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Formulation of Strategy for Sustainable Empowerment of The Fishing Community at Makasar Island Baubau City Indonesia

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ABSTRACT

This research aims to formulate a strategy for sustainably empowering fishing communities. This research uses a qualitative approach, namely research that emphasizes more aspects of an in-depth understanding of a research object. This research was conducted on Makassar Island, Baubau City Indonesia, where most of the population has a livelihood as fishermen. This research uses informants from fishermen, community leaders, and local government officials. To obtain these informants, purposive techniques are used, where informants are selected based on their ability to provide in-depth information. This study used several data collection techniques, namely observation, interviews, documentation, and focused group discussion. Data analysis in this study uses SWOT analysis (Strengths, Weaknesses, Opportunities, and Threats. The results of the study obtained several formulations of strategies for empowering fishing communities as follows: first, community-based empowerment of fishing communities; second, strengthening fishermen institutions; third, capital access development; fourth, mastery of fishing technology; and fifth, improve the technical capabilities of professional fisheries extension workers. This study recommends that the empowerment of fishing communities in Makassar Island should be directed at community-based empowerment. This approach sees that various social problems that exist in the fishing community are not only caused by problems that arise in the fishing community internally but also caused by various structural problems. This approach is also very aware of the importance of capacity building in fishing communities to increase the strength and independence of fishing communities.

INTRODUCTION

Development in the fisheries and marine sector has a very important meaning to encourage the success of a country's national development because the existence of such a large sea wealth can provide opportunities to improve community welfare and is a source of national economic growth (Bennett et al., 2020; Penca et al., 2021). Thus marine wealth on Makassar Island, Buton Islands, Indonesia is quite large when viewed based on the potential of marine resources. Although this area only has a coastline of ± 42 km, fishing communities can also take advantage of the rich sea around the waters of Buton Island, such as Muna waters, Bombana waters, and Wakatobi waters (Alimina et al., 2015). Geographically, Makassar Island is located in the area of 4.96º – 6.25º South Latitude and the area of 120.00º – 123.34º East Longitude (Cappenberg &; Mahulette, 2019).

One of the efforts taken to manage marine wealth on Makassar Island is to build a marine protected area. Aquatic conservation has a very important meaning and is positively correlated with the preservation of various natural resources and can sustainably in a sustainable manner (Levin et al., 2019; Marie et al., 2020). The idea of sustainable fisheries emphasizes a balance in social, economic, and ecological aspects (Russo et al., 2019; Smith & Basurto, 2019; Upe et al., 2022).

However, the problem faced by the fishing community on Makassar Island is that they develop fishing businesses only as traditional fishermen.

They catch fish only using simple fishing gear such as fishing rods and Ngkuru-Ngkuru. Thus, their understanding of the fishing business is a small-scale fishing business and the results are only for the fulfillment of daily living needs (subsistence). In addition, concerning the ability of capital for business development, fishermen generally have very limited financial capital, if they market their catch, they are only classified as small traders.

Therefore, to improve the standard of living and welfare of fishing communities and communities in general, a community-based fishing community empowerment strategy is needed (Auster et al., 2021; Sahar et al., 2020; Torre et al., 2019; Valentina et al., 2021). In addition, this community empowerment strategy is also needed to overcome various problems in the management of fishery resources on Makassar Island today such as conflicts between fishermen caused by the struggle for fishing areas, damage to some water areas caused by the use of fishing equipment that damages the environment and this is of course quite important, especially for the sustainability of marine area management for generations in the future.

Community empowerment strategy can be understood as a program and process (Barrios et al., 2020; Mendes, 2019). The meaning of empowerment as a community empowerment program is a series of activities whose achievement time has been predetermined (Connolly et al., 2020; Trouillet et al., 2019). The meaning of empowerment as a process is an activity that takes place continuously (Ahmed et al., 2021; Lee et al., 2021). This contains the understanding that empowerment seeks to prepare structures and systems in community life so that they are always responsive and proactive to various problems in common life.

The community-based empowerment strategy in this paper is analyzed using the SWOT (Strengths, Weaknesses, Opportunities, and Threats) method. SWOT analysis is a method to systematically understand various aspects to formulate the most profitable strategy. This analysis is thinking by maximizing the strengths and opportunities possessed, and then simultaneously trying to minimize weaknesses and threats (Li, 2020). SWOT analysis is widely used because it can help and facilitate determining the strategy of an organization (Agyekum et al., 2020; Giusti et al., 2020; Paramalingam et al., 2020).

