



GOVERNMENT POLICY STRATEGY IN THE DEVELOPMENT OF CAPTURE FISHERIES IN PANGANDARAN REGENCY, WEST JAVA PROVINCE

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ABSTRACT

Pangandaran Regency is one of the regencies in West Java with the capital of the Regency located in the District of Parigi. Pangandaran coast and sea is one of the areas included in the 573 Fisheries Management Area (WPP) zone, WPP 573. This area is a mainstay for capture fisheries. So that the capture fisheries sector contributes greatly to the regional economy and society in the Pangandaran region. Therefore a regional government policy strategy is needed as an effort to develop capture fisheries in Pangandaran Regency. This research aims to describe the profile of local government policy strategies in the past five years as an effort to develop capture fisheries in Pangandaran Regency and to analyze the policies that have been implemented so that they can be recommended in the field of capture fisheries. The research method used in this research is a descriptive method on the basis of case studies. Analysis of the data used in this study uses the Soft System Methodology approach. Based on an unstructured problem-solving approach, it represents an exiting condition. Exiting conditions include technical or production aspects, institutional aspects, and aspects of Human Resources.

Keywords : Pangandaran, Policy, Capture Fisheries, Soft System Methodology.

1. INTRODUCTION

Pangandaran Regency is one of the regencies in West Java with the capital of the Regency located in Parigi District. Pangandaran Regency is bordered by Ciamis Regency and Banjar City in the north, Cilacap Regency in the east, Indian Ocean in the south, and Tasikmalaya Regency in the west. The area of Pangandaran Regency is 168,509 ha with a sea area of 67,340 ha. Pangandaran Regency has a beach length of 91 km.

Pangandaran coast and sea is one of the areas included in the Fisheries Management Area (WPP) 573 zone, WPP 573 covers the waters of the Indian Ocean south of Java to the south of Nusatenggara, Savu sea and East sea. This area is a mainstay for the marine tourism sector and capture fisheries. Both of these sectors are noted to have contributed greatly to the regional economy and the people in the region (Atikah 2013). This potential is realized by the government in terms of economic development in Indonesia which has taken the fisheries and marine sector seriously.

Since the New Order, various policies in the context of developing the fisheries and marine sector have been implemented. Nationally, the policies that have been implemented have an impact on the increase in fisheries production. According to Damanhuri (2000) said that policies that are top down and centralistic will lead to the destruction of positive traditional values and a uniform policy approach between regions will kill local initiatives and the creativity of economic actors. Therefore, the government policy programs implemented have not been able to have an optimal impact on the economic performance of fisheries and marine as a whole, especially on the welfare of fishermen. Pangandaran Regency itself most of the people in the coastal area are very dependent on their livelihood from the fisheries and maritime sector so that the fisheries and maritime sector is often referred to

as "employment of the last resort" which means that labor that is not absorbed in other sectors will be easily absorbed by the fisheries sector and marine,

one of the community groups that utilize fisheries and marine resources is the fishing community, the fishing community is a group of people who carry out activities directly by earning income from fishing activities, fisheries and marine resources can potentially be utilized to improve the level of the life and welfare of fishermen, but in reality there are still many fishermen who have not been able to increase their catches, so that the level of income of fishermen does not increase

Pangandaran Regency has quite a number of fishermen according to the data release from P West Java Provincial Government in 2017 the number of residents who work as fishermen is 5,198 people. Divided into 3 categories of fishermen namely 2,722 full fishermen, 1,238 part-time main fishermen and 1,238 additional part-time fishermen.

The right local government policy strategy is needed in this problem because it involves the lives of many people, especially in social and economic issues. Local government policy strategy is expected to run optimally so that it can achieve the desired goals. The local government of Pangandaran Regency has implemented a number of policies as an effort to improve the welfare of fishermen but in reality there are still many fishermen who have not been able to increase their catches so that their welfare level does not increase. So far there has been no research that describes the regional government policy strategy. Therefore, the author is interested in raising the topic and formulating it into thesis research with the topic "Regional Government Policy Strategy in the Development of Capture Fisheries in Pangandaran Regency".

2. RESEARCH METHODS

2.1 Time and Place

This research was conducted in Pangandaran Regency, the time of the study was carried out for eight months, starting in March 2019 until November 2019. Data collection and other information related to this research activity were carried out by observation and interview with the Marine Agency and Pangandaran Regency Fisheries and fishermen.

