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The Impact of Minister of Marine Affairs and Fisheries Regulation Number 12 of 2020 on the Sustainability of Lobster in Indonesia

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Abstract

The new policy to provide broad flexibility to capture lobster seeds is the same as opening up massive exploitation and welcoming the extinction of lobster seeds in Indonesia. The commitment of lobster seed exporters to develop cultivation is very doubtful and is suspected of using partnerships with lobster cultivators as an effort to obtain a lobster seed export license only. After obtaining the license, the exporters are predicted to break the partnership agreement. Therefore, there needs to be an evaluation, given that business actors are not ready with supporting facilities and infrastructure to carry out the cultivation. This qualitative research leads to a case study of the impact of a new policy regarding the export of lobster seeds on the sustainability of lobsters in Indonesia. This study uses primary data and secondary data to explore and explain the impact of Minister of Marine Affairs and Fisheries Regulation Number 12 of 2020 in order to draw general conclusions and support the theory.

Keywords: *Government Policy; Cultivators; Fishermen; Lobster Seeds*

Introduction

Indonesia, as an archipelagic country, has extraordinary marine resources and has always been the target of fishermen from various countries who are equipped with modern fishing equipment to obtain large-scale catches, while domestic fishermen are still faced with a number of restrictions related to the use of fishing equipment. However, over time, the government, through the Ministry of Marine Affairs and Fisheries, has attempted to revise 18 regulations in the capture fisheries sector which are considered hampering the business world and prepared 89 specifications for fishing equipment that are considered environmentally friendly to replace *cantrang* and the similar equipment.

One of the revised government policies that have caused sharp polemic among stakeholders is the Minister of Marine Affairs and Fisheries Regulation Number 12 of 2020 concerning the management of lobsters and crabs in the territory of the Republic of Indonesia. Another Ministerial Regulation that has also been revised and has caused unrest is legalizing fishing equipment that was previously prohibited

from being used, including shrimp trawl, *payang*, *cantrang* and the like that are classified as trawl. The government argues that it has compiled a roadmap for lobster cultivation 2020-2024. In 2020, the production value of cultivated lobster is targeted at IDR 330 billion and is projected to increase to IDR 1.73 trillion in 2024.

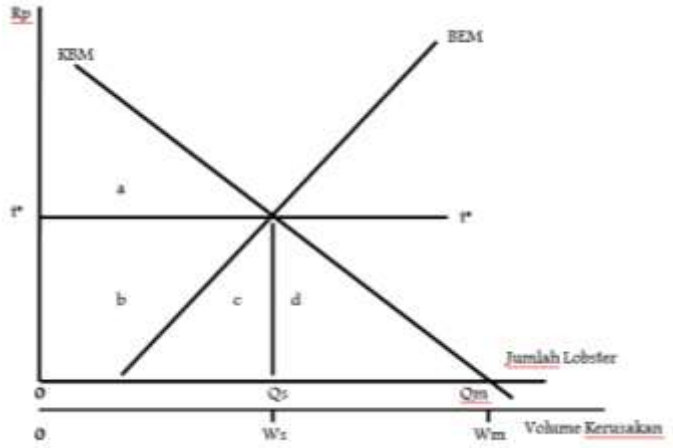
According to the Ombudsman of the Republic of Indonesia, the policy that allows the export of lobster seeds is not in accordance with the mandate of the economic constitution regulated in Article 33 of the 1945 Constitution paragraph 3 and paragraph 4 with the argument that lobster seeds are an extractive natural resource because they are taken from nature, and are usually produced from hatcheries. Therefore, the use of lobsters for export must be managed by the state and the government must be transparent so as not to cause confusing opinions. However, the government still insists on implementing the Minister of Marine Affairs and Fisheries Regulation No.12 of 2020 with the argument to help 13,000 small fishermen who have lost their livelihoods due to the issuance of the previous regulation.

The government's policy to open lobster seed exports and legalize fishing equipment, such as *cantrang* and the like, is feared to trigger horizontal conflicts between fishermen which are increasingly widespread. So far, conflicts have often occurred with fishermen related to the use of non-environmentally friendly fishing equipment. For example, crab fishing boats are often hit by boats equipped with *arad* nets (*cantrang* variant), resulting in the loss of crab nets. In the end, conflicts between fishermen are inevitable and there is no resolution among the fishing communities. Likewise, *cantrangs* and the like are often modified in such a way as to be able to extract various types of fish from small to large sizes and damage the environment. Many parties argue that the government ignores the protection of small fishermen, favors the interests of investors, encourages liberalization of fish resource use, and is not transparent regarding the export of lobster seeds.

