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Collaborative Governance-Based Fisheries Sector Development Strategy in Tulang Bawang Regency

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ABSTRACT

This study aims to identify the implementation, key factors, actor involvement, and collaborative governance-based fisheries sector development strategies in Tulang Bawang Regency, Lampung Province. Although Tulang Bawang Regency has great fisheries potential, the development of this sector has not been optimal. This study uses a qualitative approach with quantitative calculations through the Analytical Hierarchy Process (AHP) technique, involving informants from the government, universities, the business world, banks, the mass media, and the fishing community. The results of the study indicate that the implementation of collaborative governance in the fisheries sector development is still ineffective. The key factors that influence this are the initial conditions dimension (0.517), collaborative leadership facilitation (0.449), institutional design (0.661), and collaboration processes (0.509). The actors with priority roles are the government (0.3240), the business world (0.2638), banking (0.2024), universities (0.1396), mass media (0.1150), and the fishing community (0.0553). Priority strategies include improving financing and capital facilitation (0.803), utilizing fisheries technology (0.796), processing fishery products (0.754), expanding markets (0.750), and applying information technology (0.719). In addition, improving the quality of human resources and institutions (0.678) as well as research and product innovation (0.584) are also very necessary. This study shows that the fisheries sector in Tulang Bawang Regency requires increased collaboration between actors and improved policy design in order to create a more significant impact. This study provides important insights for policymakers to strengthen the collaborative system in fisheries resource management in order to support sustainable development in the region.

1. INTRODUCTION

Indonesia is known as a maritime country with abundant fishery resources. Its waters cover 75% of the country's total area [1]. This makes it one of the main contributors to national economic development. This wealth is reflected in the extraordinary marine biodiversity, which includes 450 species of coral and more than 2,000 species of fish [2]. The interdependence between marine ecosystems and life on earth forms the conceptual foundation of the Blue Economy (BE), which advocates for the responsible and sustainable use of marine resources to promote economic growth, enhance social well-being, and safeguard ecological integrity [3].

Lampung Province is one of the provinces that has made the marine and fisheries sector a main pillar of its economy. Among the existing regions, Tulang Bawang Regency stands out as a significant contributor. Based on data from the Lampung Province Central Statistics Agency in 2024, the capture fisheries production in this regency reached 25,712 tons in 2022, making it the second highest in Lampung Province. In addition to capture fisheries, the aquaculture sector in Tulang Bawang also ranks first with a production volume of 14,201 tons and a production value of IDR 894,870,000 (Central Statistics Agency of Lampung Province, 2024). This data shows that Tulang Bawang District plays a strategic role in maintaining regional food security and the economy, but also faces challenges in BE has become a concept closely linked to marine resources, coastal communities, and economic growth. BE can be defined as the sustainable use of ocean resources for economic growth, livelihoods, better jobs, and the health of ocean ecosystems [4].

Effective fisheries management requires a holistic approach that involves various stakeholders. Law No. 45 of 2009 on

Fisheries explicitly mandates optimal and sustainable management, as well as the need to consider customary law and community participation [5]. This paradigm is in line with modern trends in governance, namely collaborative governance. This approach emphasizes the importance of synergy between the government, the private sector, academics, and the community (Pentahelix-collaboration) to achieve common goals. Although this concept has emerged as an ideal solution to achieve common goals in overcoming policy failures [6], its implementation in the fisheries sector, especially at the local level, still requires in-depth study.

The literature shows that many previous studies on fisheries governance tend to be partial and have not systematically integrated the roles of actors, key factors, and collaborative policy strategies [6, 7]. Existing studies emphasize theoretical or technical aspects, without mapping the specific contributions of each actor measurably or formulating adaptive and contextual strategic priorities [8].

Collaborative governance has emerged in the last two decades as an important and ideal approach to the process of governance and public policy. Collaborative governance is like a "mantra" that can cure various policy pathologies, whether from the perspective of the politicization of regulations, budget bloat or limitations, or policy implementation failures [9].

