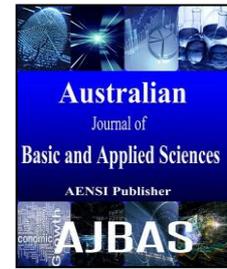




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**Natural and Physical Resources, and Economic Activity of Cindai Alus Minapolitan Area in Banjar Regency**

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**ABSTRACT**

**Background:** In order to support the implementation of regional autonomy that can be efficient and effective in regional development, it is necessary to accelerate the development of each sector effectively by empowering its potential. **Objective:** This paper aimed to describe the condition of Cindai Alus Minapolitan Area in Banjar Regency. **Methods:** This research is a descriptive qualitative research which is supported by qualitative and quantitative data. The data collection method is the observation and literary study. The data is analyzed using interactive analysis. **Results:** Undertake the development of fisheries and marine development areas based on the comparative advantages in accordance with the competence and superior products in each area is a strategy to support the implementation of regional autonomy. Marine fisheries and policy development geared to be able to play a major role in the improvement of the local economy. Marine and fisheries development is expected to position itself as one of the driving regional economic development and provides a substantial contribution to GDP. **Conclusion:** Banjar District Fisheries Development is directed in order to increase income of fish farmers so they are able to be independent, innovative agribusiness which is oriented for friendly environment and can improve the well-being and quality of life. To implement this policy, and then assign territories included in the Development of Fisheries Areas called Banjar Regency Minapolitan area based on the principles of Sustainable Development.

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**INTRODUCTION**

Minapolitan is a development concept which is based on the regional economic management with the utilization of marine and fishery sector that apply the principles of integration, efficiency, quality and high acceleration (Raissa et al., 2014). In accordance with the Minapolitan and decree of Ministry of Marine and Fishery of Indonesia No. 32/Men/2010, Banjar has been selected as one of the Minapolitan areas in South Kalimantan.

That Banjar has strategic locations is the reason why it is selected as the Minapolitan area. Its strengths are the availability of entry-point access from all area directions and near from Trans Kalimantan lane, airport and harbor. Banjar has three potential rivers such as Martapura, Riam Kanan and Riam Kiri. Farming area that can be occupied is

around 427,133 ha in Martapura River, 161,132 ha in Riam Kanan River and 191,132 ha in Riam Kiri River. It also has 9,200 ha Riam Kanan Dam and 530 ha Mandikapau Dam. Furthermore, it has 15,000 ha marine with 26 km coastline. It has 65,030 ha swamp with the watered drainage for 3-6 months and 79,255 ha swamp with the watered drainage for a year (Statistic Centre of Banjar Regency, 2012). In order to implement the Minopolitan policy, through decree of Banjar regent No. 241 in 2008, the government decided Cindai Alus as one of the Minapolitan areas in Banjar, South Kalimantan.

Cindai Alus is a Minapolitan area of catfish in Martapura Kota Subdistrict. The management of fish farming in this area uses the water obtained from the irrigation of Riam Kanan River. Fishery and agriculture are the main sector in this area. Today, there is an increase of agriculture and fishery

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production as well as the increase of the selling price in the market. It encourages the farmers to improve the quantity and quality of their product by intensification and extensification. Despite, the increase of production is confined by the availability of irrigation water which is used for another need (farm irrigation and water source of PDAM), area availability and landscape problem, facility, institutional problem and human resource. Therefore, it is necessary to conduct a research on the condition of natural resource, physical resource and economic activity in Cindai Alus. By doing a deep analysis on the three conditions, this research is expected to provide the information about better and sustainable design and management in Cindai Alus so the fishery development can go well with other sectors.

#### Research Methods:

This research is a descriptive qualitative research which is supported by qualitative and quantitative data. The data collection method is the observation and literary study from Masterplan of Minapolitan

Cindai Alus Banjar Regency, Banjar Regency in Numbers, District in Number, Village Potency Data and Socio-economic Data of Banjar Regency. The data is analyzed using interactive analysis of Miles & Hubberman (1984), where the researcher collects, reduces and analyzes the data then makes a conclusion.

## RESULT AND DISCUSSION

#### Natural Resource of Cindai Alus:

Cindai Alus is an integrated fishery area which is located in Martapura Kota subdistrict that consists of Sungai Sipai, Tungkaran and Cindai Alus Village while in Martapura Barat subdistrict consists of Sungai Batang, Penggalaman and Sungai Rangan Hambuku Village (Figure 1). The management of marine conservation in this area uses water obtained from the irrigation of Riam Kanan River. Fishery and agriculture (crops) are the main sector in this area which uses irrigation and becomes the primary economic activity.

