

Conference Paper

Cultural Study of Fisherman Community in The Settlement, Brondong, Lamongan Jawa Timur

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Abstract

The fishing community is a society with low income socio-economic conditions, poverty of fishing communities originating from weak human potential and lack of environmental support in utilizing the natural potential and available resources. With the specific cultural characteristics of fishing communities, it does not always support increasing the potential of its citizens, sometimes even hampering the progress of the community itself. Fishermen communities pay less attention to their settlement environment, fishermen's neighborhood conditions look bad, it requires structuring fishermen's neighborhoods, especially the existence of open spaces. The aim of the study was to identify and analyze the cultural characteristics of the community in the fishing village, as a basis for efforts to arrange open space settlements. With compliance with open space, this can improve the quality of the environment and the standard of living of fisherman families on the coast. The research method used is a combination of qualitative and quantitative research with a phenomenological approach, a research area on the North Coast of East Java, by sampling the Brondong coastal fishing village in Lamongan. The research was conducted by identifying and comprehensive studies of cultural aspects of fishing communities in the coastal area. It is expected that the results of this study can provide a discourse on government policy regarding the implementation of open space procurement, taking into account the culture of fishing communities, so that it can produce a concept of open space that can significantly spur economic and social growth of fishing communities on the coast.

Keywords: Community culture, fisherman settlements, open space

INTRODUCTION

Some of the coastal settlements are fishermen. Fishermen generally inhabit island areas, along the coast including lakes and along rivers. Fisherman culture is a system of ideas or cognitive systems of fishing communities that are used as references to socio-cultural behavior by individuals in community interactions, this culture is formed through a long socio-historical process (Kusnadi, 2009). Most fishing communities are low income communities, the size of the income will greatly affect their ability to manage the home environment where they live and live. The limited knowledge of fishermen also makes them not motivated to improve the quality of their settlement environment. Even though the settlement environment has a large contribution in improving their standard of living and welfare. In this study, aspects of culture in coastal communities will be studied, and their correlation with the existence of open space. The fishing village as the object of observation, in the North Coast of East Java, namely on

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the Brondong beach in Lamongan Regency, the condition of the settlement environment requires structuring of the open space, so that the lives of the fishermen community are more comfortable as regulators of their ecology. The problems that can be formulated in this initial research phase are as follows: What is the culture of coastal communities in coastal settlements?

Coastal areas, according to Dahuri et al., (2001), that the process of managing coastal areas is carried out sustainably and dynamically by considering all socio-economic-cultural aspects and aspirations of coastal users, stakeholders as well as conflicts of interest and conflicts over coastal area utilization. The main problem in the management of coastal areas is the poverty of fishing communities, fishing communities face a number of complex social, economic and economic problems. These problems include the following (Kusnadi, 2009): Poverty, social inequality, and economic pressures that come at any time; Limited access to capital, technology and markets, thus affecting business dynamics; Weaknesses of existing socio-economic institutional functions; Low quality of human resources as a result of limited access to education, health, and public services; Degradation of environmental resources, both in coastal, marine and small islands; and the lack of strong maritime-oriented policies as the main pillars of national development.

Open space, according to Ashihara (1983), open space is a part of outer space which has certain limits and there are also functions, intentions and intentions of humans. The boundaries are marked by the frame mentioned above, our view into the frame becomes a positive space. And the space outside the frame is widespread and infinite, referred to as negative space. Open space is basically a container that can accommodate the activities of certain activities of the residents of the environment either individually or in groups. The shape of this open space really depends on the pattern and composition of the building. Limitations of open public space patterns are: Basic forms rather than open spaces outside buildings; Can be used by the public; Give opportunities for various activities. Open space must be easily accessible both by vehicle and on foot, and these conditions must be close and can be felt directly by the user. Open space certainly has an important role in the social development of the community. The presence of a public open space will have an impact on the daily lives of citizens who use it for activities. Some functions of open space namely: Social functions; as a place to communicate or socialize, a place to play and exercise, a place to get fresh air, a place to wait for other activities, as a barrier between the mass of buildings, connecting one place to another, a means to create cleanliness, health, harmony and beauty of the environment. as a means of research and education, as well as counseling for the community to form environmental awareness. Ecological function; to soften building architecture, absorb rainwater, prevent flooding, refresh air, improve microclimate by reducing heat and pollution, maintaining and maintaining the balance of the ecosystem.

