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## PLANNING AND DEVELOPMENT OF A CREATIVE BUSINESS AREA BASED ON FRESHWATER FISH CULTIVATION IN PANDEGLANG REGENCY

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### Abstract

*This study aims to examine the planning and development of a creative business district based on freshwater fish farming in Pandeglang Regency, Banten Province. Pandeglang Regency has significant potential in freshwater aquaculture such as tilapia, carp, catfish, and gourami which is spread across almost all sub-districts. However, this potential has yet to be fully optimized as a driving force for the local economy. Using a qualitative approach that includes observations, in-depth interviews, and document analysis, this research explores the current conditions, strategic planning for creative business areas, and collaboration among government, business actors, academics, and local communities. The findings reveal that despite promising potential, several challenges remain, such as limited product innovation, inadequate supporting infrastructure, and low adoption of digital technology and modern marketing strategies. Therefore, an integrated development strategy is required encompassing the strengthening of production and processing centers, development of educational tourism based on freshwater fish, capacity building through training, and enhanced multi-stakeholder collaboration to create a competitive and sustainable creative business ecosystem. This study is expected to serve as both policy recommendations for local government and an academic reference for the development of similar sectors in other regions with comparable potential.*

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**Kata Kunci:** *Creative Business District, Freshwater Aquaculture, Strategic Planning, Innovation, Pandeglang Regency*

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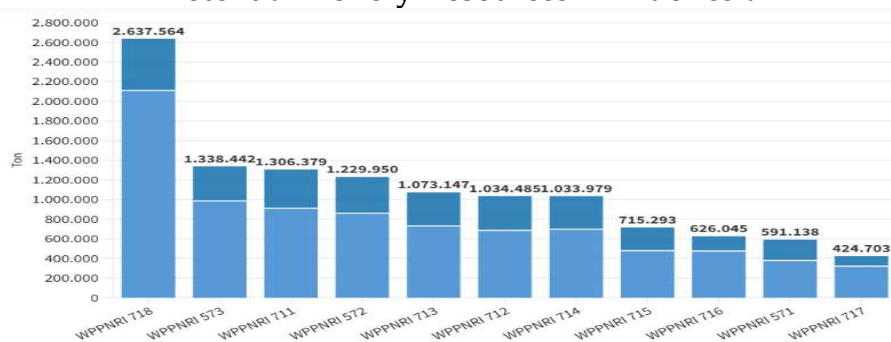
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## INTRODUCTION

Indonesia is known as a country with immense maritime and fishery potential. This sector has become one of the key drivers of national economic development, especially in efforts to improve the welfare of communities that depend on fishing for their livelihoods. (Kusrini, 2010). In coastal areas and small islands, micro, small, and medium enterprises (MSMEs) in the fisheries sector also support the local economy, with main activities such as processing fish, shrimp, and seaweed that have high added value in both domestic and international markets. One of the interesting aspects discussed regarding the fisheries sector in Indonesia is that Indonesia has a very vast ocean area and a high diversity of fish species. This can be proven by Indonesia's location in the tropical region and having the longest coastline, which is 95,000 km, making Indonesia home to 45% of the world's fish species. Besides the marine fisheries sector, Indonesia also has great potential in the freshwater fisheries sector, because Indonesia has good water and land resources, making it suitable for freshwater fish farming.

**Figure 1**  
**Potential Fishery Resources in Indonesia**



(Source of Data: Ministry of Maritime Affairs and Fisheries, 2024)

Most of the fisheries SMEs have developed on the island of Java, particularly in West Java, Central Java, and East Java. However, the government through the Ministry of Maritime Affairs and Fisheries (KKP) encourages that this potential be developed more broadly across all regions, in order to strengthen equitable development and enhance competitiveness in the global market. In the context of supporting the freshwater fish farming sector, the government has issued several important regulations. One of them is Presidential Regulation Number 6 of 2025 concerning the Management of Subsidized Fertilizers, which in Article 1 Paragraph 7 explains that fish farmers include anyone who makes freshwater, brackish, or saltwater fish farming their livelihood. (Iptek & Lipi, 2015).

In addition, various policies such as Law Number 25 of 2004 on the National Development Planning System, Law Number 23 of 2014 on Regional Government, and Law Number 20 of 2008 on MSMEs emphasize the importance of developing regional potential through integrated planning and strengthening the small business sector based on local potential. Furthermore, Presidential Regulation Number 78 of 2021 on the National Master Plan for Creative Economy Development 2025–2045,

Banten Provincial Regulation Number 5 of 2014 on Regional Spatial Planning, and the RPJMD document of Pandeglang Regency prioritize the fisheries and creative economy sectors as drivers of regional development.

