



Analysis of Community Participation Level in Aquaculture in Situraja District, Sumedang Regency

**Mia Sonia ^{a*}, Ine Maulina ^a, Roffi Grandiosa Herman ^a
and Iwang Gumilar ^a**

^a *Department of Fisheries, Faculty of Fisheries and Marine Sciences, Universitas Padjadjaran, Bandung Sumedang Highway KM 21, Jatinangor 45363, Indonesia.*

Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

Article Information

DOI: 10.9734/AJFAR/2023/v24i6647

Open Peer Review History:

This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: <https://www.sdiarticle5.com/review-history/103894>

Short Research Article

Received: 10/06/2023

Accepted: 14/08/2023

Published: 22/08/2023

ABSTRACT

This research aims to analyze the level of community participation in aquaculture in the Situraja District, Sumedang Regency. The method use in this study is a descriptive with a quantitative approach. The data for this study consists of two types: Primary data and secondary data. Primary data were obtained through written questions using a questionnaire distributed to 50 respondents. The research findings regarding the level of community participation in aquaculture in the Situraja District, Sumedang Regency, indicate an average community participation index of 0.55, which is still considered low. The community participation is at the Informing stage, where information is conveyed to the community. At this level, participation is considered Tokenism. In this stage, the community is merely included for formalities, allowing them to hear and have the right to voice their opinions, but they are not yet actively involved in decision-making.

*Corresponding author: Email: mia19002@mail.unpad.ac.id;

Keywords: Community participation; aquaculture; Sumedang regency; Situraja district.

1. INTRODUCTION

Indonesia is one of the countries capable of developing the future of the fisheries sector, both in capture fisheries and aquaculture. The aquaculture sector can be a major driver of economic growth in the fisheries sector, considering Indonesia's strategic and advantageous geographical location, which supports the potential of its fishery resources.

The economic structure of Sumedang Regency, as one of the regencies consistently contributing to West Java's growth, relies heavily on the Agricultural, Forestry, and Fisheries Sector, accounting for 21.2% [1]. Aquaculture in Sumedang Regency has been experiencing annual growth, with an average increase of about 2.5-6%, covering aquaculture in calm water ponds, swift water ponds, and rice field ponds.

Productivity in the development of fisheries business is still relatively low, around 0.90-1.1 kg/m²/year, depending on the conditions and human resources in aquaculture management, as well as the support from the government and relevant parties [2]. Therefore, support and participation from the community are crucial for the development of fisheries businesses in Sumedang Regency. Community participation is a supportive force in utilizing existing fisheries resources, where this community involvement is expected to be a solution to various issues in the existing fisheries management system in Indonesia [3].

Participation will have an influence in deciding policies, while also creating a social control system that pertains to the lives of the respective community [4]. For the development and management of aquaculture production, the participation and support of the community are crucial. Community participation refers to the involvement of the community in decision-making processes and the implementation of programs, wherein the community also benefits from the policies and programs enacted.

Based on the aforementioned background, which will influence a sense of belonging and a sense of responsibility of the community in carrying out aquaculture management, it is important to conduct research aimed at determining the level

of community participation in aquaculture management in the Situraja District.

2. MATERIALS AND METHODS

This research was carried out in Situraja District, Sumedang Regency. The data collection and analysis time is from March – June 2023. Covering preparatory activities, field research, data retrieval, data processing and report preparation. The method used in this study is the quantitative descriptive method. The population in this study is the community in the Situraja District of Sumedang Regency, while the sample in this study consists of the community members who are part of the fish cultivation groups in the Situraja District of Sumedang regency. The sampling technique used was purposive sampling method with the criteria set by the researcher by the research objectives. The data for this study consists of two types: primary data and secondary data. Primary data were obtained through written questions using a questionnaire distributed to 50 respondents.

2.1 Data Analysis

Analysis data used in this study is participation index.

2.1.1 Participation index

According to Gumilar [5] the Community Participation Index is an aggregate measure used to assess community participation on a particular issue, ranging from 0 to 1. The level of community participation in environmental management is measured using the Participation Index (IP), which is an aggregate measure designed to assess a specific variable, in this case, community participation. The Community Participation Index can be calculated with a maximum value of 1 and a minimum value of 0, which is as follows:

$$I_n = \frac{TS}{x}$$

Where:

$$\begin{aligned} I_n &= \text{Index} \\ TS &= \text{Total Score} \\ ST &= \text{Highest Score} \\ \sum R &= \text{Total Respondents} \\ x &= ST \times \sum R \end{aligned}$$

Table 1. Interval of Arnstein's [6] Participation ladder

Interval of values	Upper limit	Stage	Level
1	1	Citizen control	Citizen Power
0,876 – 0,99	0,99	Delegated power	
0,76 – 0,875	0,875	Partnership	
0,626 – 0,75	0,75	Placation	Tokenism
0,56 – 0,625	0,625	Consultation	
0,376 – 0,55	0,55	Informing	
0,26 – 0,375	0,375	Therapy	Non Participation
0 – 0,25	0,25	Manipulation	

Source: [6]

After conducting the calculations, to determine the level of community participation based on ladder of participation Arnstein's (1954), the intervals are established within the range of 0 to 1, as shown in Table 1.

3. RESULTS AND DISCUSSION

The level of community participation in the management of fisheries resources is divided into three stages: the planning stage, the management stage, and the monitoring stage. Based on the analysis results of each stage that have been previously explained, the next step is to create a summary of the level of participation of fishermen communities, as described in the Table 2.

