

The Impact of the Trickle Down Effect on the Program "Kampung Perikanan Budidaya" of the Ministry of Maritime Affairs and Fisheries on The Level of Community Welfare in Sebatuan Village Pemangkat District Sambas Regency



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ABSTRACT: This study aims to describe and analyze the impact of the trickle down effect of the program "Kampung Perikanan Budidaya" in Sebatuan Village, Pemangkat District, Sambas Regency. Sebatuan Village, Pemangkat Subdistrict, Sambas Regency has a huge potential of marine and fisheries resources with a beach of approximately 60 Km and ponds covering an area of approximately 10,329 Ha, with a total of 10 (ten) ponds spread across 4 (four) hamlets of Sebatuan village. However, it did not have an impact on improving welfare and reducing poverty rates because until 2023 the number of poor people in Sebatuan village still amounted to 67%. The results showed that in general the program "Kampung Perikanan Budidaya" is considered appropriate because it refers to an aquaculture program that can avoid fish extinction. However, homogenizing one type of fish in one village limits the potential of fish farming that can be developed. The existence of the program "Kampung Perikanan Budidaya" in Sebatuan Village can increase the income of farmers, but it is inversely proportional to the income and welfare of the community as the location of aquaculture because instead of realizing local economic improvement and creating new economic sources in the fisheries sector in the local area, the program has the potential to cause new problems and conflicts for fish farmers with the surrounding community. Environmental analysis shows that environmental damage occurs due to the entry of aquaculture businesses in the form of waste generated from the process of cultivation activities affecting water quality. Based on these findings to minimize environmental damage, it is expected that the use of chemicals: such as antibiotics and pesticides is done in minimal quantities. It is expected that there is synergy between pond entrepreneurs and the surrounding community in realizing the aquaculture village as a trigger in the economic movement in the village, so that the development of the trickle down effect model can be a new role model for the success of empowerment programs.

KEYWORDS: evaluation, trickledown effect, Village, Aquaculture, Fisheries

1. INTRODUCTION

Sebatuan Village, Pemangkat District, Sambas Regency was designated as an Aquaculture Village in 2021 by the Directorate General of Aquaculture, Ministry of Maritime Affairs and Fisheries (KKP) with reference to Permenkp Number 47 of 2021. The determination of Aquaculture Villages generally aims to develop superior commodities and / or endemic local commodities to prevent extinction and to strengthen economic resilience, quality and equitable growth. Sebatuan Village, Pemangkat Subdistrict, Sambas Regency, was determined because it has enormous potential for marine and fishery resources with a beach of approximately 60 Km and ponds covering an area of approximately 10,329 Ha, with a total of 10 (ten) Pokdakan pond farmers spread across 4 (four) hamlets of Sebatuan Village. Related to the number of Pokdakan Sebatuan Village, Pemangkat District can be seen in the following table:

**Jumlah Kelompok Budidaya ikan (Pokdakan) Desa Sebatuan
Kecamatan Pemangkat
Tahun 2021**

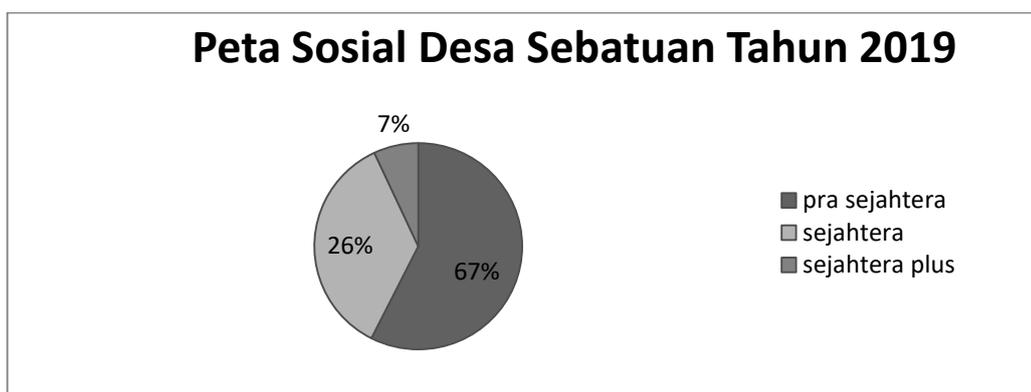
No	Nama Kelompok	Dusun	Jenis Bantuan
1	Tanjung Nipah 1	Sungai Mas	Rehabilitasi tambak tradisional dan rehab tambak budidaya
2	Tanjung Nipah 2	Sungai Mas	Sarana dan prasarana budidaya ikan air payau dan udang
3	Tanjung Nipah 3	Sungai Mas	Percontohan Budidaya udang tradisional
4	Parit Pekong 1	Sebangkau	Sarana dan prasarana budidaya ikan air payau dan udang