Pandeglang Regency in Banten Province holds great potential in freshwater fish farming such as goldfish, catfish, tilapia, and gourami. The availability of land, water sources, and local communities with traditional skills are important assets, possessing promising potential for freshwater fish farming. The topography and geographical characteristics provide ample opportunities to develop fish farming activities that contribute to food security and the local economy. Freshwater fish farming groups (POKDAKAN), members are spread across 35 sub-districts and these groups have been developed by the Pandeglang Regency Office with approximately 4,493 people (approximately 450 groups) and those who already have POKDAKAN membership cards (KTA) amounting to approximately 4,439 fish farmers. To illustrate this condition, there is data showing that almost all areas in Pandeglang Regency have the potential for freshwater aquaculture and can foster creativity in the economic and business sectors to advance the improvement of superior freshwater fish production. Supporting the explanation above, the following supporting data is provided:

**Table 1. Potential Areas for Freshwater Aquaculture and Types of Freshwater Fish**

| No | Region  | Types of Freshwater Fish  |
|----|---|---|
| 1  | Almost the entire district area has potential for freshwater aquaculture. | Goldfish, Nile Tilapia, Catfish, Milkfish, Gourami, Catfish Eel |
| 2  | Other Cultivated Water Areas  | Lobster, Crab, Grouper, Seaweed                                 |

*(Source of data: Strategic Plan of the Fisheries Office of Pandeglang Regency, 2021-2026)*

However, this potential has not yet been optimally utilized as a driving force for economic growth based on an integrated creative business area. However, the development of such areas opens up opportunities to create added value through product innovation, strengthening marketing, and developing educational and culinary tourism based on freshwater fish. Even the goldfish seedlings typical of Pandeglang Regency, known as Ikan Emas Sinyonya, are quite popular among freshwater fish farming. However, various obstacles are still faced, such as the lack of integrated area planning, limited technology and product innovation, insufficient data on potential and market demand, low collaboration between the government, private sector, and community, as well as limited supporting facilities and infrastructure. Therefore, this research is important to formulate a strategy for developing a creative economy area based on freshwater fish farming, local potential, and supporting sustainable economic development in Pandeglang Regency. To illustrate these conditions, the following supporting data is presented:

**Table 2. Aquaculture Production Volume In Pandeglang Regency**

| NO .                 | TYPE OF CULTIVATION | TYPE OF FISH   | QUANTIT Y (KG)    | QUANTIT Y (Ton) | FISH PRICE (Rp) | PRODUCTION VALUE (Rp)    |
|----------------------|---------------------|----------------|-------------------|-----------------|-----------------|--------------------------|
| 1.                   | freshwater          | IKAN MAS       | 2.154.601         | 2.155           | 35.000          | 75.411.037.800           |
| 2.                   |                     | IKAN NILA      | 4.990.062         | 4.990           | 35.000          | 174.652.176.888          |
| 4.                   |                     | IKAN PATIN     | 795.032           | 795             | 25.000          | 19.875.801.600           |
| 5.                   |                     | IKAN GURAME    | 16.020            | 16              | 45.000          | 720.906.606              |
| 6.                   |                     | IKAN LELE      | 4.202.094         | 4.202           | 22.000          | 92.446.070.614           |
|                      |                     |                | -                 | -               |                 | -                        |
| 1.                   | brackish water      | IKAN BANDENG   | 346.729           | 347             | 20.000          | 6.934.570.832            |
| 2.                   |                     | UDANG VANNAMEI | 14.322.054        | 14.322          | 85.000          | 1.217.374.603.600        |
|                      |                     |                | -                 | -               |                 | -                        |
| <b>QUANTITY (KG)</b> |                     |                | <b>26.826.592</b> | <b>26.827</b>   | <b>-</b>        | <b>1.587.415.167.940</b> |

(Data Source: Fisheries Office of Pandeglang Regency, 2021-2026)

