

Policy Strategy in Optimizing the Economy of Salt Farming Communities in North Sumatera and Aceh

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ABSTRACT

Many Indonesian people live in coastal areas in a country with a vast sea. However, unfortunately, the vastness of this sea does not cause Indonesia to become a salt exporting country. North Sumatera can still not produce salt optimally as an area with an enormous enough salt-producing potential. This study aims to analyze the policy strategies that need to be carried out to optimize the economy of salt farming communities in North Sumatera and Aceh. This research will use a qualitative approach. The data used in this study came from various interviews and literature studies. This study found a potential for salt production in North Sumatera and Aceh. However, unfortunately, this potential still cannot be optimized due to various factors. The government then provided training and assistance for salt farmers in North Sumatera and Aceh to increase the optimization of salt production in the two provinces.

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I. Introduction

Indonesia has an extensive marine area, which is 2/3 of the ocean, so it is often called a maritime country. Indonesia has 17,000 islands spread across various regions. Many beaches are almost scattered throughout the island. The majority of the livelihoods of the people living on the coast are fishermen. The vastness of the sea area and the many beaches in Indonesia do not necessarily make Indonesia a salt exporting country. At the same time, Indonesian seawater has a good content for producing salt. If you look at the potential for a coastline of 95,181 kilometers, Indonesia is the second longest in the world to be self-sufficient in salt [1].

In Indonesia, salt is used to meet basic needs as well as industrial needs, including the chemical industry, food industry, pharmaceutical industry, oil industry and also the leather tanning industry, so salt is a strategic commodity. Salt production from 2010 to 2020 continues to fluctuate. The Indonesian government had stated that it would be self-sufficient in salt in 2015, but until now, imports are still going on. This condition is ironic, considering Indonesia is a maritime country [2].

In 2016, salt production fell to 118 thousand tons, whereas in 2015, salt production reached 2.8 million tons. This figure is far from the target and expectations of the government, which wants salt self-sufficiency. Salt production in Indonesia is not commensurate with the demand for salt in the market. Indonesian President Joko Widodo said that as of September 22, 2020, there were still 738,000 tons of people's salt that were not absorbed by the domestic industry. Director General of Chemical, Pharmaceutical, and Textile Industries (IKFT) of the Ministry of Industry Muhammad Khayam said the need for salt might continue to increase every year [3].

To compensate for the growing demand for salt but not supported by local salt production, the government imports salt from various countries. The government does this to meet market demand for salt and suppress the increase in the price of salt in the community. The countries that supply salt to Indonesia are Australia, India, China, and New Zealand [4].

Data from the Central Statistics Agency (BPS) presents the accumulated realization of Indonesia's salt imports in 2020, reaching 2.61 million tons with a value of US\$94.55 million. In terms of volume, this demand has increased compared to the realization of imports in 2019. The most significant import of salt in Indonesia comes from Australia, which has a narrower coastline than Indonesia [5].

The Ministry of Industry predicts that the national salt demand in 2021 will reach 4.6 million tons. However, of the total 4.6 million tons of national salt demand, as much as 2.4 million tons or 53 percent is the need for the Chlor alkali plant (CAP) sector, which includes the petrochemical, pulp and paper industry [6].

PT Paper Factory Tjiwi Kimia is listed as one of the chlor alkali industries requiring 100 thousand tons of salt as raw material yearly. The salt is processed through the electrolysis process into NaOH, Hypo 12%, Cl₂, Chlorine and HCl. In addition, the company also produces products in the form of paper, stationery, cardboard boxes and packaging products. In 2021, the Ministry of Industry also coordinated with the Ministry of Maritime Affairs and Fisheries regarding local salt stock data.

Currently, the Ministry of Industry will oversee the absorption of local salt stocks by the salt processing industry under the coordination of the Indonesian Salt User Industry Association (AIPGI), most of which are located in eight central locations, namely Cirebon Regency, Indramayu Regency, Rembang Regency, Pati Regency, Sampang Regency, Pamekasan Regency, Sumenep Regency, and Bima Regency. The total national salt demand in 2021 will reach 4,606,554 tons, of which 1,528,653 tons are local, while the rest are imported.