Research Theory

Price movements of lobsters and lobster seeds are largely determined by developments in demand and supply, both domestically and abroad. The large increase in demand in the international market will encourage the issuance of new policies in the context of the welfare of fishermen or cultivators. However, these new policies often ignore the sustainability of lobsters in Indonesia. The Roma Group, therefore, invites stakeholders to be aware and willing to think ahead, both in terms of time and space. Natural resources are an important source of income in production activities, both in industry and in services. Marine resources that belong to the public always have a tendency to be overexploited. They often even take shortcuts to get big catches by using *cantrang* or modern equipment.

The report of the Roma group in "The Limits to Growth" (Meadow, 1972) shows that the world is likely to experience failure because important natural resources are very limited in number, while the level of world consumption continues to increase. Several renewable natural resources have suffered a lot of damage and pollution. In addition, environmental capacity is also increasingly limited, for example lobster resources in 11 fisheries management areas in Indonesia are in the red zone and the yellow zone. This implies that the harvesting of adult lobsters should not be increased and the capture of lobster seeds must be carried out with great care. It is sometimes difficult to draw a clear line between non-renewable and renewable natural resources. In fact, renewable resources can also be depleted and non-renewable resources can be increased in stock through new discoveries or technological advances that make it possible to obtain these resources from cheaper materials. However, renewable natural resources are different from non-renewable natural resources. Renewable natural resources can naturally be re-created in line with the speed of exploitation by human, as long as the exploitation does not reach the point of extinction, but this will not happen to non-renewable natural resources.



Note:
KBM / NPM : Net Profit Margin
BEM / ECM : External Costs Margin
t* t* : Taxes on damage to the marine environment

Figure 1. Optimal Pigovian Tax
Source: M. Suparmoko, Maria R.S, 2000, adopted by authors, 2020

Lobster production must be reduced to an optimal net social benefit point, or at the Qs production amount, where the tax imposed is exactly the same as the cost of damage to the marine environment incurred by the *arad* netting vessel (*cantrang* variant) produced by the lobster catching company. Meanwhile, the Pigovian Tax is shown by the line t*t* where for each unit of environmental damage, the producer has to pay tax to the government in the amount of t*. If the producer produces more environmental damage than the point Ws, the producer will receive an additional benefit that is smaller than the additional amount of tax he has to pay. Therefore, the producer will try to reduce the amount of environmental damage to the most efficient level, or as high as the level of Ws, or produce as high as Qs.

Figure 1 shows that a producer will get the maximum net profit by producing lobsters up to the point Qm. However, if the costs of environmental damage due to the use of *cantrang* must be considered by the producer, the lobster production will not be carried out because the net profit margin is lower than the external cost margin. Therefore, lobster production will stop at point Qs and consequently reduce environmental damage from Wm volume to Ws volume. This tax on environmental damage provides greater benefits than the direct regulatory system which is accompanied by the imposition of fines, because it does not meet environmental damage standard. If the environmental damage standard is set higher than the Ws volume, the producer will keep producing lobster products that provide a net benefit value lower than the external costs borne by society. If the environmental damage standard is determined to be lower than the Ws volume, it will be detrimental to the society as a whole.

Research Methods

This research is included in the qualitative descriptive category with the format of a lobster case study that is associated with problems regarding the implementation of public policies in the community, especially fishermen and cultivators. Qualitative data is expressed in the form of sentences and descriptions supported by secondary data obtained from the Ministry of Marine Affairs and Fisheries of the Republic of Indonesia. Sentences and descriptions in this study are obtained from informants, namely lobster cultivators in Paremas Village and Telong Elong Village, Jerowaru Sub-District, East Lombok Regency, West Nusa Tenggara Province as well as explanations from the Indonesian Marine Fish Cultivators Association. Furthermore, the data are analyzed comprehensively, deeply, and meaningfully so that in the end a general conclusion can be obtained.

Research Discussion

Economically, the policy on lobster seed export seems less profitable, given the very small state revenue. On the other hand, the legalization of lobster seed export has the potential to trigger massive exploitation of lobster seeds which will ultimately threaten the balance of the ecosystem. In fact, the export of lobster seeds will only benefit the lobster enlargement business in Vietnam and lobster seed exporters because of the large disparity in the price of lobster seeds at the fishermen level and the export market. Meanwhile, the government considers that the export of lobster seeds is carried out for the benefit of fishermen who live from catching lobster seeds and for generating lobster cultivation.

