

The West Sumatera Sea and Fisheries Strategy in the Supervision of the Bants of the Use of *Trawls*

(study: in Linggo Sari Baganti District, Pesisir Selatan Regency)

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Abstract—The ban on the use of trawls in Linggo Sari Baganti Subdistrict is an old polemic which until now is still a problem that has not yet been overcome so that a strategy is needed to overcome it. This study aims to look at analyzing the realization of the strategy of the Department of Maritime Affairs and Fisheries of West Sumatra in monitoring the prohibition of the use of trawls in the South Coastal District of Linggo Sari Baganti District. This research is descriptive with a qualitative approach. Data collected by observing, interviewing, and studying documentation. The results showed that there were 10 strategies to monitor the use of trawls, namely: (1) providing training to fishermen such as using a system, catching fish that is sustainable and environmentally friendly, (2) increasing the number of fish auction sites (TPI), (3) opening the ease of fish export as raw material for the processing industry of fisheries products Determination

of Allowable Fishing quotas, (4) optimization of utilization of Tracking Technology from fishing areas, (5) provision of access to fishing areas, (6) provision of business capital assistance Increasing preproduction needs and fishery product processing, (7) reinforce fishing zones by the authorities (Pol-water and Satkamla). and be given strict regulations in accordance with applicable laws and regulations so as to create, (8) establishment of a monitoring post to monitor and raid actors who use *trawl* trawlers so that supervision can be done as effectively and efficiently as possible, (9) conduct training and guidance using *trawls* establishment of supervisors to monitor and raid perpetrators who use trawlers so that supervision can be carried out as effectively and efficiently as possible, (10) conducted training and guidance using trawls Increased oversight Increased oversight Increased supervision.

Keywords—Strategy, Supervision, Trawls

I. INTRODUCTION

The sea is one of God's amazing creations, with the sea there are so many benefits that we can get, one of which is the sea fish that we consume everyday. The potential of fisheries that have been owned is an economic potential that can be utilized for the future of the nation. Utilization of the sea becomes a resource that requires participation from various parties such as the government and the community.

In Law Number 32 of 2014 concerning maritime affairs, the government and regional

governments are in accordance with the authority to conduct marine management for the prosperity of the people through the use and use of marine resources [1].

In utilizing responsible fish resources optimally and sustainably and reducing conflicts in the use of fish resources based on the principles of fish resource management, the Government of Indonesia through the Minister of Maritime Affairs and Fisheries has issued Minister of Maritime Affairs and Fisheries Regulation No. 2 of 2015 concerning the

prohibition of using fishing gear *trawls and seine nets* in the Republic of Indonesia fisheries management region [2], which have been updated with the Minister of Maritime Affairs and Fisheries Regulation No. 71 of 2016 concerning Fishing Tracks and Placement of Fishing Equipment in the Republic of Indonesia's Fisheries Management Areas Indonesia [3].

Article 21 paragraph 2 states that fishing equipment that disrupts and damages the sustainability of fish resources consists of seine nets, trawls, aerial traps and muro ami. In paragraph 3 it is explained that fishing equipment that is included in the types of destructive fishing gear is prohibited from operating on all fishing lines in the entire territory of the Republic of Indonesia Fisheries Management (WPPNRI).

This regulation is a reference in managing fishing activities and businesses in fisheries in the territory of Indonesia. The purpose of the stipulation of this Ministerial Regulation is to realize the responsible, optimal and sustainable use of fish resources and to reduce conflicts over the use of fish resources based on the principles of management of fish resources.

In optimizing the implementation of the policy prohibiting the use of fishing equipment that disturbs and damages the sustainability of fish resources, it is necessary to have a strategy carried out by the Department of Maritime Affairs and Fisheries and the community. Strategy is a set of specific objectives and action plans, which if achieved will provide the expected competitive advantage. In other words, the strategy is the answer to the question how a company can achieve the goals set, thus the strategy is all steps needed by the company to achieve the goals set [4].

With the policy of prohibiting the use of trawls, of course it is not enough to get there alone, must be accompanied by supervision to make a policy effective, supervision is an effort to check everything that happens in accordance with the established plan, orders issued, and the principles adopted are also intended to find out weaknesses and mistakes to be avoided in the future [5].

