

Salt Business Opportunity Analyze: Approaches Towards a Green and Environmentally Friendly Economy in Madura Island

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ABSTRACT

Madura Island, with its abundant natural wealth, has great potential to develop a sustainable salt business, towards a green and environmentally friendly economy. This paper discusses approaches to map salt business opportunities in Madura Island with a focus on green economy and environmental aspects. This method of approach includes an analysis of factors such as natural resources, technology, and human resources. Through this approach, it is expected to identify business opportunities that have the potential to have a positive impact on the local economy and the environment, as well as contribute to efforts towards sustainability on Madura Island.

Keywords: green economy, salt, human resource, opportunities, innovation

1. INTRODUCTION

Salt is an important commodity because many industries use it as an additive, ranging from the food and beverage sector to the chemical industry such as chlorine and alkali (CAP). (Hadi & Ahied, 2017). However, nationally the salt industry is still marginalized due to the low competitiveness of human resources, limited production capacity, and inconsistent variations in salt quality (Cholil et al., 2021). Until now, national salt production is still not enough to meet consumption needs, while industrial needs are still entirely imported from other countries. Iswahyudi et al (2013). The use of salt production methods that still rely on traditional methods produces low-quality salt, while competition with imported salt causes selling prices on Madura Island to decrease (Astutik et al., 2019). This imbalance benefits certain parties, such as companies that have licenses for salt imports (Alham, 2015). In addition, there are negative impacts of the salt industry including making spring water salty due to the evaporation process carried out by the salt industry. During the evaporation process, the evaporated water will later leave a higher salt concentration. As a result, the salt content in the water source increases significantly, making the water salty. The problem of salt has a complex relationship. Factors that play an important role generally include social, economic, cultural and technological aspects. (Holilah, et al., 2019) and institutional (Astutik, et al., 2019). Another factor that also has an important role is human resources (Ihsanuddin et al., 2016). Based on the above background, the following problems can be formulated:

1. How to optimize the business opportunities of the salt sector in Madura by paying attention to the green economy based on aaker theory?
2. How is the right technological innovation to drive the success of business opportunities in the salt sector for green economic development?
3. How to improve the quality of Madurese human resources (HR) in the salt industry for economic development?

In this case, mapping a sustainable salt business is a strategic step to ensure that resource utilization not only generates financial benefits, but also must pay attention to its impact on the environment and economic sustainability. This study aims to explore approaches in mapping sustainable salt business opportunities, with emphasis on aspects that support green economic development. Therefore, the mapping of salt business opportunities is expected to provide a new view in integrating economic growth with environmental sustainability, towards the creation of a sustainable and environmentally friendly economy. The proposed approach aims to support inclusive economic growth, reduce social inequality, and preserve the environment, taking into account the needs and interests of all stakeholders. Thus, mapping salt business opportunities not only offers a new view in bridging between economic growth and environmental sustainability.

2. LITERATURE REVIEW

2.1. Salt Industry in Madura

Madura Island is one of the main salt production centers in Indonesia. The salt processing process on Madura Island has existed since ancient times and was passed down from generation to generation. The salt processing system used is also still fairly simple, because the local community still depends on the dry season and traditional technology (Astutik et al., 2019). These traditional salt entrepreneurs produce quality salt with low NaCl content so that it is difficult to be accepted by the market, especially for industries that need salt as their main raw material. (Salim and Munadi 2016). Salt is divided into consumption salt and industrial salt. Consumable salt consists of table salt and table salt. The difference between the two lies in the content of NaCl and different quality specifications. (Kurniawan et al., 2019). The use of industrial salt can be seen in the soda electrolysis industry and the oil industry. However, to produce industrial salt from crosok salt can not only be obtained from the washing stage. This is because the impurity contained in crosok salt is in its crystal structure, so a recrystallization process is needed (Faikul, 2019: 24). In this template, the "Styles" menu should be used to format your text if needed. Highlight the text you want to designate with a certain style, and then select the appropriate name on the Style menu. The style will adjust your fonts and line spacing. Use italics for emphasis; do not underline. To insert images in Word, position the cursor at the insertion point and either use Insert | Picture | From File or copy the image to the Windows clipboard.

