TRADITIONAL SALT SYSTEM ANALYSIS IN NORTH BEACH DISTRICT PROBOLINGGO

Mustofa
STIE Mandala Jember
mustofa@stie-mandala.ac.id

Abstract

Analysis of traditional systems on the north coast salt Probolinggo district is based on characteristics of a region. Java's northern coastal waters represents the characteristic condition of coastal resources management is needed specifically especially traditional salt processing. Traditional salt system on the northern coast of Probolinggo district became one of the major economic activities in coastal areas. This study aims to: (1) Identify the economic activity of traditional salt farmers in the northern coastal region of Probolinggo district; (2) Knowing the demographic characteristics, economy and culture of farming communities traditional salt in region northern coast Probolinggo district; (3) Knowing the relationships among stakeholder groups (stakeholders), namely salt farmers, traders or middlemen, government agencies, and community institutions in connection with the traditional salt farmers in the northern coastal region of Probolinggo district. This study uses a form of qualitative research conducted on an object and condition as it is. Data collection is done by collecting a variety of information or data about the economic activity of traditional salt farmers in the northern coastal region of Probolinggo district. From the research results can be concluded and advised efforts to improve the quality levels of NaCl 85% NaCl salt into 98% of the people in order to meet the needs of industry for salt for this supply through import salt. The establishment of a financial institution or group-based joint venture business group of salt needs to be done to overcome this difficulty salt farmers in terms of capital in the activities of salt production and post-production so that the sales price can be sold at a high price.

Keywords: Salt, traditional, north coast
1. Introduction

Traditional salt-making has been done for generations mainly in East Java, one of which is the northern coastal area of Probolinggo regency. Coastal community activities in marine, fishery, and salt farming are among the important sources of economic growth because: (a) the supply capacity is very large, while demand continues to increase; (b) in general, the output can be exported, while the input coming from local resources; (C) can generate large upstream and downstream industries, thus absorbing enough manpower; (D) generally takes place in the region; and (e) the fishing industry, biotechnology and marine tourism can be updated (renewable resources), thus supporting the implementation of sustainable development (Boedhisantoso, S. 2009: 12).

A coastal community in general is a group of people that are lagging behind in social, economic, and cultural comparison with other community groups. Such perceptions are based on direct observations of the realities of coastal community life or through an understanding of the results of academic studies. Socio-economic backwardness in coastal communities a potential obstacle for them to push the dynamics of development in the region (Shjahrul Asward, 2009: 32). As a result, frequent weakness bargaining position with other parties outside the coastal areas, so they lack the ability to develop their personal capacity and social organization or institution owned as a means of actualizing in developing regions. Coastal communities (fishermen) can be classified into: (1) fishermen fishing (the crew and owners); (2) the farmers / growers / farmers salt; (3) processing of seafood; And (4) seafood traders (Susilowati, et al, 2004: 28).

Generally, the problems faced by coastal communities in Indonesia is no different from the problems encountered in other small-scale economic activities. They live in all the limitations, as well as economic constraints appear in the low income levels of fishermen. As a strategic commodity as industrial raw materials and foodstuffs that are needed by almost all communities. But salt production produced by Indonesian salt farmers has not been able to meet the salt needs of Indonesian society. Therefore, the Indonesian government decided to import salt. In realization, the purpose of imports as described previously to meet domestic needs, it raises a new problem because it exceeds the required amount.
Salt farmers on the northern coast of the district of Probolinggo in general are farmers traditional salt with a pattern that depends on the season and have not utilized marine resources to the maximum and a low degree of knowledge about banking, processing of salt are still using the old ways are hereditary and do in very traditional ways.

1.1 Formulation of the problem

Based on the above background problems can be formulated as follows:

1. How traditional salt farmers' economic activity in the northern coastal region of Probolinggo district?

2. How is the demographic, economic and cultural traditional salt farmers in an area of the north coast of Probolinggo district.

3. How is the relationship between stakeholder groups (Stake Holders) ie salt farmers, traders or brokers, government agencies, and community institutions with respect to their traditional salt farmers in the northern coastal region of Probolinggo district.

2. LITERATURE STUDY

In a review of this Library is made to provide a theoretical foundation in the study contains theories that represent research activities and used as a basis for determining research variables. This literature review is an attempt to understand the problems in research. According to Nazir (2003: 93) a literature review aims to explore the theories developed in the science concerned and obtain orientation broader research issues as well as seeking methods and techniques of research, both in collecting data or analyzing data that has been used by previous researchers, also obtained a broader orientation in selected issues and avoid unwanted duplication.
2.1. Coastal Area

Growth of the region based on a commonly recognized regional approach is the theory of export-based growth (Nugroho et al., 2004: 57). Based on the description of the literature review, that the production and value of production of salt farmers that took place in the northern coastal region of Probolinggo as a means of managing marine products, especially salt today has shown indications of growth as the main activity and support activities. Contextual understanding of the growth of the area in this literature review is to see the existence of the northern coastal area of Probolinggo as part of the activities of salt farmers.

