

## Shrimp Pond Business Local Market Strengthening: An Initiation

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### Abstract

This research is conducted to provide strategies to strengthen the local market shrimp commodity. The method used in this research is qualitative descriptive and obtain the data by Focus Group Discussion (FGD) and structured interviews. The results show that the need for export, shrimp is generally obtained from cultivation in ponds. Shrimp dominates more than 40% of fishery products for export and earn foreign exchange. During the COVID-19 pandemic, it is necessary to strengthen marketing in the local market to minimize the impact of barriers to export shrimp abroad. Several things can be done to strengthen the local market, among others, conduct a shrimp consumption campaign, increase value-added of processed shrimp product, implement shrimp farming method using small-scale round ponds for the community for marketing efficiency. This is done to ensure shrimp supply in the market in accordance with the market demand. Finally, these strategies can create an integrated local market system for shrimp commodities, so that it can provide not only the international market but also the local market.

**Keywords:** covid 19, farm business, shrimp, strengthening local markets

### INTRODUCTION

According to the Ministry of Marine Affairs and Fisheries 2018, the fishery and marine sector is one of the sources of potential export commodities for Indonesia. Export destination countries for Indonesian fishery products include the United States (USA), the European Union, China, Japan and several countries in Asia. From 2012 to 2017, the trend in the export value of fishery products has increased by an average of 4.242 per year [1]. Among the aquaculture products, shrimp is the favorite and has contributed greatly to the country's foreign exchange. Based on BPS data, shrimp contributed to foreign exchange of USD 1.3 billion or 36.96% of the total export value, whereas if viewed from the volume, shrimp only contributed 18.35% of the total volume of exported commodities [2].

The high contribution of shrimp exports to state income is influenced by the strong competitiveness of these commodities. Indonesian shrimp commodity has strong competitiveness in several countries such as Japan, USA, and England [3]. RCA is one of the methods used to measure comparative advantage in a region (region, country, province) [4].

Furthermore, based on the results of the analysis, the RCA values were 5.14 for Japan, 11.70 for the United States and 36.36 for the UK. The factors that affect the competitiveness of shrimp exports are labor, cultivation land, production factors, quality and government programs [5].

In connection with the positive impact of the increasing volume of shrimp exports, this activity can at the same time increase the welfare of the community. However, it cannot be denied that the covid-19 pandemic since the end of December 2019 has resulted in a decrease in demand for shrimp exports from several countries. In one of the online news channels, the Ministry of Marine Affairs and Fisheries stated that there was a decrease in demand of 10-20% due to the outbreak [6]. The decline in demand ultimately has an impact on the selling price of shrimp in the international market [7]. The decline in shrimp prices in the export market will certainly reduce the income of farmers during the ongoing outbreak. Also, cultivation activities continue to this day with abundant harvests, while the price of size 50 shrimp, which was initially Rp.67,000 - Rp.70,000 per kilogram, has decreased to Rp. 60,000 per kilogram [8].

The pandemic not only affects the demand and price of shrimp but also affects the export mechanism so that the distribution process is hampered. The Ministry of Trade noted that Indonesia had to face 16 cases of trade remedies

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during the Covid-19 pandemic. Of these, 14 cases were new investigations and two of them were review investigations or reconsiderations [9]. In destination countries, which implement regional quarantine to prevent the spread of the epidemic, they impose strict rules on incoming goods from other countries. The Ministry of Trade in a virtual public lecture on strategic policies to face the impact of the pandemic in the trade sector to students of Paramadina University in Jakarta, on May 5, said that there were several impacts of the COVID-19 pandemic for global trade. This impact namely changes in global trade patterns. This is due to disrupted supply and demand, the prohibition of export and import of several foods and health commodities; and changes to the global supply chain centers of China, the United States, and Germany [10].

Based on the description of some of the things above, this research was conducted to create alternative opportunities in marketing aquaculture products through the initiation of strengthening the local market for shrimp farming. Marketing of crops in the local market can reduce the risk to the export mechanism in some conditions, but at the same time can be a source of good nutrition for the community. The market function in some developing countries is for the continuous improvement of welfare. For example, absorbing excess production and stabilizing prices. Markets also perform valuable functions such as the distribution of inputs and outputs, the transformation of raw commodities into value-added products, and the transmission of information and risks. Competitive markets help ensure efficient allocation of resources to maximize welfare [11]. Potential demand in the local market that has been ignored by farmers because they prefer the export market is less risky. Shrimp marketing that is carried out directly to consumers can form a more stable price to increase people's purchasing power. This is because the distribution carried out in the export market can cut the supply chain so that it can reduce distribution costs, export-import policies, trade embargoes from other countries, and so on. Also, the distribution of the presence of ports and airports in various cities as well as toll roads that have connected between cities can support these distribution activities.

Several research studies on local markets still focus on institutional roles [12], strengthening the character of local markets due to globalization [13], and strengthening products

through marketing strategies [14]. From previous research, there is no research focus related to local market mapping. This research was conducted by mapping the local shrimp market with the advantages of mapping based on supporting facilities and infrastructure, shrimp cultivation centers, and potential consumer distribution so as to provide a more comprehensive marketing alternative to shrimp farming. This mapping is expected to provide information for farmers in starting the development of local shrimp distribution without reducing the value of production value for farmers.

