

# How Economic Change Can Empower Local Cultural Values of Coastal Ecological Sustainability: A Research on Coastal Management in Malabro Village

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**Abstract**—Every society has its own set of values which is expressed in the form of local culture. The culture forms a guideline for its members of society, setting out how to behave in order to fulfill their social and economic needs sustainably. The coastal community of Malabro Village, Teluk Segara, Bengkulu is in many ways typical example of an Indonesian coastal society with the majority of its population living on the ‘gift’ of coastal and marine resources and has developed a local culture and values focused on sustainable management of the coastal environment. Through focus group discussions and interviews with fishermen, traders of marine resources and local tourism service providers an understanding of the local culture and its valuation of the coastal environment were obtained. The community understands that the natural coastal environment includes the land adjacent the ocean which both influences and is influenced by natural marine processes. Given the importance of coastal areas for sustaining life and culture it is imperative they are sustainably managed in order to maintain the quality of resources and its values to society. These social values include spiritual, social, and physical dimensions. Spiritual value positioned the coastal environment as the work of Almighty God, which was bestowed upon humans for them to use, generating sufficient product, and for them to preserve for posterity. Social value positioned the coastal environment like a shelter and a place where people socialize and conduct cultural events. Physical value positioned the coastal environment as an economic resource; a means of providing for human needs as well as a venue for business, a source of living for family, a place to go picnic, a place to go sport, a place to hang out, a place to farm, a place to buy and sell marine products, and a place to anchor fishing vessels. These three values underpin local rules of engagement with the coastal environment as applied to the residents of Malabro Village. The rules cover the following areas: (1) ritual gratitude and charity; (2) prohibition against saying bad words when heading to the sea; (3) waste management and prohibition against household waste disposal to the beach; (4) reforestation and prohibition against cutting trees; (5) prohibition against swimming in the reef and estuary areas; (6) prohibition against picking up corals; (7) arrangement of business premises (stalls) and tourist attractions; (8) provision of communal clean water sources; (9) monthly communal work; (10) cleaning and maintaining the beach environment; (11) encouraging families to educate about waste management for their members.

**Keywords**— local culture; coastal area; Bengkulu City

## I. INTRODUCTION

Bengkulu province is located in the west of Sumatra Island with approximately 525 kilometers of Indian Ocean to the west, Lampung province to the south, the province of West Sumatra to the north and Jambi and South Sumatra provinces, which are parts of the Bukit Barisan Mountains, to the east. Bengkulu province is divided into seven districts which all have a coastal frontage. The culture of these coastal societies is dominated by activities surrounding the fulfillment of the basic needs of life; taking/catching marine products, creative activities utilizing coastal and marine resources and developing the values of local culture related to the sustainability management of the coastal environment.

Three other Bengkulu regencies inhabit rural areas away from the coast, predominantly in the hill and forest margins. They mostly accomplish their living needs with farming, planting, and gardening. These societies implement sustainable management of the forest environment consistent with their own cultural values which appears to be different from the coastal Bengkulu society. The culture of fishermen in coastal areas and the culture of agriculture and plantations in rural areas are the two modes of life in Bengkulu. These create interesting paradoxes warranting research on the local cultures that may enhance our understanding of the cultural underpinnings of sustainable economic development in Sumatra. There are particular opportunities to explore the relationships between culture and sustainable management of natural resources and to observe differences

between different social groups including gardeners, farmers, fishermen, special indigenous community, certain communities and more particularly variations based on gender.

This research took place in a coastal society in the administrative region of Bengkulu City. While the focus of this project is on cultural values relating to environmental sustainability, some damaged degraded and polluted locations can be found all along this coast. The cause of these conditions ranges from natural phenomenon such as erosion during high tides to human activity. The human vector for environmental degradation takes a range of forms including exploitation of sands in Teluk Sepang Village and Sungai Hitam Village, logging of mangrove trees in coastal Kampung Melayu and Gading Cempaka Sub-districts. The dumping of coal waste disposal through Sungai Air Bengkulu's rivers has led to their accumulation on Koalo Beach while and careless waste disposal behaviors by individuals, families and small business have created a widespread plastic pollution problem. In addition, seawater intrusion was found in Teluk Segara sub-district and caused the saltwater to seep into coastal areas. The increasingly dense establishment of houses in areas adjacent to the coast become saline cause the fresh water in these areas to become saline. The additional problem is, a saltwater intrusion which is the movement of saline water into freshwater aquifers that can lead to contamination of drinking water sources and other consequences was found in the coastal of Teluk Segara Sub-district.