The Ministry of Industry strives to maintain the supply of raw salt materials needed by various industrial sub-sectors. The paper industry is one of the industries that use salt maintained for its productivity and competitiveness. By maintaining the supply of salt, it is believed that it can spur the recovery of the national economy due to the impact of the Covid-19 pandemic [7].

However, this effort has not been optimal because until now, the government has not optimized the potential of salt farmers in other areas besides the eight central locations, namely Cirebon Regency, Indramayu Regency, Rembang Regency, Pati Regency, Sampang Regency, Pamekasan Regency, Sumenep Regency, and Bima Regency. In other regions, the potential for salt production can also help meet the country's salt needs and increase salt production in Indonesia [8].

North Sumatra has a reasonably significant salt potential because it is located on the West coast, which has a lot of salt content. However, the community has not maximized this potential to produce salt. Assistant II for Economics and Development of North Sumatra Province R Sabrina said there are still few salt farmers in North Sumatra, even though the North Sumatra area is classified as a west coast area with a lot of salt content [9].

Some areas have quite a lot of salt content, among others, in Central Tapanuli. The lack of salt farmers in North Sumatra is the lack of socialization and knowledge about salt farming. Likewise, with salt farmers in Aceh, the salt-producing areas in Aceh Province are spread over nine districts, namely Aceh Besar, Pidie, Pidie Jaya, North Aceh, East Aceh, Southwest Aceh, South Aceh, Aceh Tamiang and Bireun districts [10].

Another contributing factor to the lack of salt farmers is that people do not know that the profession of salt farming is very profitable. Salt farmers can harvest 3 (three) times in one year. The profit can reach Rp. 4,000,000 (four million rupiah) per harvest. This also causes the large volume of salt imports in North Sumatra and Aceh in the last three years. At least of the total salt demand in North Sumatra, as much as 192,628 tons, about 60% or 116,701 tons, are imported salt. At the same time, the rest is imported from local producers such as Madura [4].

Not only the lack of public knowledge about salt farming, but President Joko Widodo also admits that another cause is the people's salt production technology which is still very traditional. Furthermore, the availability of warehouses, especially storage warehouses, is not yet available. However, the government's attention to the economic welfare of the salt farming community is still minimal [11].

The minimal allocation of government assistance assisting salt farmers in rural areas is also a factor that hinders the economic potential of salt farmers in North Sumatra and Aceh. In addition to these challenges, the manifestation of a competitive nation also faces problems of limited availability of infrastructure that can support increased economic growth, contradictory regulatory constraints, limited mastery of technology, and the level of understanding of salt farmers in increasing salt production, considered a problem in optimizing the economy of salt farmers. Based on this, there is a gap that several previous research results have not explained with the existing conditions in salt farmers [12].

Research conducted by [13] is based on a SWOT analysis. Some policy strategies that need to be carried out on boiled salt businesses in Brebes Regency are to provide education and skills packages for business actors both in formal and non-formal education, such as online marketing training so that marketing reach can be more expansive and can overcome the threat of competitors outside the city.

Then the research conducted by [14] explained that five strategies could be implemented to optimize Pemekasan salt farmers' activities. Of the five, four criteria were taken, namely expanding market share with technology with a CR value of 0.151 (15.1%), improving the quality of salt products with a CR value of 0.603 (60.3%), providing production motivation to salt farmers with a value of CR is 0.206 (20.6%) and arranges farmer group management with a CR value of 0.040 (4.0%).

However, the previous research has not explained the role of policies that can improve and optimize the economy of salt farmers in North Sumatra and Aceh based on policies carried out by the government and their implementation in salt farming communities. The emergence of this gap and the problems described above have interested researchers in researching policy strategies for optimizing the economy of salt farming communities in north Sumatra and Aceh..