2.2 ResearchThe research

Methodsmethod used in this study is a descriptive method on the basis of case studies. Descriptive research is research that seeks to tell the solution of existing problems based on data in the field (Sujdarwo and Basrowi 2009).

The research method used in this research is a case study. Case studies are a form of in-depth research on an aspect of the social environment including humans in it. Case studies can be carried out on individuals, groups of individuals (for example a family), a group of people (teachers, tribes), human environment (rural urban sector) or social institutions (Nasution 2009).

Data and information were collected from respondents through questionnaires. The questionnaire is a number of written questions that are used to obtain information from the respondent in the sense of a report about his personality. Questionnaires can also be defined as a list of questions that researchers will use to

obtain data from sources directly through the communication process or by asking questions / interviews (Arikuonto in Wulandari 2015).

2.3 Sources and Types of Data

Sources of data used in this research are of two types namely primary data and secondary data. Primary data is data obtained directly from the source, then observed and recorded for the first time (Kurniawan 2012). Primary data were taken directly from the field using direct interview techniques with respondents, namely local government officials and the fishing community using a questionnaire while secondary data came from the Pangandaran Regency Maritime and Fisheries Office, Pangandaran Regency Regent's office and the Regional Representative Council Office of Pangandaran Regency.

The type of data used is qualitative data. Qualitative data is descriptive data in the form of spoken or written words from humans about observed human behavior (Faisal and Sanapiah 2001).

2.4 Data Methods Data

Collection collection is done by sampling. The sampling technique used is using purposive sampling method to government officials as policy authority and fishermen as the object of the policy. Samples are taken according to the desired criteria, meaning that the technique of taking samples is not based on random, regional or stratum, but based on the existence of considerations that focus on specific objectives or techniques to determine research samples with certain considerations aimed at making the data obtained later more representative (Sugiyono 2010). While the questionnaire given to the regional government apparatus is to the authorities concerned with the development of capture fisheries namely the Pangandaran Regency Maritime and Fisheries Office, the Pangandaran Regency Regent's office, the Regional Representative Council Office of Pangandaran Regency and to fishermen who meet the desired criteria.

This study uses a sampling method that fits the criteria of all fishermen and local government officials in Pangandaran Regency, West Java that matches the desired criteria and has the same opportunity to be taken as a sample, based on location, anyone, anywhere and anytime when it was found which was then used as a respondent in this study.

2.5 Data Analysis Data

analysis used in this study is descriptive qualitative data analysis. Qualitative descriptive data analysis is an analysis that describes the general description of Pangandaran regency government policy strategy and analyzes policies that can be recommended in the development of capture fisheries in Pangandaran Regency from the perspective of the stakeholders of local government policy and the viewpoint of the fishing community.

Analysis of the data used in this study uses the Soft System Methodology approach. Checkland and Scholes 1990 in Alamsyah 2012 emphasized that Soft System Methodology (SSM) is an ongoing process but the stages in SSM are not rigid so they can be adapted to the situation in their implementation. Brocklesby 1995 in Alamsyah 2012, stated that in its use it is not fixed that the process must be partially advanced, but the movement of each stage in the SSM can go forward or back to each stage. Maqsood et al 2001 in Alamsyah 2012, stated that research can begin at any stage with literacy and retrieval as important components. The seven stages according to (Checkland & Scholes 1990 in Alamsyah 2012) are:

- (1) Assessing unstructured problems.
- (2) Express the problem situation.
- (3) Building a problem definition relating to the problem situation.
- (4) Building conceptual models
- (5) Comparing conceptual models with problem situations.
- (6) Establishing appropriate and desired changes
- (7) Performing corrective actions to the problem.

3. RESULTS AND DISCUSSION

3.1 Analysis of Soft Systems Methodology in Government Policy in the Development of Capture Fisheries

Soft systems methodology (SSM) is a systemic research process which in its implementation uses system models (Checkland 1990). Soft System Methodology analysis will provide a form of capture fisheries development strategy in Pangandaran Regency. SSM will provide a form of effort to improve the government's strategy for the development of high-cost fisheries so that the capture fisheries sector is more feasible to continue to be developed. Soft System Methodology analysis conducted on the development of capture fisheries consists of several stages.

