The Sea is Not an Empty Space

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Abstract. This research departs from a unique phenomenon, where Indonesian local people, fisherman, in Sapeken sub-district, Sumenep regency, together are able to divide the sea space based on the existence of resources in it with local intelligence inherited from generation to generation. Fisherman in Sapeken sub-district have the spatial intelligence to identify the existence of a sea space called premises "Takat" and "Timpusu". Those spaces however cannot be seen with the eye and merely as an empty space, until the community giving meaning and signing to the space and create the strong perceptual map that prove that the sea is not an empty space. In order to have such a rigorous finding, the researcher using phenomenology methodology that allowed researcher to explore more about the phenomenon.

1. Introduction

Sea, a space on earth that commonly referred as a maritime space is a space in the context of patterns, as the locus of maritime activities, such as resource-rich locations, sailing, cultivation, and marine resource extraction. Indonesia as an archipelago nation which has lots of maritime space, avouch the government to formulate a decision in developing a maritime management in order to utilize existing marine resources. For the government, the sea is a space that should be utilized as much as possible for the sake of Indonesian nation prosperity. But unlike the mainland space, the sea cannot be permanently occupied, fenced or absolutely controlled. Yet, the sea can only be controlled for a limited time. The government's perspective to maritime space leads us to a conclusion that the sea is an integral part of an indivisible territory of the country, but can be distinguished according to the legal regime that governs it.

This research departs from a unique phenomenon, where Indonesian local people, fisherman, in Sapeken sub-district, Sumenep regency, together are able to divide the sea space based on the existence of resources in it with local intelligence inherited from generation to generation. Sapeken sub-district has the most island, which is 42% of the island from a total island that Sumenep Regency has. Sapeken Sub-district located in the east of Sumenep regency and administratively consists of 9 villages: Sabuntan, Paliat, Sapeken, Saseel, Sepanjang, Tanjungkiaok, Pangerungan Kecil, Pangerungan Besar, and Sakala. One of the interesting things in this district is the unique configuration area where small islands stretching around the sea area by forming the letter C. In the middle, there is a group of islands of Saredeng Besar and Saredeng Kecil which is administratively part of Saseel village.

Fisherman in Sapeken sub-district have the spatial intelligence to identify the existence of a sea space called premises "Takat" and "Timpusu". "Takat" is a sea space formed from corals with shallow depths (1-5 meters), and "Timpusu" is formed from corals with depths between 10-15 meters. In

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relation to the existence of "Takat" and "Timpusu" spaces, revealed that collective agreements enable fishing communities to regulate their management include the types of extractable resources, time or season of extraction, fishing gear used, and extraction methods.

In addition, Sapeken Sub-District is not only used for navigation activities as is commonly occurring in marine areas, but also utilized by the fishermen community for the actualization media in terms of transaction activity both economically and socially, among others commodity trade, diffusion and nursery of all aspects in maritime (Maritime values, maritime ethics, maritime culture, and local skills, etc.), as well as communication. It is interesting to recognize how the fishing communities in this region collectively agree to utilize, manage, interpret, and then formulate conceptions to then produce a spatial order in the region. Research on maritime space has not yet been revealed to reveal a spatial order not only expressed textually but also spatially. Therefore, the researcher makes the research question as "How maritime space construction in Sapeken District of Sumenep regency according to the fisherman perspective?". This study will provide a sea space from the local community's view of fisherman which shows that the sea space is not an empty space, but space that can also be spatially mapped as well as the land.

2. Methods

This research uses phenomenology approach as it is congruence with ontology, epistemology and methodology of research's assumptions. This research conceives ontology realities that shaped by frame of mind construction of community's local and spesific experiences. In epistemology way, researcher has a reciprocal influence with the research object. Hermeneutik and dialecthic method are chosen as the methodology character of this research where the nature of variable and social construction will only can be created by direct communication between researcher and respondents. Therefore, the results of this research are spesific and locally accepted.

Qualitative research method was chosen as the nature of this research is to explore local phenomenon such as the classification of maritime space, takat and timpusu. A qualitative research necessitates the researcher to think inductively by observing phenomenons henceforward analysing and theorizing the observations into concepts and knowledge (Bungin, 2007). This research used inductive paradigm approach to generate answer from research questions. Inductive paradigm of this research is showed in fig. 1.