The aims and objectives of the 2016-2021 strategic plan program of the Department of Maritime Affairs and Fisheries of West Sumatra Province include reduction of activities that damage marine and fishery resources with an indicator of the percentage of fishing boats that do not do illegal fishing by 62% in 2016-2021, programs in activities which are considered priorities as planned in the restaurant include a program to increase surveillance and decrease illegal fishing that is shown to protect foreign fishermen who violate applicable regulations thereby increasing their chances of getting the largest portion of each fishing activity in the west coast region [6]. One of the Subdistricts in Pesisir Selatan District, Linggo Sari Baganti District, there is still the operation of fishermen using *trawls* [7].

Supervision carried out in Linggo Sari Baganti District can be said to be quite good but not with enforcement. This can be seen 3.40% of Fishermen in Linggo Sari Baganti Subdistrict, Pesisir Selatan District still use *trawl* or *trawl* fishing gear that are prohibited from operating in the sea area of Linggo Sari Baganti Subdistrict, and 3.40% Fishing communities who do not understand the contents, the goals and objectives of the Minister of Maritime Affairs and Fisheries Regulation No. 71 of 2016 concerning Fishing Tracks and Placement of Fishing Equipment [3], another problem is that this also causes conflicts in burning ships between fishermen who use *trawls* by fishermen who do not use *trawls* [8].

Based on the research results of Desi Sinta, et al, entitled Evaluation of the Implementation of the Policy on the Prohibition of the Use of *Trawls* (Trawls) Case Study in the District of Sei.Kepayang Barat Asahan Regency Factors causing people are reluctant to switch from using trawls with the results of research that the most dominant factors causing fishermen have not switched and still use trawls including: capital, income, ability, (skills) and experience, the results of the study also occurred in Linggo Sari Baganti District, based on the findings in the field of income as one of the most dominant causes of fishermen in Linggo Sari Baganti District unable to switch trawls fishing gear, besides the lucrative fishing

trawls from other fishing gear make it difficult for fishermen to switch [9].

With the above problems, the authors would like to examine more deeply how the realization of the strategy of the Department of Maritime Affairs and Fisheries of West Sumatra Province in monitoring the prohibition of the use of trawls in Linggo Sari Baganti District in optimizing regulatory oversight that contains a prohibition on using fishing gear that can damage the environment to the fishing community, especially fishermen in Linggo Sari Baganti District.

II. METHOD

This study uses qualitative methods with descriptive methods, there are several reasons that underlie the use of these approaches, namely, the researcher intends to develop the concept of thought, understanding of the patterns contained in the data, seeing as a whole a process state, individuals and groups, besides that the researcher intends to analyze and interpret a fact, the location of the study in the South Coastal District precisely in the Linggo Sari Baganti District

Researchers used several data collection techniques including, interviews, and study documentation. With data validity techniques using triangulation techniques. In this case the authors use the SWOT analysis technique [10]. This analysis is based on logic that can maximize strengths and opportunities while simultaneously maximizing weaknesses and threats.

III. RESULTS AND DISCUSSION

Strategy management will produce policies (*policy making*). Policy making is a step in preparing the general policies needed to carry out the strategy intended by the policy will link the strategy formulation with the implementation of the strategy. On the basis of policy all company managers can prepare strategy implementation [13]. From the statement above it is emphasized that the strategy in monitoring the prohibition of the use of Trawls is an effort or step in preparing general policies needed to carry out the objectives to be achieved. The following are the

swot points found by researchers in the field, including:

1. **(Strength) the strategy of the Office of Maritime Affairs and Fisheries of West Sumatra Province in the implementation of supervision of the prohibition of the use of trawls.**

As for the strength found in the field by researchers, they are as follows: providing assistance with funds amounting to Rp.5,000,000,000.00 (*Five Billion*) to replace *trawling* fishing gear, carried out socialization, coaching is conducted for fishermen who use *trawls*. This statement was strengthened by the results of the interview that was delivered by Mr. Andi Syafinal, S.Pi., M.Si as the Head of the Department of Fisheries at the South Coastal Regency, on January 15, 2020 at 09:21 WIB, stated:

"In 2019 yesterday for those in Linggo Sari Baganti District with the results of several meetings we have to replace all around 113 ships which must be replaced by spending as much as 5 billion and that is sharing between the Regional Government and the Provincial Government"

Based on what was conveyed by Mr. Andi Syafinal, S.Pi., M.Si, it can be understood that the granting of trawls was given in 2019 with the replacement of 113 fishing gears to be replaced. Attempts to change fishing gear have been carried out several times but these efforts did not produce results because the obstacle was not given, namely the fishermen themselves, some of the fishermen did not want to receive the aid.

