

THE ROLE OF FISHERY EXTENSIONS IN IMPROVING QUALITY CATFISH FARMERS IN BINJAI CITY NORTH SUMATRA PROVINCE

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Abstract: This research aims to investigate and analyze the role of fisheries extension officers in improving the quality of catfish farmers in Binjai City, North Sumatra Province. The quality of catfish farmers is understood as a combination of technical knowledge, practical skills, business management, and the level of innovation acceptance that affects the productivity and sustainability of catfish farming. The research methodology involves field surveys, interviews, and secondary data analysis to understand the conditions of catfish farmers and the effectiveness of the role of fisheries extension officers. The data will be analyzed qualitatively and quantitatively to obtain a holistic picture of the contribution of fisheries extension officers to the improvement of catfish farmer quality. The results of the research are expected to provide in-depth insights into specific aspects that need improvement by fisheries extension officers, such as increasing technical knowledge, implementing more efficient aquaculture practices, and better business management. The implications of this research can be used as a basis for improving fisheries extension programs and sustainable development strategies for catfish farmers in Binjai City and surrounding areas. This research is expected to contribute to the knowledge literature on the role of fisheries extension officers in the context of fisheries management and the empowerment of fishing community

Keywords: Role, Fisheries Extension Officer, Farmer Qualit

Introduction

Fiseries extension is a crucial sector in the development of Indonesian society, as fisheries play a vital role in the nation's economy. This sector contributes significantly to national development by providing raw materials for agro-industries, increasing foreign exchange through fisheries exports, creating employment opportunities, enhancing

the income of fish farmers, supporting regional development, and preserving fisheries resources and the environment.¹ Fisheries utilize both marine and inland fisheries resources, offering high added value.² The demand for fish in local, national, and global markets has been steadily increasing due to population growth and rising concerns about diseases affecting other protein sources, particularly livestock. As a result, increasing fish production as a protein source is essential. Fish has become a leading commodity.³ As consumption patterns shift from red meat to white meat.⁴ In 2008, 57.2% of animal protein consumption came from fish, with 23.2% from eggs and milk, and 19.6% from meat. The average annual fish consumption per person was 28 kg in 2008 and is projected to increase to 30 kg/year and 45 kg/year by 2010 and 2030, respectively⁵ (Directorate General of Fisheries Product Processing, Ministry of Marine Affairs, 2013). These figures indicate that fish remains a primary protein source for the population.

Binjai City, located approximately 22 km west of the capital of North Sumatra Province, Medan, has significant fisheries potential, particularly in lele fish farming. This sector plays a crucial role in providing food, employment, and economic growth in the region. Despite its potential, lele fish farming in Binjai City faces various challenges and constraints. Low productivity, inconsistent quality, and a lack of knowledge and skills among lele fish farmers are some of the major issues that need to be addressed. While lele fish farming holds immense

¹ Alawiyah, W. 2016. Perbedaan metode komunikasi pertanian yang diberikan terhadap pengetahuan dan keterampilan petani perikanan dan budidaya perikanan dalam penerapan teknologi pertanian di Desa Teluk Dawan Kabupaten Tanjung Jabung Timur. *J. Ilmiah*. **16** (1) : 148-152.

² Alif, M. 2017. Partisipasi petani dalam komunikasi penyuluhan (studi pada Kelompok budidaya perikanan Sumber Murni Kelurahan Landasan Ulin Utara Kecamatan Landasan Ulin Kota Banjarbaru). *J. Komunikasi*. **2** (2) : 155-168.

³ Amahorseya, R. M., H. Cangara. dan S. Sjam. 2014. Peran penyuluh pertanian sebagai komunikator dalam penerapan usaha pertanian lahan sempit di Desa Hukurila Kotamadya Ambon. *J. Komunikasi*. **3** (4) : 249-255

⁴ Amanah, S. dan N. Farmayanti. 2014. Pemberdayaan Sosial Petani-Nelayan, Keunikan Agroekosistem dan Daya Saing. Yayasan Pustaka Obor Indonesia, Jakarta.

