INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH & DEVELOPMENT

ISSN 2278 – 0211 (Online)

Rambangan and Lelebusayan as a Local Maritime Tradition Embraced by the Artisanal Fishing Community in Sapeken Sub-district, District of Sumenep, Indonesia

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Abstract:
The artisanal fishing community in the Saseel and Tanjungkiaok villages in the Sapeken sub-district lives by the marine resources in the maritime area of the Sapeken sub-district. They are engaged in fishing activities through the extraction of fishery resources and seaweed cultivation. Owing to insufficient resources, the fishermen have agreed to utilize resources sparingly for the continuous supply of resources and sustainability of the lives of the fishermen. An effort to maintain the sustainability of the resources is through agreeing to use traditional extraction equipment such as fishing rods and agreeing on the pattern of resource extraction, which is based on the principle of kinship and togetherness. However, social sanction is sometimes applied to fishermen who conduct activities through extraction mechanisms beyond that which are collectively agreed upon; for example, a ban on the extraction within a certain time in the common maritime spaces. Consequently, the conception of Rambangan and Lelebusayan has subsequently emerged and has been developed by the artisanal fishermen communities in Saseel and Tanjungkiaok as a local maritime tradition. This is used as the main life reference for the artisanal fishermen community. Rambangan is a maritime tradition that obliges artisanal fishermen within the community to behave socially, whereas Lelebusayan is a maritime tradition that obliges the artisanal fishermen community to behave spiritually in their utilization of resources.

Keywords: *Artisanal fishing community, maritime tradition, Rambangan, Lelebusayan, Sapeken sub-district*

1. Introduction

1.1. Phenomenon of Takat and Timpusu

Preliminary observations in the study area have identified the presence of "Takat", a cluster of coral that exists in extremely shallow depths to extreme depths of approximately 10–20 meters below the sea level. Previous studies have suggested that "Takat" is actually a natural phenomenon found in the sea area. Takat is identical to ”fishing ground" in the perspective of fisheries and biology or identical to "fishing ground" in the perspective of maritime anthropology, which is a conducive place for breeding grounds for various marine organisms, including fish resources, owing to abundant nutrition. In addition, some marine resources that are often found in Takat and Timpusu include coral fish, squid, and shrimp.

Depending on the depth of the sea, the fishing communities in the study area tend to categorize the Takat into two categories, namely the Takat formed from corals with extremely shallow to shallow depths (1–5 meters), and Timpusu formed from corals at depths of 10–15 meters. The depth characteristics of coral reflect the differences in the abundance of marine resources they have, both in the type, amount, and availability of seasons/time (time availability). However, visually, Takat and Timpusu are almost similar.

Takat (and Timpusu) in the study area are believed by the fishing communities that inhabit small islands to be areas that have a strategic value owing to the abundance of marine resources. These resources provide opportunities for fishing communities to sustain themselves. Currently, over 30 Takat and Timpusu exist in the study area. This is presented in figure 1.

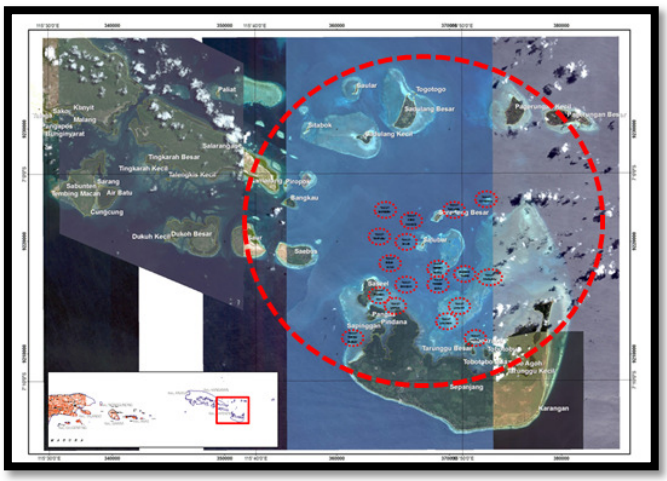

Figure 1: Spatial Distribution of Takat and Timpusu
Source: Field Survey, 2017

In the study area, the name Takat is related to “inventor” (the person who originally discovered it). At the beginning of the Takat discovery, there was an agreement among the fishing community that the inventor and his family had the right to use marine resources exclusively, including managerial rights. Over time, there has been a social transformation toward the formation of a new agreement, namely that Takat is no longer a "place" for the concentration of marine resources. However, it has become a "space" to sustain the lives of fishing communities based on agreed values and norms. In line with the findings of the Takat within the study area, as well as the tendency to decrease the quality and quantity of resources in each Takat, the agreement on the use and management rights of the Takat has been changed. Currently, the agreement regarding exclusive rights to use and manage the Takat is no longer valid.