Despite the extensive distribution of environmental degradation there are several locations on the coast at Teluk Sepang village and villages at Teluk Segara sub-district which appear to be well maintained. These spots are utilized by the community as residential areas and places of business such as fish trading, tourism, and small holder plantations. The location which clearly appears the most well-maintained area along the coast is the top tourist destination, known as Pantai Panjang. Prior to 2006, the area from Pantai Nala up to Pantai Tapak Padri was a shabby coastline area used as a long latrine (*jamban panjang*) for local residents. The majority of the community has the habit of defecating in the beach. Residential houses close to the beach rarely have a private toilet. In 2006, the policy on the construction of the 11km Pantai Panjang Tourism Road (*Jalan Pariwisata Pantai Panjang*) required residential occupants to be evicted, the houses demolished and redeveloped as a highway. The impact of this was to reorganize the coastline area from "dirty back porch" conditions into an "organized and clean front porch" condition. After the highway was built, the Local Government then implemented a coastal reforestation program by planting thousands of Casuarina Equisetifolia or Australian pine trees along the new road. Many years later, pine gardens were constructed. These then functioned as protection from marine erosion and are currently being developed into tourist destinations.

Malabro village's community has benefited greatly from the development of Tourism Road (*Jalan Pariwisata*). The population felt a positive economic change coming in the form of greater employment opportunities and a wider range of creative industries which ultimately improve the welfare of the population. In the socio-cultural field, the community has gained benefits such as progressing various aspect of social life to a better and more qualified one, the emergence of business incubation groups, tourism conscious community group, local arts groups (dol dance and percussion), beach sports community, and changes in people's attitude towards hygiene and healthy residential environment. The community realizes how much they depend upon the coastal and marine environment as a source of their livelihood and this has encouraged them to develop new regulations related to the management, conservation and utilization of the environment. This paper discusses in detail the latest values and norms which serve as Malabro society's reference points for behavior relating to the sustainable management and use of the coastal environment. The result of this research is expected to be beneficial for the implementers and facilitators of the community development movement.

## II. METHOD

The aim of the research is to identify the set of values currently held by the society of Malabro village, Bengkulu, which cover the coastal socio-cultural and environmental realms they inhabit, their management and use. Data was collected through focus group discussions attended by the representatives of fishermen, traders of marine resources, and marine tourism service providers. Observation of the geographic situation combined with unstructured interviews with the leaders and local community members were used to dig deeper into the information needed. Data Analysis was carried out thoroughly by following the qualitative research model developed by Miles and Huberman which were done before going to the field, by equipping contextual understanding through reading research results, journals, and relevant literature, during the process of data collection and data classification, through the process of data clarification on informants and in the interpretation phase (Sugiyono, 2005).

The structural-functional theory of the social fact paradigm (Ritzer, 2014) is used as a basis for analysis. This theory views society as a social system comprised of multiple components which are related to each other and will continuously attempt to maintain an equilibrium. Consequently, changes that occur in one component will bring change in others until a new balance is achieved. Social facts can be explored through social structures and social regulation. The social structure was displayed in a relationship network which enables understanding of the process and organization of social interaction, and from the process, the social position of individuals or sub-groups can be distinguished. Social regulation is a set of rules that apply to an individual and which function as a reference for behavior and personal, and in turn how one can potentially influence others. In sociology, the abstract concept of social regulation resides in the form of social values, while the representation of values is a social norm which models appropriate ways of behaving.

The data for this research focuses on the beliefs of the local culture of Malabro village regarding their appreciation of the coastal environment as the ecological context of their lives and how this guides behavior. These beliefs recapitulate what is expected of individuals and the local society in order to maintain the balance between social requirements and sustainable management, utilization and preservation of coastal resources. Sociologically, the process of allocating value to an object by an individual cannot be separated from the cultural background features attached to it. Therefore, the scale of operation of social values might vary from specific application to a certain local community, or extend more generally and be applicable across several regions.

### III. FINDING AND DISCUSSION

The research finds that the values of local culture at Malabro village's society in regard to the coastal environment were divided into three types, namely (1) the values in the spiritual dimension, (2) the values in social dimension, and (3) the values in the physical dimension.

