145,077,900
2016	171,880,000
2017	180,600,000
2018	197,430,000
2019	207,700,000

Source: [3].

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One species of shrimp that has high economic value and can support the country's economy is lobster. Sea lobster (Panulirus sp.) or crayfish is one of the fishery commodities that have high interest value. In 2014 Indonesia's lobster exports increased in value, from 9.5 US$/kg in 2012 to 13.2 US$/kg in 2014 [4]. Indonesia has earned a distinguished reputation as a leading lobster producer, thanks to the widespread availability of these prized crustaceans across the nation's expansive maritime domains. This geographical expanse spans from the western coasts of Sumatra to the eastern reaches of Jayapura, encompassing notable zones like the prolific Arafuru Sea [5].

Despite the current gradual pace of lobster cultivation advancement in Indonesia, the nation possesses substantial untapped potential within its natural resources for the expansion of marine cultivation endeavors, lobster cultivation being a noteworthy example. The predominant method of sourcing marine lobsters involves direct harvesting from their natural habitats [6]. During the period 2010-2016, world lobster production derived from fishing fisheries reached 99.54%, while the results from cultivation only contributed about 0.46% [7].

Lombok, West Nusa Tenggara is one of the areas that successfully cultivated and developed Indonesian lobsters located in Gerupuk Bay. In general, lobster seeds used by lobster farmers and breeders are caught from nature [8]. The high demand from lobster seed importing countries causes lobster seed fishing activity to increase. In addition, there is a striking price difference between export prices and prices at the fishermen's level, making fishermen choose the option to export lobster seeds rather than sell them to domestic farmers. As a result, high quality seeds that will be exported while remaining in the country are seeds with low quality. Like the example of fishermen in the Gerupuk Bay Area, starting from seaweed fishermen and then turning into lobster seed fishermen who use floating cages[9]. One country that has successfully developed lobster cultivation and has almost the same climate similarity as Indonesia is Vietnam. Xuan Tun Village in Vietnam was the first-time lobster cultivation in Vietnam began in 1922 [10].

Vietnam is one of the exporting countries of Indonesian lobster seeds. With the price offered by Vietnam for Indonesian lobster seeds, in 2010-2014, Vietnam became one of the export destination countries in 2012 with an export volume of 45kg or worth 680 US$ [4]. When compared to 2012 Vietnam only imported lobster seeds as much as 45kg and occupied the 8th position, but in 2013 Vietnam occupied the first position of importer of Indonesian lobster seeds beating the top 7 countries. In 2014, Vietnam occupied the position as the main destination country for Indonesian lobster seed exports by controlling 89.59% of Indonesia’s total lobster seed exports [5].

Seeing the threat of exploitation of lobster seeds of the Indonesian Minister of Marine Affairs and Fisheries, Susi Pudjiastuti made a policy of banning lobster exports in the Regulation of the Minister of Agriculture and Fisheries of the Republic of Indonesia[11] Number 56 / PERMEN-KP / 2016 concerning the prohibition of the capture and / or production of Lobster (Panulirus spp.), Crab (Scylla spp.), and Rajungan (Portunus spp.) from the territory of the Republic of Indonesia [12] to maintain the stability of the lobster seed ecosystem in the free sea. In Permen KKP no. 56 of 2016 Article 2 mentioned lobster fishing in the territory of Indonesia can only be allowed with the provision of 8cm length or weight above 200gr and is not allowed to export lobsters if lobsters are in egg-laying conditions. In the Regulation of the Minister, it is very clear that the capture of seeds for export is illegal and can get legal sanctions, including also catching lobster seeds for the purpose of selling to domestic cultivators as described in article 7.

