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Socio-Cultural Studies to Open Space in Fisherman Settlement in Prigi, Trenggalek, East Java

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Abstract. Fishermen are mostly classified into low income or low socioeconomic. The poverty of the fisherman community is sourced from the weakness of human potential and the lack of environmental support in empowering the natural and available potential resources. Moreover, the specific cultural characteristics of fishing community, it does not always support the potential development of its citizens, instead they may hamper the progress of society itself. In fact fishermen are less concerned about their environments as indicated by most of them live in slum settlement environment. Therefore, the arrangement of fishermen's settlement, especially the existence of open space area, is required. The objective of the research is to identify and analyze the cultural characteristics of the community in the fishing village, as the basis for the open space settlement. With open space compliance, this can improve the quality of the environment and the living standards of fishermen families on the coast. The research method used is a combination of qualitative and quantitative research with phenomenology approach, research area in coastal South Coast of East Java, and it involved fishermen of Prigi beach in Trenggalek. The research was conducted by identifying and studying the cultural aspects of the fisherman community in the coastal areas. It is expected that the results of this study can provide a discourse on government policy on the implementation of open space procurement, taking into account the culture of fishing communities, so as to produce the concept of open spatial arrangement that can significantly spur the economic and social growth of fishing communities on the coast.

INTRODUCTION

The coastal settlements are dominated by the fishermen. Fishermen generally inhabit the islands, along the coast including the lakes and the rivers. The culture of fishermen is a system of ideas or cognitive system of fishermen society which is refined socio-cultural behavior by individuals in social interaction, this culture is formed through long socio-historical process [1]. Fishermen are mostly low-income people; the amount of income will greatly affect their ability to manage their home and living environment. Limited knowledge of fishermen also leaves them unmotivated to improve the quality of their settlement environment. Yet the settlement environment has a great contribution in improving their lives and welfare. In this study the cultural aspects that exist in coastal communities, and the correlation to the existence of open space that exists. Fishing village as an object of observation, in the South Coast of East Java, on the coast of Prigi Trenggalek regency, the condition of the settlement environment requires structuring in the open space, so that the life of the fishermen community is more comfortable as the ecological regulator of the environment. The issues formulated in this initial research, was: What is the culture of coastal communities in coastal fishermen settlements?

LITERATURE REVIEW

Coastal areas, Dahuri et al. suggested that the coastal management process should be carried out continuously and dynamically by taking into account all aspects of socio-economic-culture and aspirations of coastal users, stakeholders and conflicts of interest and conflicts of coastal area utilization [2]. The main problem in coastal area management is the poverty of the fishing communities, the fishing community faces a number of social, economic and economic problems. Some issues linked with this community include : Poverty, social inequality, and economic pressures that may burden any time; Limited access to capital, technology, and markets, affecting business dynamics; Weakness of existing socio-economic institutional function; Low quality of human resources as a result of limited access to education, health and public services; Degradation of environmental resources, both in coastal areas, sea, and small islands; and Not yet strong maritime-oriented policy as the main pillar of national development [1].

Open space, Ashihara, open space as a part of the outer space that has certain limits there are also functions, intentions and will of man [3]. The boundaries are marked by the above-mentioned frame, our view into the frame into positive space. And the space outside the frame is widespread and infinite, referred to as negative space. According to Hakim, open space is basically a container that can accommodate the activities of certain people from the environment both individually and in groups. The shape of this open space is highly dependent on the pattern and composition of the building mass. Limitations of common open space patterns are: The basic form of open space outside the building; Can be used by the public; Provide opportunities for various activities [4]. According to Lynch open space is an area that can be used daily or weekly and should be able to facilitate the activities of its users and stay connected directly or interact with other users [5]. Open space should be easily accessible either by vehicle or by foot, and the condition must be close and can be perceived directly by the user.

Open space certainly has an important role to 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 to conduct activities. Some functions of open space are: Social function; as a place to communicate or socialize, play and exercise, a place to get fresh air, a place to wait for other activities, as a barrier between building masses, connecting one place to another, the 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 establish environmental awareness. Ecological function; to soften building architecture, absorb rainwater, flood prevention, refresh air, improve microclimate by reducing heat and pollution, maintaining and maintaining ecosystem balance [4].

