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Social Relation between Businessman and Community in Management of Intensive Shrimp Pond

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Abstract. Expansion of aquaculture, especially shrimp culture, is the primary cause of deforestation of mangrove along coastal zone. This phenomenon is pretty much related to social relation between businessman of intensive shrimp pond and community around coastal zone. The objective of this research is to explain social relation between businessman and community in managing intensive shrimp pond. This research is a kind of qualitative research and the method used is a case study. The result of this research shows that the behaviour of the majority of businessman of intensive shrimp pond is not accordingly with environmental concerns as they compelled conversion of mangrove and they disposed waste of shrimp pond into the sea. Such kind of behaviour caused degradation of water ecosystem and marginalizing local community. Corporate Social Responsibility (CSR) which was implemented by businessman of intensive shrimp pond in the area of social, religion, and education can downgrade the coming up of social turbulence. Otherwise, CSR in enabling economic community and environmental management was not conducted yet. CSR in environmental management can be conducted by businessman of intensive shrimp pond by considering the existence of mangrove and pond management and waste in a better way, so that environment around ponds is not polluted and the sustainability of shrimp pond business as well as income of community can be guaranteed. Accordingly with the result of this research, CSR is not only involving businessman of intensive shrimp pond and community, but also involving local government in terms of right and responsibility of citizen as well as management and development of community.

Keywords: social relation, intensive shrimp pond, mangrove, coastal management

1. Introduction

Mangroves have function and benefit which are very important in supporting life within coastal regions [1, 2]. However, the majority of the mangroves have been exploited commercially and mangrove areas as land resources have also been converted into other uses, such as agriculture, fisheries, urbanization, mining, and salt ponds [3]. Aquaculture is a major cause of mangrove deforestation globally [4, 5]. The World Bank, Asian Development Bank, and FAO have actively promoted the shrimp farming industry as a means to create jobs, bring foreign exchange, and reduce poverty in developing countries [6].

Shrimp exports provide major contribution to the economies of producer countries, but these countries are often less clear system of governance in ensuring fair use of resources. Often, the external costs of the industry are not paid by those who get benefit, but the impact go to the poorest and most vulnerable [6]. The case in Sinaloa, Mexico showed that the negative impact of the conversion of



mangroves and shrimp farms waste has led to social conflicts between businessman and rural communities driven by a cooperative (economic enterprise) of fishermen [7].

Conflicts that arise in the expansion of shrimp farming industry in the Gulf of Fonseca, South Honduras, shows how individuals and companies that have power were able to gain access to coastal land concessions, thereby depriving poor access [8]. Resistance of NGOs, environmental groups and farmers toward increase of the activity of shrimp farms also appeared in Thailand [9]. Activities of shrimp farms in Thailand has encouraged the formation of networks oriented social and ecological relationships as a way to unify the commercial interests, the environment, economic growth and social welfare [10].

A phenomenon that occurs in the management of mangrove, particularly converted into intensive shrimp ponds, strongly associated with social relations arising between businessman and the surrounding community. The social relationships is a picture of the businessman of intensive shrimp ponds in doing a variety of ways that can reduce social unrest arising from the negative impact of the their activity, like degradation of coastal ecosystems and the marginalization of local communities. Therefore, the research conducted was to explore social relation between businessman and community in management of intensive shrimp ponds.

2. Methods

The location of the research is Pesawaran Regency, Lampung Province, Indonesia (Figure 1). Geographically, Pesawaran Regency is located at coordinates 104.92°–105.34° E and 5.12°–5.84° S. Pesawaran Regency is an area of expansion of South Lampung Regency in 2007 with an area of 1173.77 km square and is administratively divided into eleven districts, where four districts are located in the coastal region, namely: Padang Cermin District, Teluk Pandan District, Punduh Pidada District and Marga Punduh District [11].

This study is a qualitative research and the method used is case study method. In general, the case study is a strategy that is more suitable when the principal question of a study with regard to how or why, when researchers have little opportunity to control events that will be investigated, and where the focus of the research lies on contemporary phenomenon in the context of real life [12]. The case studies provide broad access and opportunities to researchers to examine in depth, detailed, intensive and thorough study of the social unit.