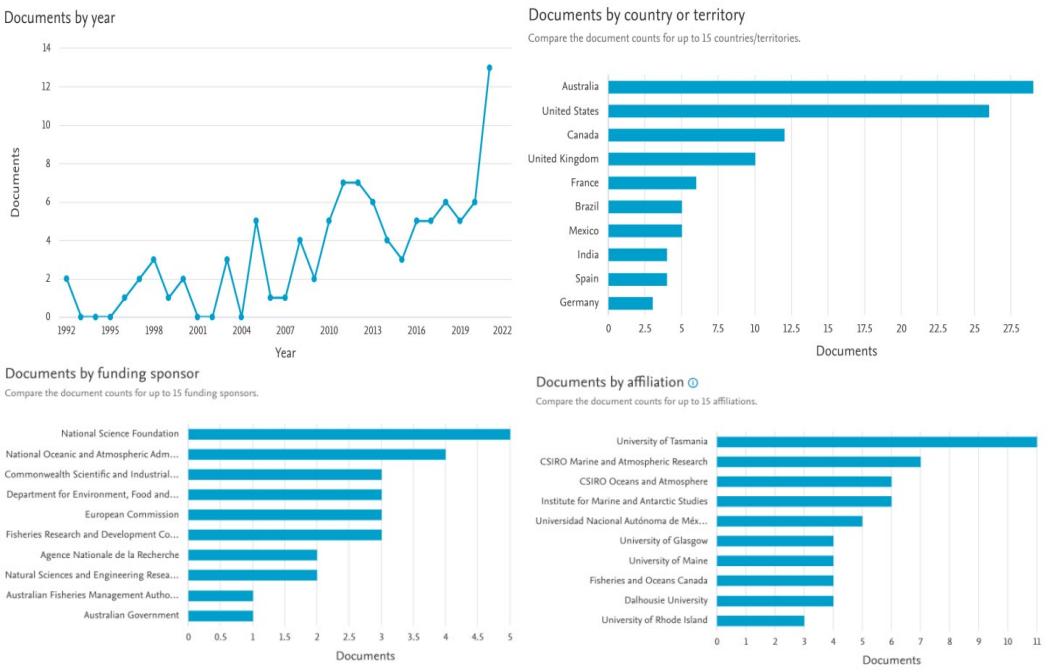
Since the creation of the policy of banning the export of lobster seeds, it has not hampered the export activity of lobster seeds in Indonesia. In 2015-2019 there were 270 cases of lobster seed

smuggling, in 2015 as many as 545,000 seeds were rescued while in 2018 it reached 2.53 million and increased sharply in 2019 by 5.15 million (Lingga, 2019). The average destination country for lobster seed exports is Vietnam. Vietnam is famous as a country of adult lobster exporting, Indonesia also learned a lot about the cultivation and enlargement of lobsters to Vietnam but Vietnam is also famous as an importing country of Indonesian lobster seeds. Vietnamese lobster seed needs by 80% come from Indonesia. Vietnam needs 500,000 sand lobster seeds and 20,000 pearl lobster seeds per day, if Vietnam only relies on local lobster seeds then Vietnam's cultivation needs are only met 1/5 only [13].

2 Research Methods

This research uses descriptive research methods of analysis that are qualitative in nature. Which is an attempt to collect, compile existing data, then continued by analyzing the data, then continued by analyzing the data. Descriptive research is research that describes a problem or problem that occurs.

3 Discussion



SCOPUS.COM analyze search results title-abstract-keyword (lobster and trade), 99 document results, year range to analyze 1992 to 2021. Affiliation Documents, more than 3, first University of Tasmania, then CSIRO Marine and Atmospheric Research, CSIRO Oceans and Atmosphere, Institute for Marine and Antarctic Studies, Universidad Nacional Autónoma de México, University of Glasgow, University of Maine, Fisheries and Oceans Canada, and Dalhousie University. No Indonesia Affiliation

Country/Territory Documents, more than 2, first Australia, then United States, Canada, United Kingdom, France, Brazil, Mexico, India, Spain, Germany, and Indonesia.

Funding sponsor Documents, more than 2, first National Science Foundation, then National Oceanic and Atmospheric Administration, Commonwealth Scientific and Industrial Research Organisation, Department for Environment, Food and Rural Affairs, UK Government, European Commission, and Fisheries Research and Development Corporation. No Indonesia Funding sponsor

3.1 Background of Lobster Seed Trade in Indonesia

As one of the largest fisheries producer countries in the world, both fishing and aquaculture, Indonesia is one of the players in the international fisheries commodity trade. Data from the Ministry of Marine Affairs and Fisheries (2015), shows that the performance of the trade balance of fishery commodities in the period 2010-2014 is always positive. The export value of fishery commodities in the period 2010-2014 grew by an average of 12.78%. The data shows the large export potential of fishery commodities in resulting in foreign exchange for the State (Rahmah, 2016).