Furthermore, the role of open space is explicated by Marcus, et.al. located in an easily accessible and visible to the user; communicate clearly the message that the place may be used and intended to be used; beautiful and attractive both inside and outside; it has furniture to support the most desired and attractive activity; create a sense of security to potential users; create relief from stress and improve the mental and physical health of its users; adjusted to the needs of the groups of users most likely to use space; encourage use by different subgroups of the user population, without the activity of one group disturbing the other; create a psychologically comfortable environment during use, in the case the weather is sunny, cloudy, foggy, windy and so on; accessible to children and people with disabilities; combines components that can be manipulated or modified by the user; easily and economically maintained within the limits of what is normally expected of a certain type of space [6].

Culture of coastal communities, cultures or local wisdom is a view of life and science as well as various life strategies that manifest activities undertaken by local communities in answering various problems in their needs. It is often also conceived as "local wisdom" or "local knowledge" or "local genius"[7]. Local wisdom is something that specifically relates 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 evolved from generation to generation survives and develops by itself, reflecting the presence of past cultural cargo, which is the cornerstone of today's life, a bridge connecting the past and the present. Koentjaraningrat divided the universal elements of culture into seven elements, namely: Religious system; Community systems and organizations; Knowledge system; Language; Art; Living livelihood system; and System technology and equipment. The seven elements are considered the universal elements of culture because they are always present in every society. The culture consists of three forms, namely: Behaviour ; Complex activity of patterned behavior of humans in society; and objects of human works [8].

RESEARCH METHODS

The research sites is precisely located in fishing village on the south coast of Prigi Trenggalek Regency, East Java, Indonesia. Research design included, phenomenological approach, mixed methods, Concurrent Embedded, rationalistic model combining qualitative and quantitative research. In this case study, the researcher tried to capture the cultural reality of fisherman society in relation to the existence of open space. The type of case study conducted in this study is a type of instrumental case study, in which the fisherman households as the instrument to understand the living conditions of fishing communities. The population in this research is resident of fisherman village on South coast in Prigi Trenggalek. Research design can be seen in FIGURE 1, data collection methods can be seen in TABLE 1, and data analysis techniques can be seen in TABLE 2 as follows:

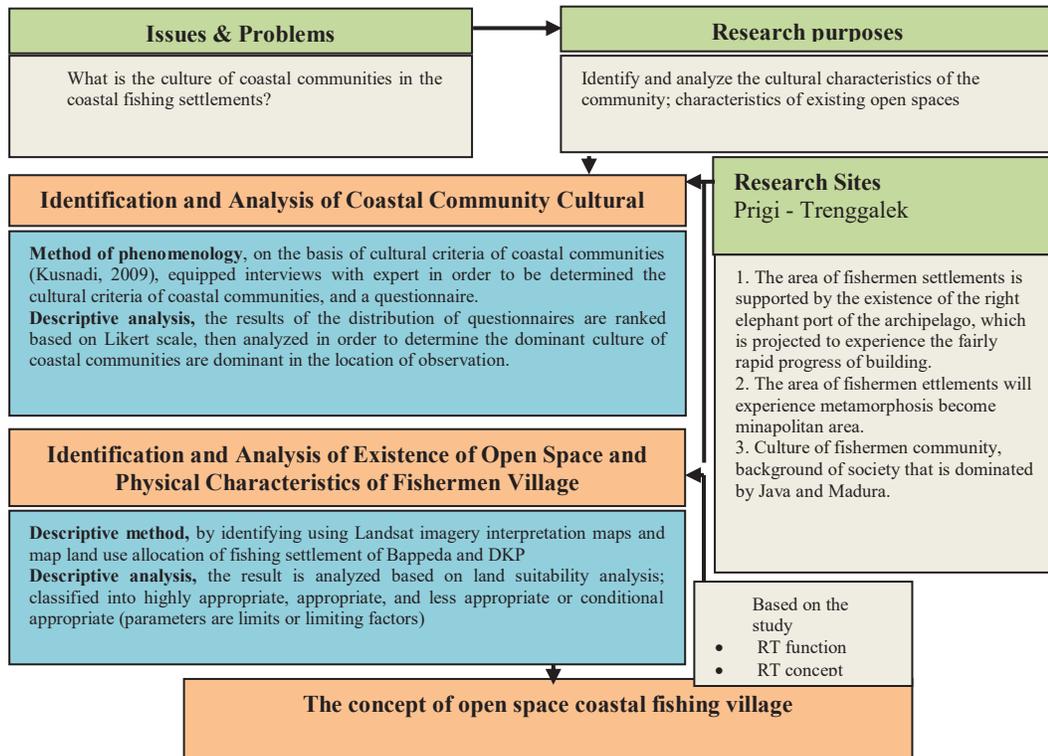


FIGURE 1. Research Design

DISCUSSION

Profile of Fishermen Settlement in Trenggalek Area

Characteristics of Residential Building Condition

The condition of residential buildings in majority fishermen settlements tend to be irregular with 58% building regularity (Figure 2). The density of settlements in this area is 19 units / ha so it is still relatively low but because the location of the clustered settlement makes the area look solid because it is influenced by its irregular location. The condition of the environment that tends to slum is caused by the placement of unused goods on empty land.