The level of community participation in the planning stage resulted in a total score of 704 with a percentage of 20.5%. During the implementation stage, the highest total score was achieved, amounting to 2079 with a percentage of 60.4%. In the evaluation stage, the total score obtained was 657 with a percentage of 19.1%. The resulting participation index is 0.55, which falls into the low category. Community participation is measured using the "ladder of participation" [6] which falls under the level of "Informing" or the mere provision of information, with an index range from 0.376 to 0.55.

Furthermore, in terms of the degree of participation, the level of "Informing" falls under "Tokenism" At this level, the community is merely a formality that allows them to hear and have the right to vote, but they are not involved in decision-making. Tokenism also represents a development planning system that emphasizes government participation, but despite involving the community in the planning process, they lack freedom and are limited in expressing their ideas and needs. According to Arnstein [6] if participation is limited to this level, there is little chance

of bringing about meaningful change in society.

The reason why the research results show a low level of community participation in this aquaculture fishery is due to the lack of government support, especially in providing the necessary facilities, infrastructure, and capital. According to Adisasmita (2006), the involvement of community members in development, which includes activities in the planning and implementation of a development program or project carried out within the local community, is defined as community participation. This participation is considered one form of Social Empowerment, aimed at utilizing and managing resources in their living environment. This includes aspects of input, process, and output [12-13].

Efforts that can be undertaken to enhance community participation include expanding the understanding and awareness of the importance of participation, strengthening institutions, such as fish farming groups in this case, participating in or providing education and training, and receiving support from the government in the form of facilities, infrastructure, and capital used for aquaculture.

According to Gumilar [5] ideally, a community is considered to have full participation when it reaches stage 8, which is community control. In the seventh and eighth stages, the community has a majority voice in decision-making and may even have full authority in managing a specific policy.

With the current level of participation being at the "Informing" stage, it poses challenges in the management of aquaculture. The community still lacks the ability to influence policies made, and they heavily depend on assistance from others. Consequently, if this assistance were to cease, their activities would be hindered and neglected [7-11].

Table 2. The level of community participation in aquaculture

No	Answer Options	Total Score	Percentage Score	Participation Index
1	The planning stage	704	20.5%	0.55
2	The management stage	2079	60.4%	
3	The monitoring stage	657	19.1%	
Total		3440	100%	

4. CONCLUSION

The average community participation index in aquaculture is 0.55, which means the degree of community participation is still considered low as it is less than 1. Community participation is at the "Informing" stage, or the mere provision of information. This level falls under "Tokenism." At this stage, the community is merely a formality that allows them to hear and have the right to vote, but they are not involved in decision-making. The community still lacks the ability to influence the policies made. They heavily rely on funding from external parties, so if the funding stops, their activities are hindered and neglected.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Regional Planning, Development, research, and development agency of Sumedang regency. Final report on the study of post Covid-19 economic impact handling In Sumedang Regency. Sumedang; 2020.
2. Department of fisheries and animal Husbandry Sumedang Regency. Potential and Utilization of Fisheries Resources In Sumedang Regency 2022. Sumedang; 2022.
3. Amnaeni et al. Evaluation and level of community participation in the management of mangrove conservation area in Munte Village, Tanalili Sub-district, North Luwu Regency. Journal of Indonesian Tropical Fisheries. 2020;3(1): 54-66.
4. Cornwall A. Making Spaces, Changing Places: Situating Participation In Development. Ids Working Paper 170. England: Institute Of Development Studies; 2001.
5. Gumilar I. Coastal community participation in the sustainable management of mangrove ecosystems in Indramayu Regency. Aquatic Journal. 2012;3(2):198-211
6. Arnstein Sherry R. A Ladder of Citizen Participation. JAIP. 1969;35(4):216-224.
7. Amanah E, Rahadian D, Iradianty A. The influence of financial knowledge, financial attitude, and external locus of control on personal financial management behavior among undergraduate students at Telkom University. E-Proceeding of Management. 2016;3(2): 1228-1235.
8. Azhar FN. Perception and community participation towards the management of the mangrove ecosystem in the estuary of Peniti River, Mempawah Regency. Padjadjaran University, Sumedang; 2022.
9. Falih AM. Community participation of fishermen in fisheries resource management in Pasirian Sub-district, Lumajang Regency. Surabaya. Sunan Ampel State Islamic University Surabaya; 2021.
10. Luce et al. level of community participation in the lake Maninjau Environmental Conservation and Management Program. Journal of Socio-Economic and Fisheries Policy. 2018;8(2):63-75.
11. Marysya Amanah. Level of community participation in village-based tourism management at Situ Gede Bogo Tourism Village. Journal of Science Communication and Community Development. 2018;2(1): 59-70.
12. Mulya DE. Analysis of community participation and benefits of community-based drinking water and Sanitation Program In Marana Village, Sindue Sub-District, Donggala Regency. Katalogis Journal. 2016;2(3).

13. Sulaiman M. Analysis of community participation in development in Gobah Village, Tambang Sub-District, Kampar Regency. Thesis. Riau: Sultan Syarif Kasim State Islamic University Riau; 2017.

© 2023 Sonia et al.; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Peer-review history:

The peer review history for this paper can be accessed here:
<https://www.sdiarticle5.com/review-history/103894>