3.1.1 Describing the Situation of UnstructuredUnstructured

Problems/problems in an object are obtained through a form of information through primary or secondary data collection. The results of information gathering will illustrate a number of problems from these problems which will bring up a good form of the issue, conflict relations, and other related problems, so that the problem is known as well as understood.

Unstructured problems are obtained through interviews and document studies from respondents. Based on information obtained from respondents namely from the group of agencies of the Office of Maritime Affairs, Fisheries and Food Security in Pangandaran Regency, fisheries instructors and fishermen explained that the main problem in capture fisheries development activities is the factual discrepancy between related agencies as policy makers and implementing policy programs with local fishermen as objects of the policy program. Penjabara program details can be seen in Table 1.

Table 1. Government Programs

NO	Government Program	Translation Program
1	Management and delivery of TPI	obligatory fishermen sell their catch to the fish auction place
2	Empowerment Small Fishermen	<ul style="list-style-type: none"> -Pembangunan fisheries infrastructures: government assistance in the form of ship above 3 GT and fishing gear and the need to go to sea. - Development of a community watchdog group: the Pangandaran District Pokmaswas in collaboration with the nature and environment lovers community to oversee the conservation, catchment and retribution areas. In Pangandaran district there are two groups of pokmaswas namely pokmaswas at sea and pokmaswas (Mainland Public Waters) due to lack of human resources. - Smartfishing development: this program is held because the majority of Pangandaran fishermen are traditional fishermen then training in the use of fishfinders, GPS and also the training of the use of the Go Online Fisherman application to find out the fishing area and weather at sea. This application is the result of collaboration between the Ministry of Maritime Affairs and Fisheries with the Ministry of Communication and Information. - Fishermen wife program: this program is in the form of training in processing fish produced by fishermen, from this training it is expected that fishermen wives can have additional money. -Promotional exhibition: the activity in this program is the thanksgiving of the fishermen or the celebration of the sea in the month of Muharam as a sign of gratitude to God who has provided abundant fish resources and also an exhibition of processed fish products from the fishermen's wife. Before the usual celebration of sea celebration activities were marked by giving buffalo heads and sowing flowers into the sea. For now the activities of giving buffalo heads or sowing flowers at sea are still carried out but only to preserve tradition. - Fishermen insurance: this program is realized starting in 2017, all registered fishermen get insurance if at any time a work accident occurs. Beginning in 2017 this program is free but starting in 2018 free only per year so the next year paid, insurance costs start from 75,000, 100,000 and 125,000 per one year. If there is an accident at work, the fisherman or family of the fisherman who has a work accident must report to the Marine and Fisheries Service a maximum of 5 days after the incident and be disbursed to their respective accounts. - KUSUKA fishing card (Marine and Fisheries Business Actor Card): This card functions as an identity card to facilitate protection and empowerment, service and guidance to business people in the field of fisheries and marine.
3	Procurement of Land for Fishermen's Houses	Provision of land to fishermen whose homes were swept away by the tsunami and fishermen who did not yet have proper housing.

Based on information obtained from respondents, namely the Regional Government of Pangandaran Regency, the Department of Maritime Affairs, Fisheries and Food Security of Pangandaran Regency, and the Fisheries Instructor of Pangandaran Regency explained that the main problems in the activities of developing fisheries in Pangandaran Regency consisted of three main problems. These problems consist of problems in aspects of

human resources, technical aspects or aspects of production, and aspects of governance. The description of the problem can be seen in Table

A good government policy program will be one of the success factors that will provide the best results on the development of capture fisheries. The implementation of the policy program in Pangandaran Regency can be seen in table 2.