Collaborative governance is also one of the approaches to governance that can accelerate bureaucratic reform, as explained by Adi Suryanto, Head of the State Administration Agency of the Republic of Indonesia, in a Focus Group Discussion (FGD) at Bappenas with the theme "Strategic Collaborative Governance to accelerate National Bureaucratic Reform" organized by the Vice President's Secretariat, explained that there needs to be a paradigm shift in governance from one that is oriented towards working alone to one that is oriented towards working together to achieve common goals, also known as network government or collaborative governance. The collaborative governance paradigm means that the government, in this case, central and regional agencies, cannot work alone to solve public problems. Collaborative governance requires synergy based on a shared commitment to harmonize understanding of public issues with the involvement of various stakeholders, namely the government, the private sector, academics, the community, and the media, which is referred to as Pentahelix collaboration. This strategy is considered more effective in facing future bureaucratic challenges [10].

This study integrates the concepts of collaborative governance, public sector strategic management, and regional development and leading sector theory [11, 12]. This approach enables comprehensive analysis, starting from the understanding that regional development must focus on leading sectors such as fisheries, which are then managed strategically through collaboration between parties. Thus, this study contributes measurable instruments through the Analytical Hierarchy Process (AHP) approach to map the roles of each actor and formulate priority policy strategies that can serve as practical references for decision makers [13]. The novelty of this study lies in the synthesis and application of a strong theoretical framework for a specific context at the district level, making it a valuable contribution to the literature on fisheries governance in developing countries.

Based on the above description, this study aims to analyze the implementation of collaborative governance in fisheries sector development in Tulang Bawang District, Lampung Province. Specifically, this study will identify key factors that influence collaboration, analyze relevant parties, and formulate collaborative policy strategies that can be prioritized for sustainable fisheries sector development.

2. METHODOLOGY

This study uses a mixed methods approach with a descriptive design that integrates qualitative and quantitative data in sequential stages. This design was chosen to obtain a comprehensive understanding, where qualitative descriptions of phenomena are reinforced by priority analysis through quantitative calculations [12]. This combined approach also allows for the verification of data from various sources to improve the validity of the findings [14].

To collect data, this study utilized primary and secondary sources. Primary data was obtained through a series of techniques, including open-ended but focused interviews, participatory observation, and structured questionnaires designed to obtain in-depth information from key informants [15]. Meanwhile, secondary data was collected from various official documents and publications, such as the Medium-Term Development Plan (RPJMN), government regulations related to fisheries, and statistical data from the Central Statistics Agency [2]. This combination of data aims to provide historical, regulatory, and macro data to support the analysis of primary data [16, 17].

Table 1. List of selected informants

Actor Category	Actor Representation	Number of Informants
Government	1. Lampung Province Fisheries Service 2. Tulang Bawang Regency Fisheries Service 3. Tulang Bawang Regency Regional Development Agency	3
Business World	1. Indonesian Young Entrepreneurs Association (HIPMI) 2. Fisheries Companies	2
Media	1. Indonesian Journalists Association (PWI) Lampung Province 2. PWI Tulang Bawang Regencyg	2
Academics	1. Government Academics, University of Lampung 2. Fisheries Academics, University of Lampung	2
Fisheries Community	1. Aquaculture Group 2. Fisheries Business Group 3. Processing and Marketing Group	3
Financial Institutions	1. BRI Bank 2. Lampung Bank	2
	Total	14

The selection of informants was a crucial step in this study. Using purposive sampling techniques, informants were carefully selected based on their knowledge, experience, and authority in collaborative governance management in the fisheries sector in Tulang Bawang Regency [18]. A total of 14 informants were involved, as shown in Table 1. The diversity

of informants was designed to cover a comprehensive spectrum of views from all actors involved in the Pentahelix model [19].

After the data was collected, the next step was analysis using the AHP method to map the roles of each actor and formulate policy strategy priorities [13].

The use of instruments at this point ensures that the resulting policy recommendations have a strong basis for calculation and can serve as a practical reference for decision makers in the region [11]. This method was chosen for its ability to solve complex multi-criteria problems by constructing a hierarchy and determining priorities based on rational considerations. The hierarchical structure used in this analysis is visually depicted in Figure 1, which shows how the research objectives are broken down from a general level to a more specific level.