According to the general agreement in the world that the coastal area is a meeting area between land and sea, the land includes both dry and submerged land that is still influenced by the properties of the sea such as tides, sea breezes and salt water intrusion into the sea including the sea which is still affected by the natural process that occurs in the land, such as sedimentation and flow of fresh water, as well as due to human activities such as agriculture and pollution (Directorate General of Coastal and Small Islands, 2003: 69).

2.2 Regional-based integration basis

The first question to be answered is related to the basis of integration, whether the alignment is based on (a) the geographical region, (b) a principal activity and activity; (C) approach of one sector of the economy / commodities. Each answer option contains different consequences. The geographic region-based integration, in this case the buffer zone as a basis for activity. If this base area is accepted into a single reference it can use one approach to the development of potential commodities and economic sectors in a given geographic area. The concept of Integrated Economic Development Zone (KAPET) that is becoming a mode can be a reference model of development. This model focuses more on integration that is based on geographical region. Its essence is the selection and determination of an area in a particular region as a center for the development of the area concerned. Commodities and economic sectors that do given the choice of the perpetrators, but directed mutual support.
Economic sector-based integration is done by first selecting a particular economic sector as one of the activities that have advantages. The basis for selection of this economic sector may vary, but is generally adapted to government development plans and programs. The geographical area may spread, but must take into account the effectiveness, convenience, and efficiency of adjacent regional movements for the economic sector concerned.

Developed commodities can also vary, but still within the framework of mutual support. For example, the integrated development of traditional medicine industry sector in which all kinds of commodities containing traditional medicines can be developed, all geared towards the development of agro-industrial or traditional herbal medicine as a policy footing.

Commodity-based integration emphasizes the choice of commodities to be the focus of development. Just as the development of an integrated area-based economic sector, options on commodity base is not focused on the geographic regions over effectiveness, convenience, and efficiency of movement between the adjacent regions for the commodity in question is possible. Because it is based commodities, such as "integrated regional development of agricultural crops," the factor of the economy are becoming irrelevant.

With regard to the idea and direction of national economic development policies within the framework of a people's economy has recently reported, then the choice should be based not on the basis of integrity of geographical areas and sectors of the economy, but rather refers to a commodity and resource strength supported by the base. Selection of commodities as a basis for the development will be easier to do because then the absolute advantage and comparative advantage of existing resources is quite reliable. At least, the development of the area will have the main economic activities of cultivating (cultivating) the selected commodities into reliable products of the local community.

2.3 Basis and Orientation of Coastal Area Development

Program development of natural resources in coastal areas, can generally be categorized as an effort driven by what can be produced by the manufacturer (product-driven) and the efforts that are controlled by the things that are acceptable to the market (market-driven.) Or in other words oriented
To economics first. In connection with the issue, every business organization and grouping of business organizations need to think of things as follows:

1. Whether it will operate according to the consumer behavior (market-oriented) or capabilities (product-oriented); and
2. Will it be developed based on the needs of the market (market-based) or based on the strength of their resources (resources-based).

Efforts made to the development of natural resources in an integrated manner has two strategic objectives, namely how it can create added value that can reduce poverty and (then) how to compete in the market in order to be sustainable.

2.4 Research Framework

The successful management of salt resources will depend on many factors. The potential of abundant salt resources that exist in a region or region, not enough to illustrate that salt farmers activities in the area will be able to grow well. The geographical position of the isolation of the topography of the region makes it difficult to access from outside the area to the location of the base area of salt farmers, limited the quality and quantity of human resources, culture conditions and socio-cultural society, the characteristics of the fish resources, technology, investment capabilities and capital minimal government and the local community, the lack of market or consumer as well as the political situation, is thought to be a limiting factor for the development of fisheries in the area. The strategy of developing salt farmers is precisely tailored to the characteristics of potential and problems that are owned in the area north coast area of Probolinggo regency.

3. RESEARCH METHODS

In this study using qualitative research forms conducted on an object and conditioned it as it is. According to Sutopo (2002: 111) "The qualitative research of his case study leads to a detailed and in-depth description of the portrait of conditions about what actually happened on the
course." Theoretically qualitative research has a notion as a systematic statement relating to a set of prepositions derived from data and empirically tested.