A social agreement currently held by the fishing community involves the emergence of exclusive rights to use and manage the Takat only by fishing communities that inhabit small islands in the region. This includes both artisanal fishermen who inhabit small islands on the "edge" and artisanal fishermen who inhabit two small islands in the "middle" (Pulau Saredeng Besar and Pulau Saredeng Kecil). Consequently, fishermen from other areas, "other groups," are excluded from the right to use and manage.

In terms of the utilization and management of marine resources, a collective agreement governs its utilization scheme:

- The utilization of marine resources can only be performed in certain seasons when the nature and migration patterns of marine resources are considered. These provisions are set differently for the entire Takat/Timpusu and the types of resources therein. Due to differences in geographical character, the existence of marine resources and their utilities differ between each Takat and Timpusu or between types of resources.
- The utilization of marine resources can only be performed by using certain instruments that have been agreed upon. One type of instrument permitted for the utilization of resources in the study area is conventional fishing instruments. The fishing communities agree not to use other instruments such as nets or trawls.
- Territorial waters stretching across the central part of the study area are a "place" to conduct daily fishing communities. This area is recognized by the fishing community as a region free from the waves because it is surrounded by small islands. Territorial waters sustain the lives of fishing communities because these waters include the location of the concentrations of marine resources (fish, squid, shrimp). In addition, they are also a vehicle for the actualization throughout the daily activities of the fishing communities in the study areas, among others:
- The utilization of marine resources, especially “Takat and Timpusu," which have relatively abundant resources.
- Aquaculture in the form of seaweed cultivation in certain regions outside the Takat and Timpusu areas.
- Shipping lanes that use the space between Takat/Timpusu and seaweed farming.
- Commodity loading and unloading activities are generally undertaken on the dock and surrounding areas. The commodity being offloaded results from resource utilization, harvest seaweed cultivation, and grocery items, which are products of transactions between islands.
- Boat repair activities are undertaken in coastal areas where the relatively shallow depths ease the activity of the workshop/boat repairs.

1.2. Space Utilization of Takat and Timpusu

The sea has been used for a variety of maritime activities related to the survival of fishing communities. However, territorial waters are used for maritime activities related to fishing, aquaculture, and other activities in different contexts.

1.2.1. Economic Transaction

The results of the utilization of marine resources do not always end in the transaction process within the fish

market, which is generally available on land. In some cases, it was found that the results of the utilization of marine resources were transacted in territorial waters. However, it was also found that both the results from the utilization of marine resources were transacted in waters, in addition to the harvest of seaweed. Water transactions are generally traded by weight and volume. Transactions in waters generally occur from farmers to collectors who buy large quantities based on weight and volume based on visual assessment.

Transactions are conducted between fishermen and farmers, fishermen/farmers and traders/wholesalers, and fishermen/farmers and buyers. Transactions performed in the water are supported by rationality that enables the saving of time in trade compared to those conducted on the mainland. Economic transactions are generally performed on shipping lines. However, transactions are rarely found around Takat, Timpusu, and seaweed spots.

1.2.2. Social Transaction

Another interesting phenomenon is the existence of social interaction on the water. This transaction is performed by the artisanal fishing community and their families. One of the findings of this phenomenon is the spatial use of seawater for learning media regarding knowledge and experience in the context of maritime activities, which include engineering the utilization of marine resources, seaweed cultivation and harvesting techniques, steering and boat engine control techniques, engineering improvements and ship repair, and loading and unloading techniques at the dock.

Learning has been undertaken in relevant and contextual spaces, depending on the type of activity. Another finding is the phenomenon of learning in the context of recognition and understanding of the character of locational/ navigation matters. Senior artisanal fishermen who are intelligent in identifying and understanding the characteristics of the sea also share their knowledge and experience with their children. Future generations will be given an understanding of wind speed and direction, the color of seawater, the speed of ocean currents, wave height, wave character/style, and location determination using bi-referential methods.

The phenomenon of social interaction identified in the study area involves the use of spatial waters as a medium of social communication between people from different islands. However, the limited use of communication technology due to limited service coverage by telecommunications service providers does not prevent the fishing community from communicating among themselves. In general, communication does not require planning to be performed at a certain time and place. However, it is performed when they undertake economic transactions or other social interactions, especially in water areas. The primary focus of communication includes the dissemination of information on government administration, population administration, development plans, and meeting plans to discuss certain matters face-to-face (with an agreed agenda to discuss celebrations on National days, for example, Independence Day, celebrations, etc.).

