

DESIGN OF FISHING PREVENTION POLICY USING TRAWL IN THE BENGKULU COASTAL AREA

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ABSTRACT

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This research aims to design a policy to prevent fishing using trawls in the Bengkulu coastal area. This research uses a qualitative approach using descriptive methods. This research uses Birkland's (2015) theory, which contains five elements, namely, the goals of the policy, the causal model, the tools of the policy, the targets of the policy, and the implementation of the policy. The informants in this research were 7 people consisting of 2 fishermen, 1 person from law enforcement, 2 people from the bureaucracy, 1 person from previous researchers, and 1 person from the organization. The research results are based on the aim of the policy to prevent the use of trawls, which is to preserve the sea and prevent conflicts between traditional fishermen and trawl fishermen. From the causal model, several causes and consequences will arise if the policy is implemented, including impacts on social, economic, and environmental impacts. From the dimension of policy tools, there are several alternative policies as tools that can be produced to prevent the use of trawling, namely in the form of 1. Confiscating fishing gear, 2. Creating a monitoring team from various institutional elements, 3. Providing sanctions and criminal penalties, 4. Providing zone boundaries. Where the use of trawls is prohibited, 5. Conduct patrols every week by changing officers continuously, 6. Conduct outreach about the dangers of using trawls and the importance of marine conservation.

1. INTRODUCTION

Bengkulu is a province located on the west coast of the island of Sumatra with a strategic location and most of its territory faces the Indian Ocean which has a coastline length of 525 km, making Bengkulu have a territorial sea area of 53,000km² and an exclusive economic zone sea area of 685 km² (Stefani, 2017). By having a beach length of 525, the majority of coastal people in Bengkulu work as fishermen. Fishermen themselves are divided into 2, namely traditional fishermen and modern fishermen. Traditional fishermen are fishermen who use simple fishing gear such as nets, fishing rods, bubu, and others, while modern fishermen are fishermen who use high-tech fishing gear such as trawls, ring trawls, tiger trawls, and even fishermen even use two boats with one net (trawl) to catch fish.

Data from the Indonesian Fishermen's Association (HNSI) of Bengkulu City still has 300 vessels using trawl fishing gear operating in Bengkulu waters (republic, 2017). The traditional fishermen of Bengkulu province also found that the use of prohibited fishing gear tiger trawls or trawls is still operating, Hendi, a traditional fisherman of Bengkulu city, stated that there were eight trawl boats in tandem that came out of the channel door of the port of Bai Island (Helti & Ratomo, 2018). Ade Sofyan stated that the rampant trawl in Bengkulu waters could no longer be overcome by fishermen, in one day they could find 30 trawl boats operating and even trawl fishing urged the traditional fishermen's cruising area

and due to the use of trawl activities, damaging coral reefs where fish spawned and reducing the catch of traditional fishermen up to 80 percent. (Fimansyah & Gloria, 2022). From this news, it can be seen that the use of trawls continues to operate in the coastal area of Bengkulu.

The continuous use of trawls can damage the marine environment as well as marine resources because fishing is carried out without paying attention to environmental aspects. These traditional fishermen consider that the use of articulated vessels and trawls will damage the existence of potential in the sea in the short and long term, for example, trawlers can catch various types of small and large fish so that in the long-term marine products (food security) will be exhausted due to fish regeneration that is interrupted due to large-scale fishing. Traditional fishermen who use traditional tools will certainly get much less marine catch compared to fishermen who use high-tech tools such as trawls. (Arisandi, 2016). The income of traditional fishermen from time to time becomes less due to the use of trawls that damage the marine ecosystem so many traditional fishermen have low income and cannot meet their living needs. (Putra et al., 2023)

This study aims to design a policy to prevent fishing using trawls.

Birkland (2015) (Agussetianingsih & Kasim, 2021) propose a simple policy design concept with a comprehensive scope consisting of five elements of policy design, namely: *The goals of the policy, The causal model,*

The tools of the policy, The targets of the policy, The implementation of the policy.