2. **(Weakness) strategy of the Office of Maritime Affairs and Fisheries of West Sumatra Province in monitoring the prohibition of the use of Trawls**

The weaknesses found by researchers in the field are: 3.40% of fishermen are still using trawls, income is one of the factors that fishermen do not want to switch *trawls*, there is no oversight post to monitor the use of *trawls* routinely. For more details can be seen in table 1 below:

Table 1. Number of *Trawlers* in the District Pesisir Selatan Regency in 2019

No	Sub-District	Payang	Trawls Role	Trawls Beach	Dogol	Trawls	Amount
1	Silaut	-	-	-	-	-	37
2	Lunang	-	-	-	-	-	-
3	BasaAmpek Balai Tapan	-	-	-	-	-	-
4	Ranah Ampe Hulu Tapan	-	-	-	-	-	-
5	Pancung Soal	-	-	-	-	-	5
6	Air Pura	17	-	-	-	-	131
7	LinggoSari Baganti	76	22	-	-	113	211
8	Ranah Pesisir	19	-	10	-	-	223
9	Lengayang	57	-	30	-	-	419
10	Sutera	92	-	95	-	-	567
11	Batang Kapas	3	-	55	-	-	324
12	Iv Jurai	2	-	35	-	-	277
13	Bayang	16	-	26	-	-	229
14	Bayang Utara	-	-	-	-	-	-
15	KotoXITarusan	27	-	37	-	-	64
Total		309	22	295	0	113	2,557

Source: Marine and Fisheries Service of West Sumatra Province

Above table it can be seen that the South Coastal Regency which consists of 15 sub-districts only in Linggo Sari Baganti sub-district that uses *trawls* with a total number of 3,318 and who uses trawls as many as 113 units of vessels. This certainly requires an effective strategy and solution so as not to the occurrence of illegal fishing in the waters of the South Pesisir Regency.

3. (Opportunities) in the strategy of the Maritime and Fisheries Service Office of West Sumatra Province in monitoring the prohibition of the use of *Trawls*

Opportunity is an important and beneficial situation in the company/organization environment [11]. The following are opportunities found in the field including the following: Managing fishing catches making fishermen

innovations by creating creative economies, Having abundant natural resource potentials, Creating business opportunities in addition to fishing (*fishing*) to empower fishing communities.

Based on the results of the researchers found that in the Linggo Sari Baganti Subdistrict there were indeed activities carried out by the government in empowering fishermen and from several fishermen groups empowered not all groups to date, and also there has been no realization of the management of fish catches such as snacks, souvenirs, as well as other foods and from the observations of researchers it is seen only salted fish production which is marketed in several regions and marketed in the region.



Figure 1. Fishermen In Linggo Sari Baganti District Drying salted fish to be market

4. (Threat) in the strategy of the Office of Maritime Affairs and Fisheries of West Sumatra Province in monitoring the prohibition of the use of *trawls*

The following is a threat found by researchers in the field, as follows, can cause pros and cons between fishing communities

who use trawls by fishermen who do not use *trawls*. The use of trawls can periodically cause a decline in fish resources that can threaten the preservation of the marine environment and the extinction of resource resources. fish, deadly fishermen's livelihoods.



Figure 2. Pros and Cons of Burning Fishing Boats in Muara Kandis Linggo Sari Baganti District

5. Strategy of the Maritime and Fisheries Service Office of West Sumatra Province in monitoring the prohibition of the use of *trawls*.

a. SWOT analysis (strengths, weaknesses, opportunities and threats)

Table 2. (SWOT) Strategy of the Office of Maritime Affairs and Fisheries of West Sumatra Province in Monitoring the Prohibition of the Use of *Trawls*:

Streghth (S)		Weakness (W)	
1. Providing assistance with funds in the amount of Rp.5,000,000,000.00 (five billion) to replace the trawls fishing gear Ou treach was carried out	2. Socialization	3. Guidance is held to fishermen who use <i>trawls</i>	
Opportunity (O)		Threat (T)	
1. Managing fishing catches makes fishermen innovate by creating a creative economy.	2. Has the potential for abundant natural resources.	3. Creating business opportunities besides fishing (fishing) to empower fishing communities	

Source: Primary data processed

Table 3. Alternative Solutions to the Strategy of Controlling the Prohibition of Using Trawls