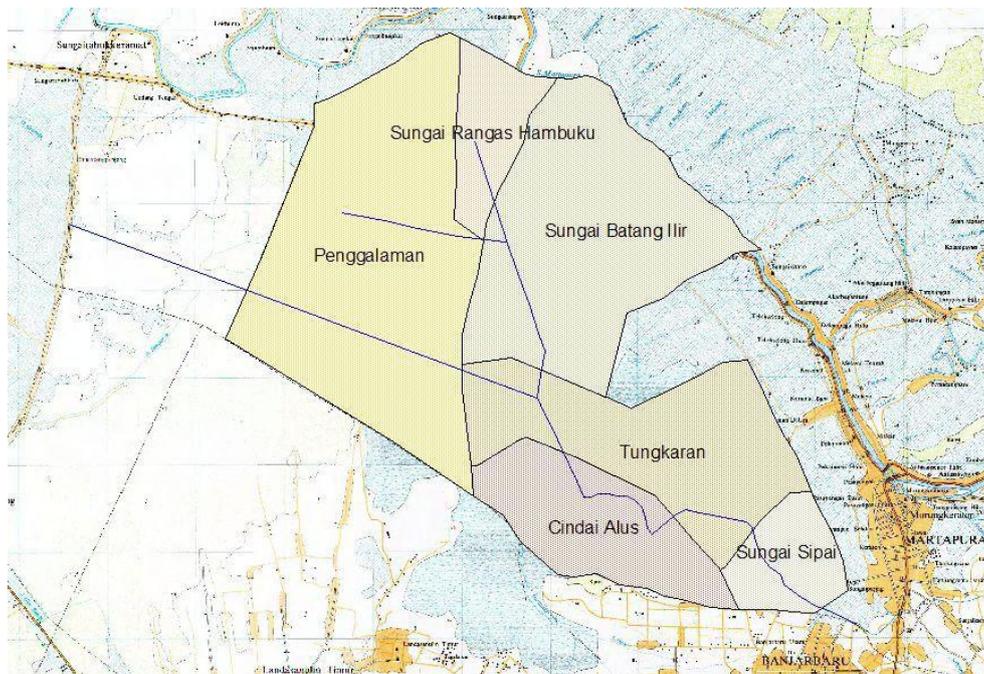


Fig. 1: Cindai Alus Map.

#### Fish Farming:

Cindai Alus has some potential natural resource that can be employed as fish farming business. The area of farming reaches 252 hectares or 59.6% of the Banjar district. Fish production is generally derived from fish farming in ponds. Some fish farmed are catfish (*Pangasius sutchi*), tilapia (*Oreochromis niloticus*) and goldfish (*Cyprinus carpio*).

Catfish is the most fish produced in Cindai Alus that reached 2,500 ton.year<sup>-1</sup> (Government of Banjar Regency, 2008). In the earlier 2015, it was reported that catfish production could reach 35-40 ton.day<sup>-1</sup>.

In accordance with the fact, catfish serves as the primary commodity in Cindai Alus (Figure 2). The catfish production increases every year because this area has adequate living medium for fish in the whole years through technical irrigation system, farmers have good skill and there is a support from parties close to the area.

The Indonesian government chooses Riau, Jambi and South Kalimantan as model provinces for the catfish Minapolitan cluster. The goal of the catfish system in those provinces is to increase the catfish production so the export number will also increase.

In 2012, the catfish production in Kampar Regency, Riau reached 30 ton.day<sup>-1</sup> and 35 ton.day<sup>-1</sup> in Muarojambi Regency, Jambi. While, catfish farming productivity in Banjar, South Kalimantan, of 2006-2011 periods reached 13040 kg.ha<sup>-1</sup>.yr<sup>-1</sup> (Sofia *et al.*, 2013). When compared with other countries such as Vietnam and Thailand, the production level is still considered as low. The average production capacity of catfish farming in Vietnam reached 213846 kg.ha<sup>-1</sup>.yr<sup>-1</sup> (Wilkinson, 2008) and Thailand reached 31250 kg.ha<sup>-1</sup>.yr<sup>-1</sup> (Ahmed *et al.*, 2010). Nevertheless, Banjar was awarded as the best Minapolitan regency with the best fish farming performance in 2014. This achievement was the result of the management and catfish production in Cindai Alus (Decree of Ministry of Marine and Fishery No. 47/KEP/DJPB/2014 28 February 2014).

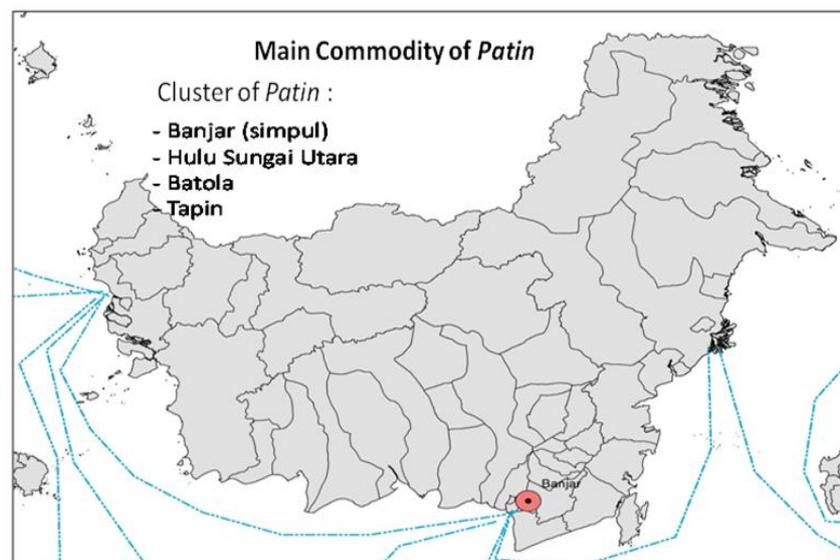
#### **Agricultural Production:**

Besides fishery potential, Cindai Alus has agricultural potential. The agricultural products are rice fruit (orange and banana), vegetable, plantation and livestock product. Production of rice in this area is based on rice-fish farming system (in Indonesia called as Minapadi). Wide of Minapadi area reaches 4 ha or 36.4% of the whole agricultural areas in