The culture of coastal communities, culture or local wisdom is a view of life and science as well as various life strategies that form activities carried out by local communities in answering various problems in their needs (Sofian, 2011). Local wisdom is something that is specifically related to a particular culture, and reflects the way of life of a particular society. Therefore, the dissemination of certain cultural practices is often a challenge. Culture in a society usually has developed from generation to generation to survive and develop by itself, reflecting the cultural content of the past, which is a milestone in today's life, is a bridge that connects the past and present. Koentjaraningrat (2005), divides universal cultural elements into seven elements, namely: Religious systems; Community systems and organizations; Knowledge system; Language; Art; Living livelihood system; and Systems of technology and equipment. The seven elements are elements of universal culture because they always exist in every society. The cultural form consists of three forms, namely: Code of Conduct; Complex behavior patterns patterned by humans in society; and objects made by humans.

METHODS

Research location, namely fishing village on the North coast, Brondong Lamongan Regency, East Java, more details can be seen in the following picture:

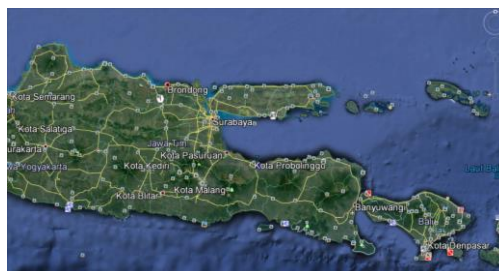


Figure 1. Map of Brondong Lamongan beach location

Research Design, phenomenological approach research, with Mixed Methods method, Concurrent Embedded (unbalanced mixture), rationalistic model that combines qualitative and quantitative research. Through case studies, researchers try to capture the cultural reality of fishing communities in relation to the existence of open space. The type of case study carried out in this study is the type of instrumental case study, in which this study treats cases of fishing households as an instrument to understand living conditions in fishing communities. The population in this study were residents of a fishing village on the North coast at Brondong Lamongan. Research design can be seen in figure 2 , while data collection methods can be seen in table 3.1, and data analysis techniques can be seen in table 3.2 as follows:

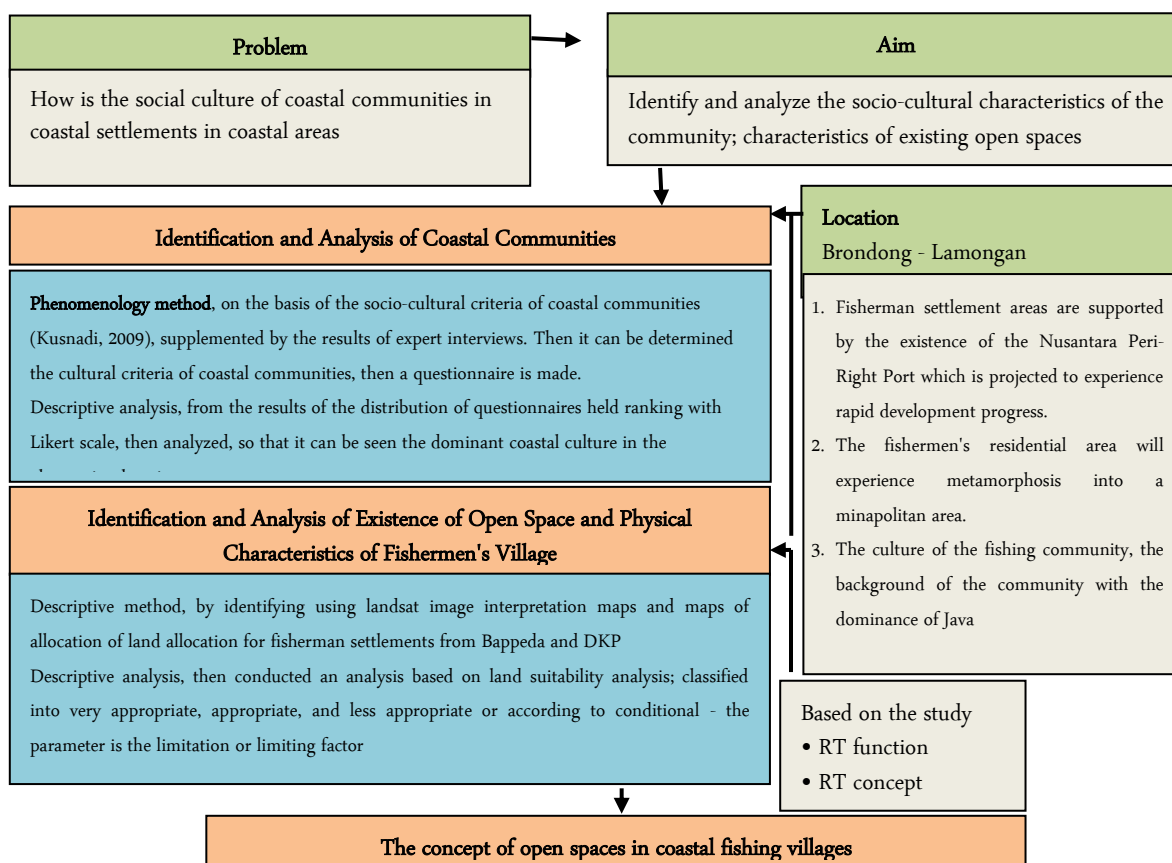


Figure 2. Research Design

Table 1. Data collection methods

RESEARCH PROBLEMS	DATA TYPE	DATA FORM	DATA SOURCE	TECHNIQUE	DATA PROCESSING INFORMATION
How is the social culture of coastal communities in coastal settlements?	Primer	Results of interviews with experts	<ul style="list-style-type: none"> ● PU Office ● BAPE DA ● District and village office ● Experts ● Community leaders 	Qualitative Method and Quantitative	With the basis of a theoretical study of the culture of coastal communities (Kusnadi, 2009), as a criterion added from the results of interviews with experts. Then it can be determined as the criteria added from the results of interviews with experts. Then socio-cultural aspects of the coastal community can be determined. A questionnaire is made which is distributed to the fishing community. From the results of the distribution of questionnaires, a war is held based on the level of importance (Likert scale). So the dominant coastal culture in the observation location can be seen

RESULT AND DISCUSSION

Profile of the Brondong Fishermen Settlement Area in Lamongan

Brondong Village is located in Brondong Subdistrict, Lamongan Regency with the southern boundary is Sumber Agung Village, Brondong Subdistrict, East boundary is Blimbing Village, Paciran Subdistrict, the western boundary is

Table 2. Data analysis techniques

RESEARCH 'S OBJECTIVES	DATA AND VARIABEL	METHODS	ANALYSIS TECHNIQUES	OUTPUT
Identify and analyze social culture characteristics of the people	Biological environment variables that have interactions with each other, have the ability to grow and can be used by fishing communities according to their needs. Variables focused on the biological environment	Qualitative Method (phenomenology) and Quantitative	Descriptive Analysis, Land Suitability Analysis; classified as being very suitable, appropriate, and less appropriate or conditional accordingly - the parameter is the limitation or limiting factor	The socio-cultural aspects of coastal communities that are dominant at the location of observation can be understood

Sedayu Lawas Village, and the North boundary is the Java Sea. Most of the land in the Brondong village is dry land, covering an area of 190,514 ha. Judging from the topography of the Brondong village there are coastal villages, villages with rivers and riverbanks

Residents

The population is 14,010 people, 50.5% are female. The population is based on age, with the largest distribution 67.3% in the age group 18-56 years. Most of the population graduated from elementary school by 87.7%, only 21.41% graduated from high school and above. Livelihoods are spread fairly evenly, with the most livelihoods being fishermen. The majority of the population is Javanese tribe 99.1%, with several other migrants such as Madura, Minang.

Community institutions

There is a community of fishermen in the form of Rukun Nelayan (RN) in Brondong under the auspices of the Indonesian Fishermen Association (HNSI). KUD Brondong Lamongan, active in its organization, once a week there is a coordination meeting with members or representatives of youth organizations. KUD, manages the administration of fishermen in TPI, working mechanism. KUD works under the supervision of PPN, the dominant KUD employee from Brondong residents.



Figure 3. Rukun Nelayan Brondong, Lamongan

Infrastructure and Facilities

Public Room / Park

Public spaces in the form of parks do not exist, children's playgrounds and families make use of open spaces in VAT. Green open space is not less noticed, regarding relative cleanliness, the part that looks slum especially in TPI.

Residential Building

Residential buildings in this area are in narrow alleys, with building densities in residential areas which are 72 units / ha with KDB averaging between 80% -100%. The pattern of the kuldesak settlements is irregular, there is no lottery arrangement.