Table 2. The implementation of the policy program in Pangandaran Regency

NO	Program	Description of Program Implementation
1	Management and Implementation of TPI	There are still many fishermen who sell fish not to TPI but directly to middlemen outside TPI due to the selling price higher and not be subject to a levy. Fishermen who sell fish to TPI will be subject to a retribution of 7% and for baskets of 3.5%. This levy of 7% is used for the mutual benefit of fishermen in the Minasari village cooperative units such as mandatory savings for fishermen, mamasuka (Eid funds), old age funds, death funds and medical treatment funds.
2	Small community empowerment	<ul style="list-style-type: none"> - Capture fisheries facilities and infrastructure development (government assistance such as boats and fishing gear) : Aid is uneven because there are so many fishermen that only a few fishermen receive assistance and preferably fishermen who have closeness to the government. Aid only reaches the skipper while ABK does not get help. Not all fishing groups that have received boat assistance above 3 GT can operate because of problems in sailing permits, SIUP, SIPI and capital for fishing supplies. - Development of a community watchdog group: Pokmaswas is going well but it is not evenly distributed due to lack of human resources and so many fishermen. - Smartfishing development: Because the majority of Pangandaran fishermen are traditional fishermen, the results of training in the use of fishfinders, GPS and also the application of go online fishermen have not shown significant results. In addition, there are not many fishermen who have an android mobile phone and there are still many fishermen who still use feeling and see natural phenomena to go to sea. -Fife fishing program: this training program is running well but its application is not working due to lack of capital to make a processed product. -Promotional exhibition: this promotional exhibition runs well every year. - Fisherman insurance: works well but is not evenly distributed because not all fishermen are able to pay insurance annually and not all fishermen have a bank account. - KUSUKA fishermen's card ((Marine and Fisheries Business Actors: fisherman card making process takes a long time.
3.	Procurement of appropriate fisherman house land is	Either the fisherman whose house was swept away by the tsunami or fishermen who do not yet have a house that is eligible for land provision from the maritime and fisheries service Standardization and the construction of his house was assisted by the Ministry of Public Works and Public Housing of the Republic of Indonesia

Table 3. Description of Problems According to Institution

Description of Problems of
Ports and Fish Auction Sites that are still under construction and repair because they have only been running for 2 years.
Non-permanent production results due to inadequate condition of ships and fishing gear so that the fishing area is less extensive and the lack of information about weather forecasts to fishermen going to sea.
Unable to fulfill fishermen's request.
Lack of understanding from fishermen regarding the regional government policy of Pangandaran Regency.

Organizations that do not work as suggested by the instructor
Lack of human resources in the field of fisheries and marine
Lack of equitable assistance from the central government to carry out programs that have been designed due to the large number of fishermen.

Based on information obtained from respondents, namely from a group of fishermen in Pangandaran Regency explained that the main problems in the capture fisheries development activities consisted of three main problems. These problems consist of problems in technical aspects or production aspects, as well as problems in Institutional aspects. Explanation of the problem can be seen in table 4.

Table 4. Explanation of Unstructured Problems According to Fishermen

Description of Problems of the
Port and Fish Auction Places that are still under construction and repair because they have only been running for 2 years.
Non-permanent production results due to inadequate condition of ships and fishing gear so that the fishing area is less extensive and the lack of information about weather forecasts to fishermen going to sea.
Low fish prices.
The training and outreach programs were not evenly distributed so that many fishermen did not join the program.
The process of making a fisherman card is time consuming.
Lack of application of the results of training that has been carried out.
Assistance from the local government is not evenly distributed so there are still many fishermen who do not feel the benefits of local government assistance.
Lack of human resources in the field of fisheries and marine affairs so that there are still many fishermen who have not felt the benefits of counseling and training.

Based on the problem approach, the unstructured problem illustrates the exiting condition. Exiting conditions include technical or production aspects, institutional aspects, and aspects of Human Resources.

1. Technical or Production Aspects.

Technical aspects or aspects of production are those relating to the project development process technically and its operation after the project is built. Based on this analysis can be known the initial design and investment costs. The implementation of this aspect evaluation is often unable to provide a standard decision, or in other words alternative answers are still available. Therefore, it is important to pay attention to one or several experiences in other similar development projects in other locations that use similar techniques and operations. Similar technical successes elsewhere helped in final decision making.

In the catch fisheries development project, the local government of Pangandaran Regency has certainly paid attention to fishing fisheries development projects in other locations that use similar techniques and operations as a reference in the process of catching fisheries development in Pangandaran Regency. The development of capture fisheries in Pangandaran Regency is still in the process of development both in terms of facilities and infrastructure such as ports, hygienic fish auction places, ships and fishing gear. Thus, the results of capture fisheries production in 2016 to 2019 have not been stable.