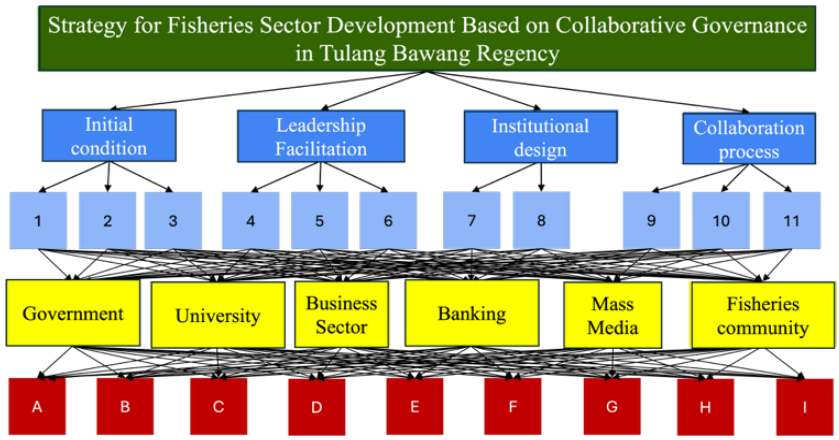

Figure 1. Analytical Hierarchy Process (AHP) analysis of collaborative governance-based fisheries sector development strategies in Tulang Bawang Regency, Lampung Province

Image Description
• Initial Conditions
1: Balance of Resources and Strengths
2: Incentives to Participate
3: Experience of Cooperation or Conflict
• Leadership Facilitation
4: Adequate management of the collaboration process
5: Management of technical credibility
6: Ensuring that collaboration can be empowered and make credible decisions
• Institutional Design
7: Opportunities for each actor to communicate with other stakeholders about policy outcomes
8: Claims that policy outcomes are a consensus among all actors
• Collaborative Process
9: Face-to-face dialogue
10: Building Trust and Mutual Understanding
11: Commitment to Process and Results

Strategy
A = Improving the Quality of Human Resources and Institutions
B = Increasing Business Activities in the Processing of Fishery Products
C = Improving the Ability to Utilize Aquaculture and Capture Fisheries Technology
D = Increasing Market Share and Expansion
E = Improving Financing and Capital Facilitation
F = Improving the Application and Utilization of Information Technology
G = Improving Research and Innovation in Product Development
H = Establishing Business Partnership and CSR Forums
I = Improving Supporting Facilities and Infrastructure

The AHP analysis process begins with the main objective, namely the Fisheries Sector Development Strategy, which is then broken down into four dimensions of collaborative governance as the main criteria: Initial Conditions, Leadership Facilities, Institutional Design, and Collaboration Process. Below this, six groups of actors are placed as stakeholders, who will be assessed based on nine development strategies as policy alternatives [6].

The AHP analysis process includes the formation of a pairwise comparison matrix, in which informants are asked to compare criteria and sub-criteria in pairs. Based on this matrix, weights (eigenvector values) are calculated to determine the order of priority of strategies and the most influential roles of actors [11]. This approach ensures that each actor's contribution can be accurately mapped to support the sustainability of the fisheries sector [19].

The consistency of the assessment is then tested by calculating the Consistency Ratio (CR), with a threshold value of 0.100 to ensure the validity and reliability of the data [13]. Thus, this approach ensures that the findings are not only descriptive but also supported by systematic, measurable data, providing a strong basis for formulating policy recommendations for local governments and relevant stakeholders [4, 10].

3. RESULT AND DISCUSSION

3.1 Result

3.1.1 Collaborative governance in fisheries development in Tulang Bawang Regency

The implementation of fisheries sector development using a collaborative governance approach has been carried out by the fisheries agency as mandated by: (1) Law Number 45 of 2009 concerning Amendments to Law Number 31 of 2004 concerning Fisheries [6]; Law Number 25 of 2004 concerning the National Planning System, Government Regulation of the

Republic of Indonesia Number 8 of 2008 concerning the Stages, Procedures for Formulating, Controlling and Evaluating the Implementation of Regional Development Plans, as well as existing regulations and cooperation programs [2]. The implementation or application of collaborative governance in various dimensions of the fisheries sector development strategy in Tulang Bawang Regency, Lampung Province, which has been carried out by the Tulang Bawang Regency fisheries service, is considered to be ineffective, partial, unintegrated, not systematically programmed, and lacking measurable targets [9, 20].

The key factors influencing the implementation or application of collaborative governance in the Fisheries Sector Development Strategy in Tulang Bawang Regency, Lampung Province, can be seen in Figure 2.