2. METHODS

This study uses qualitative research methods. According to Sugiyono, the qualitative research method is a method based on the philosophy of positivism, used to research natural object conditions, (as opposed to experiments) where the researcher is the key instrument, the data collection technique is carried out in triangulation (combined), data analysis is inductive/qualitative, and the results of qualitative research emphasize more meaning in generalization. The worldview in this study is advocacy/participatory. This worldview assumes that research must be related to politics or policy agendas so research that departs from this worldview generally has an action agenda that wants changes in research informants. The strategy in this study is a case study. A case study is a research strategy that allows researchers to investigate or explore a policy/program, event, activity, process, or group of individuals.

3. RESULTS AND DISCUSSION

1. The Goals Of The Policy

Based on interviews conducted with ES and AP as traditional fishermen what causes the use of trawls?

"There is still the use of trawls due to the support of the ship supervisors themselves, they are given bribes to be able to pass supervision and get permits to go to sea, trawls have an impact on reducing fishermen's income due to the damage to coral reefs caused by trawls" (Source: Results of Interviews with Malabero Fishermen on June 2 and 9, 2024)

Based on the Bengkulu Police Polairud, according to Harto Suyetno, S.H. as the Sasidik of the Sub-Directorate of Gakkum Polairud of the Bengkulu Police.

"The use of trawl is because initially in Bengkulu province there was a shortage of fish supply, so trawl fishing equipment was used to meet the supply of fish needed. The reason for the continued use of trawls is the economic factor because they only have jobs as crew members of trawls and their livelihoods depend on trawlers. The trawl problem not only has an impact on the environment but there is a social conflict between traditional fishermen and modern fishermen/trawl, the core of which is the struggle for fishermen's territory, namely traditional fishermen feel that Trawl fishermen take their territory" (Source: Results of Interviews with the Sub-Directorate of Gakkum Polairud of the Bengkulu Regional Police, June 4, 11 and 24, 2024)

Similarly, RA fishermen who are previous researchers on trawl also said the same thing.

"The main factor that causes the use of trawl is that trawl is more practical by using trawl more and faster to catch fish. There is still the use of trawl because of the support and protection from law enforcement officials military officials or civil officials themselves. These individuals get bribes from the owner of the trawl ship to be allowed to go to sea because the owner of the trawl ship is not a middle-class person but a middle-class person because the cost of the ship

itself requires a lot of money and the cost of the operation alone it requires a large cost. Trawl has an impact on the destruction of coral reefs that are home to small fish and the destruction of coral reefs cannot be ascertained when the time can ensure that the coral reefs can grow again trawl has an impact on the death of small fish" (source: results of previous researchers' interviews about trawl on June 5 and 20, 2024).

Based on the marine and fisheries service of the city of Bengkulu, according to Kasman Winahyu, SH

"The use of trawl is due to the lack of fish production and the increasing market demand for fisheries so that to increase the production fishermen use trawl as a more effective tool in catching fish, there is still the use of trawl due to the lack of awareness about the negative impact of the use of trawl on the marine ecosystem. Trawl impacts coral reef damage and destroys life on the ocean floor." (Source: Interview Results of the Head of Arrest of the Bengkulu Provincial DKP 14 and 21 June 2024).

Based on the chairman of the Indonesian Green Canopy, AB explained.

"The factor that causes the use of trawl is because in the first year, the government felt a lack of fish catches which resulted in the permission of the use of trawl after it was later known that the use of trawl had an impact on the destruction of corals as a place for fish to breed, after that the use of trawl was banned in 1990 issued by the KKP, there is still the use of trawl in Bengkulu due to the inconsistency of the district meter and fisheries to regulations to prevent the use of trawls, the fear of law enforcement officials because the owners of trawl boats themselves are not careless people but people who have power so that they are afraid of bureaucratic officials in overcoming or preventing the use of trawls. Trawl has an impact on the destruction of coral reefs caused by attachment to trawl fishing gear, attachment to trawl fishing gear can break corals and trawl nets can catch all types of marine animals and small fish" (source: results of an interview with the chairman of the Indonesian Green Canopy on June 22, 2024).