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5	Parit Pekong 2	Sebangkau	Percontohan Budidaya udang tradisional
6	Parit Pekong 3	Sebangkau	Percontohan Budidaya udang tradisional
7	Sepakat	Sungai Lakum	Percontohan Budidaya udang tradisional
8	Teluk Nipah 1	Pantura	Percontohan Budidaya udang tradisional
9	Teluk Nipah 2	Pantura	Percontohan Budidaya udang tradisional
10	Teluk Nipah 3	Pantura	Rehabilitasi saluran tambak

Sumber: Dinas perikanan, Peternakan dan Kesehatan Hewan, Kabupaten Sambas, 2023

However, the large number of Pokdatans and the increasing income of pond farmers have no impact on improving the welfare and reducing the poverty rate of the community in Sebatuan Village, because from 2019 to 2023 the poor population of Sebatuan Village still amounted to 67% and the potential owned is not comparable to what is obtained, so that the competitiveness of the Sambas Regency area in the marine and fisheries sector both in the form of raw products and processed products is still low. The following shows the social map of the Sebatuan Village community in 2019.



Sumber: Kantor Desa Sebatuan, 2023

Based on the social map that has been conducted in a participatory manner by the Sebatuan Village community group, 67% (603) of households in Sebatuan are in the Pre-Prosperous category, 26% (234) of households in Sebatuan are in the prosperous category, and 7% (63) of households in Sebatuan are in the prosperous plus category. Pre-welfare refers to the economic condition of households categorized as poor families. The existence of the aquaculture village program in Sebatuan Village is considered appropriate because it refers to an aquaculture program that can avoid fish extinction and can indeed increase the income of farmers, but it is inversely proportional to the income and welfare of the non-farming community around the pond location, and is at odds with the concept of the trickle down effect, namely, that the progress obtained by a group of people will automatically trickle down so as to create jobs and various economic opportunities which in turn will foster improvements in community welfare.

2. LITERATURE REVIEW

2.1. The Concept of Trickle down Effect

The trickle-down effect concept explains that the progress obtained by a group of people will automatically trickle down so as to create jobs and various economic opportunities which in turn will foster various conditions for the creation of an equitable distribution of the results of economic growth. The theory implies that economic growth will be followed by a vertical flow from the rich to the poor that occurs by itself. The benefits of economic growth will be felt by the rich first, and then at a later stage the poor will begin to benefit when the rich begin to spend the results of the economic growth they have received. Thus, the effect of economic growth on poverty reduction is an indirect effect of the vertical flow from the rich to the poor. This also means that poverty will be reduced to a very small extent if the poor receive only a small share of the total benefits of economic growth. This could open the door to an increase in poverty as a result of rising income inequality caused by economic growth that favors the rich over the poor.

Therefore, it can be concluded that economic growth can have a positive impact on poverty reduction if economic growth occurs in favor of the poor (pro-poor growth/PPG). Siregar (2006) also states that economic growth is a necessary condition for poverty reduction, while the sufficient condition is that economic growth must be effective in reducing poverty. This means that growth should be spread across all income groups, including the poor (growth with equity). Directly, this means that growth needs to be ensured in sectors where the poor work (agriculture or labor-intensive sectors). Indirectly, it means that the government needs to be effective enough to redistribute the benefits of growth.