3.1 Subject Research

Subjects in this study were people in the northern coastal area of Probolinggo, salt farmers, traders or middlemen as well as the general public.

3.2 Phases Research

The stages in the study include:

a. Digging Secondary Resources

From secondary sources collected from agencies or institutions of government agencies, non-government and private. Secondary sources include library books and other information resources. Based on these secondary sources, relevant data and information can be obtained to be able to know the existing condition of the economic activity of the area in the research location.

b. Observation or Direct Observation

Direct observation is intended to know and understand directly the activities of salt farmers in each research location. Direct observations made include:

1. Direct observation of the physical condition of the study site

   a. Observation of the land, including basic facilities, functional facilities and supporting facilities.
   b. Observation of the ease of accessibility to the location of the study, the views of infrastructure facilities such as roads and transportation.
   c. Observation of supporting infrastructure
2. Observation of the activities of traditional salt farmers
   
a. Observation of the activities of traditional salt farmers

b. Observation of the process of distribution and marketing of salt.

3. Observation of the existence and economic activity of salt farmers
   
a. Observation on the existence and role of existing salt institutions, both government
   institutions, non-governmental and private.

b. Observation of policy implementation and law enforcement.

3. 3 Mechanical Withdrawal Informants
   
   In determining informants, researchers used the technique of snowball (snowball
   sampling). In Yin's opinion as quoted by Sutopo (2002: 37):

   Snowball sampling is a preparatory use of sampling but takes the first person encountered,
   and then by following the instructions to get the next sampling so as to get complete and
   in-depth data, like a rolling snowball, getting bigger.

   Based on the above opinion, it can be concluded that to obtain in-depth data required
   informants are considered sufficient then informants are asked to show other subjects who are
   considered to know this problem more broadly, so that obtained deep data and really support the
   achievement of research results.

3. 4 Data Collection Techniques
   
   Data collection is done by collecting various information or data about coastal natural
   resource utilization conducted by salt farmers in north coast area of Probolinggo regency. The data
   collection technique is done in several ways as follows:
a. **Observation technique (observation):**

This technique is conducted to obtain data on the potential of coastal resources and socio-economic life of local salt farmers.

b. **Interview technique (interview):**

To obtain the primary data then use semi structured interview technique (semi structured interview) ie the interview which the implementation is more free and use open questions that are conducted in a purposive manner with resource persons or respondents who are considered most know the problems faced by coastal communities in the management of conservation areas Sea salt traditional farmers, traders or middlemen, village chiefs, community leaders, religious leaders, traditional leaders, officials of the Department of Fisheries and Marine and related institutions.

c. **Questionnaire:**

To obtain the primary data used questionnaire as a tool to measure. The respondents are traditional salt farmers, middlemen, village heads, community leaders, religious leaders, traditional leaders, and officials of the Fisheries and Maritime Office and related institutions.

3.5 Data Analysis

1. **Identifying Performance of Economic Activities Farmers Salts In the North Coast Region Probolinggo.**

2. **Analysis of demographic characteristics, economic and cultural traditional salt farmers in an area of the north coast of Probolinggo district.**

3. **Analysis of the relationship between stakeholder groups (Stake Holders) ie salt farmers, traders or brokers, government agencies, and community institutions with respect to their traditional salt farmers in the northern coastal region of Probolinggo district.**
One tool in analyzing traditional pergaraman systems on the north coast of Probolinggo district is the SWOT analysis. According Rangkuti (2005: 18) SWOT analysis is the identification of various factors systematically to formulate the development strategy of the Traditional Salt processing unit. This analysis is based on the logic that can maximize strength (Strengths) and opportunities (Opportunities), but can simultaneously minimize weakness (Weaknesses) and threats (Threats). Based on this analysis can be known the relationship between internal factors with external factors, so as to generate the possibility of strategic alternatives.

4. RESULTS AND DISCUSSION

Probolinggo is one of the districts in the province of East Java. Located at position 112°50' - 113°30' East Longitude (BT) and 7°40' - 8°10' South Latitude (LS) with an area of about 169,616.65 Ha or + 1696,17 Km2 (1.07 % of the land and sea of the province of East Java).

The details are as follows:

a. Settlement: 147.74 km2
b. Rice fields: 373.13 km2
c. Tegal: 513.80 km2
d. Plantation: 32.81 km2
e. Forests: 426.46 km2
f. Pond / pool: 13.99 km2
g. Gili Ketapang: 0.6 Km2
h. Other: 188.24 km2

Judging from the geographical, Probolinggo district is located on the slopes stretching from West to East, on Mount Semeru, Argopuro, Lemongan, and the Bromo-Tengger mountains. In addition, there are other mountains like Mount Bromo, Widodaren, lustrous, Gambir, Jombang, Cemoro.
Lawang, Malang and Batujajar. Seen from a height of 0-2500 m above sea level with an average temperature of 27-30 degrees Celsius (http://www.probolinggokab.go.id/).