This research is located in three villages, which are Sassel Village, Sepanjang Village, and Tanjungkiaok Village. The objects of this research are maritime space, fisherman community, and fishing activities where emphasizing on space configuration constructed by cognitive perception of fisherman community.

Information were collected by conducting interview, observation, visualization record, and measurement. The interview was conducted purposively with key respondents, while observation was conducted in order to understand the characteristic of maritime space. Visualization record and measurement were conducted in order to capture the phenomenon thoroughly. The phases of this research also showed clearly in fig. 1

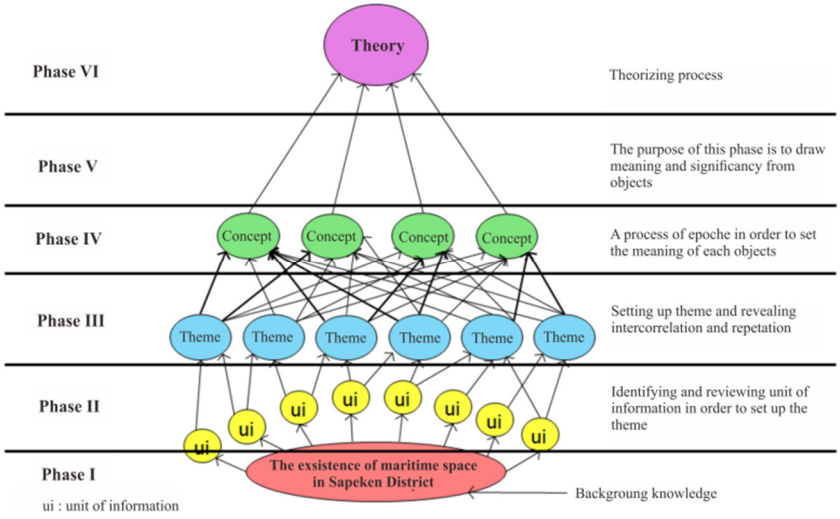


Figure 1. Research Phase
Source: Satiawan, 2017

3. Result and Discussion

3.1 The maritime profile of Spaken Island

The research object is located in Sapeken District where is an archipelago (Figure 2). The total population of Sapeken district in 2012 is 43.455 residents which the population is dominate by female residents with 22.323 residents. Most of the residents of Sapeken district work as fisherman and lived within several communities. This phenomenon can be seen from seperated settlement in different islands. The vernacular architecture such as *rumah panggung* is still exist in Sapeken district. Although for some more prosperous residents are not living in *rumah panggung* anymore.

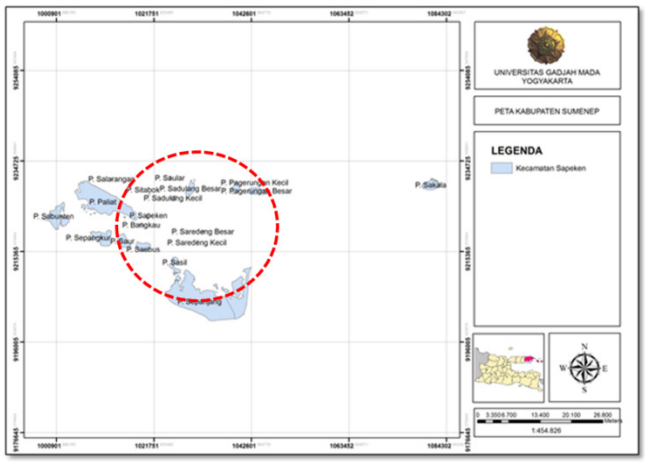


Figure 2. The archipelago of Sapeken district
Source: Satiawan, 2017

The electricity and clean water in Sapeken district is not distributed fairly, only the centre of district that has provided with electricity and clean water. The electricity service is provided individually by using diesel fuel power electricity that starts from 06.00 pm until 05.00 am. Clean

water is a big problem in Sapeken district as most of the area still have limited resources of clean water. The only clean water resources located in Saseel island that has become resource for other islands.

3.2 The phenomenon on those maritime space

The initial object within territory observation is the existence of *takat* which is coral reef in terms of physical-geographical, both of which have very shallow depths and extreme depth of approximately 10-20 meters below sea level. In line with its depth, fishing communities in the observed territory tend to categorize in two species of TAKAT. First, which are formed from corals with very shallow to shallow depth (1-5 meters), and second is TIMPUSU which are formed from corals with depths between 10-15 meters. Characteristics of coral depths have implications for the existence of differences in abundance of marine resources possessed, both in type, quantity, and season/time availability (temporal existence). The existence of the takat (and timpusu) in the observed territory is believed by the fishermen communities who inhabit small islands as a place that has strategic value because of its abundance of marine resources. It provides hope and opportunities for fishermen for their life support both in present and in the future by exploit it. Visually identification of takat and timpusu almost have no difference, as shown in Figure 3.