⁵ Faqih, A. 2014. Peranan penyuluh pertanian lapangan (PPL) dalam kegiatan pemberdayaan kelompok tani terhadap kinerja kelompok tani. *J. Agrijati*. **26** (1): 41-60.



potential, lele fish farmers in Binjai City face several hindering factors and limitations. A thorough understanding of these factors is crucial for designing effective solutions to enhance productivity, farmer well-being, and the local fisheries sector's contribution. Some of the hindering factors and limitations that form the background of the problem are: a) Limited Access to Modern Technology b) Limited Knowledge and Education c) Suboptimal Pond/Fish Pond Conditions d) Limited Access to Resources and Markets e) Economic and Financial Factors f) Climate and Environmental Change

As explained above, lele fish farmers in Binjai City lack the knowledge and skills required to manage lele fish farming effectively. This includes best practices in pond management, feed management, disease control, and sustainable practices. Additionally, limited access to resources, technology, and support from competent authorities hinders efforts to improve the quality of lele fish farmers in Binjai City. Fisheries extension workers possess relevant knowledge and experience in fisheries. They play a strategic role in providing information, training, and guidance to lele fish farmers to enhance their quality. Improving the quality of lele fish farmers will have a positive impact on local food security and the regional economy. By increasing lele fish production and quality, the region can meet local demand and boost farmer income. The fisheries sector is a potential mainstay for enhancing the economy of Binjai City's residents. Although Binjai City lacks a coastline, its fisheries sector relies on inland fisheries, and lele fish is a major inland fisheries commodity in Binjai City, with annual production reaching approximately 4,000 tons and being marketed outside Binjai. This is evident from the data in Binjai in Figures released by BPS as follows:

Table 1.1 Aquaculture Production in Binjai City, 2016-2022

Year	Lele Fish Production
2016	3 366,01
2017	3 641,16
2018	4 006,18
2019	4 272,27
2020	4 428,76
2021	4 050,60



2022	4 275,742
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Source: Statistics Agency of Binjai City, 2022

In accordance with Law No. 16 of 2006 concerning the Agricultural Extension System, agricultural extension workers are civil servants under the auspices of the Ministry of Agriculture and are placed in the OPD of Binjai City. Therefore, extension is a learning process for main actors and business actors so that they are willing and able to help themselves and organize themselves in accessing market information, technology, capital and other resources as an effort to increase productivity, business efficiency, income and welfare, and increase awareness in preserving environmental functions. The main actors and business actors in the marine and fisheries sector referred to are fishermen, fish farmers, processors and marketers of fishery products, and salt farmers. Law No. 16 of 2006 is the basis for Fisheries Extension Workers as the subject of extension activities to the main actors and business actors in their location. Meanwhile, Law No. 7 of 2016 concerning the Protection and Empowerment of the Role of Fisheries Extension Workers in providing assistance and extension for the empowerment of main actors and business actors in marine and fisheries.

LITERATURE REVIEW

The Role of Government

According to the Grand Dictionary of the Indonesian Language, governance is characterized as a process for carrying out authority and power, or a procedure for carrying out orders, which supervises those who govern. Max Weber⁶ characterizes government as anything that applies in connection with supporting the claim that he has the selective right to use actual power to implement his guidelines within a certain territory. Soewargono, 1979 in Sumaryadi⁷, defines public authority as the holder of political power, often called the ruler as the head of general government.

⁶ Surbakti, Ramlan. 1992. *Memahami Ilmu Politik*. Jakarta: PT. Grasindo Sutarto. 2009. *Dasar-Dasar Organisasi*. Yogyakarta: UGM press

⁷⁷ Sumaryadi, I Nyoman. 2005. *Perencanaan Pembangunan Daerah Otonom dan Pemberdayaan Masyarakat*. Jakarta: Penerbit Citra Utama



Surbakti⁸ means that administration (government) etymologically comes from the Greek word; Kubernan or ship's captain, which means looking ahead, deciding on various strategies that are carried out to achieve the goals of the State - society, predicting the direction of progress of the state-society in the future and preparing to move to meet the improvement of society as well as supervise and guide local areas towards ideal goals. In this way, government activities are more towards determining and running political choices to achieve the goals of the local state.

Ndraha⁹ (2003) characterizes government as an organization that processes the satisfaction of human needs as users of government products in general and civil administration. Government (government) is formed from the delegation of people's power. While governance refers to the capacity and spontaneity of social groups to regulate themselves, referring to management methods. Governance at a larger level is a social characteristic, and broader than government (government). Government needs a political process. Governance shows the existence of order and ability while government refers to the organ. The idea of government refers to the management organization based on the highest authority (government and state). The idea of governance does not only include the authority of government and state, but also the role of various actors outside government and state so that the parties involved and the scope are broader.