Lobster is a group of crustases that spread widely throughout the waters in Indonesia and live in shallow waters to a depth of 100 to 200 meters below sea level with a temperature range of 20-30 degrees Celsius. Sea lobster is a type of invertebrate animal that has hard skin and belongs to the group of arthropods and this animal is nocturnal or active at night. In Indonesia there are 4 types of lobsters that are famous among the community [14], namely:

a. Lobster Batik (Panulirus longipes)
   In Indonesia, this lobster is known by the name of lobster batik and has the Latin name Panulirus Longipes. Lobster batik has a head frame and a green belly and green carapace.
b. Pearl Lobster (Panulirus Ornatus)
   Pearl Lobster or with the Latin name Panulirus Ornatus has almost the entire body filled with a skeleton of ape and lime-colored skin.
c. Bamboo Lobster (Panulirus versicolor)
   Bamboo Lobsters known as Spiny Lobsters in the international trade has a maximum total length size of 40 cm and on average no longer than 30 cm.
d. Sand Lobster (Panulirus Homarus)
   Lobsters of this species have a maximum body of 31 cm with an average body length of about 20-25 cm. Having an average carapace length of about 12 cm, this species has a greenish or brownish base color with decorated by bright spots scattered all over the surface of the abdominal segment and on the legs there are white patches.

3.2 Lobster Exports in Indonesia

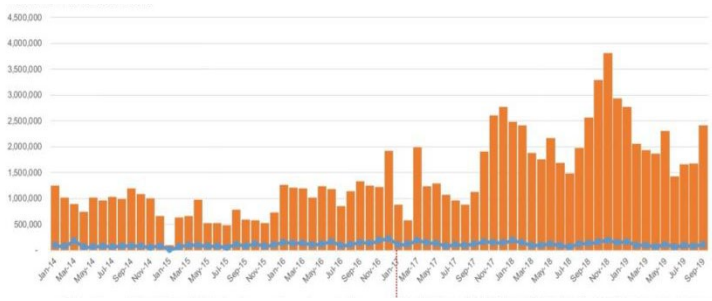


Fig. 1. Indonesian Lobster Seed Trade 2014-2019

Indonesia is one of the countries in the world that exports lobster with the 17th largest position of world exporters. However, for the ASEAN level, Indonesia is ranked as the world's lobster exporter. BPS 2019 data shows that in the first quarter of 2014-2019 the export value of Indonesian lobster commodities grew by an average of 3.54% per year, while export volume decreased by 10.55% per year. These findings are depicted in Figure III.2.1 above.The export value of lobsters in the first quarter of 2019 reached USD7.09 million or up 0.69% compared to 2018 [15].

3.3 Trade in Lobster Seeds to Vietnam

Indonesian lobster seeds that are traded illegally to Vietnam will be cultured and then re-exported after the size of adult lobsters with a value that is many times higher. Loster cultivation in Vietnam began in 1992 in Nha Trang City of Khanh Hoa Province and has spread in other provinces, mainly in Phu Yen and Ninh Thuan Province, Da Nang, Binh Dinh and continues to grow to this day[16].

Fig. 2. Main Lobster Cultivation Area in Vietnam

The demand for lobsters first pearl lobster by the Chinese state increased in the early 1980s, this is what triggered the massive lobster catch in Vietnam. Until the early 1990s as a result of catching pressures and lack of management rules led to a decrease in the yield and size of lobster catches. Therefore, Vietnamese fishermen took the initiative to keep lobster catches that are small to reach market size or worth selling with temporary methods and equipment and show that lobsters can grow well in cages placed in coastal waters.