According to Henny Aprianty a Coastal Area Researcher

"The main factor causing the use of trawls, according to fishermen who use trawls, is that the results obtained are more than using traditional tools. Trawl is still used among fishermen in Bengkulu, in my opinion, in motorboat users who still use trawl fishing gear and the like, inconsistent with the regulations of the Minister of Marine Affairs and Fisheries and more catches. The impact of the use of trawls is environmental damage and social conflicts" (source: interview on July 17, 2024)

From the aspect of problem identification, it can be concluded that the main factor causing the trawl was the lack of fish production at that time so the trawl was used to increase production to meet consumer needs. The use is still caused by the existence of officials who can be given bribes to allow trawl fishermen to operate, inconsistency in the regulations of the Minister of Marine Affairs and Fisheries on trawl prevention, lack of firmness of the apparatus against

trawl prevention policies, and there are economic factors that make trawl fishermen continue to operate because their lives depend on trawl boats. Trawl has an impact on the destruction of coral reefs, the death of small animals and trawls can cause conflicts between fishermen.

Understanding Policy Objectives

According to ES and AP traditional fishermen

"The purpose of the policy to prevent the use of trawl is to preserve the ocean" (source: interview results on June 2 and 9, 2024).

According to Harto Suyetno as a teacher in the field of sub-directorate.

"The purpose of the policy is to prevent the use of trawl and eliminate or overcome conflicts between trawl fishermen and traditional fishermen" (source: Interview with Polairud 4, 11, and 24 June 2024)

According to RA as a previous researcher about trawl. "The purpose of the trawl prevention policy is to preserve the ocean so that it can be used continuously" (source: results of interviews with previous researchers about trawl on June 5 and 20, 2024).

according to Kasman Winahyu, Head of Capture of the Marine and Fisheries Service of Bengkulu Province

"The purpose of the policy is to prevent the use of trawl and to resolve conflicts between trawl fishermen and traditional fishermen" (source: interview results on June 14 and 21, 2024).

According to AK as the chairman of the Indonesian Green Canopy

"The purpose of the policy itself is how to make the Marine and Fisheries Service brave in preventing the use of trawls" (source: interview results June 22, 2024).

according to Henny Aprianty a Coastal Area Researcher

"The purpose of the policy to prevent trawls and similar fishing gear is of course" (source: interview on July 17, 2024)

From the objective aspect, it can be concluded that the purpose of the trawl prevention policy is to preserve the sea and overcome conflicts between trawl fishermen and traditional fishermen.

2. The Causal Of The Model

According to ES and AP traditional fishermen

"The existence of a policy to prevent the use of trawl can prevent the destruction of coral reefs as a place for fish to live" (source: interview results on June 2 and 9, 2024)

According to RA as a previous researcher about trawl. "Prevention of the use of trawl will also lead to an increase in the number of unemployed and an increase in the number of poverty in the coastal area of Bengkulu" (source: results of interviews with previous researchers about trawl on June 5 and 20, 2024).

According to AK as the chairman of the Indonesian Green Canopy

"The prevention of the use of trawl is a good solution because the impacts caused by trawl are very many, ranging from the destruction of coral reefs to the fact

that traditional fishermen lose their place at sea."(Source: Interview Results June 22, 2024).

According to Henny Aprianty a Coastal Area Researcher "What is certain is that the use of trawl certainly prevents damage to the marine environment and marine ecosystems, reduces the occurrence of social conflicts between fishermen, and certainly has an impact on all-natural factors and social factors of society" (source: Interview on July 17, 2024)

3. The Tools Of The Policy

Closely related to causal theory is the choice of policy tools, or policy instruments, that can be used to create the desired outcomes.

According to ES and AP, traditional fishermen revealed

"In overcoming the trawl problem, it is necessary to have a policy from the direct regional government, namely a policy from the governor or mayor, and there must be witnesses to the use of trawl, such as confiscating the fishing gear used and increasing supervision such as creating a supervision team from various elements of regional institutions so that it is difficult to bribe and bribe" (source: interview results, June 2 and 9, 2024)

According to Harto Suyetno, SH who is the sub-disk of the Bengkulu polada gakkum polairud.