Extension

According to Notoatmodjo, Extension is an activity to educate something to individuals or groups, provide knowledge, information and various skills so that they can form attitudes and behaviors that should live.¹⁰ The essence of extension is a non-formal activity in order to change society towards a better state as desired. The knowledge obtained is expected to have an effect on the behavior of the extension target. To achieve optimal

⁸ Surbakti, Ramlan. 1992. *Memahami Ilmu Politik*. Jakarta: PT. Grasindo Sutarto. 2009. *Dasar-Dasar Organisasi*. Yogyakarta: UGM press, h. 167

⁹ Siagian. Sondang P. 2012. *Manajemen Sumber Daya Manusia*. Jakarta: Bumi Aksara

¹⁰ Eswandi. 2017. Komunikasi penyuluhan Dinas Tanaman Pangan dan Holtikultura dalam meningkatkan produksi padi di Kecamatan Sabak Auh Kabupaten Siak. J. Komunikasi. 4 (1) : 1-15



results, extension must be delivered using a method that is appropriate to the number of targets.

Edgar Dale divides these teaching aids into eleven types and describes the intensity level of each of these aids in a cone. From this cone it can be seen that the most basic layer is the real object and the top is words. This means that in the process of receiving messages, real objects have the highest intensity for perceiving messages and information. While the delivery of material that is only with words is very ineffective or has the lowest intensity. Teaching aids will be very helpful in health promotion so that health messages can be conveyed more clearly, and the target community can receive the message clearly and accurately.¹¹

Fisheries Extension

According to Soekanto¹², it is stated that Fisheries Extension Theory is a series of concepts and principles that includes the process of providing information, education, and guidance to the fishing community with the aim of improving their knowledge, skills, and behavior in managing fishery resources and increasing economic welfare. This theory reflects the philosophy, approaches, and strategies used in fisheries extension activities. The following are the key elements in Fisheries Extension Theory: (a) Active Community Participation, (b) Needs Analysis and Local Context, (c) Participatory Approach, (d) Knowledge and Skills Enhancement, (e) Community Empowerment, (f) Use of Effective Methods and Media, (g) Partnership-Based Approach, (h) Continuous Evaluation.

According to Eko¹³ it is stated that Fisheries extension is a process of providing information, education, guidance, and assistance to fishermen, fish farmers, and actors in the fisheries sector in order to improve their knowledge, skills, and practices related to fisheries. The main objective of fisheries extension is to help fishermen and actors in the fisheries sector

¹¹ Darmaludin, S. Suwasono, dan R. E. Muljawan. 2012. Peranan penyuluh pertanian dalam penguatan usahatani bawang daun di Kecamatan Sukapura Kabupaten Probolinggo. J. Buana Sains. **12** (1) : 71-80

¹² Soekanto, Soerjono. 2001. *Sosiologi Sebagai Pengantar*. Jakarta: PT Raja Grafindo Persada, h. 123

¹³ Eko, dkk., 2020. *Konsep Dasar Pengabdian Kepada Masyarakat: Pembangunan dan Pemberdayaan*. Medan: Yayasan Kita Menulis



manage their fisheries businesses more effectively, sustainably, and competitively.

Quality of Human Resources

Here are some definitions of quality, namely according to Sumodiningrat¹⁴ quality is as conformity with standards measured based on the level of nonconformity, and is achieved through inspection. Furthermore, according to Suharto¹⁵ the definition of human resources is: The integrated ability of the mental and physical power possessed by individuals. His behavior and nature are determined by his heredity. According to Sarwono¹⁶, human resources are people who are called managers, employees, workers, laborers or workers who work for the organization. The same thing was conveyed by Sastrawidjaya¹⁷ which gave the understanding that human resources are individuals in the organization who make valuable contributions to the achievement of organizational goals. Then Dwiwati¹⁸ explained the definition of Human Resource Quality, namely that the quality of human resources is not only determined by the aspect of skills or physical strength, but also by education or the level of knowledge, experience or maturity and attitude and values they have.