2.2. Green and environmentally friendly Economic Development in Madura's salt industry

The development of a green and environmentally friendly economy in the salt industry in Madura requires a holistic and coordinated approach. Increasing awareness among salt producer consumers needs to be done by providing training and education on environmentally friendly technologies and methods. This includes the use of renewable energy in the distribution of seawater commonly carried out by salt farmers such as the use of biodiesel from cooking oil waste as a substitute for diesel fuel for diesel engines (Abdullah et al., 2022). In addition, collaboration between government, industry, and local communities is essential to create policies that support the development of a green economy in the salt sector. Such as providing tax incentives to invest in environmentally friendly technologies, strict regulations regarding waste disposal, and environmental monitoring programs to ensure compliance with environmental standards.

The implementation of corporate collaboration or partnership collaboration can also provide benefits for salt farmers to improve product quality, facilitate distribution access, have established market access, and provide a strong understanding of efficient management practices, so that salt farmers are expected to overcome distribution constraints and increase product competitiveness (Irfan, 2023). Social impact and economic development are also important to ensure that industrial transformation results in equitable and sustainable economic benefits for local communities, as well as considering the needs of salt farmers such as capital, selling prices, and empowerment in order to create possibilities for Indonesia to prosper in the maritime sector and have the opportunity to become one of the best salt producers in the world (Cholil et al., 2021). With a holistic and coordinated approach, the development of a green and environmentally friendly economy in the salt industry in Madura can be a model sustainable development that integrates economic, environmental, and social interests. This not only brings short-term benefits to industry players, but also helps preserve the environment and improve the welfare of Madurese society as a whole.

2.3. Quality of Human Resources in the Salt Sector in Madura

Most salt farmers in Madura still use the traditional way to produce salt by utilizing sunlight. The process of salt crystallization from seawater involves three stages. The initial stage is to collect seawater into the water storage area. Then in stage two, the evaporated water is transferred to another container. The last stage is to transfer the evaporated water to the drying area that serves as a salt table (Susandini et al., 2021). At this stage, salt crystals will form. The salt harvest is then sold directly because the farmers do not have salt storage warehouses. In addition, their dependence on direct income to meet daily needs. The dependence of farmers on middlemen makes them unable to set the selling price of salt in the market, this causes problems in marketing salt. (Nugroho et al., 2020).

Low production quality and competition with imported salt are the causes of the decline in salt prices on Madura Island. As a result, the welfare of salt farmers on Madura Island was also disrupted (Batafor, 2020). One of the factors that make salt farmers unwilling to do salt business and improve the quality of salt they produce is due to price instability in the market. In addition, the practice of price manipulation carried out by salt collectors or salt factories also has a negative impact on salt farmers, which ultimately harms them. (Ultimate et al., 2019). Making salt that is

considered unpromising makes many salt farmers switch professions. Most salt farmers also have low education, making it difficult for salt farmers to accept the changes (Sinaga et al., 2020).

3. RESULT AND DISCUSSION

3.1. Salt Business Opportunities in Green Economic Development in Madura

In the context of green economic development in Madura, the salt business has a great opportunity to become one of the main players in driving sustainable economic growth. One of the main aspects of green economy development is the focus on environmentally friendly business practices and efficient use of resources. There are several business opportunities that can be implemented in the salt industry by applying green economy principles. One of them is to improve the quality of salt to have a higher selling value through the use of environmentally friendly production methods and efficient refining processes, as well as sustainable packaging.

In addition, the development of salt education tourism is also an attractive potential, where salt land can be used as an environmentally friendly tourist destination while increasing awareness of the sustainability of salt farming (Sofia et al., 2022). In addition, with the increasing demand for clean water, desalination technology is becoming increasingly important. Desalination is the process of removing salt content from water (generally water used by seawater) so that the water can be consumed by living things. Salt businesses can collaborate with technology companies to develop environmentally friendly desalination methods (Krisdiarto et al., 2020), such as using renewable energy or technologies that are more efficient in energy use. This will help meet the need for clean water as well as reduce negative impacts on the environment.