Figure 4. Condition of Residential Buildings in Brondong Area

Roads and Environmental Drainage



Figure 5. Environmental Conditions of the Brondong Area

Environmental conditions in the Brondong residential area have asphalt pavement with a main access width of 5 meters but there are still environmental roads in narrow conditions and some are damaged. prone to flooding due to low contours, inundation occurs during heavy rains and inundation duration is 5-6 hours.

The condition of the majority drainage network is in the form of a closed channel, there are areas prone to flooding, this condition is caused by an environmental drainage system in the Brondong settlement area, the dimensions of the channels are not uniform and the conditions of the channel are not maintained.



Figure 6. Brondong Area Environmental Drainage Conditions

Sanitation and Solid Waste Network



Figure 7. Sanitary Conditions in the Brondong Region



Figure 8. Condition of Solid Waste in the Brondong Region

In general, communities in the Brondong settlement area have 100% of waste water and sanitation disposal facilities in the form of private latrines that have been connected to septic tanks. In the area there is a home industry, namely the fish scanning industry. But in this area there is no processing of industrial waste, the waste products are directly discharged into the drainage channel.

Waste conditions in the Brondong Slum Settlement Area are good, the majority of the people already have garbage bins, but the garbage cans are not uniform and some are only in the form of buckets. The coverage of solid waste services transported to polling stations is 100%. Transporting garbage is once a day carried out by local residents to the polling station. People still often dispose of garbage in the yard and drainage channels. So that the drainage channel is stacked with garbage. Some people still manage waste by collecting and burning it.

Socio-Cultural Society of Brondong Fishermen Settlements Lamongan

The fishing community in Brondong Lamongan is divided into 4 community groups, as follows:

- The boat owner community (skipper), which is used for fishing activities.
- Labor fishing community; The most common fishing community groups do not have sufficient capital or equipment for productive businesses. Generally working as laborers or crew on boats.
- Collector fishing community (basket); coastal communities working around landing sites and fish auctions. They will collect the fish caught either through auctions or from the remaining un-auctioned fish which are then sold to the surrounding community or taken to local markets. Generally, these collectors are female community groups.
- Fishermen processing marine catches.

Fishermen sail irregularly, depending on tides. The daily activities of fishermen, departing at 10:00 a.m. at 3:00 a.m., coming at 6:00 a.m. to 12:00 p.m., the cargo was immediately dismantled and sold at TPI, so the fish was fresher. The buyer is a tourist and / or distribution agent. The results of daily fishing are 1 quintal. Weekly activities, can produce 7ton-8ton. Fishermen sail far to Kalimantan, Sumatra, Sulawesi, approximately 10-20 days. At least 12 fishermen join in sailing weekly. The ship and the average owner are native. While monthly activities, if the fishermen come at 3:00 a.m., the fish is immediately dismantled. Disassembly avoids the sun, fish are afraid of decay or damage.

Fish products: snapper, cob, brass, shaving, shrimp, squid, crab. Besides being sold, sea products are also processed traditionally by scanning, drying, making shrimp paste, and making petis. While for modern processing, it

is processed into flour, nuget and cold storage. Distribution of seafood, Lamongan, Sidoarjo, Tuban, Bojonegoro, Surabaya, Bojonegoro, Tuban, Pasuruan, Malang, Bali, Gresik. The seafood in the form of squid is processed at the Anela factory. Squid is skinned, washed, frozen / pressed. Per day + - 100 kg. Export distribution to China, Taiwan. The ship sailed to Bawean, the lambo period, Kalimantan, Sumatra.



Figure 8. Fishing boats from the sea

Fishermen do not go to sea, their lives are only repairing ships (when "Baratan"). Fishermen go to sea in 1 month at least 1 time fishing. 10-20 days at sea, 5 days on land (rest), 5 days unloading sea products. Fishermen usually repair nets and repair nets when not fishing, parking small boats in their respective villages.\

Fisherman activities are as follows: Mayang, weekly & daily, using the method of trawling tigers. The net until the bottom of the sea, which was banned by the government because the coral was afraid of being damaged, was pulled using a machine. Mrawe, by fishing, one 200 fishing line, is done at night. Nggendong, with the trading system, fish from Sembu Bawean are brought to Brondong (trade in the middle of the sea). Get off, go to sea at dawn (03.00-06.00). The tool uses puket ireng (rather loose net). Ngetrol, small fishermen 1-2 people, the tool uses a net but only on the surface, then the ship is pulled. Korsen, using pulling machine nets but minimal strength, assisted by attractive fishermen + 15-30 fishermen. Fishing, like the Marwe system, but one fishing line for every fisherman, looking for corals, the results are 1-2 quintals, the catch is in the form of expensive fish, namely red, white snapper.