Quality of Fish Farmers

According to Bahua¹⁹, Fish Farmer Quality Theory can involve several dimensions that reflect the abilities, knowledge, and practices that influence the productivity and sustainability of fish farming businesses. In this theory, the quality of fish farmers is seen as the result of a combination of factors that influence their performance in fish farming activities.

¹⁴ Sumodiningrat, Gunawan. 2013. *Pemberdayaan Masyarakat dan Jaringan Pengaman Sosial*. Jakarta: Gramedia Pustaka Utama, h. 96

¹⁵ Suharto, Edi. 2009. *Membangun Masyarakat Memberdayakan Masyarakat*. Bandung: PT Refika Aditama, h. 224

¹⁶ Sarwono, Sarlito W. 2011. *Psikologi Remaja*. Jakarta: PT. Raja Grafindo, h. 16

¹⁷ Sastrawidjaya, dkk. 2002. *Nelayan Nusantara*. Pusat Riset Pengolahan Produk Sosial Ekonomi Kelautan dan Perikanan. Jakarta, h. 306

¹⁸ Dwiwati, D. M.N. Suparta dan G. S. A. Putra. 2016. Dampak teknik penyuluhan Focus Group Discussio (FGD) terhadap perubahan pengetahuan, sikap dan penerapan pada penyuluh dan peternak Sapi Bali di Bali. *J. Penyuluhan*. **19** (1) :28-33

¹⁹ Bahua, I. dan L. Marleni. 2016. Model pengembangan kualitas penyuluh pertanian di Provinsi Gorontalo. *J. Sosial Ekonomi Pertanian*. **9** (1) : 13-19



Lele Fish Farming

Lele fish is one of the fish that is quite easy to cultivate and grows very quickly. So that many fishery business actors choose lele fish as their cultivation commodity. According to Bacal²⁰ that "Lele is one of the popular fish that is already familiar to the public. The proliferation of pecel lele stalls today, both in the form of restaurants and stalls, is a potential business that is quite large". Lele fish is one of the fish that is easy to adapt so that this fish can be raised in various maintenance media, one of which is in tarpaulin ponds. Tarpaulin ponds are ponds whose base and walls are made of tarpaulin. From the spawning process to the rearing of lele fish, it can be done in tarpaulin ponds. For how to make tarpaulin ponds, you can see in the previous article

RESEARCH METHODOLOGY

Research is a long process that begins with an individual's curiosity about a particular phenomenon, which then develops into ideas, theories, and concepts. To realize this research that starts from this interest, a way is done to realize it, namely by choosing a method that is suitable for the purpose of a research. The research method in this case is used to answer and find solutions to problems, therefore the research on the Role of Fisheries Extension Workers in Improving the Quality of Lele Fish Farmers in Binjai City, North Sumatra Province will use a qualitative research method. According to Sugiyono²¹, qualitative research methods are used to cover natural object conditions, where the researcher is the key instrument, data collection techniques are carried out in triangulation, the data obtained tends to be qualitative data, data analysis is inductive/qualitative, and the results of qualitative research are to understand meaning, understand uniqueness, construct phenomena, and find hypotheses.

RESULTS AND DISCUSSION

Profile of the Food Security and Agriculture Agency of Binjai City

²⁰ Bacal, R. 2011. Performance Management. Terjemahan Surya Dharma dan Yanuar Irawan. Gramedia Pustaka, Jakarta, h. 27

²¹ Sugiyono. 2018. *Metode Penelitian Evaluasi*. Bandung : CV. Alfabeta



The Food Security and Agriculture Agency was formed based on the provisions of Article 20 paragraph (3) of Regulation of the Minister of Home Affairs Number 12 of 2017 concerning Guidelines for the Formation and Classification of Branch Offices and Regional Technical Implementation Units, it is necessary to establish a Regulation of the Mayor regarding the Formation of a Regional Technical Implementation Unit for Fish Seed and Eye Patch at the Food Security and Agriculture Agency of Binjai City. Then Mayor of Binjai Regulation Number 38 of 2016 concerning the Duties, Functions and Organizational Structure of the Food Security and Agriculture Agency of Binjai City (Regional Regulation of Binjai City Number 38 of 2016).

Analysis of the role of fisheries extension workers in providing information, training, and guidance to lele fish farmers to improve their knowledge and skills in lele fish farming.