II. Methods

This type of research is descriptive qualitative research. This research is located in North Sumatra and Aceh Provinces. The data used in this study are primary data and secondary data derived from interviews and literature studies. Research data that has been successfully collected will be processed by researchers so that later the results of this study can be found.

III. Result and Discussion

A. *Description Of Information Policy Strategy In Optimizing The Economy Of The Salt Farming Community Of North Sumatra*

In optimizing the Community Economy in North Sumatra, policies are needed to encourage farmers to be able to produce their salt, considering the potential of the sea in North Sumatra is quite large. As stated by the Head of the Fishery Production Division of Sibolga, Mr Bangun Sahnuda Harahap, there are no salt farmers yet. However, there are only users because in Sibolga, many fish are salted or the fish sent is not fresh. This means that salt is needed as a preservative, such as fish and canned fish, as well as Central Tapanuli, so it is not in our data for salt farmers.

Unfortunately, North Sumatra's marine potential is so immense, but people still cannot produce their salt. As stated by the Head of the Fisheries Division of Sibolga, Mr Dikky, the reason for the absence of salt farmers in Sibolga or Central Tapanuli is due to unsupportive natural factors, unfavorable seasons and the heat of the sun, which is not like Madura. If you make salt, the water must be really hot, so the government does not do development.

Public knowledge regarding how to process salt is also an obstacle to salt production in Sibolga, and Mr Sori Muda conveyed this as a community benchmark that the marine potential for marine wealth in North Sumatra is enormous when viewed on the West coast from Madina Regency to Sibolga, where this distance is vast, so it must be appropriately utilized. If possible, salt production can also be developed. However, so far, there have been no people who have tried or started processing seawater into salt, it could be due to lack of knowledge, have not tried, and there is no encouragement from the government.

The people of Sibolga get salt by buying it from other regions as conveyed by Bangun Sahnuda Harahap that salt enters Sibolga from Madura through special ships for the production of salted fish canning because it is cheaper for regular consumption of salt from land-land. We want to make good technology to process seawater into salt, but we are afraid that production costs will be high, so it is better to buy it, the price is lower, and production costs can be reduced. It could also be that the salt content of Sibolga's seawater is less, so it does not have the potential to be developed.

There was once a YouTube channel about salt farmers in Sibolga, so the author was interested in researching salt farmers in Sibolga. However, when the researchers arrived in Sibolga, the salt farmers were not found, as stated by Mr Ramayana Tambunan, the Head of the Trade Service, that in the Trade Service, we did not find any salt farmers who were the same. Indeed, there is a YouTube channel for

salt farmers in Sibolga, but after checking in the field, no one knows, and none of our members has found salt farmers in Sibolga. So, we do not have any policies for salt farmers, such as training and assistance with facilities and infrastructure.

The problem in Sibolga is due to the lack of salt content and the unfavorable weather, so farmers have difficulty in terms of salt production. Mr Abdullah Hamid conveyed that the Central Tapanuli Government, or in particular Sibolga, began researching the potential of salt in Sibolga seawater. Maybe in the past, someone made it, but it did not work because of the lack of salt content or unfavorable weather, but now there may be changes, or it turns out that there is much salt in it so that it can be made salt. So if according to him, do research from the government specifically to develop the marine wealth of Sibolga or North Sumatra.

With technology, production costs will increase, making the government worried about producing salt in Sibolga. As stated by Mr Dikky, Head of the Fisheries Division of Sibolga City, if we make high technology, the production costs will be higher, so people have to spend money producing salt. We have procured fish dryers from the Ministry of Marine Affairs, and it turns out that the electricity costs are high. Hence, people prefer to dry fish traditionally because it is cheaper.

B. Salt Farmers SWOT Results in Aceh Province

The following is a table of SWOT results for the economic optimization strategy of salt farming communities.