Table 5. Data on Capture Fisheries Production in Pangandaran District

NO	YEAR	TOTAL PRODUCTION
1	2015	61.201 tons
2	2016	800,5 tons
3	2017	3.437 tons
4	2018	2.099 tons
5	2019	933,97 tons

2. Government

Aspects are an important component in an area besides having a function or a role as an agent for the socialization of planned change that grows from the community and is initiated by the government or relevant stakeholders. More than that, it can act as an adhesive and reinforce the success of the sustainable development of capture fisheries development in Pangandaran Regency.

3. Human Resources

Aspectresource aspect is an important asset in efforts to improve the quality of a community in the process of developing capture fisheries development in Pangandaran Regency.

Fishermen play a very important role as human resources in the process of catching fisheries development, so there is a program of socialization, training and counseling from the local government of Pangandaran Regency, the Department of Maritime Affairs, Fisheries and Food Security of Pangandaran Regency and Pangandaran Regency Fisheries Extension Workers is very important to be realized. The need for human resources is well managed because fishermen play an active and dominant role in every activity in the development of capture fisheries development in Pangandaran Regency.

3.1.2 Stateing the Problem Situation The

rich picture method in the development of capture fisheries can be seen in Figure 4. The rich picture depicted in Gamabr 4, shows that the capture fisheries development activities in Pangandaran Regency have not yet worked well due to technical and production aspects namely the port and place Fish Auction which is still under construction and repair, the production results are not fixed due to inadequate condition of ships and fishing gear so that the fishing area is less extensive and the lack of information about weather forecasts to fishermen going to sea. Another problem illustrated in the rich picture is the aspect of governance where the training and outreach programs are not evenly distributed so that many fishermen do not participate in the program, uneven government assistance and the lack of application of the programs that have been implemented. Another problem illustrated in the rich picture is the aspect of human resources, namely the lack of understanding from fishermen regarding the local government policy of Pangandaran Regency.

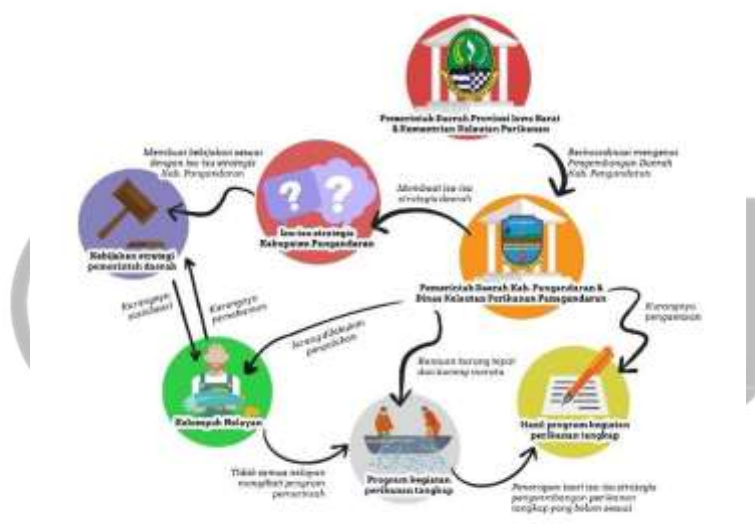


Figure1.Method of Capture Fisheries Development

3.1.3 Defining the System Relevantly The

activity of defining the system in capture fisheries development activities is carried out by stating the root definition. The activity of defining the system is done by identifying the elements of the situation and the parties involved using CATWOE. Root definition is a brief statement that is not ambiguous, by specifying the owners (O), transformation process (T) of the system to be achieved by actors (A), world view / weltanschauung (W) owners who make transformation a meaningful process for the customer (C), and environmental constraints (E) on the transformation of the system, according to the constraints chosen.

Elements of the root definition analysis stated by CATWOE on the development of capture fisheries conducted by the Pangandaran District Government can be seen in table 6.

Table 6. CATWOE analysis on the development of Pangandaran capture fisheries.

