RJOAS: Russian Journal of Agricultural and Socio-Economic Sciences
ISSN 2226-1184 (Online) | Issue 6(138), June 2023

UDC 332; DOI 10.18551/rjoas.2023-06.24

DEVELOPMENT STRATEGY FOR GIANT SNAKEHEAD FISH (CHANNA MICROPELTES) PRODUCTION IN SOUTH BARITO REGENCY OF CENTRAL KALIMANTAN

Florance Resti[1]*, **Agusliani Erma**[1], **Sofia Leila Ariyani**[2]
[1]Master of Fisheries Science, Faculty of Fisheries and Marine,
University of Lambung Mangkurat, Banjarbaru, South Kalimantan, Indonesia
[1,2]Faculty of Fisheries and Marine, University of Lambung Mangkurat, Banjarbaru,
South Kalimantan, Indonesia
*E-mail: erma.agusliani@ulm.ac.id

ABSTRACT
Activity Giant snakehead fish cultivation is carried out by fish cultivators because needs and habits the people of South Barito in consuming local fish, especially the tuna. In development strategy giant snakehead fish cultivation using cage floating in the Barito River. Study aim for analyze condition business and strategy development giant snakehead fish (*Channa micropeltes)* cultivation in South Barito Regency. Data analysis was performed with method descriptive qualitative and quantitative as well as SWOT analysis. Profit value business cultivation Still under The Regency Minimum Wage (UMK) for South Barito Regency in 2023 is Rp. 3,528,912, - per month so that results business the not yet capable to fulfill need life family cultivator. Development business Giant snakehead fish farming is included in an aggressive strategy so the strategy is taken is increase capacity giant snakehead fish production, increase and maintain quality giant snakehead fish and giving fish products help to giant snakehead fish cultivator.

KEY WORDS
Giant snakehead fish, conditions, strategy, cultivation, South Barito.

South Barito Regency has River known longest in Central Kalimantan with Name Barito River. The length of this Barito River reach 900 km and a width of 100 – 200 meters, so is one typology waters general mainland in Indonesia which has potency source power biological in the form of very abundant local fish. Due to circumstances or potency from the Barito River, then Barito River as one area minapolitan with majority the people who live along Genre River profession become fisherman as eye livelihood (Decree of the Minister of Fisheries and Maritime Affairs No. 18 of 2011 concerning Guidelines General Minapolitan) (Yusuf, 2019).

Activity Giant snakehead fish cultivation is carried out by fish cultivators because needs and habits the people of South Barito in consuming local fish especially the tuna. So still can fulfill need consumer, then fish cultivators do giant snakehead fish farming. However For giant snakehead fish cultivators still done in a manner individuals, using their own capital with amount little cage. According to Nugroho et al. (2012), including giant snakehead fish potential local fish species for developed cultivation. Temporary business development cultivation still very limited. Fish seeds are taken from natural so that No add giant snakehead fish population, even potentially threaten sustainability source giant snakehead fish power (Livestock and Fishery Statistics, 2021).

According to Amiluddin (2018), strategy is something planning and management that includes in a manner whole like ideas, plans and activities inside. Researcher see magnitude opportunity for sale of giant snakehead fish in cultivation with condition geographical South Barito Regency especially the Barito River as place business cultivation cage floating. Development fish farming system cage will play a big role in help conserve source fish power in the waters general, increase mark economy through enlargement the accompanying fish caught (Sofia, 2021). This study aimed to analyze condition business and strategy development for giant snakehead fish (*Channa micropeltes)* cultivation in South Barito Regency.

MATERIALS AND METHODS OF RESEARCH

Research area located in the Village Hilir Sper (33 RTP) and Muara Talang Village (27 RTP) of South Dusun and South Barito Regencies, Central Kalimantan, with total number of respondents as much as 60 RTP.

As for variable study about development strategy business Giant snakehead fish cultivation in the Village Hilir Sper and Muara Talang Village, South Barito Regency, Central Kalimantan were used including:

- Conditions for business activity;
- Development of business strategy based on SWOT analysis.

According to Ward (2016) Analysis use analysis descriptive qualitative and quantitative For analyze condition business activity giant snakehead fish cultivation using cage. Condition business the among them location and place fish rearing, fish species, system maintenance and production processes as well as policy department / government in framework support implementation regulation government in accordance with Regulation of the Minister of Maritime Affairs and Fisheries Number PER.12/MEN/2010 concerning Minapolitan in South Dusun Regency, South Barito Regency, Central Kalimantan.