Based on the data table above, the aquaculture production in Pandeglang Regency shows that freshwater aquaculture contributes the most to the total production and economic value of the region. The production reached more than Rp 1.58 trillion from 26,826,592 kg, or approximately 26,827 tons. The main freshwater fish production includes tilapia, carp, catfish, patin, and gourami, but the largest production volume comes from tilapia, reaching 4,990,062 kg or 4,990 tons. This is the commodity with the highest production value among other types of freshwater fish, as its price remains stable at around Rp 35,000/kg. The production of catfish, besides tilapia, reaches a volume of 4,202,094 kg (4,202 tons), and its production value remains high, reaching Rp 92.4 billion, despite its selling price having dropped by around Rp 22,000 per kilogram. The production of carp reached 2,154,601 kg (2,155 tons) with a selling price of Rp 35,000/kg, generating a production value of around Rp 75.4 billion. The production of catfish reached 795,032 kg with a selling price of Rp 25,000/kg, generating a production value of around Rp 19.8 billion. Indeed, the production of gourami only reached 16,020 kg (16 tons), but with a higher selling price of Rp 45,000/kg, it still provided a production value of around Rp 720 million. On the other hand, brackish water aquaculture also makes a significant contribution, especially for the vannamei shrimp commodity. The production of vannamei shrimp, which reached 14,322,054 kg or 14,322 tons, with a selling price of 85,000 rupiah per kilogram, generated a production value of around 1.2 trillion. This makes it a flagship commodity in the fisheries sector of Pandeglang Regency. With a selling price of

20,000 rupiah per kilogram, the amount of milkfish produced was also recorded at 346,729 kilograms (347 tons), generating a production value of around 6.9 billion.

**Table 3. Target production of aquaculture fisheries in Pandeglang Regency**

| <b>Target of the Regional Device Strategic Plan for the district/city for the year -</b> |                    |                  |                      |                  |                      |                  |                    |                  |                    |
|--|--------------------|------------------|----------------------|------------------|----------------------|------------------|--------------------|------------------|--------------------|
| <b>1</b><br>(7)  |                    | <b>2</b><br>(8)  |                      | <b>3</b><br>(9)  |                      | <b>4</b><br>(10) |                    | <b>5</b><br>(11) |                    |
| <b>K</b>   | <b>Rp</b>          | <b>K</b>         | <b>Rp</b>            | <b>K</b>         | <b>Rp</b>            | <b>K</b>         | <b>Rp</b>          | <b>K</b>         | <b>Rp</b>          |
| <b>13</b>  | <b>201,300,000</b> | <b>56</b>        | <b>1,001,453,000</b> | <b>58</b>        | <b>1,001,645,000</b> | <b>26</b>        | <b>815,000,000</b> | <b>27</b>        | <b>460,000,000</b> |
| <b>Achievement Realization for the Year -</b>  |                    |                  |                      |                  |                      |                  |                    |                  |                    |
| <b>1</b><br>(12)   |                    | <b>2</b><br>(13) |                      | <b>3</b><br>(14) |                      | <b>4</b><br>(15) |                    | <b>5</b><br>(16) |                    |
| <b>K</b>   | <b>Rp</b>          | <b>K</b>         | <b>Rp</b>            | <b>K</b>         | <b>Rp</b>            | <b>K</b>         | <b>Rp</b>          | <b>K</b>         | <b>Rp</b>          |
| <b>12</b>  | <b>296,300,000</b> | <b>73</b>        | <b>850,189,000</b>   | <b>66</b>        | <b>949,474,000</b>   | <b>72</b>        | <b>849,750,000</b> | <b>8.75</b>      | <b>109,615,000</b> |

(Data Source: Fisheries Office of Pandeglang Regency, 2021-2026)

The table above shows variations in performance achievements in terms of volume (K) and production value (Rp) over five years. In the first year, the production target of 13 K with a value of 201.3 million was realized slightly lower at 12 K, although the production value exceeded the target at 296.3 million. In the second year, the achievement exceeded the target by 12 K. In the third year, the production realization of 66 thousand also exceeded the target of 58 thousand, and the production value of 949.4 million was still below the target of 1.001 billion. In the fourth year, the production volume increased again to 72 thousand from the target of 26 thousand, but the production value of 849.7 million was still below the target of 815 million. In the fifth year, the production realization was only 8.75 thousand from the target of 27 thousand, and the production value of 109.6 million was far below the target of 460 million. This data shows that, although production volume has exceeded targets in several years, the achievement of production value does not always align with the targets, indicating instability, which can be a significant issue in the planning and future development of the aquaculture industry.