Element	Information
C (Customer)	Fisherman
A (Actor)	Ministry of Maritime Affairs and Fisheries, West Java Provincial Government, Pangandaran District Government, Maritime, Fisheries and Food Security Services, Pangandaran Regency Licensing Service, Directorate of Sea Transportation, Fisheries Extension Service, Fishermen, Group Supervisory Society, Non-Governmental Organization, and Cooperative Unit of MinasariVillage
T	Procurement of facilities and infrastructure in accordance with Perda No. 20 of 2016

(Transformation) -	<p>include: a. Fishing Vessels equipped with navigation, sailing safety equipment, and fishing gear that suits the needs of fishermen and fishing location characteristics; b. fueling stations for fishermen; c. an integrated fishing port with a fish auction site; d. port roads and port access roads; e. electricity network and clean water; and f. refrigerated and / or freezing containers. As an effort to realize the facilities and infrastructure, the following efforts are made:</p> <ul style="list-style-type: none"> -Do improve the facilities and infrastructure of capture fisheries by completing the construction and improvement of capture fisheries facilities, one of which is in the process of development, namely the Fish Auction Place and the Fishery Port. -Continuing assistance by increasing the scale of assistance and equitable distribution of assistance given the large number of fishermen in the form of improved conditions of ships and fishing gear as well as information on weather forecasts and capital for fishing. In an effort to realize the program that has been designed - Continuing capital assistance by increasing the scale of giving and equity in the form of venture capital for the implementation of training that has been carried out given the very large number of fishermen. - Equitable training and socialization program for fishermen. -The process of making fishermen's cards easier and faster. -Conduct moresocialization and training <i>intense</i> and broaden the scope so that fishermen will understand more about the policies of the local government given the large number of fishermen. -Improve the quality of human resources in the field of fisheries and marine science so that the development of capture fisheries is evenly given the large number of fishermen.
W (World-view)	Understanding between the government and fishermen must cooperate in the implementation of capture fisheries development.
O (Owner)	Ministry of Maritime Affairs and Fisheries, West Java Provincial Government, Pangandaran District Government, Maritime, Fisheries and Food Security Services, and Fisheries counselors.
E (Environment) -	Weather and uncertain sea conditions that affect fishing activities.

3.1.4 Presenting the Conceptual Model of the System in accordance with the Definition

To be able to express the conceptual model that will be built is by describing the activities that must exist to carry out the tasks stated in the root definition that has been presented in the matrix presented in table 8.

To create the model The conceptual begins with:

1. Formulating the root definition based on its constituent elements, namely CATWOE presented in the matrix presented in table 2.
2. The root definition was used for reference in the activities of formulating a conceptual model that would be recommended for improvement.
3. Determination of the root definition on technical or production aspects, governance aspects, and aspects of human resources.
4. Creating a conceptual model into a solution to existing problems.

Conceptual models can help in structuring problems and can identify relevant factors. Conceptual models will provide connections that make it easier to map problems. The conceptual model can be a true representation of the phenomenon being studied. The conceptual model will help simplify the problem by reducing the number of properties that must be included, so that it is easier to focus on the essentials

The application of the root definition is done by completing the construction of the Fishery Port and the Fish Auction Place in accordance with the principles of the Hygienic Fish Auction Place as well as doing equalization and additional assistance capital such as ship renewal, fishing gear, other needs for fishing and provision for the capital of the crew. The addition of competent human resources in the field of fisheries and marine affairs is carried out as an effort to equalize the socialization and training program up to its application. This is done in order to increase the production of fishermen's catches and the fishermen's wives can create processed fish products from the bycatch so that fishermen families can have additional income.

3.1.5 Comparing Conceptual Models with the Real World

Comparing conceptual models that have been made with the real world, expressed in the table that shows:

- a. Systematic differences between the real world and the model world,
- b. Problems to be stated further to relevant parties (stakeholders)

c. The design of actions to change the situation, the planned changes that must be made to this model activity will later describe the conditions that exist in the capture fisheries development activities in Pangandaran Regency. The conceptual model that is built without referring to the real world (real world), but is built from the ideas / ideas of researchers based on the theories used and formal rules that apply, so that the idea of thinking systems (systems thinking) becomes important in this stage. The results of the conceptual model on the development of capture fisheries from the technical or production aspects, aspects of governance and aspects of human resources in Pangandaran Regency are as follows:

Table 7. Comparison of Conceptual Models with the Real World in the Development of Capture Fisheries in Pangandaran Regency.