Production that involves processing salt production waste is also an opportunity in the salt business. Such as the use of brine water used for salt washing as salt raw material. Salt produced from brine water will certainly have an affordable price but still of high quality. This is done with the aim of reaching the target market of the lower class segment. Opportunities from other salt businesses can be done in terms of products, for example the development of SPA salt and pyramid salt. The segmentation for SPA salt used for salons with products that can be produced is Scrub and bath salt, while pyramid salt is widely used for souvenirs or purposes aesthetic due to its unique shape and high value (Sugiarto et al., 2021). In addition, brine water can also be used as fertilizer because it has various salt compounds that produce macro nutrients and micronutrients needed by plants (Laili et al., 2022). Then, a business opportunity that is not widely known by the public is Moringa fortified salt which contains many health benefits (Asfan & Maflahah, 2021).

3.2. Innovation of Salt Making Technology in Madura

The process of making salt in Indonesia usually uses an evaporation system by utilizing sunlight on the ground. However, this is less environmentally friendly because usually farmers do not use geomembranes due to the financial limitations of salt farmers (Bullah & Rimawati, 2021). Farmers directly use soil media for the process of making salt so that it will leave a higher salt concentration. As a result, the salt content in the water source increase and make the surrounding springs salty. In this case, intervention from the government needs to be done to facilitate and support salt farmers.

Development of other technological innovations that can be done such as developing methods Continuously Dynamic Mixing (CDM) in technology Greenhouse Salt Tunnel (GST) to keep producing sea salt in the rainy season (Kurniawan et al., 2019). In addition to geomembrane the use of methods Sprinkle Multilevel and methods Maduresse Insulating is also considered to accelerate the manufacture of salt (Pranoto et al., 2020). Then to manage costs in the salt industry, cooperation with IT companies can be an effective solution by developing ERP systems. An ERP solution is an IT and management tool used to help companies plan and execute all day-to-day activities. With the ERP system, the industry is expected to maximally reduce operational costs, such as inventory costs (slow moving part, etc.), the cost of loss due to machine damage and to support the implementation of the JIT concept (Just In Time) (Wantara et al., 2021). By implementing these innovations, Indonesia can strengthen its position as a sustainable and environmentally friendly salt producer, as well as make a positive contribution to the overall development of the green economy.

3.3. Human resource development in optimizing salt business towards green economy

The level of quality of human resources (HR) is one of the important factors that cause low productivity and low quality salt. Human resource development is important because it has crucial aspects in increasing productivity. Thus, human resource development needs to be the main focus in efforts to achieve sustainable progress for a country. The

initial effort that can be made to improve the quality of resources of Madurese salt farmers is by applying a model design Social Learning which can be tailored to their needs. In addition to knowledge and skills in salt making, another competency that is also needed by Madura salt farmers, is the competence to change the mindset (mind set). These competencies can be obtained through a structured model approach, which can be implemented through discussion, socialization, education, training, and various other media. (Hanik & Mutmainah, 2018). This program is expected to open the horizons of salt producers to new information or technology without changing the character of Madurese society in terms of honor and self-esteem. Method Modelling Another planned FGD (Focus Group Discussion) used to gather local or specific information or input on the challenges of salt farmland integration. With the collection of this information, it is hoped that the problem of salt agricultural land integration can get the best solution (Hanik & Mutmainah, 2020). Collaboration between salt farmers, governments, research institutions, and other stakeholders is important to create innovations in efficient and sustainable salt production. Through close exchange of knowledge and experience, sustainable salt business growth can be encouraged.

4. CONCLUSION

Based on the results of the above research, it can be concluded that the majority of salt farmers in Madura still use traditional methods in producing salt. This is because human resources are difficult to accept existing changes, so that salt business opportunities cannot be fully maximized. Therefore, increasing awareness of changes and developing technological innovations in the salt industry is needed to encourage the optimization of salt business opportunities and green economic development in the salt business so as to create an economy that is not only productive but also environmentally friendly and provides many long-term benefits for society and the environment.

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