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The case of several countries provides ample evidence of the contribution of economic growth to poverty reduction. The success of East Asian countries in the 1970s and 1980s shows that high economic growth combined with low income inequality can significantly reduce poverty (World Bank, 1993 in Cord, 2007). An analysis by Kakwani and Son (2006) of several Asian countries shows that during the 1990s the economic growth of Korea and Vietnam was pro-poor. Analysis using panel data of developing countries in the 1980s and 1990s also shows the importance of economic growth for poverty reduction (Dollar and Kraay, 2002; Kraay 2005). Related to this, pro-poor growth is currently one of the concepts of development and economic growth in various countries, especially developing countries, where economic growth is used as a tool to reduce poverty. This condition is related to the trickle down effect development concept adopted by the New Order government. The development strategy implemented by the government at that time was centered on high economic growth. However, the accelerated development carried out by the post-crisis government has also not touched the lower classes. Economic growth, which began to increase and approached 5 percent in 2020, was actually followed by an increase in income inequality. The economic growth that began to increase after the crisis was not followed by a significant reduction in the poverty rate.

2.2. Public Policy Evaluation

Public policy evaluation refers to a systematic process of assessing and measuring the performance, effectiveness, efficiency, and impact of policies implemented by the government. This evaluation is conducted using various research methods and data collection tools to gather relevant information about the policy being evaluated. In general, public policy evaluation aims to provide a better understanding of the success or failure of a policy in achieving the desired goals. Public policy evaluation also aims to provide recommendations and feedback for improving existing policies.

According to Briant & White (in Wibawa, 1994: 63) policy evaluation should basically be able to explain the extent to which public policy and its implementation approach goals. The definition of policy evaluation put forward by Briant & White above, directs policy evaluation assessments to be carried out at the implementation stage, and implementation can be assessed to what extent the impacts and consequences are produced. Meanwhile, Rossi & Freeman suggest that program evaluation must be able to answer several questions in evaluation research, namely: program design and conceptualization, program implementation (monitoring and accountability) and program usefulness (impact and efficiency).

According to Samodra Wibawa (1994: 13-14), evaluation aims to provide information to policy makers about how their programs are going. As well as showing what factors can be manipulated in order to achieve better results, to then provide new policy alternatives or just another way of implementation. Based on the explanation of the evaluation by Samodra Wibawa above, the information obtained from the policy evaluation can be used to improve the ongoing program and even provide information - which can be manipulated. Evaluation results can be used to avoid programs that harm the community and determine the sustainability of the program in the future. If the results of the program evaluation show that there are things that need to be changed in the program, then decision makers should take it seriously. This means that they must have new ideas to improve the program, so that the program can avoid failure and can achieve its intended goals.

2.3. Policy Impact Evaluation

Policy evaluation is an activity that concerns the estimation or assessment of policies that include substance, implementation and impact (Anderson: 1975). Policy evaluation is seen as a functional activity. This means that policy evaluation is not only carried out at the final stage but throughout the policy process. Evaluation is intended to assess the extent to which the effectiveness of public policy is accountable to its constituents. And to what extent the objectives are achieved and to see the extent of the gap between expectations and reality. James Anderson in Winarno (2008: 166) explains, in general, policy evaluation can be said to be an activity concerning the estimation or assessment of policies which include the substance, implementation and impact of the policy implementation.

Evaluation has several key functions in policy analysis. First and most importantly, evaluations provide valid and reliable information on policy criteria i.e., how far needs, values and opportunities have been achieved through public action. In this sense, evaluation reveals how far certain goals and targets have been achieved. Second, evaluation contributes to the clarification and critique of the values underlying the selection of goals and targets. Values are clarified by defining and operationalizing goals and targets.