Table 1. Lobster Export Volume

Destination	Fourth Quarter of 2019	
	Living (head)	Non-living (head)
China	1,276,785	36,207
Timor Leste	-	20
Hong Kong	260,209	25
Japan	-	-
South Korea	346	6
Malaysia	6,201	3,056
Singapore	26,456	2,311
Taiwan	752,450	6,865
Thailand	4,725	-
USA	-	-
Vietnam	166	-
Total	2,327,338	48,489

Source: Marine and Fisheries Ministry, 2020

Regulation of the Minister of Marine Affairs and Fisheries Number 12 of 2020 explains that exporters must carry out domestic lobster cultivation activities by involving the community or local cultivators. The exporters have succeeded in carrying out lobster cultivation activities and are always following the availability of stocks in nature. Currently there are 30 companies that have received a recommendation to export lobster seeds, including PT. Samudera Bahari Sukses, PT. Grahafoods Indo Pasifik, and PT. Tania Asia Marina. The quota for catching lobster seeds is set at 139,475,000 head per year with an allocation of 70% for cultivation and 30% for export. The new policy also requires exporters to release 2% of their harvest from cultivation.

According to the Ministry of Marine Affairs and Fisheries, the formulation of Regulation Number 12 of 2020 has gone through a long process by absorbing the aspirations of many parties and studies conducted by a team of experts, including a comparative study to Australia. Legalization of lobster seed export will benefit all parties: seed fishermen and cultivators gain economic value, exporters earn profits, the state gets income, lobster smuggling decreases, and thousands of fishermen who depend on catching lobster seeds will prosper. In 2020, the production value of cultivated lobster is targeted to be 303 billion rupiah, and will increase to 1.73 trillion rupiah in 2024. Furthermore, lobster cultivation will be developed with several strategies, including the development of an upstream-downstream supply chain system.

Indonesia's lobster exports are mostly focused on China, Taiwan, Hong Kong and Singapore. Some of the factors that cause Indonesia’s lobster exports to be unable to compete in the international market are logistical problems, lack of market control, and difficulty in obtaining lobster seeds to be cultivated or raised. In the future, fisheries export requirements will be more stringent in the international market, among others there must be certainty that the lobsters produced do not come from illegal and fraudulent fishing practices. In this regard, Indonesia has implemented certification of fish catches,

traceability of fishery products, implementation of logbooks, and safeguarding of marine resources through conservation of natural resources by reducing the risk of death of marine mammals in fishing activities.

Shrimp farming business actors complain about complicated business licensing regulations. Currently there are 21 permits that must be fulfilled by shrimp farmers. Some of the permits that many cultivators complain about are the Regional Regulation which states that cultivation ponds including buildings and the fee are calculated per square meter. The operation of the generator that is used as a backup for PLN electricity is also subject to 5 license requirements, such as generator operating permits, generator set operation feasibility certificates, generator set operator's technical competency certificates, and fuel oil storage permits.

Table 2. Roadmap for Lobster Cultivation in Indonesia

Year	Release Estimates 2%/Kg	Release Estimates 2%/head	Hole of floating net cage (3x3 m)	Need for seeds (head)	Production (ton)
2020	137,700	20,655	49,175	9,835,700	1,377
2021	239,600	35,940	85,575	17,114,300	2,396
2022	420,500	63,075	150,180	30,035,700	4,205
2023	496,500	74,475	177,325	35,464,300	4,965
2024	722,000	108,300	257,850	51,571,500	7,220

Source: Ministry of Marine Affairs and Fisheries, 2020

Referring to the description above, the Minister of Marine Affairs and Fisheries Regulation Number 12 of 2020 should not be enforced in 2020, because this policy is related to Government Regulation Number 75 of 2015 concerning Types and Tariffs of non-tax state revenues which are no longer relevant now and in the future. There are too many regulations that shackle lobster cultivators so that their production becomes difficult to compete in the international market due to inefficiency. Moreover, the results of observations by *KomisiNasional KajianSumber DayaIkan* (the National Commission for the Study of Fish Resources) in 2018 show that lobster resources in 11 fisheries management areas are in the red zone and the yellow zone, which means that the capture of adult lobsters cannot be added and the capture of lobster seeds must be carried out with great care. Therefore, the Regulation of the Minister of Marine Affairs and Fisheries Number 12 of 2020 has a negative impact on the sustainability of lobsters in Indonesia and it is better enforced in mid-2021.