#### A. *Spiritual Values*

There is an agreement in the society to view the coastal environment and all its contents as the Works of God, the Almighty God, the Supreme Lord of Nature, which is bestowed upon mankind and other creatures. Therefore, it is mandatory for humans always to thank God for that gift. The form of gratitude is shown in the form of acknowledging faith, performing a religious ritual, attending religious events, and praying for gratitude as well as praying for surrender to Allah when going to work (to the sea).

The feeling of gratitude towards the „gift“ of the coastal area is also shown by protecting the environment from the acts of destruction, by not exploiting coastal product excessively, and by holding to the principle of “just enough” in utilizing the natural resources of coastal and marine areas. What was done there is related to the value of local culture which said that coastal environment is not only theirs but belonged to posterity.

For the fisherman, spiritual behavior is displayed in alms-giving rituals which happen whenever a new boat/canoe/*sampan*/*mbody*/*jongkong* launched to the sea. The ritual includes giving a little share of their catch to their neighbor. In the past, there was another ritual called *malimau* (Sea Alms) that is the offering ceremony to the sea as a form of gratitude to the Almighty God that the oceans have given fish as the source of fishermen's livelihood. With such offerings, it is expected that sea catches will remain abundant. However, it has been twenty years since it was last carried out. Another spiritual behavior mentioned is the prohibition on swearing and bad language or doing anything in appropriate when going to the sea.

#### B. *Social Values*

The valuation of the coastal ecosystem in the social dimension is demonstrated through the recognition that humans are a small portion of the natural inhabitants which exist in mutual functionality. Nature and humans are united in an integrated ecosystem. Humans may take and make use of what is available in nature, however, in the process of utilization people must consider ecological balance and sustainability by only taking proper action. Therefore, the exploitation of nature by the community should be in accordance with the carrying capacity of the environment so that nature can keep on reproducing and providing sustained resources. Nature has the right to be respected and to be maintained and preserved in a sustainable manner. Humans need to work to ensure the content of nature, both living creatures, and inanimate features are maintained. In their interactions with nature, people must hold on to the principle of being in accordance. The coastal environment is not for humans to monopolize; it is also home to other elements which have rights, including animals, plants, and non-biological features: land, water, rocks. The local culture of Malabro even recognizes a “supernatural” element which is also considered a “friend” and whose rights need to be respected. The prohibition against over-exploiting Malabro's coastal ecology in a way which might result in an environmental crisis is applied to everyone.

The social dimension of the cultural values of the coastal area of Malabro Village reflects that it is a human habitat with an integrated community wherein individuals perform the various activities of their day-to-day lives. The establishment of adequate housing in a suitable residential environment, provides for the growth of families, the networking and development of social groups, and develop social and cultural life together.

This value is then followed up with a normative agreement in which the residents are joined, namely (1) an obligation to maintain discipline around village, (2) monthly communal work to maintain environmental cleanliness, (3) provision of communal clean water sources at several dense dwellings places, and (4) socialization of values and education on waste management in family units and through sign board in strategic places.

### C. Physical Values

In the physical dimension, the community views the coastal environment as a multifunctional ecosystem that provides (among other things) for human life. Many coastal families such as fishermen, seafood traders and vendors depend on coastal marine products. Meanwhile, on the dry zone of the coastal environment, people build residential buildings which also serve as their business stalls. Throughout the pavement road along Malabro beach, food stalls selling various things such as fish, ready-to-eat food, groceries. There are also tourist cottages, and in the wider dry zone of the coastal environment, cropland can also be found. With the appropriate infrastructure and facilities, the coastal environment provides the basic physical support for various activities such as the economics transactions mentioned above as well as cultural activities, socialization, recreation, hanging out, exercising, and anchoring fishing vessels.

The physical values then generate normative provisions which are applicable to anyone who is coming to the Malabro coastal area. Through local community institutions, the following rules were made by agreement to ensure the physical condition of the coastal environment is maintained continuously. This action seeks to avoid the development of slums and other unregulated development which will damage the environment.

- 1) Prohibition against household waste (comberan) disposal to the beach.
- 2) Prohibition against careless littering. Waste disposal from household units is managed by the assigned Waste Management Officer.
- 3) Recommendation of reforestation (planting trees) on the coast for protection against abrasion.
- 4) The prohibition against cutting down pine trees and shoreline trees.
- 5) The prohibition against swimming in the reef and estuary areas.
- 6) The prohibition against picking up corals.
- 7) Permission on fishing at the coast by using fishing rods and nets according to the specified size.
- 8) The arrangement of business premises (stalls) and tourist attractions.
- 9) Cleaning and maintaining beach environment.