4.1 Analysis of Research Results

**Economic Activity of Salt Grower Community In North Beach Probolinggo Regency**

The economic activity of salt farmers in the northern coastal area of Probolinggo district in the last one is seen to be very excited. It can be seen from the activity of active communities continuously in salt-making activities of this is due to good weather conditions with the drought is long enough. For one plot of salt ponds, salt farmers on the northern coast of Probolinggo district claim to be able to get 7 to 9 tons of salt per month. Can even harvest 15 days with white salt quality, clean and shiny. Probolinggo salt other than sent to the factory to be used as salt yudium, salt production Probolinggo also sent to Bali for mixture of sauna bath materials. For the price of salt sebebelum packed range of Rp 500 per kilo and if it is in the bag of sacks, the price range of Rp 800.

1. Stage Production Activities of Salt Making

Production activities in salt-making activities are preceded by the preparation of tools for the preparation of salt land and salt land improvement as most of the salt land when the rainy season is functioned as fish ponds in the form of hoes, shovels, windmills, pipes for waterways, and then needs logistics during ongoing land improvement there are several fields that already use geo-membrane technology.

The results of the mapping in the field of post production phases of salt production activities for the time being profitable, because there are no constraints. While the process of salt production, every day requires maximum sun blazing, thus making the production of salt is very abundant and good quality.
There is currently a 60 percent increase in salt production. Where supported by the growing dry season will further add to the quality of salt conditions. Usually 7 days of harvest, now can be 12 days from July to August 2015 is already 4 times the harvest with the number of 4 tons per pond.

2. Stage Post Production of Salt Activities

There are business actors in the post-production process, among them;

(1) middlemen,

(2) business of packing salt,

(3) intermediate buyers and final purchases.

Related to the stage of post-production activities marketing activities salt farmers peasant production and processing salt salt harvesting results.

The value chain in the upstream sector of activity pergaraman Probolinggo district north coast is the income earned value creation salt farmers as actors salt production. After the salt-making results obtained subsequently collected in a shelter salt to do the sales transaction.

Broadly speaking it can be said that the salt-making activity that occurred in the northern coastal area of Probolinggo district has now encouraged local economic growth through the value chain of salt business activities namely the growth of entrepreneurship and can open employment for local communities based on the utilization of coastal marine resources (natural, human, and institutional capital), which can create activity on businesses in connection salt-making activities. For this year there are plans to export overseas, but still constrained by the Trade Business License (siup) that has not been down.
4.2 Environmental Analysis

Internal environment in question is public and the environment Probolinggo district north coast region itself. Event salt farmers on the northern coast and development in coastal areas must not be separated from environmental capacity, the sustainability of natural resources and be integrated by the various parties involved with the emphasis on improving the welfare of local communities.

The external environment indirectly exerts a very strong influence in supporting the coastal development of Mining. Support central and local governments (LGs) to provide direction and support to the development efforts underway in the mining activity. In this case the fishery and maritime department of Probolinggo district through the Garut People's Empowerment Program (Pugar) program in Probolinggo regency 2014 (to October) reached 18,254 tons. This number increased compared to the year 2013 which reached 11,515 tons.

The Pugar program is implemented from 2011-2015. The success achieved during those four years is no more imported salt for consumption. But for the industry is still imported. The program ahead is no more salt imports for the industry. People's salt empowerment is simply left by the government. This makes the production of people salt in Probolinggo regency unstable. After the Pugar program, people salt business continues to increase from year to year. One is a program that help farmers to mebran salt is a program that is able to improve the productivity and quality of salt.

4.3 Analysis of Traditional Saltine System On the North Coast of Probolinggo Regency

A. Traditional Pergaraman System Analysis In North Beach

To analyze the traditional tanditional system on the north coast of Probolinggo district using SWOT analysis. SWOT analysis is generally used because it has advantages that are simple, flexible, thorough, unify and collaborate. With this analysis will be known linkages between internal factors and external factors, which can lead to the possibility of strategic alternatives (Rangkuti, F. 2005).
The results identify the factors SWOT analysis of economic activity salt farmers on the northern coast of Probolinggo district as follows:

1. Internal Factors Evaluation System Pergaraman Traditional In North Coast Probolinggo:

   The results of the analysis of internal factors, acquired factors on the strategic strengths and weaknesses of traditional pergaraman system on the north coast districts probolinggo as follows

   A. Power Factor

   1. Easy access to pergaraman location on the northern coast of Probolinggo district
   2. Starting in 2011 and marine fisheries department Probolinggo district mentoring program for Empowerment of People's Salt (Pugar)
   3. The formation of groups of salt farmers making it easier in mentoring.