Although Pandeglang Regency has great potential in the freshwater fish farming sector, there is currently no integrated creative business area planning that includes production, processing, marketing, and educational tourism areas. This condition results in the local potential not being optimally utilized to drive regional economic growth. The products of freshwater fish farming in Pandeglang Regency are still dominated by the sale of fresh fish, while innovation in processed products is still limited. This has an impact on the low competitiveness, limited market reach, and economic value obtained by the farming community. The planning and development of creative business districts have not yet been supported by strong collaboration among all related parties. However, pentahelix synergy is crucial for providing accurate production data, technological innovation, strengthening human resource capacity, as well as promoting and marketing products based on local potential. Most freshwater fish farmers in Pandeglang Regency still operate their businesses using

traditional methods and are not yet skilled in product development, digital marketing, or the use of modern technology. And small and medium enterprises (SMEs) in the fisheries sector often face working capital constraints, difficulties in accessing the people's business credit (KUR) program or capital assistance, and minimal sustainable business mentoring.

From these issues, it can be concluded that the planning of creative business development based on freshwater fish farming in Pandeglang Regency should ideally be conducted in an integrated, sustainable manner, and based on local potential. The first step is the preparation of a spatial plan for the creative business area, which includes production centers, fishery processing centers, promotion and marketing spaces, and educational and culinary tourism zones based on freshwater fish. Next, it is necessary to develop product innovation strategies, such as processing freshwater fish into various high-value-added products like shredded fish, fish balls, crackers, nuggets, or frozen foods that are more favored by the modern market. This planning is also important to be supported by enhancing the capacity of fish farmers through business management training, digital marketing, and modern aquaculture technology to maintain quality and productivity. In addition, the planning must include the development and improvement of supporting infrastructure such as cold storage, warehouses, road access, and training center facilities. Lastly, it is also important to strengthen collaboration between local governments, business actors, academics, communities, and the media to ensure innovation runs smoothly, policies are more targeted, and a creative business ecosystem is created that can compete in both regional and national markets. Planning like this is expected to enhance added value, expand market access, and promote the sustainable welfare of the Pandeglang community.

Based on the above description, the researcher is interested in conducting this study with the aim of understanding the Planning and Development of a Creative Business Area Based on Freshwater Fish Farming in Pandeglang Regency.

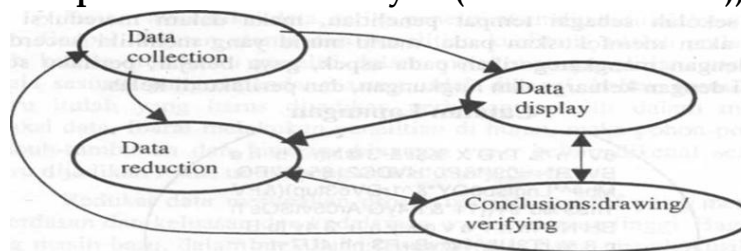
## **METHOD**

In research, the research design should be structured to achieve good results. The purpose of research is a scientific method to obtain data with specific goals and uses. Based on this understanding, there are four aspects that need to be further understood scientifically: data, objectives, and utility.

Meanwhile, research design refers to all the processes required in the planning and execution of research, stating that: "Research is conducted scientifically so that its steps are systematic. To clarify the direction of the research, the researcher needs to theorize according to the scope of the problem," based on the characteristics of science, namely rational, empirical, and systematic. Rational means that the research activities are conducted in a way that is reasonable and within the reach of human reasoning. Empirical means that the methods used can be observed by human senses. Systematic means that the processes used in the research follow certain logical steps. Primary data is data obtained directly from respondents or the object being studied or related to the

object being studied. Which is directly presented by the researcher to the informant. This source of information provides data directly, which is then broadcasted live and is original in nature. This data is the primary data used by the author to seek information for analyzing the planning and development of creative economy in freshwater fish farming towards increasing the regional income of the community in Pandeglang Regency using direct observation techniques and conducting interviews, as well as secondary data obtained through written evidence (documentation), journals, articles, the internet, and literature studies related to this research. As Sugiyono (2011:156) states, "secondary data sources are sources of data that do not directly provide data to the data collector. Secondary data sources include reference books, notes from lectures, documents, applicable regulations, and other readings from various disciplines related to this research." In this research, the researcher uses triangulation to assess the validity of the data. According to Wilersma in Sugiyono (2019:368-370), triangulation in this study is defined as the verification of data from various sources using different methods and at different times. Thus, there are source triangulation, technique triangulation, and time triangulation. And using the Interactive Model data analysis technique according to Miles and Huberman (1984) in (Sugiyono, 2011:246). By conducting data collection, data reduction, data presentation, and drawing conclusions as shown in the image below:

**Figure 2.**  
**Components in Data Analysis (Interactive Model))**



*(According to Miles and Huberman (1984) in (Sugiyono, 2011:246)*

The research was conducted in Pandeglang Regency, Banten Province, with the government, where the policies are under the Department of Fisheries of Pandeglang Regency, as well as freshwater fish farmers and freshwater fish sellers in Pandeglang Regency, from home industries to product processing.