3.4 Exploitation of Lobster Seeds in Indonesia

Fig. 3. Distribution of Lobster Clear Seeds in Indonesia

The potential of natural lobster seeds in the Indonesian sea is caused by natural factors that include oceanographic and climatological dynamics that greatly affect the existence of natural lobster seed stocks in the Indonesian sea. In addition, the quality of the marine water environment and fishing activities also affect the existence of lobster seed stocks in [17].

When viewed from the abundance of resources owned by Indonesia, Indonesia should be the largest lobster exporter in the world. But because the fishing activity occurs en masse and uncontrollably and there are no restrictions on the export of lobster seeds, it has threatened the population of high economic biota.

3.5 Impact of Lobster Seed Exploitation

The practice of smuggling lobster seeds from Indonesia to abroad at this time is still happening a lot. Although the Indonesian government continues to conduct investigations and hunting efforts, the practice of smuggling lobster seeds is still ongoing. The smuggling of lobster seeds is difficult to contain but it is increasing even though the regulation on the prohibition of lobster seed exports by the Minister of Marine Affairs and Fisheries has been issued through the Regulation of the Minister of Marine Affairs and Fisheries No. 1 of 2015 and the Regulation of the Minister of Marine Affairs and Fisheries No. 56 of 2016 but still not effective enough to reduce the exploitation of lobster seeds illegally.

The illegal smuggling of lobster seeds threatens the sustainability of marine resources in Indonesian waters. Therefore, the support of all parties related to the rescue of marine resources. One year after this prohibition regulation was enacted, in 2017 the country managed to uncover 60 cases of lobster seed smuggling with losses reaching Rp. 380 billion but there are still many records of lobster seed smuggling cases that are very detrimental to the country (Febriani, 2018).

The main purpose of the extension of lobster seeds is Vietnam by air to get to it faster, but does not rule out the possibility by land or sea routes. The capture of lobster seeds is prohibited because its existence is highly protected and endangered if exports are allowed without integrity in its control and supervision.

3.6 Lobster Seed Trade Policy in Indonesia

Indonesia is a country that has abundant natural wealth. Indonesia also has natural charm and biodiversity both in the land and in the land. In the Basic Law of the Republic of Indonesia mentioned that the earth, water, and natural wealth contained therein are controlled by the state and used for the greatest prosperity of the people. The statement gives freedom for people to be able to use natural wealth for the benefit of daily living or to get more results by selling products that are basic materials from nature.

3.7 Lobster Seed Smuggling Case

Lobster seeds have been rife since 2013, after coastal fishermen found an effective way to catch lobster seeds on the high seas. Lobster seeds are caught in a relatively easy way, simply by installing a juntaian of plastic sacks or cement sacks tied in floating jarring cages in the bay. The lobster seeds will then stick to the sack as a substrate (sticking place) agat can defend against the current. Two types of lobsters that generally stick are sand lobster and Pearl [18].