This research is expected to create a new distribution network for farmers so that the relationship between farmers is not a competitor but a cooperative relationship. Thus, strengthening the local market for shrimp commodities can be carried out in a sustainable manner, not only in the event of a global pandemic but continued to increase the source of community nutrition as well as being an effort to achieve food self-sufficiency.

#### **Data Collection**

This research is a qualitative descriptive study. Qualitative research relies heavily on field data obtained through informants, respondents, documentation, or observation in social settings related to the subject under study [15]. The source used is primary data obtained through observation, Focus Group Discussion, and structured interviews. The selection of informants is selected by the snowball method, which is taking several cases through the relationship between one person and another person or one case with another, then looking for further relationships through the same process, and so on [15]. The method of data collection using FGDs and structured interviews was carried out for researchers to obtain comprehensive and accurate information. So, the objectives of this study could be achieved properly.

#### **RESULT AND DISCUSSION**

##### **Overview of Shrimp Cultivation in Indonesia**

Shrimp is a commodity in the fishery sector with high economic value. The volume of Indonesian shrimp exports is still relative fluctuating, but shrimp remains one of the mainstay commodities of Indonesia's fishery exports. For export needs, shrimp are generally obtained from cultivation in ponds. Shrimp

dominate more than 40 percent of fishery products for export and earning foreign exchange. Japan and the United States are the destination countries with the largest volume of shrimp exports. The European Union, which has 28 members, is the world's largest market for fisheries commodities.

In Semester 1 2015-2019, the volume and value of aquaculture production increased by 3.27% and 13.98% per year on average [16]. On the other hand, Indonesia is known as one of the largest shrimp exporters in the world. Even this commodity has been exported to various countries such as the United States (66.06%), Japan (19.3%), the European Union (4.54%), ASEAN countries (2.17%), the People's Republic of China (PRC) (1.95%) and to other countries (5.98%). This potential can still be increased considering that world food demand tends to increase in terms of consumption.

The effort to increase shrimp production was carried out by the Ministry of Marine and Fisheries by implementing a pilot method of sustainable and responsible cultivation. This method is currently being piloted in several locations in Indonesia. By adopting sustainable principles, shrimp farming activities will run with due regard to environmental sustainability around the pond location. In addition, the aspect of improving the welfare of the surrounding community also includes the development of sustainable methods.

## Local Marketing Facilities and Infrastructure for Shrimp Commodities

### a. Distribution of Shrimp Cultivation

Vaname Shrimp is a species of shrimp native to Indonesian and Southeast Asian waters. And being one of the prawns that have been the favorite for Indonesian exports and one of the favorite fishery commodities, because of its superiority, it is resistant to disease and produces quite high productivity [17]. At this time the distribution of this shrimp in Indonesia is quite wide, starting from the waters of Sumatra Island to Papua, and almost all Indonesian waters have the potential for the development of their cultivation. Based on regional national statistical data, the largest distribution of production from Vaname shrimp fishing for Sumatra is North Sumatra, South Sumatra, Lampung. Meanwhile, the island of Java is Java, Central Java, East Java. The island of Kalimantan is the province of Kalimantan. Furthermore, in West Nusa Tenggara, then for the island of Sulawesi, there

are Gorontalo, South Sulawesi, and North Sulawesi.

### - Land transportation

In the local map, this land route is marked by the existence of a toll road as the chosen road for transportation, including: Sumatra Island, Aceh, North Sumatra, Riau Islands, Riau, West Sumatra, Bengkulu, South Sumatra, Lampung. Whereas in Java Island are: Banten, Jabodetabek, West Java, Central Java, East Java, the special area of Yogyakarta, while on the island of Kalimantan are: East Kalimantan. If the islands of Sulawesi are: South Sulawesi and North Sulawesi.



Figure 1. Map of local market, land routes

### - Water transportation

In the local map, this land route is marked by the presence of ports as the chosen road for transportation, including: Java Island there are 19 ports, Sumatra island has 61 ports, while on the island of Kalimantan there are 8 ports and on the island of Bali there are 4, islands Sulawesi has 17 ports, West Nusa Tenggara has 5 ports, East Nusa Tenggara has 9 ports, North Maluku Island has 10 ports, Maluku Island has 13 ports, Papua Island has 15 ports.



Figure 2. Map of local market, water routes

### - Air Transport

In the local map, this Air Line is marked with an airport as the chosen road for transportation, including: Banten has 1 airport, Bali has 1 airport, East Java has 2 airports, Central Java has 1 airport, Sulawesi has 3 airports, North Sumatra has 1 airport, Yogyakarta has 1 airport, Jakarta has 1 airport, Batam has 1 airport, Palembang has 1 airport, Bandung has 1 airport, Kalimantan

has 8 airports, West Nusa Tenggara has 1 airport, Riau has 1 airport, West Sumatra There is 1 airport, Papua has 5 airports, Kupang has 1 airport, Jambi has 1 airport, Maluku has 1 airport, Bangka Belitung has 1 airport, East Nusa Tenggara has 1 airport, West Nusa Tenggara has 1 airport, Aceh has 1 airport.