Figure 3. Visual Identification

In the case of marine resources utilization and management, there is a collective agreement where the scheme of utilization is arranged as follows:

1) Utilization of marine resources can only be done in certain seasons by considering the pattern of expansion and migration of marine resources. This provision is set differently for all *takat / timpusu* and types of resources therein. The existence of marine resources and their rotation presence is different between each *takat* and *timpusu* or different among types of resources, because of geographic distinction.
2) Utilization of marine resources can only be done by using certain instruments through consensus process. The types of instruments that can be used for resources utilization in the observed territory is only fishing lines. Fishermen have agreed not to use other instruments such as nets or trawlers.

Life as a fisherman in certain generation brings a loaded of knowledge and understanding to the nature and maritime environment. One of fishermen community capabilities that can be said as one of the local intelligence is the knowledge and understanding of the character of the resource itself, for instance about the availability of natural resources dynamically. In the observation area, another intelligence that needs to be revealed is the ability of fisherman communities to recognize and understand a location, or often termed as spatial intelligence. In aquatic spaces, spatial objects are always dynamic spaces and influenced by natural and environmental process, for example weather and

climate. Various findings of spatial intelligence phenomenon by fishermen community in the observed area such as their ability in determining and detecting a location above the water space. From field observations, it was found that the instruments and methods that is used to identify, determine and detect a location in water space include:

1) Wind speed and direction
2) The colour of sea water in various weather and climate
3) The speed of sea currents
4) Wave height
5) Wave character. In general, the wave character is different from wave height. Wave character is the regularity pattern of the wave existence.
6) Detection of sound that arise from seabed (coral), it use to determine the depth of takat / timpusu by putting the ear to the bottom of the boat
7) The use of *Dwi-Referensial* through the use of two hands to create an angle between two hands or to identify the distance between two hands (in *depa* unit). Some objects that is used as reference are islands, hills, highlands, mangrove plants in groups, high buildings (eg BTS towers, light beacons, lighthouse, flames, etc.).
8) Astrological sign, especially at night when the weather is good.

The local spatial intelligence that describe above affects a systemic and intact intelligence. One of manifestation is the ability of fishermen t produce the "map" which is a representation of spatial intelligence. The generated maps are very different from the formal maps geographically that are reconstructed from the formal system. As a result, they have lack of ability to recognize and operate maps that is generated from formal processes. They are only able to recognize and operate the "local" maps compiled by themselves.

3.3 Sapeken Maritime Space Construction (The sea is not an empty space)

There are several interesting activities happen besides the cultivation activities within the maritime space. These activities are economic transaction and social interaction.



Figure 4. Perceptual map of maritime space (left)
and activities in maritime space of Sapeken district (right)
Source: Satiawan, 2017

A. Economic transaction

The catchment of marine resources and seaweed were sold by fishermen directly within the maritime space where basically it was sold in the mainland market. The transaction occurs between fishermen and sellers, either between fishermen and buyers. The reason of this activity is that they can save more time compared if they have done the transaction on the mainland. This activity usually occurs in the cruise lines.

B. Social interaction

Social interaction happens between fishermen and their families. This research found that maritime space is used for maritime educational purpose. The parents will teach their son about maritime activities knowledge such as marine resource cultivation, how to fix the boat, loading and unloading the dock, etc. The second finding is the phenomenon of local knowledge transfer that inherited to the young men in the family about maritime space navigation. This knowledge includes the wind speed and direction, tidal and current measurement, characteristic, etc. The third finding of the research the use of maritime space as a space to interact with other ethnics from different region that usually occur right after the economic transaction finished

4. Conclusion

From the study, we can conclude that the sea space is not an empty space. However, sea is a space that has lots of meanings and spaces for local communities / fisherman who can be considered to have a spatial intelligence to map those space. It also provides new knowledge that from fisherman perceptions of the various spaces of the sea can be expressed spatially, forming a new pattern of seaward. This study is also expected to be input in the marine space planning documents, that local people's perceptions should also be seen to develop a fairer public policy for all concerned

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