## RESULTS AND DISCUSSION

### Result

Referring to the mandate of the 1945 Constitution of the Republic of Indonesia, local governments are authorized to regulate and manage their own governmental affairs based on the principles of autonomy and delegated tasks. The granting of extensive autonomy to the regions is aimed at accelerating the realization of community welfare through improved services, empowerment, and community

participation. The geographical area of Pandeglang Regency, surrounded by the sea, greatly influences the direction of development in this region. Therefore, the maritime and fisheries sector needs to become the main engine of economic growth in Pandeglang. The fisheries sector itself has its uniqueness, especially because its resources are open, not limited by administrative regions, and although there are many species, their numbers tend to be limited. On the other hand, the development of fisheries in Pandeglang Regency still requires attention as it is not yet optimal. The Fisheries Office of Pandeglang Regency is one of the Regional Device Organizations (OPD) owned by the Pandeglang Regency Government, located at Jalan Raya Labuan Km. 2 Ciek Karaton. This agency has the task of carrying out regional government affairs in the field of fisheries based on the principles of autonomy and delegated duties.

Planning and Development of Creative Business Areas Based on Freshwater Fish Farming in Pandeglang Regency. Based on the results of observations and interviews conducted by researchers at the Fisheries Office of Pandeglang Regency, freshwater fish farmers, and other related parties. To see and measure the success of the Creative Business Area Based on Freshwater Fish Farming in Pandeglang Regency, it can be measured using a structured interview method directly with several informants adjusted to theoretical indicators such as the Economic, Social, and Environmental Aspects Approach. The interviews were first conducted using economic aspect indicators such as:

1. Economic aspect

This aspect is important as a foundation for understanding the potential, innovation, constraints, and collaboration of all parties in promoting local economic development through freshwater fish farming. Due to stable market demand and the availability of ponds, rice fields, and sufficient water sources, freshwater fish farming has great potential to increase the income of the community in Pandeglang Regency.

**figure 3.**  
**Observation of Freshwater Fish Sellers in Pandeglang Regency**



(Data source: Processed by the Researcher, 2025)

Based on the results of the economic aspect observation conducted with freshwater fish sellers in Pandeglang Regency, they concluded an opinion: *"Currently, most of it is still in the form of fresh fish sold directly in the market."* However, *there have already been innovations such as the production of fish floss, fish meatballs, fish*

*crackers, and even fish nuggets. We also try to utilize social media for promotion so that these processed products become more widely known."* (Freshwater Fish Seller, Pandeglang Regency, 2025).

Based on that opinion, it can be concluded that although the main product produced is still fresh fish, innovations in processed products such as shredded fish, fish balls, fish crackers, and fish nuggets are starting to emerge with the aim of increasing their market value. Nevertheless, farmers face issues such as lack of funds, insufficient guidance, and limited access to marketing. Private businesses market and purchase the harvest, while local governments assist through training, seed aid, and feed. However, it is deemed necessary to expand support so that more small-scale farmers can benefit and promote more equitable local economic growth.

## 2. Social aspect

The development of a creative business area based on freshwater fish farming in Pandeglang Regency has significant social aspects due to its impact on community welfare, job creation, workforce empowerment, inclusion of vulnerable groups, and cooperation patterns among business actors. By increasing family income, freshwater fish farming has proven to enhance community welfare.

**Figure 4.**  
**Freshwater fish farmers in pandeglang regency**



*(Data source: processed by researchers, 2025)*

The result of a follow-up observation in the social aspect conducted with freshwater fish sellers in Pandeglang Regency concluded an opinion, "Usually, there are training sessions from the government or the fisheries department, although they are still limited in number." The topics include cultivation techniques, processing results, and marketing. We hope the training can be more frequent and have more participants. (Freshwater Fish Farmers of Pandeglang Regency). This income is ultimately used to meet daily needs and educational expenses. From an employment perspective, this cultivation activity not only absorbs direct labor as cultivators but also opens opportunities in processing, distribution, and marketing. Even supporting sectors like transportation also feel

the benefits. The local government, through the relevant departments, usually conducts training for cultivators and MSME actors in terms of human resource development. This training includes cultivation techniques, product processing, and marketing. However, this training is still limited and has not yet reached all MSME actors. It has become increasingly evident that vulnerable groups, such as women and youth, are participating, especially in the processing and marketing of products. These groups play a crucial role in enhancing product innovation and utilizing digital technology for marketing. However, more effort is needed to improve their roles. Lastly, businesses such as breeders, processors, and marketers usually collaborate through cooperatives or fish farmer groups.