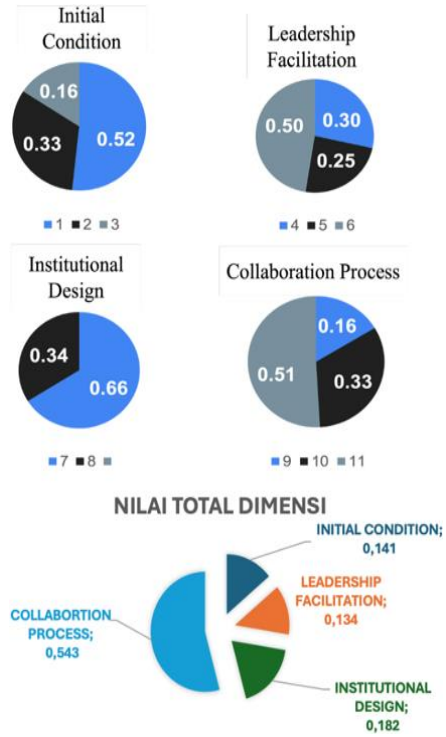

Figure 2. Key factors of collaborative governance in fisheries sector development in Tulang Bawang District, Lampung Province

In Figure 2, the analysis results indicate that the implementation of collaborative governance in the fisheries sector is influenced by different priorities in each dimension [6]. In the initial conditions, the highest priority was achieving a balance between resources, with a percentage of 51.7%, indicating the importance of empowering disadvantaged parties to ensure meaningful participation [21]. Meanwhile, in the collaborative leadership facilities dimension, the factor of ensuring that collaboration is empowered to make credible decisions was the most crucial, with a percentage of 44.90%. This confirms the role of leadership in uniting stakeholders and forming a common agenda [7]. In the institutional design dimension, the top priority (66.10%) is the opportunity for every actor to communicate about policy outcomes, which is essential for building synergy [10]. Finally, the collaborative process dimension highlights commitment to process and results as the highest priority (50.90%), which stems from a belief in good-faith negotiation to achieve common goals [22].

The significant gap between Institutional Design and Collaborative Process indicates a 'policy-implementation decoupled' phenomenon. While the formal rules and legal framework are well-established, the actual collaboration remains ceremonial [16]. This failure is rooted in deep-seated sectoral egoism within the local bureaucracy, where agencies prioritize internal KPIs over collective goals [10]. Consequently, the collaborative process becomes partial and non-continuous, lacking the 'trust-building' mechanism necessary for long-term sustainability [6].

3.1.2 Actors of collaborative governance in fisheries sector development in Tulang Bawan District, Lampung Province

To understand the roles and contributions of each actor in the implementation of collaborative governance in Tulang Bawang Regency, a quantitative analysis was conducted through a survey using the AHP approach [13]. The results of this analysis identified the relative level of influence of each actor in each dimension of collaborative governance that was measured. The various roles of each actor or stakeholder in the collaborative governance-based fisheries sector development strategy in Tulang Bawang Regency, Lampung Province, can be seen in terms of their influence or percentage of their role in various dimensions of collaborative governance, as shown in Table 2.

Table 2. Stakeholders or actors of collaborative governance in fisheries sector development in Tulang Bawang Regency, Lampung Province

Dimension	Sub-Dimension	Government	Universities	Business World	Banking	Mass Media	Fisheries Group
Initial Condition	1	0.306	0.131	0.233	0.171	0.106	0.053
	2	0.32	0.109	0.228	0.188	0.106	0.049
	3	0.273	0.129	0.241	0.191	0.112	0.055
Leadership Facilitation	4	0.31	0.146	0.215	0.17	0.11	0.049
	5	0.303	0.141	0.229	0.183	0.097	0.047
	6	0.308	0.114	0.252	0.19	0.094	0.042
Institutional Design	7	0.35	0.122	0.218	0.167	0.095	0.048
	8	0.274	0.124	0.257	0.188	0.106	0.05
Collaborative Process	9	0.389	0.12	0.204	0.158	0.088	0.041
	10	0.181	0.123	0.296	0.218	0.123	0.059
	11	0.226	0.137	0.265	0.2	0.113	0.06
	TOTAL	3240	1396	2638	2024	1150	553
	Rank	1	4	2	3	5	6

Table 2 shows that the government is the most dominant actor in the collaborative governance-based fisheries sector development strategy in Tulang Bawang District. Based on the data, the government has the strongest influence in almost all dimensions, with a total score of 3240, placing it at the top of the list. This is in line with the views of experts who state that the government plays a central role as a stabilizer, investor, modernizer, and coordinator in the development process [20, 23]. The government has a responsibility to maintain peace and security, as well as provide public services, so its dominance in the collaboration process is very important [11].