The data collection was conducted in several ways, namely: in-depth interviews, participant observation and document analysis. The key informants made up of businessmen intensive shrimp ponds (14 persons), organization's management of Shrimp Club Indonesia (SCI) of Lampung Province (3 person), community (46 persons), Mitra Bentala NGO (3 persons), and government officials of Pesawaran Regency (15 persons). The data collected then were further analyzed descriptively in relation that occurred between businessman and community in the management of intensive shrimp ponds.

3. Results and Discussion

3.1. Impact Exploitation Intensive Shrimp Farming

In the 1980s, when Pesawaran Regency was still part of South Lampung Regency, exploitation of shrimp farms in the region was still conducted traditionally. In that time, businessman still rely on land extensification; where the ponds size were between 0.5-2 hectare and types of shrimps were black tiger shrimp (*Penaeus monodon*). Along with the decline in production due to increased disease that attacked the tiger shrimp around the end of the 1990s, cultivation of shrimp farming was conducted in semi-intensive and intensive way; where the ponds size were between 0.25 to 0.3 hectare and cultivated species of shrimp are white shrimp (*Litopenaeus vannamei*). Type of white shrimp were considered by businessman were more resistant to disease than black tiger shrimp.

Data [14] showed in the time period between 2007 to 2011 alone, there had been a vast increase in shrimp ponds of 32.23%. Most of the shrimp farms in the region, or 77.96% were intensively cultivated. Construction of shrimp farms by businessman were to convert area of mangrove, either in part or as a whole. According to [15] Pesawaran Regency has 838.653 hectare of mangrove. The mangrove area was degraded from year to year due to the conversion of mangrove into shrimp ponds.