3. Environment aspect

Because freshwater fish farming is highly dependent on the sustainability of this business, especially water cleanliness and water availability, farming that does not pay attention to environmental sustainability has the potential to cause pollution, damage ecosystems, and ultimately harm the farmers themselves.

**Figure 5.**  
**Department Of Fisheries, Pandeglang Regency**



*(Data source: processed by researchers, 2025)*

And the results of further observations in the environmental aspect conducted together with freshwater fish sellers in Pandeglang Regency concluded an opinion: "The challenge is that the need to increase production often tempts people to add excessive stocking density, causing the water to become quickly polluted." There is a need for awareness and guidance so that production increases but remains environmentally friendly" (Head of the Fisheries Department of Pandeglang Regency). Basically, the conclusion from the observation results is that this sector reduces the use of hazardous chemicals that can pollute water sources by regularly cleaning the ponds and ensuring the water quality remains good. Maintaining the balance between increasing production and environmental sustainability is the biggest challenge in terms of the environment. Farmers are often forced to increase yields by increasing stocking density or using feed and chemicals excessively, which has a negative impact on the environment. Therefore, in order for the principle of sustainability to become a common awareness and not just an official obligation,

continuous mentoring and training are needed. Business actors are now starting to become more aware of environmental issues, especially after realizing the long-term losses from environmental damage. However, more socialization, guidance, and real examples of sustainable farming practices are needed to create a more environmentally friendly culture.

In this discussion, it is shown that the potential for freshwater fish farming in Pandeglang Regency has a strategic role in driving the increase in local community income. This is reflected in the presence of natural resources such as ponds, rice fields, and water availability that support cultivation activities. The main products produced are still dominated by fresh fish, but innovation is starting to grow, such as processed products like fish floss, fish balls, fish crackers, and fish nuggets. This innovation not only adds product variety but also opens up broader market opportunities. Nevertheless, the breeders still face several significant challenges, such as limited business capital, lack of training to improve skills, and restricted access to modern marketing channels. Support from local governments, such as training, assistance with seeds and feed, as well as the role of the private sector in marketing, is starting to show benefits, although it is still considered necessary to be expanded to reach more small-scale farmers. These findings emphasize the importance of stronger collaboration among parties, including the government, private sector, and business actors, to optimize the economic potential of freshwater fish farming. With joint efforts, it is hoped that product innovation, skill enhancement, and market access can develop better so that this sector not only survives but also grows into a pillar of local economic strengthening.

On the social aspect, the research also revealed that freshwater fish farming has a significant impact on the social conditions of the community in Pandeglang Regency. Additional income from aquaculture has proven to help meet daily needs and education costs, thereby contributing to reducing the unemployment rate. In addition to creating job opportunities for direct cultivators, this sector also generates opportunities in processing, packaging, distribution, and supporting services such as transportation. In terms of human resource empowerment, the local government has conducted several training sessions related to cultivation techniques, product processing, and marketing. However, the number of training sessions and their coverage are still limited, so they need to be expanded so that more micro and small business actors can benefit from them. The participation of vulnerable groups such as women and youth is also beginning to grow, particularly in the fields of processing and marketing that utilize digital technology. Nevertheless, the role of vulnerable groups needs to be further optimized through special programs that encourage their more active involvement. On the other hand, collaboration among breeders, processors, and marketers usually takes place through cooperatives or fish farmer groups. However, challenges such as differing interests and price competition still pose obstacles to achieving ideal cooperation. Overall, this sector not only increases income but also strengthens the socio-economic network and empowers the community more evenly.

In the environmental aspect, research shows that the sustainability of freshwater fish farming heavily relies on good environmental management,

particularly the management of water quality and availability. Practices such as maintaining pond cleanliness, controlling water flow, avoiding harmful chemicals, and regulating fish stocking density have been implemented by most farmers as steps to keep the ecosystem balanced. Some entrepreneurs are also starting to utilize environmentally friendly innovations such as the use of biofloc systems, energy-efficient aerators, and water recirculation systems for efficiency. However, limited capital and technical knowledge pose obstacles to the wider application of these technologies. On the other hand, organic waste such as fish manure is usually utilized as fertilizer, although the management of waste from processing, such as wastewater, still requires better systems to avoid polluting the surrounding environment. The main challenge faced is the pressure to increase production, which often drives practices such as excessive stocking density, potentially polluting the water and damaging the ecosystem. Therefore, raising awareness, education, and continuous mentoring is crucial so that the principle of sustainability does not just become a formality, but a culture applied in the field. Overall, the awareness of business actors regarding the importance of preserving the environment has begun to grow, although it still needs to be strengthened so that freshwater fish farming practices can be sustainable and environmentally friendly in the long term.