The strategy is formulated from various external and internal factors that influence it. Various existing factors are then mixed to produce alternative strategies by maximizing strengths, taking advantage of opportunities, minimizing weaknesses, and overcoming challenges (Dampson et al., 2020; Del Barrio Alvarez & Sugiyama, 2020). SWOT analysis is one of the tools and ways to make a decision, especially strategic decisions, and is one of the most powerful analytical instruments when used appropriately (Bayliss et al., 2020; O'Brien et al., 2020). This ability lies in the ability to conduct strategic analysis, the ability to maximize the role of strength factors, and take advantage of opportunities, as well as to minimize weaknesses and suppress the impact of threats that arise (Irfan et al., 2020; Longhurst et al., 2020; Pietrantonio et al., 2021).

The purpose of this study is to formulate a strategy for empowering fishing communities in a sustainable community-based manner. This is very important considering that this approach views various social problems that arise in people's lives as not only caused by behavioral deviations but also caused by structural problems.

METHODS

This research uses a qualitative approach. This research was conducted on Makassar Island, Buton Islands, Indonesia. The reason Makassar Island is used as a research location is because most (80%) of the population have a livelihood as fishermen. This research uses informants from fishermen, community leaders, and local government officials. To obtain these informants, purposive techniques are used, where informants are selected based on their ability to provide in-depth information. The search for field data in this study emphasized primary data, although the need for secondary data is still needed. Here it can be understood that the need for secondary data is needed to strengthen qualitative data. For this reason, in this study, several data collection techniques were used, namely observation, interviews, documentation, and focused group discussion.

After the primary and secondary data are collected then processed and analyzed which refers to the research problem carried out according to

descriptive-qualitative analysis. Based on this analysis, data collection and data analysis were carried out simultaneously during this research process. It is based on the thought that when data collection is indirectly has also occurred a process of analysis of research data. Data analysis in this study uses SWOT analysis, which analyzes strategic factors in fisheries business development including strengths, weaknesses, opportunities, and threats. In this analysis, the preparation of the strategy plan goes through several stages, namely: the data collection stage (evaluation of external factors, internal), the analysis stage (description of the external internal matrix), then the decision-making stage (Lee et al., 2021).

RESULTS AND DISCUSSION

Identification of the Internal Environment

The internal environment is the conditions and factors that exist within the community area that can function as a force to support and encourage business development or vice versa, namely as a weakness that hinders the development of fisheries business on Makassar Island, as illustrated in table 1 below:

Table 1. Assessment of Strengths and Weaknesses

No	Parameters	Indicators	S/W
A. Social			
1	The existence of social and cultural capital (S1).	Fishermen on Makassar Island are ethnic Butonese who have trusts, values, norms, and social networks.	S
2	Sufficient manpower is available (S2).	The population of Makassar Island is 4,975 people and most (80%) consist of fishermen.	S
3	Great motivation as a fisherman (S3).	The fishing community on Makassar Island has pursued and maintained the profession of fishermen for generations.	S
4	Business in groups (S4).	Fishermen belong to patron groups, clients, and cooperatives.	S
5	Socio-economic organizing generally still takes place informally (W1)	Socio-economic organizing generally takes place informally in a kinship nature, with fishermen who are members of cooperatives, still a small part.	W
6	Weak capital (W2).	Generally, fishermen still live with a subsistence economic system, which is income earned only to meet daily family needs.	W
7	Relatively low formal education (W3).	Ineffective implementation of counseling and training conducted by the government.	W
B. Economics			
8	There is alternative work (S5).	Fishermen's alternative jobs; Seaweed farming, carpentry, and transportation services.	S
9	Large Fisheries Potential (S6).	The great potential, especially in capture fisheries with an ocean area of 200 miles and seaweed cultivation of around 960 Ha which has only been utilized around 111.6 Ha. The length of the coastline along ± 42 Km	S
10	Simple equipment and technology (W4).	The operation of fishing boats is still limited in the water area around the waters of Makassar Island, not yet reaching a wider area.	W
11	Limited access to marketing (W5).	There is no Fish Auction Place, as a result, fishermen sell fish to intermediary traders at varying prices.	W
12	Limited supporting facilities (W6).	For example, the absence of an ice factory, as a result of which fishermen do not dare to keep fish for a long time.	W

Note. S = Strength; W = Weakness.

As illustrated in table 1, several parameters and indicators are evaluated to assess internal strengths and weaknesses. This parameter covers social, economic, technological, and other aspects related to the development of fisheries business on Makassar Island. The indicators listed in table 1 provide an overview of specific conditions that support (strength) or hinder (weakness) the development of fisheries business. By understanding internal strengths and weaknesses, appropriate strategies can be formulated to optimize potential and overcome challenges faced by fishing communities on Makassar Island.