Table 1. Matrix of Alternative Economic Optimization Strategies for Salt Farmers

Internal	Strengths	Weakness
	<ol style="list-style-type: none"> Economical price compared to other competitors. Guaranteed sources of business capital HR who are diligent and hardworking Spacious Land Established a good relationship with suppliers Issuance of SNI 	<ol style="list-style-type: none"> Lack of supporting facilities Incompetent human resources in the field of Knowledge and Technology The difficulty of product marketing Lack of supporting technology Challenging to get capital from financial institutions Less creative salt farmers in promoting their business
External	SO Strategy	WO Strategy
	<ol style="list-style-type: none"> Increase Production innovation Expanding cooperation with various governments, institutions or communities Increase the Potential and Skills of HR. 	<ol style="list-style-type: none"> The company seeks to obtain a halal label on the raw materials used, a halal certificate, and the Indonesian National Certificate (SNI) for salt production. Establish more incentive cooperation with government institutions and salt collectors in terms of marketing Improve the quality of technology.
Opportunity	ST strategy	WT Strategy
<ol style="list-style-type: none"> Community Economic Growth Population increase Development of Technology and Information Easy-to-reach marketing Improve product development and sales Improved financial services for salt farmer's capital lending 	<ol style="list-style-type: none"> Develop innovations and dominate market share. Increasing human resources, especially in the knowledge of the salt production process and mastery of technology Increase turnover and profit by expanding marketing 	<ol style="list-style-type: none"> Improving quality even though still using technology that is not yet sophisticated and still requires upgrading Increase cooperation with the government and related institutions Strengthening the brand with a halal certificate
Threat		

Based on the table above, it can be seen that the salt farming community has strengths and weaknesses as internal factors of the company. At the same time, opportunities and threats are external factors of the company. The SWOT strategy carried out can provide a strategy for salt farmers to develop production, namely by using strengths to take advantage of opportunities, minimizing weaknesses by taking advantage of existing opportunities, using strengths to overcome threats that come from outside the company and minimize weaknesses in order to overcome threats from competitors that may come from both domestic and foreign.

Based on the alternative strategies mentioned above and looking at the position of the salt farming community, they are in the first quadrant, which means aggressive. The aggressive strategy is a comprehensive strategy that requires the company to be able to develop. One proof of the company's growth is expanding the company by opening branches in strategic locations or extending the company's working hours as an alternative strategy.

Another strategy that can be done to expand marketing is to establish more incentive cooperation with salt collectors to be marketed outside the region. The role of government is needed to expand the marketing network for salt production in Aceh Pidie by making policies related to the marketing of salt products that can favor salt farmers and provide equitable assistance to salt farmers so that the economy of the salt farming community can increase.

C. Policy Strategies That Need To Be Done In Optimizing The Economy Of Salt Farmers In North Sumatra

After the researcher had a discussion with the head of the field at the Fisheries Service Office, Food Security and Agriculture, Sibolga, information was obtained that salt farmers do not exist in North Sumatra, the enormous marine potential possessed by the North Sumatra region does not necessarily make people around the coast produce salt. As for the people who try to produce salt in Sibolga, the business is still a home-based business where the government has not touched it, as said by Mr. Bangun Harahap, Head of Division at the Fisheries Service Office, Food Security and Agriculture, Sibolga. Salt consumed is taken or shipped from outside Sumatra, such as from Java and Madura.

Some factors cause undeveloped salt production in North Sumatra, namely weather factors, technology, and salt water levels in Sibolga, which are still lacking. So it is necessary to implement a policy strategy to encourage farmers to increase their knowledge and technology in terms of effective and efficient salt production. These policies can be in the form of training on producing good quality salt at a relatively low cost to compete with salt producers from other regions.

D. Policy Strategies That Need To Be Done In Optimizing The Economy Of Salt Farmers In Aceh

1) Salt Production Methods in Aceh, Pidie District

Two methods carry out salt production, the first is the traditional method of boiling, and the second is the geomembrane method. The method of boiling is done by natural methods or by boiling salt seeds. The natural boiling process starts with scratching the soil or sand as a drying medium for collecting salt content from seawater and watering sea water four to five times a day using a bucket.