## Discussion

Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. (Warda, 2021). Sustainable development is a multidimensional development paradigm that considers the interests of future generations in addition to meeting current needs. The interconnection between economic, social, and environmental aspects is realized in terms of justice, comfort, and sustainability.. (Utami et al., 2023). Sustainable development is a process of change involving the exploitation of natural resources, investment direction, technology development orientation, and institutional changes that are built to be harmonious and consistent with both current and future needs (Kementerian PPN/Bappenas, 2020).

According to Hastalona & Sadalia, (2021) in (Aisah et al., 2023) dalam (Sopian, 2023) Sustainable development is sustainable development that emphasizes an efficient lifestyle without reducing the use of natural resources in the future. According to Budiharjo & Sujarto (2013), when a city continues to develop and can meet the needs of its current population without sacrificing the ability of future generations. And sustainable development encompasses three main pillars: economic, social, and environmental. The efficient and wise use of resources is key to ensuring long-term economic growth.. (Dewi et al., 2023).

According to Emil Salim in (Azis et al., 2020). view sustainable development as a development paradigm that is not only oriented towards economic growth but also must pay attention to environmental and social aspects in a balanced manner. According to him, sustainable development aims to improve the welfare of society broadly without damaging the environment, so that future generations can still meet their needs. He also emphasizes that conventional development, which only focuses

on economic growth, often fails when viewed from social and environmental aspects. Therefore, sustainable development must integrate Economic Aspects, Social Aspects, and Environmental Aspects. Generally, the definition of strategy is a broad outline of direction in actions to achieve predetermined goals.

In establishing a strategy, it must be preceded by an analysis of the opponent's strength, which includes the number of personnel, strength, and armaments, field conditions, enemy positions, and others. (Wardhana, 2020). On the other hand, another opinion defines strategy as a series of integrated actions that serve as a tool to enhance the success and long-term strength of a company in achieving competitive advantage. (Faslah & Haris, 2017).

In carrying out this strategic planning, various factors that could potentially influence the success or failure of operations will be thoroughly, meticulously, and maximally considered, resulting in a very high likelihood of success. (Suharyani & Djumarno, 2023). Basically, as we already know, the term strategic planning is a combination of the words planning and strategic. Planning, as previously explained, is a fundamental process in determining what is to be achieved and how to achieve it. (Rusniati & Haq, 2014). A strategic plan is a document used to communicate with the organization, the organization's goals, and the actions needed to achieve those goals, as well as any other critical elements developed during the planning process. Strategic management is a comprehensive set of ongoing activities and processes used by an organization to systematically coordinate and align resources and actions with the mission, vision, and strategy through an organization. Strategic management activities transform static plans into a system that provides strategic performance and feedback for decision-making, as well as allowing plans to engage and evolve as requirements and other circumstances change. Strategy execution is essentially synonymous with strategic management and the systematic implementation of the strategy. (Warlizasusi, 2018).

Local economic development is a region-based approach aimed at stimulating economic growth and improving community welfare by utilizing local resources, knowledge, and capacities..” (Rodríguez-Pose & Wilkie, 2023). The success of the LED strategy depends on the development of inclusive partnerships between the government, private sector, and civil society tailored to the local economic potential.” (Nel & Rogerson, 2020) “Effective LED strategies increasingly incorporate considerations of sustainability and resilience to ensure long-term economic and environmental benefits.” (Pike, Rodríguez-Pose & Tomaney, 2018) “Active community involvement in decision-making enhances the effectiveness and legitimacy of local economic development programs..” (Sotarauta & Beer, 2021)).

Local governments play an important role in LED as coordinators of local actors, developers of development visions, and facilitators of investment. (Beer & Clower, 2019). *LED focuses on leveraging competitive advantages and local innovation capacity to drive economic diversification.* (Martinez-Fernandez et al., 2020). Collaboration between universities and local governments supports LED through knowledge transfer, skill enhancement, and entrepreneurship strengthening. (Benneworth, Pinheiro & Karlsen, 2019). The success of LED is greatly influenced by the availability of accurate data, a continuous evaluation system, and the ability to

adjust strategies.. (Swinburnet et al ., 2019). Creative industries and cultural heritage can drive LED by strengthening regional identity and attracting tourists. (Bell & Jayne, 2018) Social capital and trust among local stakeholders are important foundations for the sustainability of LED. (Sotarauta & Beer, 2021).