Values are also critiqued by systematically questioning the appropriateness of the goals and targets in relation to the problem at hand. Third, evaluation contributes to the application of other methods of policy analysis, including problem formulation and recommendations. Information about inadequate policy performance can contribute to the reformulation of policy problems. Evaluation can also contribute to the definition of new policy alternatives or policy revisions by showing that previously favored policy alternatives need to be removed and replaced with others (Bardach, E. 2008).

Evaluation has two interconnected aspects; the use of various methods to monitor the outcomes of public policies, programs, and the application of a set of values to determine the usefulness of these outcomes to some people, groups, or society as a whole. Note that these interconnected aspects indicate the presence of both facts and value premises in any evaluative inquiry. Yet many

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of the activities described as "evaluation" in policy analysis are essentially non-evaluative - that is, they are primarily concerned with the production of designative (factual) claims rather than evaluative claims. This calls for an approach to "evaluation research" or "policy evaluation" (Bardach, E. 2008).

In terms of impact, implementation evaluations look at short-term or temporary impacts, while impact evaluations look at permanent or long-term impacts. Impact evaluation pays greater attention to policy outputs and impacts than to the policy implementation process itself. In relation to policy impacts, it is necessary to understand the existence of expected and unexpected impacts. Expected impact implies that when the policy is made, the government has determined or mapped out what impacts will occur.

According to Effendi (in Samodra Wibawa et al, 1994: 31): As some of the characteristics required in every research, ADS as intellectual work must be empirical, cannot, rational, reliable and valid. in other words, ADS must be carried out logically-empirically. The analysis must be empirical in the sense that the assessment carried out must not only be hypothetical or assumptive-theoretic speculative, but must be tested or corroborated by data or at least the results of research that has been carried out. Furthermore, because the analysis is carried out on the available alternatives, the result of which will be our selection of the most appropriate or good alternative, then we must be impartial or biased towards one of the alternatives. That is, before the analysis is carried out, we do not determine or choose which alternative we consider good.

According to Finsterbusch and Motz (in Samodra Wibawa et al, 1994: 33): Policy evaluation studies are descriptive and analytical, on the one hand. Evaluation studies seek to describe the impact and results that have been achieved, on the other hand, evaluation studies try to describe the implementation process of a policy. implementation process of a policy. So in conducting evaluation studies there are several types evaluation studies. Finsterbusch and Motz in Wibawa (2014: 74-75) mention four types of program evaluation based on the strength of conclusions. mention four types of program evaluation based on the strength of the conclusions as follows:

Four types of evaluations

Jenis Evaluasi	Pengukuran Kondisi Kelompok Sasaran		Kelompok kontrol	Informasi Yang Diperoleh
	Sebelum	Sesudah		
<i>Single program after only</i>	Tidak	Ya	Tidak Ada	Keadaan kelompok sasaran
<i>Single program before after</i>	Ya	Ya	Tidak Ada	Perubahan Keadaan Kelompok Sasaran
<i>Comparative after only</i>	Tidak	Ya	Ada	Keadaan sasaran dan bukan sasaran
<i>Comparative before after</i>	Ya	Ya	Ada	Efek program terhadap kelompok sasaran

Sumber: Samodra Wibawa, (2014:74)

From the types of evaluation studies proposed by Finsterbusch and Motz, it can be seen that the single program after only evaluation type is the weakest type of evaluation study. Is the weakest type of evaluation study. The selection of the type of study used by the evaluator in conducting the analysis is often determined by the availability of data on the public policy determined by the availability of data on the public policy. If the program has been completed, then it will only conduct a single program after only program study. On the other hand, if they have more complete data about the program objectives before and after the program, they will tend to conduct a single program after only study before and after the program takes place, it tends to conduct a single program before after study in evaluating the policy conduct a single program before after study in evaluating the policy. Evaluators can only obtain data on program targets when the program has been completed, then they will only conduct a single program after only evaluation.

3. RESEARCH METHOD

This research uses a qualitative approach often referred to as ethno-methodology or field research, to get a basic understanding through first-hand, and is expected to be able to explore answers related to what problems are experienced and what impacts are caused for the Sebatuan Village community by the Sebatuan Village community, Pemangkat District, Sambas Regency as a recipient of the Ministry of Marine Affairs and Fisheries "Kampung Perikanan Budidaya" Program in detail.