   B. Factors weakness

   1. There are still a small number of salt farmers who use geo-membrane technology
   2. Community knowledge of salt handling so that quality is very low
   3. The absence of adequate warehouses to store salt farmers' crops
   4. Local salt NaCl content is only 85%, while import salt reaches 98% NaCl.

2. External Factors Evaluation System of Traditional Pergaraman On the North Coast Probolinggo

   The results of the analysis of external factors, acquired factors strategic opportunities and threats in the traditional pergaraman system activity on the north coast districts probolinggo as follows:

   A. Opportunity Factors

   1. Salt needs still very limited so the market is still very open peluan
   2. Government policy that temporarily closes salt imports
3. The direction of government policy that promotes fisheries and marine industries

B. Threat Factors

1. The presence of environmental pollution in the sea which can degrade the quality of existing resources.
2. Marketing information is controlled by middlemen
3. Many people sell salt land and switch to shrimp ponds.

5. CONCLUSION

Based on the results of analysis of traditional pergaraman system in the northern coast of Probolinggo district can be concluded: the process of producing salt in the salt-making using a very simple way, but there are already some salt farmers who already use geo-membrane technology. Stages of geo membrane technology:

Area that will be used must be in Fox layout is traditional lands into a semi-intensive layout changes are intended to increase production, which in a semi-intensive land consists of several plots
A. Young water reservoir
B. 2 ponds of peminihan
C. Threaded pond
D. An old water reservoir
E. Table crystallization

From the change of land it will be able to increase the very real production that reaches 40% to 60% this is because of the ratio of land area where 35% of land area used for old water reservoir, pond peminihan, screw pool and old water reservoir, while 65 % Is used for the crystal table, in addition to the increased production of other advantages of semi-intensive system is a faster production period
where within 14 days will quickly get the old water while on the traditional land to get old water up to 30 days.

Coat the crystallization table with plastic sheeting to improve the quality of people’s salt that is currently a market demand, salt farmers must be willing to add existing facilities. Because the current production of people's salt is considered less qualified SNI, namely the low NaCl value, the color brown and brown opaque. Therefore, to overcome the existing problems, currently developed geo membrane technology. In the geo-membrane technology the entire table of crystallization is covered with plastic sheeting to ensure the cleanliness of salt production.

With the geo-membrane technology of the people's salt cultivators during the salt season can harvest salt continuously, no need to worry anymore about the quality of salt produced because the salt crystals are not in contact with the soil, so it will get white salt crystals, clean and weight. In addition to the crystallization table lined with plastic sheeting as well as in the old water entry channel from the old water reservoir to the crystallization table needs to be covered with plastic sheeting, it is intended to prevent the mud of the soil from the feeding line not to carry into the crystallization table at the time Dividing the entry of old water into the table crystallization.

Plastic sheeting is in use.

Plastic sheeting used for geo membranes can use A 12 or HDPE plastics with a thickness of 500 microns, because this plastic has a high economic value, which in its use can last up to four salt seasons with good care. In this plastic treatment, if it is not salt season should be removed from the table crystallization then washed and rolled back kept in a tub of water, do not be stored in a dry place, because it will likely be destroyed by rats.

How to Install geo membrane

a. Measure the amount of plastic geo membrane that will be used
b. Create a galengan on the crystallization table in accordance with the plastic geo membrane area
c. Guluk or crystallization table were pressed so flat table surface crystallization.
d. Expand plastic geo-membrane on the table to cover the entire surface crystallization bunds.
e. Be strong on the edge of the plastic geo-membrane by way of giving wooden pegs on the edge of the plastic geo-membrane.

**SUGGESTION**

1. It needs to be intensified assistance from the department of marine and fisheries through the Empowerment of People's Salt (PUGAR) continuously not only when delivering aid to farmers only.

2. Efforts to improve the quality of people's levels of NaCl salt to 98% in order to meet the needs of industry for salt for this disupali through import salt. While the local salt NaCl levels only reached 85%, while the NaCl salt imports reached 98%.

3. Establishment of a financial institution or group-based joint venture salt business group needs to be done to overcome this difficulty salt farmers in terms of capital in the activities of salt production and post-production so that the sales price can be sold at a high price. Because of all this salt farmers are always manipulated by middlemen with debt bondage system.

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