Below the government, the business world ranks second with a total score of 2638. Their role includes being a partner that fosters business and economic opportunities, as well as making important contributions in terms of financing, technology, and marketing [5, 12]. Third place is occupied by the banking sector, with a total score of 2024, which shows its crucial role in facilitating financing and capital, especially through programs such as People's Business Credit (KUR) [24].

Next, higher education institutions are just below the banking sector with a total score of 1396, which confirms their role as providers of knowledge, mentors, and sources of information [18]. This role is important in supporting innovation and technological development in the fisheries sector. Finally, the mass media, with a total score of 1150, and the Fisheries Group, with a total score of 553, are at the bottom, indicating their role in publishing information and directly representing the fishing community.

The analysis reveals a stark power asymmetry, where Government dominance contrasts sharply with the low involvement of the fisheries Community. Interviews with local fishermen and women in fish processing groups highlight that their participation is often limited to the planning phase without real influence in decision-making [21]. The informal actors face digital literacy barriers and limited access to formal forums [25]. This finding challenges the 'Pentahelix' ideal, suggesting that in the Indonesian fisheries context, the model still operates under a state-centric shadow rather than a truly egalitarian partnership [6]. Although collaboration between parties is at the core of collaborative governance, these findings underscore that in Tulang Bawang Regency, collaboration is still driven by the highly centralistic role of the government as the main actor [10].

3.1.3 Fisheries sector development strategy in Tulang Bawang District, Lampung Province

Local governments can enhance development in accordance with their respective potentials [1]. With the emergence of a new paradigm in development, the fisheries sector has become a focus in development plans [2]. The depletion of land and the enormous potential of Indonesia's fisheries have shifted the government's development focus from agriculture to the fisheries sector [26]. Tulang Bawang Regency in Lampung Province, which has a geostrategic location, has considerable potential in both capture fisheries and aquaculture [4]. Based on the results of interviews and the processing of a combined matrix from 14 (fourteen) informants using the AHP technique, the results of the study show that the priority order of collaborative governance-based fisheries sector development strategies in Tulang Bawang Regency, Lampung Province, which can be implemented by each actor or stakeholder, can be seen in Figure 3 [17, 19]. These strategies, which include technical to managerial aspects, are expected to be a reference in strategic decision-making for the welfare of local communities and the sustainability of resources [27].

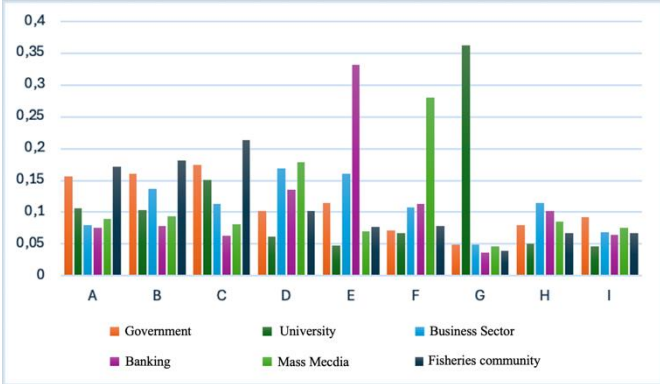

Figure 3. Fisheries sector development strategies in Tulang Bawang Regency, Lampung Province

Strategy Description

A = Improvement of Human Resource Quality and Institutions

B = Increase in Fisheries Product Processing Business Activities

C = Enhancement of Aquaculture and Capture Fisheries Technology Utilization Capabilities