Banjar. These farming systems are combined nurture rice and fish in same field and time that provide advantages such as increase the production of rice and fish, reduce pesticides, inorganic fertilizers, weeding and tilling. Arlius and Ekaputra (2011) showed that Minapadi system in South Solok Regency were able to increase farmer's income.

#### **Landscape of Cindai Alus:**

Based on the data from Banjar Government in South Kalimantan 2012, most Cindai Alus area is agricultural area with wetland ( $\pm 70\%$ ) and the rest is dry land fish farming area and settlement. Most of fish production in Cindai Alus is farming in ponds. This area has the most number of ponds compared to other areas. There are 797 families who farm fish in ponds, 70 families do in keramba (fish cage) and 15 families do in Minapadi. In the past time, the fish farming in the fresh water (ponds) did not run well because the seed is distributed from other cities but today there is a seed server institution called Office of Fish Breed and Parental - Balai Benih dan Induk Ikan (BBII) in Karang Intan Subdistrict. Although BBII is not located in Cindai Alus, it is expected to be able to provide good seeds for the farmer, particularly in Banjar.



**Fig. 2:** The Banjar's Minapolitan Node of Catfish centered in Cindai Alus.

For the process of post-harvest, a fish process institution named Unit Pengolahan Ikan (UPI) has been established to facilitate the process of post-harvest in Cindai Alus. Some facilities provided by UPI are Air Blast Freezer (ABF) with 2 ton capacity, cold storage that can freeze 2 ton fish and processing room with its equipment. Besides UPI, there are UPP/UPT office, counseling center, fish integrated service center called Post of Integrated Fisheries Service - Pos Pelayanan Ikan Terpadu (Posikandu) and small ice factory. Based on Decree of Aquaculture Director No.KEP 45/DJ-PB/2009, one

of requirements that an area can be developed into a Minapolitan is that area has Minabusiness infrastructure covering market, financial institutions, farmers groups, hall for fish seed, counseling and training activities and good irrigation facilities. Therefore, Cindai Alus has fulfilled the eligibility of Minapolitan area, despite for the future despite required enhancement capacity and improvement of existing facilities.

Cindai Alus also has independent fish meals factory as the implementation of a program called Autonomy Feed Movement - Gerakan Pakan Mandiri

(GERPARI) planned by Ministry of Marine and Fishery. This factory is able to produce 5 ton.day-1 catfish meals. Even though the production is not able to suffice the need, it decreases production cost so much. Therefore, independent fish meal group which is separated from farmer group is being established so it can provide fish meals independently. The independence is expected to be able to increase the margin and farmer's welfare.

#### **Economic Activity in Cindai Alus:**

It is estimated that the master plan of Cindai Alus development runs from 2008 to 2018. The goals of the development are to improve the quality and quantity of fish farming, increase the supporting facilities in the Minapolitan area, empower and develop the society. The availability of economic facility affects the program and the smoothness of economic activity in the Minapolitan area.

The facilities supporting the economic activity in Banjar are 9 markets and 6 banks. Market is the place where the seller and buyer meet to exchange the product ownership. The fresh fish sellers are about 232 while the processed fish sellers are approximately 41, five of them are amplang (fish chips) producers with every seller produces 46.5 kg.month-1. Bank has an important role in saving people's finance that will be distributed in the form of credit as the capital employed.

The economy interaction in Cindai Alus shows the positive dynamic of the development in Banjar, in this case, the dynamic improvement can increase the people's purchase, encourage the consumption, activate the local economy and create an investment that can increase the local economic growth. Besides the environmental conservation, the Minapolitan development is needed to accelerate the economic growth process.

Budiman (1995) stated that the parameter of success development is not only the one focused on the economic productivity rate, but also two factors such as social justice (same income) and environment factor because both can be used to conserve the environment and development success so there will be sustainable development. It will be reached if the development does not destruct the environment. The environment serves people need so the development which is friendly to environment is the development that supports society. The friendly environment development also creates the fair development which means that there is similar chance for people to gain proper income and similar right to use the development result and take the similar risk of the environment damage.

#### **Conclusion:**

Cindai Alus has potential natural resource, catfish that becomes the main commodity in the minapolitan area development. It is supported by the institutions needed in the farming process and fish

process such as Unit Pengolahan Ikan with sufficient facility and independence effort of catfish meals production. To reach the sustainable development, it is necessary to increase the facility of seed provider and purchasing institution. Furthermore, farmers need to improve their diversification skill of making meals made from catfish so the storage is longer and the selling price is higher.

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