Then, the soil or sand that has been dried by sunlight and contains salt is carried with a bucket to the filter. Then, the soil is watered with sea water and taken with a bucket. In this case, seawater seepage from the filter is called old water. One-time boiling is carried out on average for six hours in a very hot boiling room/kitchen. Generally, on an average day, they cook 2-3 times in the dry season and 1-2 in the rainy season. For one, boiling produces 20 kg of salt.

The next method is boiling using seeds. The process of boiling the seeds is done using coarse salt or krosok, which salt farmers in Aceh call seed salt. This salt comes from Java and Madura and is obtained through salt companies or national salt exporters. This process is carried out by collecting seawater in a cauldron/pot taken from the sea, and then seed salt is poured into the cauldron/pot. The ratio is 50% krosok seed salt and 50% bucket of seawater deposited. After that, the salt is cooked for an average of 6 hours, as in the natural boiling method to produce salt.

The second system is called the tunnel system (geomembrane). This system is carried out using plastic. The inaugural harvest of the tunnel system salt farmers (geomembrane), assisted by the Aceh Maritime Affairs and Fisheries Service (DKP), was carried out in Gampong Cebrek, Simpang Tiga District, Pidie Regency.

The tunnel system measuring 4X10 Meters, as many as ten units, is an aid from the Aceh DKP. With this tunnel system, farmers will produce a higher and multipurpose salt production compared to the boiled salt system reaching 10-12 times.

2) *Strategies that need to be done*

The strategies that need to be carried out by the government in terms of making policies to optimize the Community Economy according to the SWOT analysis are in Quadrant I, namely:

a. Increase Production Innovation

The Aceh government has begun to improve the innovation of the salt production process by using a new system called the tunnel system (geomembrane). This has been done but has not been evenly distributed, and it is hoped that the system can be carried out by all salt farmers so that salt production can be maximized and can improve the economy of the salt farming community.

b. Expanding cooperation with various governments, institutions or communities.

It is necessary to have synergy between the existing agencies in Aceh Province, especially in Pidie Regency, so that the supply chain management of salt production can run synergistically and can improve the economy of the salt farming community.

c. Increase the Potential and Skills of HR

The salt farming community in Pidie Regency is a community that is known to be diligent and hardworking, but there are still many people who do not know how to produce a salt that is effective and efficient, and there are also many who do not master the technology. It is necessary to make a policy on optimizing the human resources of salt farmers so that the production, packaging, distribution and marketing processes are increasing. The policy can be in the form of training, education and comparative studies in areas of maximum salt production.

IV. Conclusion

The potential of the sea in North Sumatra and Aceh is very large, so maximizing salt production can improve the economy of salt farming communities. The tremendous marine potential in North Sumatra does not necessarily make salt production available, and many other factors are also considered in producing salts, such as weather factors, technology, and saltwater content which turns out to be unfavorable in North Sumatra to produce salt. The business opportunity for salt production in Aceh is very potential. Aceh Laut has a vast sea and a large population, making the Aceh region a particular and potential area for developing salt production business. Then there is a need for cooperation between the Department of Marine Affairs and Fisheries and the Department of Trade in marketing salt products.

Furthermore, the technology is still not sophisticated, the capital is still lacking, and the absence of investors is an obstacle to optimizing the economy of the farming community in Aceh Province in processing salt. Marketing that has not been handled directly by the salt farmers themselves. There are no investors who invest in helping salt farmers in marketing salt in Aceh so that it is more widely marketed. Then the policies taken by the government in Aceh Province can be in the form of training on how to produce good quality salt at a relatively low cost in order to compete with salt producers from other regions, while for North Sumatra, it is a policy to encourage people to be interested in producing salt. Finally, the government has assisted salt farmers, but the unequal distribution of assistance has also become an obstacle in optimizing the economy of salt farmers.

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