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The research subjects were selected purposively. The research subject in this study is the Sebatuan village community, while the informants in this study are as follows: Head of Aquaculture DPPKH Sambas Regency, Head of Sebatuan Village, Pemangkat Sub-district, Sambas Regency, Head of Sebatuan Village, Pemangkat Sub-district, Head of Pokdakan and the community around the program recipients. Data for the purposes of this study came from five sources, namely: documents, archival recordings, interviews, direct observations, and physical devices, in the form of personal documents, official documents, photographs or images of activities, and records of activities.

This type of research is a single program before-after evaluation. The single program before-after type of research aims to examine the impact on the target group during the implementation of the program and after the program is implemented, as well as observing the condition of the target group before the program is implemented. This is to see if there is a change in the condition of the target group after the program is implemented. To test the validity of the research data, researchers used two techniques, namely data source triangulation and data collection technique triangulation. Triangulation of data sources to test the credibility of data is done by checking the data obtained through several This type of research is a single program before-after evaluation. The single program before-after type of research aims to examine the impact on the target group during the implementation of the program and after the program is implemented, as well as observing the condition of the target group before the program is implemented. This is to see if there is a change in the condition of the target group after the program is implemented. To test the validity of the research data, researchers used two techniques, namely data source triangulation and data collection technique triangulation. Triangulation of data sources to test the credibility of data is done by checking the data obtained through several sources, while triangulation of techniques to test the credibility of data and is done by checking the data to the same source with different techniques.

4. RESULTS AND DISCUSSION

Sebatuan Village, Pemangkat District, Sambas Regency was designated as an Aquaculture Village in 2021 by the Directorate General of Aquaculture, Ministry of Maritime Affairs and Fisheries (KKP) with reference to Permenkp Number 47 of 2021. The determination of Sebatuan Village, Pemangkat District as a Aquaculture Village after seeing the potential of fish farming to boost the economy. Like the harvest results carried out by the Parit Pekong milkfish pond group, Sebatuan Village, Sunday (29/05/2023) morning. In a period of approximately four months, this pond group managed to harvest 1.7 tons of fish.

The role of the fisheries sub-sector today is no less important in providing animal protein consumption, increasing farmers' income and improving the economic development of Sambas Regency. Sambas Regency has a coastal length of : 198.25 km is very potential for the development of fisheries and marine sector, namely:

- Potential marine fisheries production of $\pm 6,326.04$ tons/year,
- Potential Land Area of Aquaculture $\pm 8,302.6$ Ha,
- Pond Aquaculture Production Potential $\pm 6,980.45$ tons/year,
- Potential Freshwater Fish Production: 121.05 tons/year.

Kampung Perikanan Budidaya is an area based on superior commodities and/or local commodities by synergizing various potentials to encourage the development of competitive and sustainable fish farming businesses, preserving fish resources, and driven by the community so as to ensure continuous and scheduled production.

The Parit Pekong Fish Farming Group (Pokdakan), Sebatuan Village, Pemangkat District, Sambas Regency, is one of the Aquaculture Village areas that is expected to be able to drive the community's economy. Pokdakan Parit Pekong, which cultivates milkfish in the ponds of Sebatuan Village, has been proposed by the Sambas Regional Government in 2021, through the Dinas Perikanan Peternakan dan Kesehatan Hewan (DPPKH) and designated as a Aquaculture Village by the Directorate General of Aquaculture, Ministry of Marine Affairs and Fisheries (KKP).The Aquaculture Village program by KKP is also in line with the OVOP (One Village One Product) program launched by the Sambas District Government. This is a government effort to build the independence of milkfish farmers in coastal areas. The milkfish farm of the Parit Pekong Group, in Sebatuan Village, Pemangkat Subdistrict, Sambas Regency, West Kalimantan, is an Aquaculture Village area that is expected to be able to drive the economy of the community. In addition, the Aquaculture Village program in Sebatuan village is not only excellent fisheries, but in the future it is expected to become an ecotourism area. This pond location is not only a place for fish farming from maintenance to harvest. But it can also be a place of education, for example, student interns, they can see firsthand how and what to do technology applied in milkfish ponds.