The analysis of the role of fisheries extension workers in improving the knowledge and skills of lele fish farmers in Binjai City, North Sumatra Province, can be considered as a stabilizer in the development of the local fisheries sector. Fisheries extension workers act as an important link between lele fish farmers and the available knowledge and technology resources. Through the guidance and support they provide, fisheries extension workers help lele fish farmers understand the best practices in fish farming, environmental management, marketing, and other relevant aspects. Thus, their role not only improves the knowledge and skills of lele fish farmers, but also contributes to economic and social stability in these fishing communities.

An extension worker who has good skills does not only provide information about the right cultivation techniques, but is also able to guide farmers in facing challenges that may arise, such as climate change, fish diseases, or market fluctuations. They also act as a link between farmers and the latest resources and technologies that can improve the efficiency and productivity of lele fish farming businesses. More than that, the capacity of human resources in extension also includes the ability to raise awareness of sustainable and environmentally friendly farming practices. With proper education, farmers can understand the importance of maintaining the



balance of aquatic ecosystems, managing waste efficiently, and practicing responsible farming.

This is the basis for the Food Security and Agriculture Agency of Binjai City in carrying out its role in providing guidance and coaching to the lele fish farmer community in Binjai City, North Sumatra Province. One of the efforts made is to provide direct extension programs to the fishing community about the stability of local fisheries businesses, namely lele fish farmers in Binjai City, North Sumatra Province. The results of interviews with Mr. Ralasen Ginting, SP, Head of the Food Security and Agriculture Agency of Binjai City about the role of fisheries extension workers in providing information, training, and guidance to lele fish farmers to improve their knowledge and skills in lele fish farming, especially in the context of becoming a stabilizer for improving the quality of lele farmers in Binjai City, he stated that:

"The Food Security and Agriculture Agency of Binjai City is a technical OPD that oversees and fosters farmers, breeders, and fish farmers. one of the goals of fostering is to improve human resources and monitor the results of production of both plants, livestock and fish. This is reflected in my duties and functions as the Head of the Agency, therefore extension workers as the extension of the Agency who are in direct contact with the community are those who are selected based on quality have technical and managerial abilities that are expected to be able to maintain the stability of farmer resources and agricultural production in the assigned work area."

The results of interviews with Mr. Muhammd Iqbal Nasution, S.Pi, Head of the Fisheries Division at the Food Security and Agriculture Agency of Binjai City about the role of fisheries extension workers in providing information, training, and guidance to lele fish farmers to improve their knowledge and skills in lele fish farming, especially in the context of becoming a stabilizer for improving the quality of lele farmers in Binjai City, he stated that:

"Efforts to foster and develop the quality of lele fish farmers in Binjai City still require the right touch, we recognize that

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the capacity of human resources, especially lele fish farmers, is still low, this makes it difficult for them to accept changes or improvements in their quality. Therefore, extension workers as the spearhead who are in direct contact with farmers must have the ability to guide and direct farmers to understand the importance of improving their knowledge and skills in lele fish farming for the stability of fisheries production."

Results of an interview with Mr. Jamal, S.Pi, Fisheries Extension Coordinator at the Food Security and Agriculture Service of Binjai City, North Sumatra Province regarding the role of fisheries instructors in providing information, training and guidance to catfish farmers to increase their knowledge and skills in catfish cultivation, especially in the context of being a stabilizer for improving the quality of catfish farmers in Binjai City, he stated that:

In the effort to foster and develop the quality of lele fish farmers in Binjai City, it still requires the right touch. We acknowledge that the human resource capacity, especially lele fish farmers, is still low. This makes it difficult for them to accept changes or improvements in their quality. Therefore, extension workers as the spearhead who are in direct contact with farmers must have the ability to guide and direct farmers to understand the importance of improving their knowledge and skills in lele fish farming for the stability of fisheries production."

Results of interviews with Mr. Suwanto, a catfish farmer in West Binjai District, Binjai City regarding the role of fisheries instructors in providing information, training and guidance to catfish farmers to increase their knowledge and skills in cultivating catfish, especially in the context of being a stabilizer for improving the quality of farmers catfish in Binjai City he said that:

"As a fisheries extension worker in Binjai City, North Sumatra Province, I have the responsibility for the development and improvement of the skills of the lele fish farmers we foster. In our extension duties, we continuously provide guidance related to the importance of maintaining production stability, even though most farmers still have a

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low basic education in fisheries and find it difficult to understand it."