D = Increasing Market Share and Expansion

E = Improving Financing and Capital Facilitation

F = Increasing the Application and Utilization of Information Technology

G = Increasing Research and Innovation in Product Development

H = Establishing Business Partnership and CSR Forums

I = Improving Supporting Facilities and Infrastructure

Figure 3 shows that the priority strategies in the development of the fisheries sector based on collaborative governance in Tulang Bawang Regency, Lampung Province, are as follows:

i. Improvement in Financing and Capital Facilitation with a value of 0.803.
ii. Improvement in the Ability to Utilize Aquaculture and Fishing Technology, with a value of 0.796.
iii. Improvement in the Processing of Fishery Products with a value of 0.754.
iv. Increased Market Share and Expansion with a score of 0.750.
v. Increased Application and Utilization of Information Technology with a score of 0.719.
vi. Improved Quality of Human Resources and Institutions with a score of 0.678.
vii. Increasing Research and Innovation in Product Development with a score of 0.584.
viii. Establishing Business Partnership Forums and Corporate Social Responsibility (CSR) with a score of 0.499.
ix. Improving Supporting Facilities and Infrastructure with a score of 0.414.

The development of the fisheries sector based on collaborative governance in Tulang Bawang Regency, Lampung Province, requires policies that focus on improving the facilitation of financing and capital for fisheries businesses in various dimensions of collaborative governance [24]. Based on the Banking Law and the 2020-2024 National Medium

Term Development Plan (RPJMN), the development of the fisheries sector greatly requires funding support from banking institution through special schemes such as the KUR [2, 26]. In the KUR program, the government acts as a risk guarantor while banks act as fund providers, which aims to improve the standard of living of fishermen and micro-entrepreneurs in coastal areas [27]. Financing for capture fisheries businesses through the banking sector is provided through the KUR and the Non-KUR Credit Program. In the KUR Program, the Indonesian government targets KUR distribution of Rp 20 trillion. Regarding KUR, the government has made a policy that if the credit application is less than Rp 20 million, fishermen do not need to provide collateral; the collateral is the fishermen's business itself. In KUR, the bank is the executor and provider of funds, while the government acts as the risk guarantor.

The second aspect that must be considered is improving aquaculture and capture fisheries technology capabilities. Based on the location of cultivation, there are three types of aquaculture businesses, namely marine aquaculture (mariculture), brackish water culture, which uses a mixture of seawater and freshwater as its medium, and freshwater culture, which is usually carried out in lakes, rivers, and reservoirs. According to Boyd [28], aquaculture management has three basic principles, namely the regulation/management of environmental quality (water quality), the regulation/management of supplementary feeding, and the control of pests and diseases affecting cultivated biota. Collaborative application of these principles between academics and practitioners is essential to maintain the sustainability of coastal ecosystems [19]. However, technically (in terms of applied technology), there are several differences in the application of these three principles.

In order to increase added value in the development of the fisheries sector based on collaborative governance, the third priority aspect is to increase the processing of fishery products. Fishery product processing activities or fishery agro-industry can be grouped into three categories [5], including:

i. Primary industry, including live fish handling, fresh fish handling, freezing, and fish refrigeration industries.
ii. Secondary processing industry, including canned fish and other packaged fish processing industries, as well as traditional processing industries such as salting, curing, pindang, and others.
iii. Tertiary processing industry, including any form of industry that uses fish as an additional ingredient, such as shrimp paste, petis, abon, fish meal, and others.

In order to increase the sales value of fishery products, more intensive efforts are needed to market them. Therefore, the fourth priority strategy is to increase market share and expand the market [4]. Marketing strategies for fishery products to help increase sales include:

a) Identifying target markets
b) Improving product quality and safety
c) Diversifying products
d) Building partnerships and distribution networks
e) Improving branding and promotion

The development of information technology must be utilized in the development of the fisheries sector, not only to expand the market but also to increase the productivity of the fisheries sector in Tulang Bawang Regency [13]. Therefore, the sixth priority strategy is to increase the application and utilization of information technology. Information technology also aims to ensure that access to information is fast, accurate, and secure, and can assist in decision-making based on valid data. Here are some other objectives.

The next strategy that needs attention is improving the Quality of HR and Institutions, Enhancing Research and Innovation in Product Development, Establishing Partnership Forums and CSR, and Improving Supporting Facilities and Infrastructure [14, 15]. Through the Pentahelix approach, it is hoped that all of these strategies can be systematically integrated to realize the welfare of coastal communities in Tulang Bawang Regency [10, 17].