According to Andani et al., 2024 in (Tuwaji, 2024) In the feasibility of farming, it is related to economics and finance, resources and territory, as well as institutions, which are associated with the formation of regulations either from the government or from the farmers themselves concerning freshwater fish farming (for example, farmer groups, extension services, irrigation, and maintenance). Aquaculture itself plays an important role in conserving fish resources. For the development of aquatic farming, it cannot be separated from the breeding of superior species. Seed production is the starting point in the effort to develop aquaculture, as it is the key to the success of aquaculture endeavors. The quality of good seeds will ensure good production results as well. The availability of adequate seeds in terms of quantity, quality, and continuity must be guaranteed so that the development of aquaculture can proceed well. Until now, seed production efforts remain a limiting factor in the development of aquatic farming in Indonesia for certain organisms. Therefore, breeding efforts are absolutely necessary. (Makmur Kambolong et al., 2023).

In the feasibility of farming, it is related to economics and finance, resources and territory, as well as institutions, which are associated with the formation of regulations either from the government or from the farmers themselves concerning freshwater fish farming (for example, farmer groups, extension services, irrigation, and maintenance). Aquaculture itself plays an important role in conserving fish resources. For the development of aquatic farming, it cannot be separated from the breeding of superior species. Seed production is the starting point in the effort to develop aquaculture, as it is the key to the success of aquaculture endeavors. The quality of good seeds will ensure good production results as well. The availability of adequate seeds in terms of quantity, quality, and continuity must be guaranteed so that the development of aquaculture can proceed well. Until now, seed production efforts remain a limiting factor in the development of aquatic farming in Indonesia for certain organisms. Therefore, breeding efforts are absolutely necessary. (Dahniar et al., 2021). Therefore, it requires training. With this training, aquaculture practitioners can optimize sustainable fish farming and expand marketing through digitalization. This is expected to have a positive impact on the local economy and improve the welfare of the community. Suggestion for this community service activity includes the need for advanced training programs to ensure the sustainable improvement of community skills, including the application of technology in fish farming. The local government and related agencies should provide assistance and conduct regular evaluations of the development of freshwater fish farming ventures run by the community. (Fish et al., 2025). Cultivation is an activity to produce and develop biota (organisms) in a controlled environment in order to obtain profit. (Annastya, 2021).

## CONCLUSIONS

In this study, which aims to understand how "Planning and Development of Creative Business Areas Based on Freshwater Fish Farming in Pandeglang Regency," it can be concluded that Pandeglang Regency has a very large potential for freshwater fish farming due to the availability of natural resources, land, and supporting water sources. The main products of aquaculture are still dominated by fresh fish, although processed product innovations such as shredded fish, meatballs, crackers, and fish nuggets have started to emerge to increase added value. However, the utilization of this potential is not yet optimal due to several obstacles, such as limited capital, low technology utilization, lack of innovation, limited market data, and low multi-stakeholder collaboration between the government, business actors, academics, and the community.

In addition, this research also found that the planning and development efforts of the creative business area have not yet been fully integrated and are still partial. However, integrated planning of creative business areas that includes production centers, processing, marketing, and freshwater fish-based educational tourism is essential to increase added value, expand markets, and drive local economic growth. Support from the local government, training for enhancing human resource capacity, and the development of supporting infrastructure such as cold storage and training centers are also important factors. With good planning and strong pentahelix collaboration, it is hoped that the potential of the freshwater fishery sector in Pandeglang Regency can be maximized to improve the welfare of the community sustainably.

In this study, the researchers provide opinions and suggestions for planning and developing a creative business based on fish farming in Pandeglang Regency so that it can be implemented as expected by the community and the local government, such as 1). The local government is expected to promptly formulate and implement a comprehensive integrated creative business area plan based on freshwater fish farming, involving elements of production, processing, marketing, and educational tourism, so that local potential can be maximally utilized. 2) The enhancement of product innovation needs to be encouraged through training programs, continuous mentoring, and the provision of access to modern technology, so that processed freshwater fish products have higher added value and can compete in regional and national markets. 3) The improvement of supporting infrastructure such as the construction of cold storage, distribution centers, and adequate transportation access to facilitate the supply chain and maintain the quality of fish products. 4) The expansion of access to capital for fish farmers and MSME actors in the fisheries sector to increase business scale, product innovation, and market reach.

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