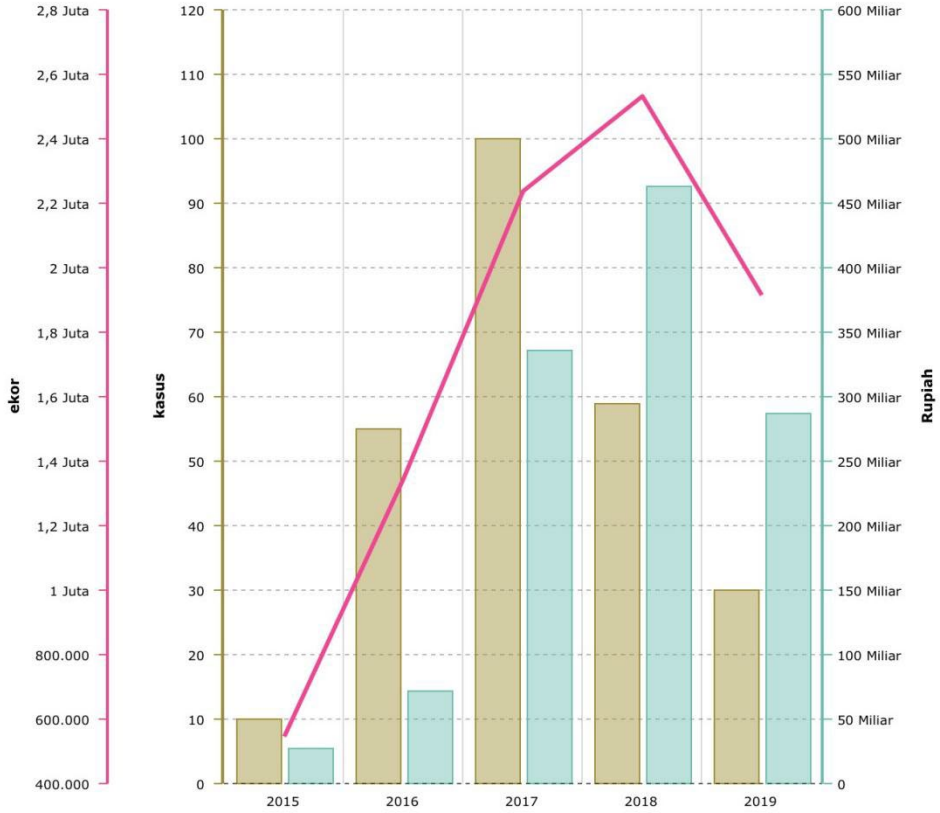


Fig. 4. Total lobster seed smuggling cases in 2015-2019.

In addition, smuggling often occurs because lobster cultivation activities in Indonesia have not been developed properly and seriously by the government and farmers groups. Some of the problems that lobster farmers cannot overcome are reproductive technology, feed, and diseases that attack lobster seeds that are still susceptible to disease. Lobster cultivation activities require a duration of 1 to 2 years with high craft because lobsters are very sensitive to environmental changes. Lobster

cultivation also requires a lot of investment so that it requires consistency of program and seriousness of the government and farmers make lobster as one of Indonesia's superior commodities.

4 Conclusion

The decrease in the value of Indonesian lobster exports from 2012 to 2015 was significantly 78% due to the massive trade in Indonesian lobster seed exports to Vietnam. The difference in the selling price of lobster seeds at the local fishermen level is priced at a range of Rp10,000 to Rp15,000 per head, while the price offered by Vietnamese exporters ranges from Rp70,000 to Rp150,000 per head. This very high price difference makes the option of selling lobster seeds abroad an attractive option amid the various risks of lobster seed cultivation in Indonesia that cannot be addressed.

Indonesian lobster seeds traded to Vietnam will be cultivated and exported again after adult size with a value that is many times higher. Vietnam needs Indonesian lobster seeds because lobsters in the sea off vietnam have been exploited, although there is a quality of lobster seeds native to Vietnam is fairly bad and most suffer from milk disease, red body disease, and black gill disease. Because of this, Vietnamese fishermen and farmers took the initiative to keep lobster catches that are small to reach market size or worth selling with temporary methods and equipment and show that lobsters can grow well in cages placed in coastal waters.

If lobsters are caught continuously and excessively without giving them a chance to breed, then the presence of lobster species in the open is getting less and less and can achieve the extinction of the lobster population. For things that are not desirable and as a form of realization of the protection of the lobster population that is less and less in nature, indonesia issued a policy through the Ministry of Marine Affairs and Fisheries under the Leadership of Minister Susi Pudjiastuti issued Permen-KP Number 1 of 2015 and Permen-KP Number 56 of 2016 on the export of lobster seeds. Where in it regulates the size of lobsters that can be exported, as well as a ban on exporting lobsters that are laying eggs on the grounds that the species of marine animals have time to reproduce before being captured and traded.

But regulations issued by the Ministry of Marine Affairs and Fisheries on export bans have not been effective enough to reduce the illegal exploitation of lobster seeds. According to Minister of Marine Affairs and Fisheries Susi Pudjiastuti in a press conference at the Marine Resources and Fisheries Control Base (PSDKP) on Wednesday, July 17, 2019, said that if ditotal from 2015 to 2019 the government has succeeded in thwarting as many as 263 cases of lobster seed smuggling and saving 9,825,677 lobster seeds worth Rp 1,373,371,140,000.

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