3.2 Discussion

3.2.1 Analysing key factors and priority strategies in the fisheries sector

This study departs from the core question: How can we formulate effective fisheries sector development strategies through collaborative governance at the local level? To answer this question, we integrated an in-depth analysis of the factors that influence the implementation of collaborative governance with the determination of priority policy strategies [6, 12].

Table 3. Summary of key findings

Analysis Aspect	Aspect Found	Value/ Weight	Description
Collaboration Dimension	The collaboration process is the most influential dimension.	0.543	Indicates that the effectiveness of collaborative governance is highly dependent on the dynamics of interaction, such as dialogue, trust, and commitment among the parties.
	Initial Conditions (Resource Balance).	0.517	Fundamental prerequisites that must be met to ensure fair and meaningful participation.
	Leadership Facilities (Making Credible Decisions).	0.449	Emphasizes the important role of leadership in directing and validating the results of collaboration.
	Institutional Design (Actors' Communication Opportunities).	0.661	Indicates that the existence of open communication platforms and mechanisms is crucial.
Actor Roles	The government is the dominant actor.	-	Although the government is the main driver, a transition to the role of facilitator is necessary for sustainability.
	Business, Banking, and Fishing Communities.	-	Make vital contributions and be effectively integrated to support the role of the government.
Strategic Priorities	Improvement of financing and capital facilities.	0.803	This is the most crucial strategy because it addresses the basic needs of business actors in the field.
	Improving fisheries technology.	0.796	Increases productivity and competitiveness.
	Improving fisheries product processing.	0.754	Focuses on increasing the added value of fisheries products.

This study systematically analyzes several interacting factors in the implementation of collaborative governance for fisheries sector development in Tulang Bawang Regency. This analysis provides an in-depth understanding of the dynamics of local governance and formulates the most relevant priority strategies, as shown in Table 3.

There is a notable paradox where high production doesn't translate into financial independence, making 'Financial and Capital Facilitation' the top priority (0.803) [24]. This occurs because the majority of fishers in Tulang Bawang act as raw material suppliers with minimal value-added processing [5]. Without adequate capital for post-harvest technology, they remain trapped in low-margin cycles [1]. The high priority of financing reflects a structural need to bridge the gap between high biological productivity and low economic welfare through integrated credit schemes involving the Banking sector [26, 27].

3.2.2 Policy implications and scientific contributions

Overall, this analysis has significant implications for policy formulation at the local level. A one-size-fits-all approach has not proven effective [16, 20]. Instead, policies must be contextual and adaptive, with strategic priorities tailored to specific needs on the ground [4]. This requires a shift from a top-down model to a more participatory approach, where the government, business, academia, and the fishing community collaborate equally [6, 10].

This research contributes to the literature by providing a measurable model for analyzing and formulating effective development strategies in the context of developing countries [19]. By integrating the collaborative governance framework and AHP analysis, this study provides practical guidance for decision makers to identify strategic priorities and manage the dynamics between actors, ensuring that development efforts not only run smoothly but also achieve optimal and sustainable results [13, 14]. This ensures that development efforts not only run smoothly but also achieve optimal, inclusive, and sustainable outcomes for both coastal ecosystems and communities [17, 24].

4. CONCLUSION

Based on findings that identify the importance of the collaboration process, it is recommended that local governments, particularly the Fisheries Service, conduct a more in-depth study of aspects that can increase the commitment of the parties involved. The main aspects that need attention are the dimensions of mutual trust and transparency, given that collaboration involves many stakeholders with multidimensional interests. Mutual trust is a crucial foundation that ensures that each actor feels valued and has a sense of ownership of the collaboration process and results. In addition, local governments are advised to proactively facilitate the establishment of an inclusive collaboration forum. This forum should be designed not only as a communication forum, but also as an empowering platform, where all components of society, from fishermen, entrepreneurs, academics, to the media, can convey ideas and participate actively in formulating fisheries sector development strategies. Thus, collaboration can be transformed from merely sporadic activities into a systematic, synergistic, and results-oriented governance ecosystem.

The findings of this study offer a replicable framework for other regions with similar characteristics, such as riverine or swamp-based fisheries in Southeast Asia. The transferability of this model depends on the ability of local leaders to mitigate government dominance and empower informal sector actors. Future policies should shift from top-down directives to a shared-power approach to ensure that high fishery potential leads to actual community prosperity.

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