"Prevention of the use of trawl, namely by Thursday Ba'da Ashar (15.30 WIB) to Friday Ba'da Friday (14.30 WIB) is not allowed to go to sea, zoning division takes into account the distance between semi-modern fishermen and traditional fishermen, modification of the net of the diamond-shaped bag (ketupat) into a box/squarish (2 inch) or more, it is not allowed to use cowardly chains" (source: Interview Results 4,11, and June 24, 2024)

According to RA as a previous researcher regarding trawl

"To overcome and prevent the use of trawls, it is necessary to have a policy derivative from the regulation of the Minister of Marine Affairs and Fisheries No. 2 of 2015 concerning the prevention of the use of trawls. Alternative policies that can be carried out can be in the form of sanctions that provide a deterrent effect, such as the provision of criminal penalties, the provision of fines, the provision of zones where the use of trawls is prohibited, and patrolling every week by changing joint officers continuously" (source of interviews with previous researchers about trawl 5 and 20 June 2024).

According to Kasman Winahyu, Head of the Fishing Division of the Marine and Fisheries Service of Bengkulu Province.

"To prevent the use of trawls, the government has held an open meeting of the Bengkulu province environmentally friendly fishing gear analysis team with the results of the agreement, namely: 1. Thursday Ba'da Ashar (15.30) to Friday Ba'da Friday (14.30) is not allowed to go to sea. 2. The zoning division pays attention to the distance between semi-modern fishermen and traditional fishermen. 3. Modify the mesh of the diamond bag to a box/squarish (2 inches) or more. 4. Do not use cowardly chains" (source: results of an interview with the head of the Bengkulu Provincial Marine and Fisheries Service on June 14 and 21, 2024).

According to Ak the chairman of Indonesia's Green canopy

"To overcome trawl is by making the public aware of the dangers of using trawl, making the apparatus aware to carry out and carry out their duties." (Source: Results of an

Interview with the Chairman of the Indonesian Green Canopy on June 22, 2024)

According to Henny Aprianty a Coastal Area Researcher
"Until now, the problem has not been completely overcome because even though the ban has been carried out, there are still fishermen who use trawls. In my opinion, the reason why the alternative was chosen is of course the purpose of reducing environmental damage to the marine ecosystem" (source: Interview on July 17, 2024)

4. The Target Of Policy

The target of the policy is the entity of the person or organization whose behavior the policy wants to change. The choice of policy tools is a function of assuming the behavior of policy targets.

Policy targets

According to ES and AP, fishermen

"The target of the policy is trawl fishermen" (source: interview results June 2 and 9, 2024)

According to Harto Suyetno, who is a chassis of the subdivision of the Bengkulu Police.

"The target in this policy is fishermen who use trawls" (source: interview results 4, 11 and 24 June 2024).

According to RA as a previous researcher regarding trawls.

"The target in the policy to prevent the use of trawl is fishermen, especially fishermen who use trawl" (source: Interview results June 5 and 20, 2024).

According to Kasman Winahyu, SH Head of the Fishing Division of the Bengkulu Provincial Marine and Fisheries Service.

"Trawl users are the target of this policy" (source: Interview results on June 14 and 21, 2024).

According to AK, who is the chairman of Indonesia's green canopy

"The target is the government officials themselves so that they dare to carry out their duties as they should" (source: Interview Results June 22, 2024).

According to Henny Aprianty a Coastal Area Researcher

"The target of this policy is of course fishermen who use trawl and similar fishing gear, especially their fishing gear" (source: interview on July 17, 2024)

5. The implementation of the policy

Policy Implementation

According to ES and AP, fishermen

"This policy should be carried out by the governor or mayor involving the Marine and Fisheries Service, Polairud, and the Navy. (Source: Interview Results June 2 and 9, 2024).

According to Hart Suyetno, SH head of the Bengkulu Police Arrest Division

"It is carried out by the Marine and Fisheries Service (DKP), Polairud, the Indonesian Navy, PSDKP, SYAHBANDAR, the Ministry of Environment and Forestry (KLHK) and Non-Governmental Organizations (NGOs). (Source: Interview Results 4, 11 and 24 June 2024)

According to RA as a previous researcher regarding trawl.