Evaluation of External Strategy Factors

The external environment is all factors and conditions that exist outside the community area that may be used as an opportunity or threat in realizing the development of fisheries business. Based on the results of the study, external factors were obtained which were used as an opportunity or threat in fisheries business development efforts on Makassar Island as presented in the following Table 2.

Table 2. Assessment of Opportunities and Threats

No	Parameters	Indicators	O/T
A. Social			
1	Regional Autonomy Policy (O1).	The local government's policy is very strong towards empowering fishing communities and making the fisheries sector the mainstay sector of Bau Bau City.	O
3	Human resource development (O2).	A vocational school has been built that has a concentration in the marine sector, namely the marine school on Makassar Island.	O
B. Ecology			
3	Policies with priority in the fisheries sector (O3).	Some policies favor the welfare of small fishermen and encourage the eradication of Illegal Fishing.	O
4	The Development of Bau Bau City (T4).	The pace of development of Bau Bau City has an unfavorable impact on the sustainability of the aquatic environment on Makassar Island. The waters around the island at this time, have begun to be polluted by pollution sourced from sewage and smoke of motorized boats as well as industrial and household waste.	T
C. Economics			
5	Non-governmental organizations that empower fishermen (O4).	The involvement of the Sintesa Non-Governmental Organization in the development of cooperatives on Makassar Island, which currently has 110 members.	O
6	Fluctuating selling prices (T1).	The selling price of fishery production tends to be unstable.	T
7	Limited supporting facilities (T2).	There is no ice factory on Makassar Island, and as a result, fishermen do not dare to keep fish for a long time.	T
8	The existence of fishing that damages the environment (T3).	The existence of destructive fishing and illegal fishing carried out by fishermen from other regions can damage the aquatic environment on Makassar Island.	T

Note: O = Opportunities. T = Threats.

Table 2 provides a comprehensive overview of external factors to consider in planning a fishing strategy in Makassar. By understanding the opportunities that exist and facing the threats that may arise, strategic steps can be formulated to improve the success of fishing efforts and overcome the challenges faced.

Formulation of Strategy for Sustainable Empowerment of the Fishing Community

After the analysis of the next strategic environmental conditions, a strategy formulation for its development is carried out by utilizing a SWOT analysis (strengths, weaknesses, opportunities, threats). This analysis is based on the idea of maximizing various strengths and opportunities, but simultaneously trying to overcome or reduce weaknesses and threats (Barceló-Llull et al., 2021; Dalic et al., 2021; Mallick et al., 2020). The formulation of strategies for the development of the fishing business in Makassar Island can be seen in the following Table 3.

Table 3. Strategy Formulation for Empowering Fishing Communities.

Internal External	Strengths 1. The existence of social and cultural capital (S1). 2. Enough manpower available (S2). 3. Great motivation as a fisherman (S3). 4. Group business (S4). 5. Alternative employment (S5). 6. There is great fisheries potential (S6).	Weaknesses 1. Traditional fishermen (sub-sistence) (W1). 2. Weak capital (W2) 3. Simple equipment and technology (W3). 4. Low formal education (W4). 5. Limited marketing access (W5). 6. Limited supporting facilities (W6).
Opportunities 1. Government policies that support the development of the fisheries sector (O1). 2. Fishermen's welfare improvement policy (O2). 3. Fisheries support facilities improvement policy (O3). 4. Traditional fishermen empowerment policy (O4)	Strategy SO: 1. Driving the transformation of fisheries technology S3, S4, S5, S6 Vs O3, O4. 2. Developing access to capital for traditional fishermen S1, S2 Vs O1, O2.	Strategy WO: Institutional Strengthening of Fishermen Community W1, W2, W3, W4, W5, W6 Vs O1, O2, O3, O4.
Threats 1. High oil prices (T1). 2. Limited supporting facilities (T2). 3. The emergence of fishing that damages the aquatic environment (T3). 4. The development of Baubau City that damages the aquatic environment (T4).	Strategy ST : 1. Develop marketing access S4, S5, S6 Vs T2 2. Developing supporting facilities and infrastructure S1, S2, S3, Vs, T1, T3, T4.	Strategy WT : Community-based empowerment W1, W2, W3, W4, W5, W6 Vs T1, T2, T3, T4.