TABLE 1. Methods of data collection

PROBLEMS RESEARCH	TYPES OF DATA	DATA FORM	DATA SOURCES	DATA PROCESSING	
				TECHNIQUE	INFORMATION
What is the culture of coastal communities in the coastal fishing settlements?	Primary	Results of interviews with experts	<ul style="list-style-type: none"> • Public Works Office • Bappeda • Kecamatan, Kelurahan • Experts • Community leaders 	Qualitative and Quantitative Methods	On the basis of the study of the theory of coastal community culture (Kusnadi, 2009), as a criterion is added from the results of interviews with experts. So it can be determined the cultural criteria of coastal communities, then made a questionnaire that is distributed to the fishing community. From the results of the distribution of questionnaires held a war based on the importance of interest (Likert scale). So it can be known culture masyarakat dominant coast in the location of observation.
	Secondary	Literature study	<ul style="list-style-type: none"> • The cultural phenomenon of coastal communities 		
	Secondary	Literature study	<ul style="list-style-type: none"> • Sustainable coastal zone management • Spatial layout 		

TABLE 2. Methods and models of data analysis

RESEARCH PURPOSES	DATA AND VARIABLE	METHOD	TECHNICAL ANALYSIS	OUTPUT
Identify and analyze the cultural characteristics of the community	Biological environment variables that have interaction with each other, has the ability to grow and can be utilized by the fishing community as needed. Variable focused on biological environment of coastal areas	Qualitative Method (phenomenology) and Quantitative Method	Descriptive Analysis, Land suitability analysis; classified to be very appropriate, appropriate, and less appropriate or appropriate conditional-parameters is limitation or limiting factor	It can be known culture of coastal communities are dominant in the location of observation



(a)



(b)

FIGURE 2. Condition of Residential Building Density

Condition of Settlement Infrastructure

The condition of the infrastructure/infrastructure network in the fisherman's residential area is as follows:

Environmental Road Infrastructure

Environmental road conditions are in grid-patterned settlements and the majority have asphalt pavement for main roads as well as cement and paving for environmental roads. In addition, there is also a dirt road, with conditions that are heading bad because if rain so it will form a puddle or puddle so that when passed the vehicle will become muddy and slippery. Approximately 46% of roads are not in accordance with the technical standard requirements, and 70% of roads are hardened but in poor condition, see Fig. 3 and Fig. 4.



FIGURE 3. Road Pavement Environment Condition



FIGURE 4. Environmental Road Problems

Environmental Drainage Network

The condition of the drainage network in the fishermen settlement is dominated by moderate condition, only at some point the drainage is not working due to the accumulation of garbage. The type of channel in general is the open drainage, from the existing drainage as much as 42% does not work see Fig. 5.



FIGURE 5. Environmental Drainage Network Conditions

Drinking Water Service Network

The network of drinking water or clean water services in the settlement includes the availability and performance of services for both consumption and for other activities (cooking, washing). In fulfilling the need for clean water, people in residential areas obtain water from wells. The quality of this water supply service reaches 70% with the number of HHHs served.

Waste and Sanitation Network

In general, the community in the Tasikmadu settlement area already has a means of waste water disposal infrastructure and sanitation in the form of private toilet as much as 80% which has been connected with septic tank. In this area there is home industry namely industry of pengindangan. Nevertheless this area has no industrial waste treatment thus the waste is directly discharged into the channel of a small river so that the effect of odor pollution.

Waste Network

The condition of garbage in residential areas, there is no systematic waste service system. The coverage of garbage services transported to TPS is 40%. Although there is transport but the service is not yet entirely limited to the area close to the center of the activity, while for the area inside it still use the empty land to hoard or just collect the garbage so that it seems dirty and dirty because the garbage is scattered, there are also activities garbage disposal into the river see Fig. 6.