"This alternative policy is implemented by the Marine and Fisheries Service (DKP), Polairud, the Indonesian Navy, the Ministry of Environment and Forestry (KLHK) and Non-Governmental Organizations (NGOs). (Source: Interview results on June 5 and 20, 2024).

According to Kasman Winahyu, SH Head of the Fishing Division of the Bengkulu Provincial Marine and Fisheries Service.

"This policy is implemented by the Marine and Fisheries Service of Bengkulu Province, Polairud, and the Marine Angkatan TNI" (source: interview results on June 14 and 21, 2024).

According to AB, who is the chairman of the Indonesian Green Canopy

"Bengkulu Provincial Marine and Fisheries Service" (source: interview results June 22, 2024).

according to Henny Aprianty a Coastal Area Researcher

"The relevant agency to implement this policy is certainly the Marine and Fisheries Service" (source: interview on July 17, 2024)

DISCUSSION

1. The Goals Of The Policy

The goals of the policy are the dimensions of policy objectives. Policy objectives are created because someone has convinced us enough (i.e. citizens, elected officials, or both) that something needs to be done to solve a problem.

Based on the goals of the police, there are two aspects, namely the identification of problems and policy objectives related to trawl, it can be explained that the main factor in the use of trawl is the lack of fish production obtained by traditional fishermen so that the use of trawl fishing equipment is made because by using trawl it is possible to get a larger number of fish in relatively less time. Fisheries production is a function of the number of fishing attempts, fish stocks, and fishing gear capabilities used. The use of trawl fishing gear is considered to provide great benefits because this fishing gear has high productivity with a relatively short time at sea. The average fishing time from fishing activities using trawl fishing gear is 74.40 hours, which is relatively shorter than that of gillnets with an average sea time of 104.60 hours. (Siregar & Sh, 2023).

Coral reef ecosystems function to support the life of living things. Coral reef ecosystems provide ecosystem services in the form of habitats for breeding, shelters, and barriers to large waves. (Siregar et al., 2023). Trawl causes damage to the marine ecosystem and causes conflicts between traditional fishermen and trawl fishermen caused by territorial disputes. The destruction of marine ecosystems caused by the use of fishing gear that is not environmentally friendly causes damage to coral reefs under the sea where coral reefs are places where fish live and hide and the use of trawl nets can destroy the fish regeneration process which has very bad implications for the ecosystem. Small fish fry are also caught but not wanted, which in the end are just thrown away. The impact of damage to fishery resources by using unfriendly fishing gear causes this Most of Indonesia's small-scale fishermen will be lost. So if left unchecked, it will have an impact on the continuation of the conflict between traditional fishermen and trawl fishermen because trawl fishermen operate in the area where trawl fishermen operate. So the purpose of the policy to prevent the use of trawl is to maintain the marine ecosystem and overcome conflicts between fishermen between trawl fishermen and traditional fishermen.

In preventing fishing problems by using existing illegal fishing gear so that it is unsustainable and causes damage that has a big impact.

2. *The Causal Model of the Theory*

If the participants in policy-making can at least estimate the consensus of goals, then the next thing they must do is understand the causal theory that underlies the policy to be implemented. Causal theory is a theory of what causes a problem and what interventions (i.e., what policy responses to the problem) can address the problem. Without a good cause-and-effect theory, it is unlikely that a policy design will be able to produce the desired results.

From the existing policy alternatives, everything has its impact, be it social, economic, or political. The social impact is in the form of dissatisfaction and protests from fishermen who use trawls. The economic impact is that it can make fishermen lose income and lose their jobs so it will increase the number of unemployment and increase the number of poverty. The political impact is in the form of improving the government's image in preserving the ocean but will also get protests from fishermen and demands for budget transparency impact of damage to fishery resources by using unfriendly fishing gear causes most of Indonesia's small-scale fishermen to disappear. (SIREGAR & SH, 2023).