Strategy S-O	Strategy S-T
<p>Take advantage of the potential to seize opportunities:</p> <ol style="list-style-type: none"> 1. Provide training to fishermen such as using a sustainable and environmentally friendly fishing system 2. Increase the number of fish auction sites (TPI) 	<p>S-T Strategy Utilize the potential to face challenges:</p> <ol style="list-style-type: none"> 1. Provision of business capital assistance Increased reproduction and processing of fishery products 2. Reaffirm zoning of fishing by the authorities (water police, and Satkamla). And be given strict sanctions in accordance with applicable laws and regulations so as to make a deterrent.
Strategy W-O	Strategy W-T
<p>W-O Strategy Overcome weaknesses to seize opportunities</p> <ol style="list-style-type: none"> 1. Open the ease of fish export as raw material for processing fishery products Determination of Allowable Catch fishing quota 2. Optimization of utilization 3. Tracking technology from fishing grounds (traceability) 4. Granting access to fishing areas to the group 	<p>W-T Strategy Minimizing Weakness to survive from threats</p> <ol style="list-style-type: none"> 1. Establish a supervisory post to monitor and raid perpetrators who use trawlers so that supervision can be carried out as effectively and efficiently as possible 2. Performed training and coaching that uses trawl 3. Increased control

Source: Primary data processed

1. Strategy S-O (Strengths Opportunities)

- a. Provide training to fishermen such as using a sustainable and environmentally friendly fishing system

Through sustainable fishing practices it can create environmentally friendly businesses. Labeling environmentally friendly products is needed to make it easier for people to distinguish which ones are safe and properly captured. In addition the government can also improve the quality of human resources (fishing communities) through training and guidance on modern and environmentally friendly technologies in strategies to provide training to fishermen such as using sustainable and environmentally friendly fishing systems.

- b. Increase the Number of Fish Auction Sites (TPI)

The most dominant opportunities are first, there is a Fish Auction Place (TPI). second, high

fish demand. TPI needs to be built because it is more utilized and optimized so that it can be a price controller for fish. So far, fishermen sell their fish to collectors or middlemen, while TPI is only used as a place to sell fish without auctioning. In addition, opportunities with high fish demand can be used as opportunities to increase the income of fishermen in Linggo Sari Baganti District, Pesisir Selatan Regency.

TPI becomes a meeting place between fishermen as producers and fish baskets as buyers who conduct fish or sea product sales transactions through auction. Ideally, selling fish through an auction process can create fairness, both for fishermen and fish baskets. With the auction process in the sale of fish, it is expected to avoid asymmetric information because through the auction process, information can be obtained perfectly [11]. The auction process can describe the willingness to pay of the buyer precisely so that it plays a role

in the formation of prices in accordance with market mechanisms. Buyers can compete with each other in offering prices until a price is formed at a certain level which is the equilibrium point of the forces of demand and supply.

2. Strategy W-O (Weaknesses Opportunities)

- a. Opening the ease of export of fish as a raw material for processing industry fisheries results in determining the allowable catch of fish catches

Increasing the number of exports and the value of fishery products in Linggo Sari Baganti Subdistrict, Pesisir Selatan District still has a big opportunity, this opportunity is also supported by an increase in consumption of fishery products globally. Nevertheless, the condition of global trade with a high level of competition requires strong competitiveness in the trade of various goods and services including trade in fishery products.

Determination of the number of fish catches is regulated in the Amount of Capture allowed (JTB) not only that the control of catches can also indirectly control the level of fishery exploitation. 31 Year 2004 which was subsequently changed to No. 45 of 2009, Article 7 paragraph (1) letter c, which reads: "In order to support the fish resource management policy, the Minister stipulates: "The amount of catch allowed in the Fisheries Management Territory of the Republic of Indonesia" [12]. The main objective of JTB is to regulate the number of catches so as not to exceed the carrying capacity of fish resources, so that their utilization can be sustainable and sustainable. The main objective of JTB is to regulate the number of catches so as not to exceed the carrying capacity of fish resources, so that their utilization can be sustainable and sustainable.

- b. Optimizing the use of tracking technology from fishing areas (traceability)

Optimization in the use of tracking technology in fishing areas can be done such as the use of GPS to find the location of fish hordes. So that with the help of GPS it is hoped that it will facilitate fishermen in finding the location of fish.

Factors causing the low level of income of fishermen, including traditional and small-scale fishing gear, in addition to knowledge skills are also still limited. This makes the fishermen in Linggo Sari Baganti Sub-istrict still reluctant to switch from trawling fishing gear based on research results because they think the results obtained are far more so they don't think about the impact of what they do, for fishermen who don't trawls or traditional fishing groups still use simple equipment so that it has difficulty developing its business [13].

The implication of technology development is an improvement in the operational performance capacity of fishing units, increasing the reach of fishing, increasing fishing effort (number of trips) and catches being, post production to marketing [14].