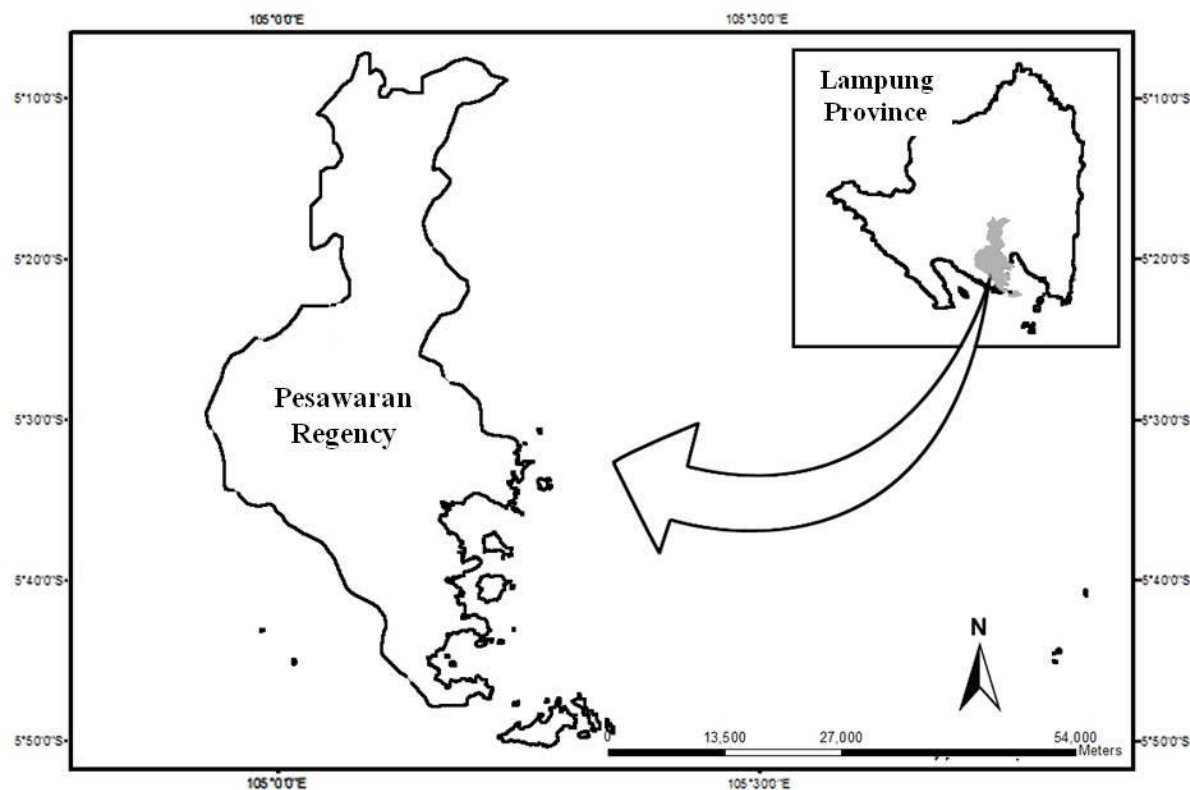


Figure 1 The Location of the Research Source: [13]

Mangrove degradation made community becoming marginal, because the community are increasingly difficult to make ends meet, such as firewood and wood buildings from the mangrove. Also, the community who work as fishermen, due to the destruction of foraging, spawning and breeding of various species of fish, shrimp, oysters and other marine creatures. Disposal of waste most of intensive shrimp ponds without treatment processes increased water pollution. As a result, fishermen are forced to fish up to the middle of the sea, as a result that their catch has declined.

In addition to polluting the water, seawater originating from the most intensive shrimp ponds experiencing seepage into lands surrounding communities. Because of that agricultural land can not be cultivated and well water became salty. Construction of partly intensive shrimp ponds also resulted partly buried irrigation channels which made a number of the fields experiencing water shortages. Some of farmland were also submerged as a result of the closing of the drain by the construction portion intensive shrimp ponds. Development of intensive shrimp farms have exhausted eroded hilly areas adjacent to mangrove land hoarding. The use of heavy equipment and road drainage damage as a result of these activities had damaged public facilities. The existence of the ponds also make community access to the sea became more difficult.

Mangrove in the Pesawaran Regency grow on lands that are outside the state forest. Based on the narrative community leaders and village elders, in the past there were no one claimed ownership of mangrove lands in the region; because most community have profession as farmer working the fields or fields and fishermen who fish in the sea. Shrimp farming began to develop in the 1980s prompted some people to own mangrove land to be turned into ponds which were traditionally managed. Other people owned mangrove control land for the purpose of sale to investors from outside the region. In some locations, it had also occurred forcible takeover of mangrove lands ownership to the community by investors with inadequate compensation; so could lead to violent conflict. With the rapid development of shrimp farming cultivated semi-intensive and intensive around the end of the 1990s, most of the land was in the coastal mangrove Pesawaran Regency has shifted ownership to investors from outside the region.

Pesawaran Regency does not have local regulations that specifically regulate mangrove management in the region, but there are some policies related to the management of mangrove and shrimp ponds as well as its exploitation. The policy is permission for exploitation shrimp farms, the establishment of Ponds Monitoring and Evaluation Team, Pesawaran Regency Decree No. 162.B/III.06/HK/2009 regarding the Protection of Mangrove Management Agency of Punduh Pedada District Pesawaran Regency, Pesawaran Regent Decree No. 175/III.06/HK/2009 regarding Mangrove Working Group and Local Regulation of Pesawaran Regency No. 4 of 2012 regarding Spatial and Territory Planning of Pesawaran Regency 2011-2031. In the implementation, the above policies are more supportive on intensification of shrimp farming than mangrove conservation.

3.2. Relationships between businessman of Intensive Shrimp Farming and Community

The negative impacts of intensive shrimp ponds on community's lives and the environment has the potential of a great conflict. Community in some villages in the coastal areas several times blocked access road leading to the pond locations. But it was done only limited impact caused by damage to the road, not because of the activity in converting mangrove ponds and contaminate the water. Trucks activities carrying shrimp feed and crop yields, as well as the activity of heavy equipment used in construction of intensive shrimp ponds have allegedly accelerate the process of destruction of the road in their region. Issues of road damage is usually settled amicably between the businessman and the community. Businessman will contribute, in cash or material way, while people who do roadwork worked together.