Equality profit can be written with formula:

$$П = TR – TC$$

Where: П = Profit / profit; TR =Total revenue/total receipts; TC = Total cost/total cost.

The total acceptance equation can be written with formula:

$$TR = P \times Q$$

Where: TR =Total revenue/total receipts; P =Price; Q = Production.

The total cost equation can be written with formula:

$$TC = FC + VC$$

Where: TC = Total cost/total cost; FC = Cost still; VC = Cost Variable.

To measure strategy for development cultivation of giant snakehead fish SWOT analysis used. SWOT analysis done through a number of stages: determine factor internal (strength and weakness) and external (opportunity and threats); determine weight and ratings on every factor internal and factor external; determine score weighted with multiplication between mark weight x ratings; criteria evaluation SWOT something activity can Keep going next when total score IFAS > 2 and total score EFAS > 1; compile matrix Internals strategic factors Analysis Summary (IFAS) and matrix External strategic factors Analysis Summary (EFAS); compile diagram and matrix SWOT.

RESULTS AND DISCUSSION

Analysis of giant snakehead fish cultivation in South Barito Regency is based on cost depreciation and fixed costs (see Tables 1-2).

Cost variable consists from price seeds and prices feed. Seed and feed values obtained of the average price issued by the cultivator is Rp. 4,007,627,-.

Giant snakehead fish farming business still considered as work side besides as fish catchers and rattan farmers. When business giant snakehead fish cultivation want to made income main so needed effort spur fish growth. The growth of giant snakehead fish can spurred with method gift feed protein high, regular given every day, feed given in fresh conditions and enough fish get food (Happy, *et al,* 2017).

EFAS analysis revealed differences between total opportunities and total threats and explained that business of giant snakehead fish cultivation capable to handle opportunities and threats with good response (Rangkuti, 2014).

Table 1 – Annual depreciation of giant snakehead fish cultivation facility

No.	Item Name	Unit	Item Price	Total Cost	Age Economical	Depreciation Price
1.	Cage	1 Unit	Rp. 2,000,000,-	Rp. 2,000,000,-	3 years	Rp. 600.000,-
2.	Scrap	3 Units	Rp. 100.000,-	Rp. 300.000,-	3 years	Rp. 90.000,-
3.	Basin	3 Units	Rp. 50.000,-	Rp. 150.000,-	3 years	Rp. 45.000,-
4.	Knife	2 Units	Rp. 20.000,-	Rp. 40.000,-	3 years	Rp. 12.000,-
Amount				Rp. 2.490.000,-		Rp. 747.000,-

Table 2 – Costs fixed per year giant snakehead fish cultivation

No.	Cost Still	One Time Production
1.	Shrinkage	Rp. 1.494.000,-
2.	Maintenance means	Rp. 990.323,-
Amount		Rp. 2,484,323,-

Table 3 – Costs variable per year giant snakehead fish cultivation

No.	Cost Variable	One Time Production
1.	Seed	Rp. 2.120.253,-
2.	Feed	Rp. 1,887,374,-
Amount		Rp. 4,007,627,-

Table 4 – Analysis IFAS Matrix (Internal Strategic Factors analysis summary)

Factors / Strategy Internals	Weight	Ratings	BxR	Condition Existing
Strength (*Strength)*				
1. Extensive watersheds (DAS).	0.24	4	0.96	Wide cultivation area _ reach 900 km and 100 – 200 meters wide and close with settlement cultivator.
2. Potential as area local fish farming.	0.18	3	0.54	Appropriate For local fish farming Because The same such as their natural habitat and River water quality worthy For activity cultivation.
3. Experience fish cultivator.	0.17	3	0.51	Activity This done during not enough more 10 years.
4. Availability seed.	0.10	2	0.2	From nature is results catch own, purchased from fisherman other.
Total strength			2,21	
Weaknesses _				
1. Supply feed and continuity supply feed	0.10	2	0.2	The catch own, purchased from other fishermen or from the market.
2. Don't have yet knowledge about giant snakehead fish hatchery.	0.08	1	0.08	Cultivator No Can do giant snakehead fish hatchery so Giant snakehead fish seeds only depend on originating seeds _ from nature.
3. Level of education fish cultivator Still low.	0.05	1	0.05	From the data obtained For level equivalent elementary education as much as 67%..
4. Limited capital.	0.08	2	0.16	Still relying on their own capital with range of Rp. 1.000.000,- up to Rp. 2,000,000,-.
Total weakness	1.00		0.49	
Difference between total strengths – total weaknesses = 2.21 – 0.49 = 1.72 (element x)				