Results of interviews with Mr. Wenang, a catfish farmer in South Binjai District, Binjai City regarding the role of fisheries instructors in providing information, training and guidance to catfish farmers to increase their knowledge and skills in cultivating catfish, especially in the context of being a stabilizer for improving the quality of farmers catfish in Binjai City he said that:

"In my opinion, the capacity of human resources in extension is very important in maintaining the stability of our lele fish production. Competent extension workers not only provide information about cultivation techniques, but also help us manage the risks associated with our business. They are expected to be able to provide practical and implementable solutions to overcome problems such as fish diseases or fluctuations in feed prices. In addition, their ability to facilitate our access to the latest resources and technologies is highly expected to help in increasing the productivity and sustainability of our business."

Results of an interview with Mr Romadona, a catfish farmer in East Binjai District, Binjai City regarding the role of fisheries instructors in providing information, training and guidance to catfish farmers to increase their knowledge and skills in cultivating catfish, especially in the context of being a stabilizer for improving the quality of farmers catfish in Binjai City he said that:

"I feel that extension workers have provided us with information on how to properly cultivate lele fish. However, sometimes, we find it difficult to implement their suggestions because the conditions in the field are often different from what they talk about. I think they should better understand our situation and provide more concrete solutions to the problems we face, such as market price fluctuations that sometimes cause low fish production values."

Results of an interview with Mr. Darto, a catfish farmer in West Binjai District, Binjai City regarding the role of fisheries instructors in



providing information, training and guidance to catfish farmers to increase their knowledge and skills in cultivating catfish, especially in the context of being a stabilizer for improving the quality of farmers catfish in Binjai City he said that:

"We really need extension workers in developing us as catfish farmers to get guidance and information about maintaining and increasing the production of quality fish seeds in a sustainable manner."

From the results of the interview above, I can draw the conclusion that the role of fisheries instructors according to Soekanto (2018) is that an instructor who has good skills not only provides information about appropriate cultivation techniques, but is also able to guide farmers in facing challenges that may arise, such as climate change, fish disease, or market fluctuations that a trained and competent extension agent has the ability to provide guidance and assistance to catfish farmers in facing various challenges that may arise, such as fluctuations in feed prices, weather changes, or disease attacks. They not only provide information on proper cultivation techniques, but also help farmers to develop effective risk mitigation strategies.

Apart from that, human resource capabilities in extension also include the ability to build good relationships with farmers and understand the needs and challenges they face. An effective extension agent will adopt a participatory and responsive approach, enabling them to provide solutions that suit local conditions and farmers' needs. Extension agents also act as a liaison between farmers and the resources and information needed to maintain the productivity and sustainability of the catfish farming business. By helping farmers to access appropriate training, technology and markets, they can help increase the efficiency and competitiveness of the quality of catfish farmers in Binjai City.

Thus, I believe that investment in developing human resource capabilities in extension is a strategic step in supporting the stability and growth of the quality of catfish farmers in Binjai City, especially in catfish



cultivation, in our region. As an instructor, human resources are a strength in carrying out the role of developing the catfish farming community in supporting stability in the development of the fisheries sector in Binjai City, North Sumatra.

CONCLUSION

Fisheries instructors at the Binjai City Agriculture and Resilience Service have carried out their roles as stabilizers, innovators, modernizers and pioneers in improving the quality of catfish farmers in Binjai City, North Sumatra Province, but have not provided optimal results. The obstacles faced by Fisheries Instructors at the Binjai City Agriculture and Resilience Service in improving the quality of catfish farmers in Binjai City, North Sumatra Province are: low human resources for fisheries instructors such as limited numbers, technical and non-technical expertise and competence which is a strength in carrying out the role of developing the catfish farming community in supporting stabilizing the development of the fisheries sector in Binjai City, North Sumatra province. The low participation of catfish farmers in implementing modernization of facilities and infrastructure in the fisheries sector, farmers feel comfortable in carrying out the usual cultivation system. financial limitations of farmers in business development, the budget capacity of the Food Security and Agriculture Service of Binjai City which is still very insufficient to meet the demands and needs of catfish farmers and the lack of cross-sectoral cooperation between agencies in efforts to empower the role of fisheries instructors in improving the quality of catfish farmers in the City Binjai, North Sumatra province.

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