Some communities have started realizing the environmental impact caused by the activity of intensive shrimp ponds. The increasing of public awareness can not be separated from the facilitation undertaken by one of the local NGOs in Lampung Province which was named the Mitra Bentala NGO. Exposures which were quite intensively conducted by the NGO at the local and national mass media in the period 2008-2011 related to the conversion of mangrove performed by intensive shrimp ponds in Pesawaran Regency. In 2010, Mitra Bentala NGO had facilitated a multi-stakeholder workshop in the two districts, Padang Cermin District and Punduh Pedada District. The workshop was attended by representatives of coastal communities and relevant stakeholders to establish a rescue deal of coastal mangrove in Pesawaran Regency.

The workshop resulted in several recommendations, namely: stop all kinds of land conversion, especially coastal mangroves; synergy between the relevant agencies in determining the allotment of coastal areas; supports community participation in the management of mangrove resources; urged relevant agencies to not issue a permit to use that can lead to conversion of mangroves; provides strict sanctions against the perpetrators of environmental destruction (farmers, tourism and public) or other parties; encourage the participation of entrepreneurs in order to contribute to environmental conservation, social awareness to the community, and support the improvement of facilities and infrastructure in the region; companies must perform sewage treatment ponds; the Pesawaran Regency Government facilitate coastal villages in the manufacture of village regulations on the management of natural resources; asks the Pesawaran Regency Government and Council of Local People Representative of Pesawaran Regency to quickly create Local Regulation with regard to mangrove protection; and cracked down/penalizing businessman and community that caused demolition of the coastal environment. The above recommendations then used as a policy negotiations at the district level to encourage the existence local regulation of mangrove management. However, legal drafting of local regulation is apparently encountered many obstacles in the process.

Social and environmental impacts as a result of massive conversion of mangrove can be mitigated by the businessman. Various social activities carried entrepreneurs to communities around the intensive shrimp farms. Businessman participating in social activities at different levels in each location. Social activities are generally done to contribute to the celebrations of religious holidays and the day of independence of the Republic of Indonesia, as well as holiday allowances to people who were in the vicinity of their business. In addition, there also are on scholarships, mass circumcision, etc. There are also entrepreneurs who participated in the construction of facilities and infrastructure, such as mosques, schools, village hall, village office, roads and others. Various social activities above have made one of the businessmen appointed traditional leaders by the local community. Traditional institutions are still to exist in several locations.

Position as traditional leaders make people become reluctant to businessman. This of course also affect how people behave towards social and environmental impacts caused by business activities run by entrepreneur intensive shrimp ponds. Personal approach was also conducted with local community leaders. Similarly, the local authorities, such as the village and district heads. The relation that exists with village chiefs and district heads facilitate businessman in administrative proceedings pond licensing, manufacture statement on land of mangrove land it has, and the support of local government officials to the presence of shrimp farms in the region.

The existence of intensive shrimp ponds can empower the surrounding community, so businessman involving some people by hired them in cultivation, harvesting, post-harvest pool cleaning, security personnel, cooks, and others. Recruitment of security that comes from the surrounding community pond is one of the ways in which businessman by utilizing the identity and social relations which owned the local community. Usually the security personnel recruited a community leader who has a strong influence as respected and honored in his village, so that the security problems of the local communities for activities intensive shrimp ponds can be minimized.

Of the many social activities that have been undertaken by businessman intensive shrimp ponds to communities around the location of his business, it can be stated that businessman are already doing most of corporate social responsibility (CSR). [16] explained that CSR has become the concern of various circles, such as the government, politicians, academics, and community. From the point of government, CSR can be seen as part of the company's participation in regional development financing sources. From the political point of view, CSR is a means of companies to obtain government support. From the view point the community, CSR is the right of local people to benefit from the company's presence on the improvement of their living conditions. From the point of companies, CSR is a process of internalization of external factors, namely: people, planet, and profit; where a good company not only hunt mere economic profit (profit), but has a concern also to the preservation of the environment (planet) and social welfare (people).