Figure 9. Fisherman activities unloading fishing results

The annual culture of fishermen in Brondong Lamongan when there are West winds or strong winds and big waves. Fishermen's cultural activities include: fly over and sea quotes (going out to sea), no sea rituals, only dances, impressions and recitals. The activity was held during the West wind and big waves, in December-February. This cultural activity is known as the flying cap, which is when the weather is bad, the fishermen stop going to sea, hold dances and recitals. Sea quotes are held before going to sea, when the weather is good. Pengajian and Tayuban activities. Rituals: 5 days - 7 days. Dangdut, tayuban, pengajian was performed in January-February. The ritual fishermen's program was like a small boat and the buffalo head was no longer done now.

The concept of open space with the culture of coastal communities

Spatial planning and culture are closely related. At the regional level, culture is the key to strengthening regional governance. District or City Governments have the authority to improve themselves in accordance with the potential of the resources, characteristics, and culture of their respective regions. The concept of open space with cultural studies of coastal communities, can be through a systems approach and several sustainability indicators covering three pillars of sustainable development plus technological aspects:

- a. Ecological aspects, open space development in fishermen's residential areas in Brondong Lamongan, must continue to pay attention to the preservation and carrying capacity of the environment, while still applying environmentally sound principles, such as preventing pollution (water, soil, and air), while maintaining the existence of the area water absorption, increasing green open space in several corners of the area.
- b. Economic aspects, every open space development activity in the fishermen's residential area in Brondong Lamongan must continue to adhere to the principle of profit oriented, be profitable for the developer and involve several relevant stakeholders, but still based on the principle of affordability.
- c. Socio-Cultural Aspects, the construction of open spaces in fisherman settlements in Brondong Lamongan based on the aspirations and needs of the community as residents, without violating the rules and regulations that apply. Cultural aspects in this case are efforts to maintain local wisdom in the form of coastal architecture.
- d. Technology Aspects, the characteristics of the land in the form of the North coast of Java, technology engineering is needed in accordance with the coastal environment ecosystem

CONCLUSION

The Brondong settlement has an economic generator in the form of a large fish auction place, namely TPI Brondong, the livelihood of the average population is fishermen. The community has a different cultural system, marine resources become the livelihood of coastal communities, with marine catches in the form of squid, snapper, brass, cob, bloated, anchovies, crab, layur, tengiri, pari. The developing fishing industry can absorb a lot of labor, fishery products have an absolute comparative advantage. The advanced fisheries sector will contribute to improving the welfare of coastal communities. There is a home industry for fish breeding which is also one of the sources of livelihood for fishermen families.

With the study of the culture of coastal communities the principles can be applied in open space arrangement, which is in accordance with local culture. Its application as a basis for effective planning to reduce the risk of environmental destruction is a process and requires the involvement of related parties and policy support. Fishermen in Brondong Lamongan are dominated by Javanese, minority migrants, awareness of the environment is quite good. To be able to improve living standards depends on the quality of productive human resources. It takes a view of life and mental attitude that is always trying to improve abilities, activities of the knowledge and skills it has.

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REFERENCES

- Ashihara, Yoshinobu. (1983). *Exterior Design in Architecture*. Terjemahan Gunadi, Sugeng. Surabaya: PT Dian Surya.
- Dahuri., Rochmin., Jacob Rais., Sapta Putra Ginting., M.J. Sitepu. (2001). *Pengelolaan Sumberdaya Wilayah Pesisir dan Lautan secara Terpadu*. Jakarta: Penerbit Pradnya Paramita.
- Koentjaraningrat. (2005). *Pengantar Antropologi II, Pokok-pokok Etnografi*. Jakarta: Rineka Cipta.
- Kusnadi, 2009. *Keberdayaan Nelayan dan Dinamika Ekonomi Pesisir*. Yogyakarta: Ar-ruzz Media.
- Sofian, Soemarno. (2011). *Kearifan Lokal dalam Pengembangan Wilayah Pesisir*. Malang: PM-PSLP PPSUB.