A number of obstacles were encountered, including the scarcity of fertilizers and limited subsidized diesel. Farmers there rely heavily on subsidized fertilizer to grow moss as natural food for milkfish. Then, during the tidal season, they need diesel for the water pump engine. In addition, milkfish farmers in Sebatuan Village also need three-wheeled vehicles to transport the harvest by land. The three-wheeled vehicles are considered more effective and efficient for traversing the narrow roads around the ponds. The following is a document of harvesting and aquaculture methods through tarpaulin ponds, now starting to be favored by Pokdakan in Sebatuan Village.

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Figure 1: Harvesting milkfish from Pokdakan Parit Pekong in Sebatuan Village



Figure 2: Aquaculture method through tarpaulin ponds

Description: The method of aquaculture through tarpaulin ponds has become popular among Pokdakans in Sebatuan Village in recent years.

The existence of a milkfish aquaculture village in Sebatuan Village, with increasing yields, is expected to drive the economy of the community around the ponds, but in reality the expected effect of this program is not in accordance with the program objectives launched by the Ministry of Maritime Affairs and Fisheries, namely the occurrence of economic turnover for the community around the village aquaculture. One of them is mobilizing mothers in the aquaculture village, such as the fish processing industry".The expression of the Sebatuan Village Head is in accordance with Permenkp 47 Tahun 2021 concerning Aquaculture Villages placed in the State Gazette of the Republic of Indonesia in 2021 Number 1361 that the requirements for the establishment of Aquaculture Villages must include: technical aspects, social aspects, economic aspects, and environmental aspects.

1. Technical Aspects

Technical aspects are aspects directly related to the Fish Farming process whose parameters include at least the availability of aquaculture facilities in the form of seed sources and feed sources; availability of aquaculture infrastructure in the form of road access, transportation, and water sources; clarity of land ownership status; having superior commodities and/or local commodities that can support food security and/or high economic value; availability of land and/or Fish Cultivation containers that are currently being operated; availability of supporting production facilities in the form of medicines and laboratories; availability of other supporting facilities at least in the form of cold storage and/or Fish processing units in accordance with the type of Fish commodity cultivated; Fish Cultivation technology used; and potential land/water potential for aquaculture. In general, the aquaculture village program is considered appropriate because it refers to an aquaculture program that can avoid fish extinction. In addition, fish farming will have an impact on fulfilling fish consumption needs. However, this program has not touched on the main problem of fish farming among farmers. Moreover, homogenizing one type of fish in one village limits the potential for more fish farming. The problem that must be resolved immediately is to overcome the high price of fish feed. The high cost of fish feed is still one of the

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obstacles in developing aquaculture businesses in Sebatuan Village, Pemangkat Subdistrict. Fish farming farmers are currently facing the problem of expensive fish feed.

As a result, depending on fish feed sellers (ijon), even though many tools have been assisted for independent feed, it still cannot run because protein fish feed raw materials are difficult to obtain for aquaculture farmers. So, to save costs, it is necessary to provide assistance in feed technology and fish vitamins to aquaculture farmers from the Sambas Regency, Dinas Perikanan Peternakan dan Kesehatan Hewan (DPPKH) to create other fish feed breakthroughs that can be continuously produced in a self-sufficient manner, so that aquaculture farmers can easily obtain independent feed raw materials without having to rely on industrial feed. The implementation of counseling and mentoring to program recipients and communities around the implementation of the program is expected to achieve optimization of aquaculture production.