CSR activities conducted by each businessman of intensive shrimp ponds at different levels, depending on the willingness and ability of businessman. CSR conducted thus far was able to reduce the social and environmental impacts arising from the massive conversion of mangrove into shrimp ponds intensive. However, CSR is merely the religious social activities, development of infrastructure, education, and others. Businessman of intensive shrimp ponds have not been doing CSR in economic empowerment, such as the provision of a revolving fund for community development efforts in the field of agriculture, fisheries, livestock, trade, and so forth. In addition, the most important thing is that CSR in environmental management up to now has not been done by the businessman.

CSR has not been done by businessman in the management of the environment is closely related to the lack of insight and knowledge of businessman about the importance of good environmental quality. It can be seen from the massive conversion of mangrove lands into intensive shrimp ponds. In addition, spacious green belt of mangrove there has not been adequate. This condition is exacerbated by the unavailability of good sewage treatment, where the majority of intensive shrimp farms dispose of waste directly into the water. Studies conducted [17] in the Gulf of Hurun, Padang Cermin District, Pesawaran Regency show Harmful Algal Blooms phenomenon (HABs). The phenomenon is one indication of the decline in water quality that is allegedly due to the increase in nutrients (nitrogen and phosphorus) from wastewater aquaculture, hatchery (hatchery), and fish farming in floating net. Input of nitrogen and phosphorus cause water eutrophication that can trigger phytoplankton population explosion that is harmful to aquatic organisms. This is in line with research [18] that shows how coastal eutrophication in Hainan Island, China is driven by the introduction of aquaculture waste untreated threatens aquatic ecosystems in the region.

Behavior of businessman shrimp farms that dump waste into surrounding waters has resulted in water quality to decrease; whereas sea water used by businessman as a medium for their aquaculture. As a result, these behaviors trigger the onset of a disease affecting shrimp cultivated by businessman. Disease attack has caused a sharp decline in shrimp production in almost all ponds in the Pesawaran Regency since the late 2000s. Mass death of fish grouper was also experienced by owners of floating net cages. [19] explains that the principles underlying ecological shrimp farm management becomes important, because it can help to understand and contribute to solving problems faced diseases in shrimp farming. Aquaculture is basically a natural ecological processes, although in the case of intensive shrimp farming is done to achieve the proportion of the industry; so that the shrimp farms rely heavily

on environmental services provided by nature and should consider the carrying capacity of the shrimp farming ecosystem perspective, including aspects such as the intensity of cultivation, density ponds and sustainability.

Massive conversion of mangrove into shrimp ponds has eliminated the function of the mangrove ecosystem as natural biofilter; consequently reusable waste pond, causing pollution to the pond system itself and affecting mangrove and coastal habitat remaining, especially the harvesting of the sea product by the local community. According to [20], management of intensive shrimp ponds should be done in an environmental friendly by businessman to the existence of mangroves as well as the management of shrimp ponds and better waste, so that the environment around the pond is not polluted and sustainability of shrimp ponds and the community's livelihood be guaranteed.

4. Conclusion

Behavior of the majority businessman of intensive shrimp ponds are not environmental friendly by converting mangroves and dispose waste into the sea This behavior have resulted in the degradation of coastal ecosystems and marginalizing local communities. Although the policy of Pesawaran Regency Government has accommodated function protection of mangrove, but its implementation further supports the intensification of intensive shrimp ponds. The relation between the businessman of intensive shrimp ponds and the surrounding communities and CSR in the areas of social, religious, educational, and others were able to dampen social unrest arising from the presence of the pond activity in the region. However, businessman have not been doing CSR in the economic empowerment and environmental management.

CSR in environmental management can be performed businessman of intensive shrimp ponds to the existence of mangroves as well as the management of ponds and better waste, so that the environment around the pond is not polluted and sustainability of shrimp farms and the community's livelihood be guaranteed. Therefore, CSR does not only involve businessman and community, but also involves Local Government of Pesawaran Regency in terms of rights and obligations of citizens as well as management and development of community. Assertiveness of Pesawaran Regency Government in implementing policies related to sustainable management of mangrove can be encouraged by providing pressure through a network involving national and local NGOs, local institutions, universities, research institutions, and others, so the Pesawaran Regency Government expected to be more in favor of conservation of mangroves.

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