- c. Giving access to fishing areas to fishermen groups

Giving access to fishing areas to the Group for direct participation in utilizing and maintaining fish resources in order to remain sustainable. In the Appendix to the Regulation of the Director General of Sea Space Management Number: 03/Per-Djprl/2016 concerning guidelines for the use of sustainable fishing zones for conservation areas for fishing activities by local and traditional communities through a partnership program r is explained that the management of fishing zones and the utilization of fish resources must take into account the match between the availability of scientific data/information, the socio-economic aspects of the community and the institutional capacity of the community groups must be designed to fit the scale of the fishing activities of the community groups so that they can be managed with clear boundaries of the fishing subzone.

Utilization of fishing zones for community groups must have legal certainty, be protected and have a sufficiently long period of time to be able to provide benefits in accordance with the proposed management plan [15].

3. S-T (Strengths Threats) Strategy

- a. Provision of business capital assistance
Increased preproduction and processing of fishery products

In addition to reducing the addition of capital grants, increasing the need for preproduction and processing of fishery products can also open up employment opportunities for fishing groups so that it can divert the view of the fishing community from the use of trawls in addition to pre-production or processing of fish catches if processed seriously can also produce more profits even more from the catch from the use of *trawls*.

- b. Reinforce fishing zones by the authorities (Pol-water, and Satkamla)

The government needs to emphasize zoning for fishing, so that the fish population does not decline, fishermen who can do activities there are fishermen who have boats < 10GT (small scale fishermen), and > 10GT is the scope of the Province, while many are complained of by small fishermen, waters 4 The mile is mostly done by large fishermen, or has a large boat.

In this case the government must emphasize zoning and extra supervision of sea water in the Linggo Sari Baganti Subdistrict, Pesisir Selatan Regency by involving the authorities such as Pol-water and Satkamla and cracking down on fishermen who violate fishing zones.

4. W-T (Weaknesses Threats) Strategy

- a. The building of a surveillance post

The establishment of a monitoring post to monitor and raid perpetrators using trawlers so that surveillance can be carried out routinely based on the findings in the field in terms of oversight distance from the location of the use of trawls is a factor constraint in this problem because in monitoring with far looting requires a lot of fuel and high costs, each supervision requires a minimum of 2 tons of fuel oil back and forth, and active vessels only 2 to 3 ships with a monitoring post construction strategy in order to facilitate routine monitoring.

- b. Doing training and coaching for fishermen who use trawl

Training and fostering fishermen need to be done to improve the sustainable economy by utilizing the potential of a very rich sea fishermen can meet the needs of the economy with the results of natural resources at sea, but it needs to get attention by preserving the

marine environment is maintained and not polluted by irresponsible fishermen answer.

With the strategy of the policy that is carried out will encourage the participation of fishermen to protect the environment efforts that can be done to hold socialization about protecting the sea, such as protecting coral reefs, as well as cracking down on actors who do damage to marine populations and conducted training and guidance so that fishermen can switch from trawling tigers.

- c. Increased supervision

The government must ensure the protection of fishing areas for traditional fishermen from fishing gear conflicts through recognition of traditional fishermen management areas in zoning plans in each coastal province and district/city; and ensure the transition so that all parties can hold back, and actively prevent conflict and criminalization.

With the strategy to increase oversight, the government must work closely with fishing organizations and law enforcement institutions to prepare integrated and community based supervision schemes. During the transition process, together with local governments prepare social protection schemes against *trawls*.

IV. CONCLUSIONS

From the results of research and discussion, it can be concluded that the strategy of the Maritime and Fisheries Service Office of West Sumatra Province in monitoring the use of trawls in Linggo Sari Baganti District was formulated 10 strategies for monitoring the use of trawls, namely (1) providing training to fishermen such as using a sustainable and environmentally friendly fishing system; (2) increasing the number of fish auction sites (TPI); (3) provision of business capital assistance Increasing the demand for preproduction and processing of fishery products; (4) reinforce zoning for fishing by the authorities (Pol-water and Satkamla) and subject to strict sanctions in accordance with applicable laws and regulations so as to make a deterrent; (5) open the ease of export of fish as raw material for the fishery processing industry

Determination of Allowable Fishing quotas; (6) optimization of utilization of Tracking Technology from the area of fishing (traceability); (7) providing access Fishing area in k group; (8) establishment of monitoring post to monitor and raid perpetrators who use trawlers so that supervision can be carried out as effectively and efficiently as possible; (9) training and guidance using trawl; (10) increased supervision and realization of strategies that have been carried out have not been able to effectively ban the use of trawls.

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