FIGURE 6. Waste Network Condition

Culture of Fishermen Society in Prigi Trenggalek

The fishing communities as the main perpetrators of the coastal development, cannot be separated from the coastal environment and vice versa, the coastal environment is very exposed by the community. The fishermen community settlement in Prigi Trenggalek, is a society that is less able to interact with the environment properly, the level of education and honesty is low, the pattern of thinking is static, traditional. The socio-cultural life of coastal communities can be seen in Table 3, 4, and 5:

TABLE 3. Activities in fishing households

Family Members	Activities
Husband	<ul style="list-style-type: none"> - Sail fishing - Preparing ships and fishing gear - Transporting the catch is brought to the fish auction
Wife	<ul style="list-style-type: none"> - Helping the husband at the fish auction place - Selling the catch in the sea (basket) - Preparing debriefing; food and drinks and medicines - Processing seafood: salted fish, pindang, baked fish, chicken feed - Taking care of household chores:
Son	<ul style="list-style-type: none"> - Helping his father go to sea - Assist with fishing vessels and fishing gear
Daughter	<ul style="list-style-type: none"> - Helping mothers take care of fish catch - Helping housewife

The fishermen community in Prigi Trenggalek is divided into 4 (four) community groups, as follows:

1. The community of ship owners (skipper), which is used for fishing activities.
2. Community fisherman labor; the most common fishing community groups, lacking adequate capital or equipment for productive enterprises. Generally, work as laborers or crew on the ships skipper.

3. Community of fish buyer (*bakul*); they include coastal community groups who work around landing sites and fish auctions. They will collect the fishes either by auction or from unprivileged fish which are then sold to the surrounding community or taken to local markets. Generally, the collectors are women's groups.
4. Community of sea catch processing.

TABLE 4. Processes and Sail results

Coastal fishermen	Profit Sharing system
Prigi Trenggalek	<ul style="list-style-type: none"> - Marine 30-50 miles, - Gasoline needs 4 million - Crew members are + 25-40 people - The maximum yield of each vessel is 6 ton-10 ton, minimum 2 ton-3 ton - Crew's income is about 500 thousand-1 million / day; and the captain is about 2 million / day - At moonlight about 10 days / month, fishermen do not go to sea - The fish include <i>layang/teropongan, tongkol/rengis, and teri</i>

TABLE 5. Fishermen Activities at sea and on land

Activity	Activity Forms
On the sea	<ul style="list-style-type: none"> - Catch fish in the middle of the sea - Insert fish from nets into beds - Take action for health during fishing - Conduct daily activities to eat and drink during fishing - Lowering the catch of the sea
On the land	<ul style="list-style-type: none"> - Fix broken fishing boats - Fix fishing nets and damaged equipment - Fix a damaged ship engine - Process the sea catch - Prepare the materials and tools to go to sea; fuels, groceries, beverages, medicines

The concept of open space based on the culture of coastal communities

Spatial and cultural arrangements are closely related. At the regional level, culture is the key to strengthening the organization of regional arrangement. District or City Government has the authority to perform self-improvement in accordance with the potential resources, characteristics, and culture of each region. The concept of open space with coastal community cultural studies, can be through system approaches and some sustainability indicators covering three pillars of sustainable development plus technological aspects:

1. The ecological aspect, the development of open space in the fishermen's settlement area in Prigi Trenggalek, should still pay attention to environmental sustainability and carrying capacity, while maintaining environmentally sound principles such as preventing pollution (water, soil, and air), while maintaining the existence of the area water absorption, increase green open space in some corners of the area.
2. Economic aspect, every open space development activity in fishermen's settlement area in Prigi Trenggalek must stick to the principle of profit oriented, beneficial for the developer and involve some related stakeholders, but still based on the principle of affordability.
3. Social Aspect - Culture, open space development in fishing settlement in Prigi Trenggalek based on aspiration and society needs as its occupant, without violating rules and rules. Cultural aspect in this case is effort to maintain local wisdom in the form of coastal architecture.
4. Technological aspect, land characteristic in the form of South Java coast, is one of the problems in this research. Therefore, it is needed engineering technology in accordance with coastal ecosystems.

CONCLUSION

Fishermen community has different cultural systems with other communities living in mountainous areas or valleys. Coastal community culture principles can be applied in the arrangement of open spaces, 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 stakeholder involvement and also supported policy. Moreover, the formulation phase of the concept of open spatial arrangement in the fisherman settlement is done through the approach of spatial concept which is environmentally friendly. The improvement of the standard of living depends on the quality of productive human resources. It takes a life view and a mental attitude that always strives to improve the ability, activity of the knowledge and skills it possesses. The ability will turn into an attitude dependent also on the level of suitability of mental attitude will encourage the efforts to improve life.

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