The economic impact felt by the fishing community using the Hela Pukat and Pukat Tarik APIs, where based on calculations, their income is greater than other APIs. In addition to the productivity problem of API, there is also the size of crew members in other official APIs so that the income is divided by the number of crew members so that the average income of crew members is far below the Regency/City Minimum Wage. The economic impact on the activities around the Hela Pukat and Pukat Tarik fishermen business is huge. So the policy of prohibiting the use of Hela and Pull Trawl APIs, especially Cantrang, will only cause poverty and social vulnerability. (Nababan et al., 2018).

3. *The tools of the policy*

Anne Schneider and Helen Ingram (1997, 93) define a policy tool as "an element in a policy design that causes an agent or target to do something they would not do if they were not done or to change behavior to solve a public problem or achieve a policy goal." Lester Salamon and Michael Lund (1989, 29) provide a simpler definition of a policy tool as "a method by which the government uses to achieve policy objectives."

The regulation prohibiting the use of Trawl (Trawl) has been established for a long time, but in 2015 this regulation was reaffirmed with the issuance of PERMEN-KP No. 2 of 2015. One of the obstacles that makes this regulation not work is the difficulty of taking action. This is related to the feeling of compassion that arises in oneself if the operation of the prohibited fishing gear is immediately prohibited because it has a direct impact on the loss of livelihoods.

To prevent the problem of fishing by using existing illegal fishing gear that is not sustainable and causes damage that has a big impact, it is necessary to confiscate some fishing gear.

4. *The implementation of the policy*

Wahab (2008) in (Hoffman, n.d.) States that *Policy implementation encompasses those actions by public or private individual groups that are directed toward the achievement of objectives outlined in prior decisions*

(actions taken by individuals or officials or government or private groups directed towards the achievement of the objectives outlined in the policy decision).

The implementation of this policy will be carried out by the Bengkulu Provincial Customs and Fisheries Service, Polairud, and the Navy. The Marine and Fisheries Service is the formulation of the policy and the Polairud and the Indonesian Navy as supervisors will supervise the implementation of the policy so that no one violates and if anyone violates it, they will get legal action.

ITU (2020) said that the government must play its main role in preparing for the transition process by establishing comprehensive policies and facilitating the coordination of the stakeholders involved. The problem of a complex transition process requires support and synergy from stakeholders to achieve the goals of (Agussetianingsih & Kasim, 2021)

4. CONCLUSION

In designing fishing prevention policies using trawls. Based on this aspect, the purpose of the policy to prevent the use of trawl is to preserve the sea and prevent conflicts between traditional fishermen and trawl fishermen. From the causal model, several causes and consequences will arise if the policy is implemented, whether it has an impact on social, economic, and environmental. From the dimension of policy tools, there are several policy alternatives as tools produced to prevent the use of trawls, namely in the form of 1. Confiscating fishing gear, 2. Creating a supervisory team from various elements of the institution, 3. Providing sanctions and criminal penalties, 4. Provide boundaries of zones where the use of trawls is prohibited, 5. Conducting patrols every week by changing officers continuously, 6. Conducting socialization about the dangers of the use of trawl and the importance of ocean conservation, 7. Thursday Ba'da Ashar (15.30) to Friday Ba'da Friday (14.30 WIB) is not allowed to go to sea, 8. Zoning division pays attention to the distance between semi-modern fishermen and traditional fishermen, 9. Modify the mesh of the diamond bag to a box shape (2 inches) or more. 10. Do not use shrinking chains, 11. Raising public awareness about the dangers of trawl, 12. Awakening the apparatus to carry out and carry out their duties. From the policy target aspect, the target in the design of this policy will be fishermen who use trawls. The policy implementation aspects that will implement this policy are the Marine and Fisheries Service, Polairud, and the Navy.

Based on the results of the research and conclusions, the author can provide some suggestions related to this research.

1. Making a derivative regulation from the ministerial regulation of the Ministry of Maritime Affairs and Fisheries no. 2 of 2015 concerning the prevention of the use of trawls.
2. The government must be more consistent in preventing the use of trawls.
3. The government must work even harder in preventing the use of trawls.
4. Fishermen must obey the policies implemented by the government.
5. The community should help preserve the ocean and care more about the marine ecosystem.

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