Table 5 – External Strategic Factors (External Strategic Factors analysis summary)

Factors / Strategy external	Weight	Ratings	BxR	Condition Existing
Opportunities				
Still market potential big.	0.28	3	0.84	Giant snakehead fish marketing a lot to South Kalimantan namely city Barabai and Kandangan as well as interested Because benefit For health that is because giant snakehead fish contains albumin
Opportunity effort.	0.15	3	0.45	Made as business living community _ side River barito.
Support from the Department of Fisheries.	0.10	3	0.3	Get guidance from service related about sustainable giant snakehead fish farming as well as support from service fishery can inform training maggot cultivation like activities that have carried out by the department fisheries in the environment office fisheries that have place cultivation broke.
Determination location cultivation as area minapolitan (fish village).	0.15	3	0.45	One of the supported areas activity local fish farming based on Decision Minister Fishery and marine No 18 Year 2011 About Guidelines General Minapolitan and Regulation of the Minister of Maritime Affairs and Fisheries of the Republic of Indonesia No. 47 of 2021 concerning Fisheries Villages Cultivation.
Total odds			2.04	
Threats				
Local fish production other.	0.12	2	0.24	In the form of a snakehead fish at the time season catch / season dry in amount a lot, then the price of giant snakehead fish will be decreased.
Pollution waters.	0.10	2	0.2	Bother River water flow form waste domestic.
Monopoly price	0.10	2	0.2	Price depends trader collectors so that cultivator must Can lower cost production especially For cost feed.
Total threat	1.00		0.64	
Difference in total opportunity – total threat = 2.04 – 0.64 = 1.4 (y element)				

Strategy WT is a strategy based on activities that are defensive and trying minimize existing weaknesses, as well as avoid threat. The strategy similar management together between giant snakehead fish and local fish other as well as increase knowledge about fish farming (Sharma, 2018).

Table 6 – Matrix Diagrams SWOT

Internals External	Strength (*Strength)* 1. Extensive watersheds (DAS). 2. Potential as area local fish farming. 3. Experience fish cultivator. 4. Availability seed.	Weaknesses 1. Supply feed and continuity supply feed. 2. Don't have yet knowledge about giant snakehead fish hatchery. 3. Level of education fish cultivators still low. 4. Limited capital.
Opportunities Market size. Business opportunities. Fisheries Service Support. Location determination cultivation as area Minapolitan (Fish Village).	Strategy (S–O) Increase capacity giant snakehead fish production. Improve and maintain quality giant snakehead fish products. Give help to giant snakehead fish cultivator.	Strategy (W–O) Procurement feed. Give skills hatchery to fish cultivator.
Threats Local fish production other. Pollution waters. Monopoly price.	Strategy (S–T) Give information about advantages / benefits of giant snakehead fish. Forbidden throw away rubbish haphazard to River. Make agreement between collectors and cultivators.	Strategy (W–T) Management feed to get satisfying harvest determine price. Increase knowledge about giant snakehead fish farming.