NO	Real World	Model Conceptual Model
1	<ul style="list-style-type: none"> -Not evenly distributed fishing vessels equipped with navigation, sailing safety equipment, and fishing gear according to the needs of fishermen and the characteristics of fishing locations. -No presence of a refueling station for fishermen. - Development of fishing ports and fish auction sites that are still under construction 	<ul style="list-style-type: none"> - Procurement of facilities and infrastructure in accordance with Bylaw No. 20 of 2016 include: a. Fishing Vessels equipped with navigation, sailing safety equipment, and fishing gear that suits the needs of fishermen and fishing location characteristics; b. fueling stations for fishermen; c. an integrated fishing port with a fish auction site; d. port roads and access roads to ports; e. electricity network and clean water; and f. refrigerated and / or freezing containers.
2	<ul style="list-style-type: none"> Unequal distribution of capital assistance to fishermen. 	<ul style="list-style-type: none"> -Channel and increase the scale of giving and equity in the form of aid capital in accordance with the recommendations of community leaders, extension workers, NGOs and community groups.
3	<ul style="list-style-type: none"> Human resources in the fishery and marine sector in the Regional Government of Pangandaran Regency are still limited. 	<ul style="list-style-type: none"> - Increase the quantity and quality of human resources in the field of marine and fisheries.

3.1.6 Systematic changes

The sixth stage of the SSM is the stage of formulating action recommendations for improvement, refinement, and change in the real world situation. Systematic change is defining and selecting options to achieve ideal conditions. This change was made as an effort to improve fisheries development in Pangandaran Regency. Action research-based SSM requires positive change and provides benefits for a long period of time. Based on the conceptual model that has been described, as well as making comparisons with the real world, it can be said that the expected systematic change in the technical aspects is the procurement of facilities and infrastructure in accordance with those stated in Perda No. 20 of 2016 concerning Protection and Empowerment of Fishermen and Fish Cultivators, namely continuing the fishing boat provision program which is equipped with navigation, sailing safety equipment, and fishing gear according to the needs of fishermen and the characteristics of fishing locations, procurement of refueling stations for fishermen and continuing construction of fishing ports and fish auction sites. The expected systematic change in the aspect of governance is to channel and increase the scale of giving and equity in the form of aid capital in accordance with the recommendations of community leaders, extension workers, NGOs and community groups. The expected systematic change in the aspect of human resources is to improve the quality and quality of human resources in the field of marine and fisheries.

3.1.7 Actions to improve the problem situation

Efforts to improve the problem situation can be a form of capture fisheries development strategy. The conceptual model described in table 12 has outlined how the remedial action should be taken by all relevant agencies. Improvement efforts that can be made to change the technical aspects is to continue the development of facilities and infrastructure for capture fisheries in accordance with Regulation No. 20 of 2016. Improvement efforts that can be made to change the aspects of governance are to continue the program of capital assistance and increase the scale of giving and equity in the form of aid capital in accordance with

recommendations of community leaders, extension workers, NGOs and Pokmaswas. The aspect of human resources is to increase the quantity and quality of human resources in the field of maritime and fisheries.

Conclusions

Based on the results of research on the Development of Capture Fisheries in Pangandaran District, it can be concluded that:

1. Programs that have been carried out in the development of capture fisheries are land acquisition for fishermen houses. Some programs are still in the process of implementation, namely the procurement of fisheries facilities and infrastructure programs, assistance programs for fishermen. For this reason, the development of capture fisheries in Pangandaran Regency is still in the process of development, in the medium-term development plan the area of catch fisheries development is carried out within 5 years while in Pangandaran Regency it has only been running for 2 years.

2. The catch fisheries development policy program that is still in process, namely the capture fisheries facilities and infrastructure procurement program in accordance with Bylaw No. 20 of 2016, the equal distribution of assistance and capital programs to fishermen. So the recommended strategies are: (1) Procurement of facilities and infrastructure in accordance with Bylaw No. 20 of 2016 include: a. Fishing Vessels equipped with navigation, sailing safety equipment, and fishing gear that suits the needs of fishermen and fishing location characteristics; b. fueling stations for fishermen; c. an integrated fishing port with a fish auction site; d. port roads and access roads to ports; e. electricity network and clean water; and f. refrigerated and / or freezing containers. (2) Distributing and increasing the scale of giving and equity in the form of aid capital in accordance with the recommendations of community leaders, extension workers, NGOs and community groups. (3) Increasing the quantity and quality of human resources in the field of marine and fisheries

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