SO Strategy: "Maximizing fisheries production by developing capital access, combining the advantages of its potential with the use of technology". SO strategy is a strategy that uses power to gain opportunities (Ali et al., 2021; Harrikari et al., 2021; Zima et al., 2020). The SO strategy seeks to strengthen comparative advantage and obtain opportunities for goal achievement. The comparative advantages of fisheries potential in Makassar Island are large, especially in seaweed cultivation and capture fisheries. The length of the coastline is ± 42 Km, with the support of large motivational communities who have pursued and maintained the profession as fishermen for

generations and are members of the client patron group. The entire potential has not been utilized optimally, it is proven that seaweed cultivation is around 960 Ha which has only been utilized around 111.6 Ha.

The low production of capture fisheries is due to the fishermen's operating area only around the waters of Makassar Island, while the sea area that can be utilized is 14 miles. Making maximum use of this potential will positively affect the increase in production and welfare of fishermen. This is becoming quite possible, given the growing number of technology options available to implement. Similarly, the existence of social and cultural capital that is still lived and practiced by fishing communities as principles that are considered good and true. On the other hand, the Central Government's policy that prioritizes the fisheries sector is an opportunity to obtain financial support for the success of this strategy. In addition, it will also mobilize the participation of financial institutions and non-governmental organizations to increase productivity.

WO strategy: "strengthening of fishing communities". The WO strategy seeks to address internal weaknesses through opportunities from the environment externally (Heshmati et al., 2022; Li, 2020). Opportunities are used to minimize weaknesses. The weakness of the Bau Bau City Regional Government in general is in the dimension of employee quality. Apparatus resources tend to be unable to support the implementation of quality services to fishermen. These weaknesses eventually accumulate in service products that are not to the needs of fishing communities. The regional autonomy policy is expected to provide opportunities for the Bau Bau City Government to make adjustments where the region has the authority to synchronize the organization and resources of the apparatus with the wishes of fishermen.

Through the reorganization process, personnel organizations are designed in such a way as to be able to provide quality services. The synergy of efficient and effective organization and professional personnel resources will produce quality services for fishermen. The fishing community on Makassar Island can be understood as a community that supports and depends on each other from various kinds of ties (family, relatives, culture). Therefore, for fishermen's businesses to continue to develop sustainably, efforts are needed to strengthen social ties, then synergy with socio-economic institutions and organizations is needed both horizontally and vertically.

ST Strategy: ST strategies are used to avoid or minimize the impact of threats originating from outside the organization (Kittel et al., 2020; Shang et al., 2020). This strategy harnesses power to minimize or avoid threats (Palomares et al., 2021; Sahani, 2021). The main threat faced in increasing fisheries production is market prices that tend to fluctuate. Similarly, the development of Bau Bau City has an unfavorable impact on environmental sustainability in the waters of Makassar Island and its surroundings. The waters around Makassar Island have been polluted by pollution sourced from sewage and smoke from motorized boats as well as industrial and household waste in Bau Bau City. The existence of destructive fishing and illegal fishing carried out by fishermen from other regions has damaged the aquatic environment.

WT strategy: "community-based empowerment of fishing communities". WT strategy is used to minimize the impact of threats originating from the external environment (Madurai Elavarasan et al., 2020; Papapostolou et al., 2020). For this reason, in fisheries management on Makassar Island, it is very important to pay attention to social systemic empowerment, namely empowerment that pays attention to cultural and structural aspects with the principle of sustainability, so that the implementation of the empowerment of fishing communities on Makassar Island, the government will not appear as a dominant actor. This approach understands the importance of strengthening the capacity of a community to encourage increased independence and strength internally, through readiness to internally control material and non-material resources through capital ownership. This approach views various social problems that arise in people's lives as not only caused by behavioral deviations but caused by structural problems (Shao & Pan, 2019; Wirutomo, 2013; Woolcock, 2001).

Formulation of strategy for sustainable empowerment of the fishing community in this study, namely: first, community-based empowerment of fishing communities; second, strengthening fishermen institutions; third, capital

access development; fourth, mastery of fishing technology; and fifth, improve the technical capabilities of professional fisheries extension workers.

CONCLUSION

Based on the analysis and formulation of community-based fishing community empowerment strategies in Makassar Island using SWOT analysis, several formulations were obtained as follows: first, community-based empowerment of fishing communities; second, strengthening fishermen institutions; third, capital access development; fourth, mastery of fishing technology; and fifth, improve the technical capabilities of professional fisheries extension workers.

The empowerment of fishing communities in Makassar Island should be directed at community-based empowerment. This approach will encourage harmonious coordination between communities, non-governmental organizations, and the government. Thus, it is hoped that such a large sea wealth can provide opportunities to improve the welfare of the community sustainably.

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