The Malabro community clearly understand that the coastal environment in which they live is an ecological unit. The coastal zone incorporates the dry land which is influenced by natural processes of the sea (e.g., sea breeze and moderated temperature, coastal rain) and the marine habitat which is influenced by run-off from the land and the activities of coastal communities. Since the coastal area is an important place for life and culture, coastal areas should be sustainably managed in order to obtain and maintain the benefits they extend to the inhabitants now and into the future. Society in Malabro has developed local cultural values by giving significance to the ecological environment of the coastal area. The society then incorporates those values as a guide to how to behave and conduct oneself in order to fulfill today's needs and how to maintain sustainability and to ensure the availability of residential areas for the next generation.

By being aware that coastal area and marine resources are the main sources of livelihood for the majority of Malabro village's population, the society of Malabro village has to priorities the unity of the coastal and marine ecological area as the most precious „thing.“ Their faith in and appreciation of the ecological environment in which they live has established the local cultural values for managing coastal and marine resources. This is seen in the way they use natural resources.

The orientation of cultural values regarding the coastal natural environment at Malabro Village is a portrayal of social interaction with the ecology which guarantees the sustainability of the ecosystem. Sustaining human life depends on the ecological condition. When the natural environment is disturbed, human well-being is also disturbed. Likewise, when people fail to achieve security and prosperity, over-exploitation can follow which can, in turn, suppress the balance of nature. As stated by Soemarwoto (1988), humans and the natural environment in which they live are inseparable units in a system where parts of both elements create a functionally reciprocal relationship. Therefore, humans have to work to maintain the harmony and the balance of their relationship with nature by developing the adaptive cultural patterns which are appropriate with their specific local conditions. Hence the values of the local culture of Malabro society embody knowledge system that was developed as etiquette for continuous and everlasting efficient environmental management.

The values of a local culture include positions that become a conviction/belief and behavioral reference which guide people on how they should behave as part of society. According to Notonegoro (Muin, 2013), that value refers to an important state of things and something that provides meaning and brings benefits for human life. The local cultural values are concerned with the material value of objects when they are acting to fulfill human needs. Local cultural values also establish vital physical positions on things which enable human to engage meaningfully in day-to-day activities. And there are also the spiritual values which are beneficial for mental and spiritual needs of human. These are all found in Malabro village to reflect a fundamental appreciation of the importance of maintaining the coastal environment. The society has developed local cultural values supportive of the coastal environment which holds a vital role as the source of livelihood and support for all human activities, but also as a way of thinking and a guide to proper and appropriate behavior in society. The local culture is also socialized as a general guide as well as a social control tool which binds the society to do good deeds towards their ecological environment. This reinforces the

harmonic and everlasting sustainable relationship between humans and that environment. At last, the values in local culture have informed regulations that contain social norms for supporting the community in managing the use of coastal resources.

#### IV. CONCLUSION

This research identifies that the values of culture and norms at Malabro's society need to be institutionalized continually in order to guarantee the sustainability management of Bengkulu City coastal environment remains eternal. Coastal ecosystems are considered as a gift from God to humans and act as the source of their livelihoods and the supports of all economic activities such as trade and production which include creative industries and socio-cultural activities of the community. The principle in utilizing the coastal resources is by avoiding any action which causes exploitation and destruction since it will disrupt the harmony between a human and coastal environment where they live at. The management of the coastal environment was based on the principle of harmonious and balanced sustainability so that in the future it can be relished by the posterity.

Culture values then shape society's attitude and spiritual behavior along with the social rules which concern on the usage and maintenance of the environment and its counter measures against damage. Through local community institution, rule such as management of household waste disposal, reforestation and prohibition against cutting down trees, prohibition against any activities which might cause damage to coral reef, arrangement of business premises and tourist attractions, provision of communal clean water sources, communal work, and socialization of values and education on environmental concerns.

The changes in the coastal environment from its slums state, prior to 2006, into organized areas at Malabro village need to be appreciated. The emergence of society's awareness of the maintenance of environment and coastal resources along with the Bengkulu Provincial Government's program on Pantai Panjang Tourism Development needs to be synergized. The assistance for the development of society-based tourism village is recommended in order to build up the economics of the village. This action aims to improve the living standard of the village and in turn, reduce the population pressure on the damage of the coastal environment. The land certification program which has been an obstacle for families inhabiting the land on the inside edge of the highway need to immediately acquire state's attention so that the residents are able to achieve a legal certainty of their land ownership.

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