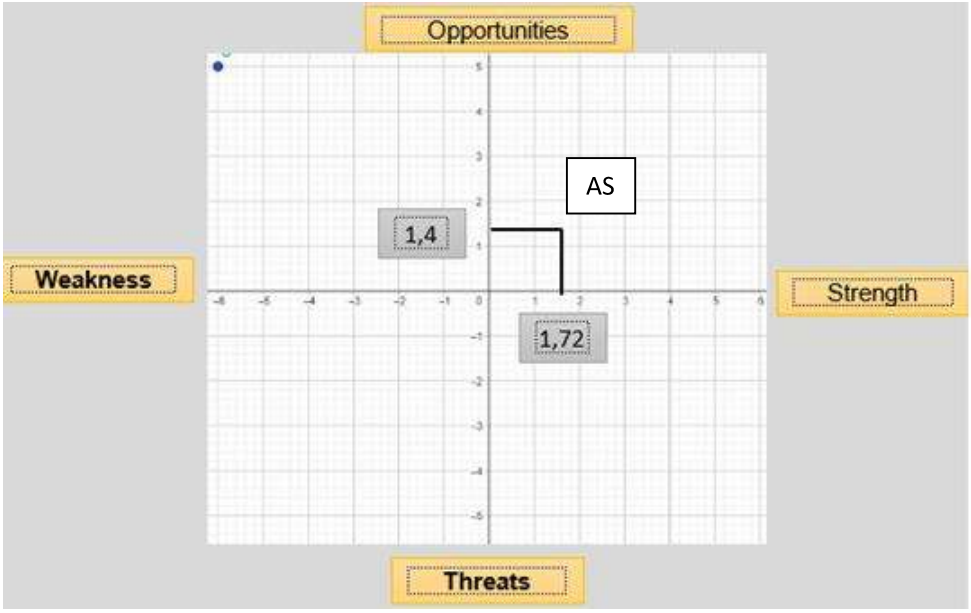

Figure 1 – SWOT Analysis (Note: AS – Aggressive Strategy)

CONCLUSION

Based on results research that has done about Conditions and Development Strategy for Giant snakehead fish Cultivation in South Barito Regency based on condition Giant snakehead fish farming technical, according to Tan (2008) conditions Giant snakehead fish farming finances and strategies adopted using SWOT can concluded as following:

- Giant snakehead fish cultivation technical use cage with use still seeds originate from nature and type the feed given are trash fish, chicken intestine and fish intestine. Willingness Giant snakehead fish feed depends with results catch and owned capital cultivator so that gift feed No done in a manner intensive. Amount of respondents for study these are 60 cultivators with age the most between 37-42 years (26.67%), level education highest at the elementary school level (66.67%) and experience business cultivating giant snakehead fish the most at 5-7 years (40%);
- Development of business included in aggressive strategy with increase of production capacity, maintaining of products quality and providing support to giant snakehead fish cultivators.

REFERENCES

1. Akbar Junius. 2017. Potential, Opportunities and Challenges Development Fishery Swamps in South Kalimantan. Stomach Mangkurat University Press. Banjarmasin.
2. Amiluddin. 2018. Village, S. D. M. P M., & Passivation, K. L. Q. Department Anthropology Faculty Knowledge Social and Knowledge Political University Hassanudin.
3. Ediwarman, R. Hernawati, W. Adianto, and Y, Moreau. 2008. Use of Magot as trash fish substitution in giant snakehead fish farming (channa micropeltes CV). J. Ris Aquaculture Vol. 3. No. 3:395-400
4. Livestock and Fishery Statistics. (2021). Directorate General of Livestock and Animal Health. Ministry of Agriculture, Indonesia.
5. Nugroho. E, M. Fatuchri Sukadi, Gleni Hasan Huwoyon. 2012. Some Potential Local Species for Cultivation: Domestication, Hatchery Technology and Environmental Health Management of Cultivation. Aquaculture Media. 7(1): 52-57.
6. Rangkai, Freddy. 2014. Analysis SWOT Technique split Case business. Jakarta: PT Gramedia References Main.
7. Sharma, R., & Sharma, RK (2018). SWOT analysis of Indian fisheries sector: An institutional perspective. International Journal of Fisheries and Aquatic Studies, 6(2), 72-77.
8. Greetings, Krisdianto, Pahmi Ansyari, Muhammad, Erma Agusliani, Hastin Umi Anisah. 2017. Cultivation of Giant Snakehead Fish in Cages And Eel Fish In Tarp Pond As Persification Of Fishermen In Rawa Waters Of Sari Panji Amuntai Village. Stomach University Mangkurat Faculty Fishery and Marine Banjarbaru.
9. Sofia, LA 2021. Family Channidae Local Fish Business Development System Cage In Regency South Kalimantan Babirik. Proceedings of the National Seminar on Research and Socio-Economic Policy on Maritime Affairs and Fisheries. SUPP-04. PP. 167
10. Tan, BK, & McAleer, M. (2008). A comparative analysis of the relative strengths and weaknesses of SMEs in the Singaporean and Taiwanese fishing industries using SWOT analysis. Asia Pacific Journal of Management, 25(2), 325-347.
11. Ward, T., & Gaffney, N. (2016). Strategic marketing planning for the Southeast Asian Seafood Industry using SWOT analysis. Journal of Global Marketing, 29(1), 1-14.
12. Yusuf, M., & Arafat, Y. (2019). The analysis of the strengths, weaknesses, opportunities, and threats (SWOT) of Indonesia's marine and fisheries sector. IOP Conference Series: Earth and Environmental Science, 319(1), 012008.
13. Zulfikar, M., & Ayub, M. (2019). Development SWOT analysis business Giant snakehead fish farming in Indonesia. Journal Research Aquaculture, 14(3), 239-248.