Figure 3. Map of local market, air routes

### Strategy to Strengthen Local Market for Shrimp Farming

This study aims to create an alternative marketing space for shrimp commodities. Whereas so far, each community considers shrimp to be a fishery product with a relatively expensive price, besides that, the high global demand and price for shrimp has made farmers prefer to export their shrimp abroad.

The conditions of the COVID-19 pandemic have created new obstacles in important export activities around the world. Various countries have implemented tighter regulations on imported goods to minimize the spread of the virus. This is of course the smooth export of shrimp abroad. The research was conducted online by conducting focus group discussions with informants who are engaged in shrimp farming which is well known in Java, Bali and Nusa Tenggara. In the FGD process, several issues were discussed related to the development of shrimp farming activities, the impact of the pandemic on business activities, and the efforts made by farmers in overcoming the crisis that occurred due to the pandemic.

Based on the results of discussions and exposures from farmers, there are several things that need to be done to develop and assess the local market for shrimp farming in Indonesia.

#### 1. Shrimp Consumption Campaign

Shrimp has been considered an expensive product by the community. Not infrequently they prefer to buy beef, which is more expensive than shrimp. In fact, in terms of nutrition, shrimp has good content for health. Efforts to improve the nutrition of the Indonesian people and the

interest in consuming fish need to be improved, because fish is expected to be one of the main sources of protein in the consumption pattern and culture of the Indonesian people. In view of this, the Ministry of Marine Affairs and Fisheries of the Republic of Indonesia has a program for the Socializing of "Let's eat fish" (GEMARIKAN).

In its development, this program is not only carried out by the government but many practitioners in the fisheries sector, especially fish cultivators, have participated in a campaign to like to eat fish. One of them is done by Shrimp Club Indonesia which has shrimp consumption campaign. This program aims to promote shrimp to the community as well as to provide education about the benefits so that in turn the shrimp will be more attractive and familiar to the community.

#### 2. Increasing Value Added of Shrimp through Processing

Furthermore, shrimp on the market are sold in fresh form and then processed by consumers according to their respective tastes. Besides that, some of the processed products that are quite familiar are shrimp crackers, petis and dimsum. Processing of shrimp with the application of certain technologies into new products is proven to increase its selling value [18]. Value added is the value added during the production process starting from the purchase process or adding raw materials to the finished product [19]. Thus, raw shrimp that is further processed with certain methods and technologies will increase the added value of the commodity itself so that its selling value will increase.

In addition to shrimp meat which can be processed again into certain foods, it turns out that shrimp waste in the form of skin and head can be processed into animal feed and is useful as a source of animal protein in livestock [20]. Not only that, chitin and chitosan contained in shrimp shells are needed by various modern industries such as the pharmaceutical, biochemical, biotech, biomedical, food, paper, textile, agriculture, and health industries [21]. Thus the potential for processing shrimp is very large to support the improvement of community welfare. State that processing shrimp shell waste can provide considerable benefits for processors and have good feasibility, so that government support is needed in disseminating and introducing and training related to technology and methods of processing shrimp waste into products that have added [22].

### 3. Application of Round Pond Shrimp Cultivation for Small Scale Cultivation Business

Shrimp farming using round pools is one solution in the development of the fish farming industry to increase production. So far, cultivation activities are limited by several factors, including limited water, land and pollution to the environment. So, to maintain the sustainability of vannamei shrimp farming activities on narrow land, it can be done by utilizing home yards using tarpaulin pond media without reducing the target amount of production obtained [23].

### 4. Increasing Product Diversification

Shrimp is a fishery product that is widely known by the public, but based on BPS 2018 data, the level of shrimp consumption in Indonesia in 2018 is only around 1.4 kg per capita per year. The low level of fish consumption is due to the relatively expensive price of shrimp and limited product diversification. Based on the results of the FGD, according to one of the participants, a consumer representative said that so far it is often difficult to get the right size shrimp. So that to increase the level of public consumption of shrimp, it is necessary to increase the amount of shrimp production so that prices are more affordable, besides that it is also necessary to diversify processed products and sizes of shrimp in the market to increase preferences for the community.

### CONCLUSION

Based on the results of the dedication, it is known that the need for export, shrimp is generally obtained from cultivation in ponds. Shrimp dominate more than 40 percent of fishery products for export and earn foreign exchange. During the COVID-19 pandemic, it is necessary to strengthen marketing in the local market to minimize the impact of barriers to export of shrimp abroad. Some things that can be done to initiate the strengthening of the local market include shrimp consumption campaign, increasing the added value of processed shrimp products, implementing shrimp farming methods using small-scale circular ponds for the community for marketing efficiency and ensuring the supply of shrimp in the market is in accordance with the needs of the community, especially in terms of size and diversification of processed products. In turn, this community service activity can create an integrated local

market system for shrimp commodities so that it can not only meet export needs but also meet the nutritional needs of local communities.

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