2. Social Aspects

The social aspect is an aspect related to human resources and the impact of human relations, the parameters of which at least include community institutions in the form of fish farming institutions and/or fish processing and marketing institutions; the number of fish farmers; the main occupation of the community as fish farmers; and the potential for social conflict. The development of the trickle down effect model can be a new role model for the success of empowerment programs. Especially the genuine implementation for the development of Sustainable Development Goals (SDGs). Of course, the development of the Pokdakan Parit Pekong and Tanjung Nipah models is unlikely to succeed if there are no supporting instruments. As part of community control and participation, it is not wrong if the mentoring program must go hand in hand with an awareness program for community working groups. For this reason, support from various parties is needed in the process and stage of awareness. In addition to immaterial government program support, the encouragement of applicable policy changes is an integral part. The encouragement of this change must lead to a revolving fund 'support' program for Pokdakan activists, especially those that are most realistically needed by the Sebatuan Village community. The results of interviews with fish farmer respondents said that the increase in social relations/interaction occurred not only between members of the farmer group, where they usually held regular group meetings, but also interactions with outside communities, such as providers of seeds, feed, and other fish farming facilities and infrastructure, buyers of cultivated products, as well as transfer of information between farmers and fisheries extension officers from the agency.

3. Economic Aspects

Economic aspects are aspects related to the income of fish farmers, surrounding communities, and regions, whose parameters include at least production volume; production value; market potential and access; and access to capital/financing. That to strengthen economic resilience, quality and sustainable growth in order to improve maritime, fisheries, and marine management through increased production, productivity, quality standardization, and added value of marine and fisheries products and to increase aquaculture production, income and welfare of fish farmers, and local community participation. The aquaculture village program should have been effective in driving the economy in the village, by involving the surrounding community as pond workers, but in reality they brought in pond workers from Singkawang. And this has no impact on reducing the number of poor families, which reaches 67% in Sebatuan Village, considering that around 200 families of Sebatuan village work as traditional fishermen whose income is very dependent on the weather. Furthermore, the Sebatuan Village Head said, "I hope there will be synergy between pond entrepreneurs and the surrounding community in realizing the aquaculture village as a trigger in the economic movement in the village through the aquaculture village". Further revealed by Urai Didin as a Supervisor from UPT PSDKP (Supervisor of Marine Fisheries Resources of West Kalimantan Province), that: "the aquaculture village program of the Ministry of Marine Affairs and Fisheries, does not solve the main problem in the issue of fish farming. Instead of realizing local economic improvement and creating new economic sources in the fisheries sector in the local area, the program has the potential to cause new problems and conflicts for fish farmers with the surrounding community.

4. Environmental Aspects

Environmental damage due to the entry of inland aquaculture is generally initiated by the clearing of land intended for aquaculture that does not pay attention to environmental aspects and the series of cultivation processes carried out inappropriately, resulting in a decrease in the quality of the surrounding environment. For example, waste generated from the process of fish farming activities will affect water quality. To maintain the sustainability of a body of water, aquaculture activities must pay attention to the amount of waste load both from the fish farming business and from the environment. Areas that are used for the benefit of aquaculture that are less controlled have a negative impact on the aquatic environment. As stated by several residents of Sungai Mas Hamlet: "Before the existence of aquaculture ponds, people around the hamlet if only to find a side dish (shrimp and mullet fish), it is enough just to put mines / nets on the side of the river. But after aquaculture ponds, we have to look for shrimp/fish in the river which is quite far and the results of the net are also not much, because after the ponds are harvested, they clean the moss in the ponds using chemicals that pollute the river, thus poisoning the shrimp and fish around the tributaries". The problem that arises is environmental pollution caused by various activities around the waters and from the aquaculture business itself. This is also supported by Maniagasi et al. (2013) in their research which explains that in general the quality of waters near aquaculture is in relatively good condition if the

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aquaculture business can be controlled properly. In addition, aquaculture also has an impact on the socio-economy of the community. The environmental impact of aquaculture can be minimized by implementing various strategies. These strategies include:

1. Minimizing the use of chemicals: Aquaculture operations should strive to use minimal amounts of chemicals such as antibiotics and pesticides. This can be achieved by using alternative methods such as integrated pest management, which utilizes natural predators to control pests, and the use of probiotics to reduce the need for antibiotics.
2. Reducing water pollution: Aquaculture operations should seek to reduce water pollution by implementing best management practices such as proper waste management and water treatment. This can be achieved by using proper filtration systems, aeration systems, and sedimentation tanks.
3. Minimizing the spread of disease: Aquaculture operations should seek to minimize the spread of diseases by implementing biosecurity measures such as the use of quarantine tanks and strict implementation of cleaning protocols.
4. Utilize closed containment systems: Aquaculture operations should look to utilize closed containment systems, which are designed to contain and treat all water and waste within the system. This can help reduce the spread of disease and minimize water pollution.
5. Utilize sustainable feed sources: Aquaculture operations should seek to utilize sustainable feed sources such as plant-based feeds, which can reduce the need for fishmeal and fish oil.

5. CONCLUSIONS AND SUGGESTIONS

5.1. Conclusion

Based on the results of the research and discussion previously described related to the evaluation of the impact of the trickle down effect on the Ministry of Maritime Affairs and Fisheries' "aquaculture village" program on the level of community welfare in Sebatuan Village, Pemangkat District, Sambas Regency, reviewed based on technical aspects, social aspects, economic aspects, and environmental aspects, it can be concluded that:

1. Referring to the technical aspects, in general, the aquaculture village program is considered appropriate because it refers to an aquaculture program that can avoid fish extinction. In addition, fish farming will have an impact on the fulfillment of fish consumption needs. However, this program has not touched on the main problem of fish farming among farmers. Moreover, homogenizing one type of fish in one village limits the potential for more fish farming. Problems that must be resolved immediately are the high price of fish feed, poor road access, and the many complaints from the community regarding the many regulations for licensing aquaculture businesses.
2. Analysis based on social aspects, there is an increase in social relations/interaction not only between members of the cultivator group, where they usually hold regular group meetings, but also interactions with outside communities, such as with providers of seeds, feed, and other fish farming facilities and infrastructure, with buyers of cultivated products as well as transfer of information between cultivators and fisheries extension officers from the agency.
3. Analysis based on economic aspects, it can be concluded that: the aquaculture village program is not effective in driving the economy in the village, because it has no impact on reducing the number of poor families which reaches 67% in Sebatuan Village, there is no synergy between pond entrepreneurs and the surrounding community in realizing the aquaculture village as a trigger in the economic movement in the village. Instead of improving the local economy and creating new economic resources in the fisheries sector in the local area, the program has the potential to create new problems and conflicts for aquaculture fish farmers and the surrounding community.
4. There is environmental damage due to the entry of aquaculture businesses, generally initiated by land clearing intended for aquaculture businesses that do not pay attention to environmental aspects and chemical waste generated from the process of fish farming activities that pollute rivers, thus poisoning shrimp and fish around tributaries.

5.2. SUGGESTIONS

Based on the results of research related to the evaluation of the impact of the trickle down effect on the Ministry of Maritime Affairs and Fisheries' "aquaculture village" program on the level of community welfare in Sebatuan Village, Pemangkat District, Sambas Regency, the following suggestions are made:

1. To overcome the expensive price of fish feed, assistance in feed technology and fish vitamins is needed for aquaculture farmers from the Department of Fisheries, Livestock and Animal Health (DPPKH) of Sambas Regency.
2. To strengthen economic resilience, local community participation is in accordance with the background of the issuance of Permenkp 47 of 2021 concerning Aquaculture Villages, it is hoped that aquaculture entrepreneurs will involve / employ the surrounding community in the aquaculture village program, so that there is a "trickle down effect" as launched by the Ministry of Maritime Affairs and Fisheries.

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3. Minimize the use of chemicals in aquaculture operations, ie: strive to use minimal amounts of chemicals such as antibiotics and pesticides. This can be achieved by using alternative methods such as integrated pest management, which utilizes natural predators to control pests, and the use of probiotics to reduce the need for antibiotics.

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