The roadmap for lobster cultivation in Indonesia 2020-2024 looks very optimistic and tends to ignore conditions in the field. For example, this new policy has triggered an increase in the price of lobster seeds at the fishermen level, from an average of IDR 5,000 per head to IDR 12,000 or IDR 13,000 per head, with an increase of 140%. The increase has also occurred in the price of pearl lobster seeds from an average of IDR 15,000 or IDR 20,000 to IDR 33,000 or IDR 35,000 per head (Survey, July 20, 2020). The unreasonable price increase has resulted in lobster cultivators being helpless. It is estimated that if lobster seeds are taken continuously for export purposes for 3 years, in the fourth year the cultivators will no longer get the seeds when the export of lobster seeds is out of control. In addition, conflicts between fishermen are often unavoidable. Since the issuance of the Regulation of the Minister of Marine Affairs and Fisheries Number 12 of 2020, the fate of lobster cultivators has worsened because the price of harvested lobsters has dropped sharply and they find it difficult to sell them. Farmers tend to be threatened that they cannot continue their lobster enlargement business because they cannot afford seeds which are increasingly expensive. In fact, collectors have begun to refuse to buy the lobster yields because they find it difficult to sell them. Exporters prefer exporting lobster seeds to marketing lobster cultivation products. The unclear partnership has put lobster cultivators in a pinch in the midst of lobster yields that are not absorbed by the market, and eventually prices decrease sharply.

Table 3. SWOT Analysis

Strength (S)	**Weakness (W)**
1. The number of fishermen and lobster cultivators 2. The number of lobster exporting companies 3. Fishermen are permitted to catch lobsters in the sea using *cantrangs*	1. High operational costs (less efficient) 2. Conflict between fishermen 3. Scarcity of clear lobster seeds
Opportunity (O)	**Threads (T)**
1. Minister of Marine Affairs and Fisheries Regulation Number 12 of 2020 2. Increase in demand for lobster in China, Taiwan, Hong Kong, Singapore, Malaysia, Thailand 3. Advances in lobster fishing gear technology	1. Pseudo-partnership 2. Lobster resources in 11 fisheries management areas are still in the red zone and the yellow zone 3. Exploitation of lobster seeds on a large scale

Source: Researcher, 2020

Referring to the results of the SWOT Analysis, a strategy for the management and trading of lobsters can be formulated in an effort to preserve lobster and maintain the welfare of lobster cultivators and fishermen. Strategic steps that can be taken by the central government are to delay the implementation of the new policy, to simplify central and regional licensing, to stop the export of lobster seeds, to reduce the risk of marine mammal mortality, to choose more environmentally friendly lobster fishing gear, and to restructure the partnership pattern so that there is legal certainty for cultivators and fishermen. In fact, the new policy has caused inefficiency in the allocation of production factors. This indicates a failure in government intervention. In other words, the efficiency that could have been achieved through market mechanisms has been hampered by the interference of both the central and regional governments. Although the market is always considered as a force that will allocate production factors in production activities in order to be efficient, the fact is that the market will fail to perform its function if there are externalities in the economy so that it cannot achieve maximum social welfare.

Table 4. Economic Management Strategy for Lobster

Strength-Opportunity Strategy	**Strength-Threads Strategy**
1. To develop upstream-downstream supply chain system 2. To revise all regulations related to lobster cultivation and trading 3. To avoid illegal and fraudulent fishing practices	1.To postpone Minister of Marine Affairs and Fisheries Regulation Number 12 of 2020 2.To review all Regional Regulations that are burdensome for cultivators and fishermen 3.To maintain lobster sustainability for the red zone and yellow zone
Weakness-Opportunity Strategy	**Weakness-Threads Strategy**
1. To simplify licensing for lobster cultivation, both central and regional 2. To choose a more environmentally friendly lobster fishing equipment 3. To reduce conflicts between fishermen	1. To stop lobster seeds export 2. To strengthen partnerships between companies and lobster cultivators 3. To minimize the risk of death for marine mammals

Source: Researcher, 2020

Market mechanisms tend to ignore costs or burdens borne by third parties as a result of activities carried out by companies. The information held by the government is often less accurate, especially in the eastern region, than the information held by fishermen, cultivators and fishermen associations, so that the central government is less able to understand the impact of the policies adopted. In fact, policies that were initially thought to have no impact on the environment actually have a very large negative impact on the environment. Many researchers have shown that policy products have little effect on the expected end results in the form of benefits to society, such as who benefits and who bears the burden of policy.

Conclusion

The enactment of Minister of Marine Affairs and Fisheries Regulation Number 12 of 2020 has proven to have a negative impact on the sustainability of lobsters in Indonesia. This regulation is more in favor of investors than fishermen / lobster cultivators and creates a scarcity of lobster seeds, thus complicating the position of cultivators. The new policy should not be implemented immediately without paying attention to the ability of fishermen and cultivators, given the many problems faced, especially related to licensing which is very burdensome for cultivators. There are even indications that the partnership is only utilized by the company to qualify for the export of lobster seeds and the cultivators are only utilized as a tool and complement to obtain a lobster seed export license. The large number of companies that apply for licenses to the Ministry of Marine Affairs and Fisheries indicates a high difference in selling prices in an effort to attract wealth hunters to obtain the maximum trade quota which in turn threatens the sustainability of lobsters in Indonesia.

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