These three findings indicate that water spaces have been utilized in the context of social interaction for the diffusion and actualization of life and marine values, both in normal and abnormal weather conditions. Furthermore, the seawater space characteristics perceived by artisanal fishermen and seaweed farmers in the study area are shown in figure 2.

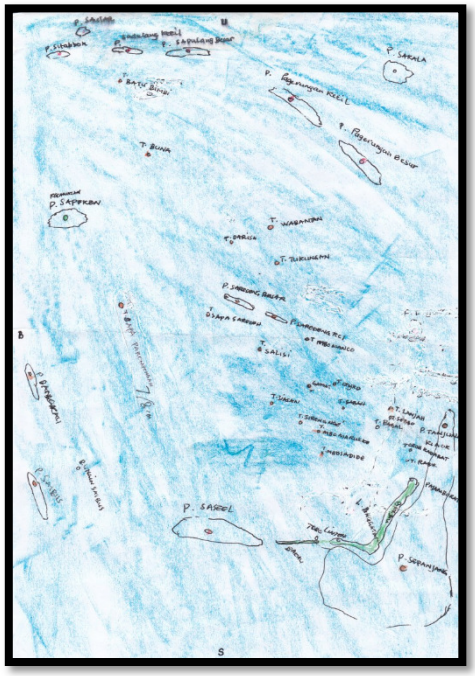

Figure 2: Seawater Space Profile Based on the Perception of Artisanal Fishermen and Seaweed Farmers
Source: Cognitive Map Drawn by Fishermen, 2017

2. Literature Review

2.1. The Sea as a Space

2.1.1. General Characteristics of the Sea

The sea is often interpreted as an object that has dangerous characteristics, an unspoiled environment, uncertain, the source of a constant threat (e.g., hurricane), an accident, as well as phenomenal factors such as uncertain tidal cycles and first occurrence cycles (Acheson, 1981; Cunha, 2005). At sea, many factors have characteristics that are immeasurable, unpredictable, and very high risk, in addition to unique functions that exist within common space (Maldonado, 2005). However, many people believe that the sea provides humans with food and preparations that are always available and never run out (Acheson, 1981).

2.1.2. Sea as a Socio-Cultural Space

Schottenhammer (2006) states that there are at least two paradigms of the sea; the first is that the sea is a barrier/obstacle in the context of access and that the sea is considered an interconnection between two or more areas that are geographically separated by sea. The second paradigm describes the sea as a contact zone, a medium of exchange, and a media transaction in the context of political, military, economic, and cultural exchange, knowledge transfer, and human migration. In addition, according to Schottenhammer (2006), sea space utilization, both in the context of the barrier and the contact zones, reflects the movement of people, commodities, traditions, concepts, beliefs, and religion.

The sea has a hydro-oceanographic function and is believed to have a position and function in the context of space, which is often termed as the maritime space with some specific characteristics such as the following:

- Not homogeneous, always varies from time to time (Cunha, 2005)
- Does not have a fixed pattern in every season (Maldonado, 2005)
- It is indivisible; there is no formal ownership, marine resources mobility, or production that cannot be predicted (Maldonado, 2005)

The fishermen often classify sea space in accordance with the type of designation, among others, for aquaculture, fishing rods, fishing nets, the location (identified as being rich in resources), shipping lanes, an undisclosed location, etc. (Maldonado, 2005; Lampe, 2012). Some of the specific communities in Brazil interpret the sea as a maritime space. Consequently, they classify it and interpret the domestic space as consisting of roads, walls, roofs, and floors (Cunha, 2005). Schottenhammer (2006) revealed that in Chinese mythology, sea space is interpreted to be divided into several types of designation such as oceans, seas, utilization, shipping lanes, coastal areas–periphery sea space. In the context of exploiting marine space, Lampe (2012) suggested that using marine space reproduces maritime traditions such as pragmatism, instrumentalism, adaptation, and others. Furthermore, the perception of the sea as maritime space also led to the phenomenon of the existence of nautical ethics, an ethic that must be owned by each fisherman to ensure success in their activities in the maritime space, i.e., the spirit of youth, health, calmness, willingness to take risks, and the ability to lead the boat crew (Kottak, 1996).

2.1.3. Sea as the Location to Triggered Local Skills

Although the sea is a mysterious entity because its uncertainties and changes are not patterned and often cannot be predicted, there are particular skills in managing marine life and resources therein. This includes the ability of fishermen to detect a particular location for the benefit of their livelihoods through the visual triangulation method. Objects are often used to support the visual triangulation method in the form of certain natural physical characteristics that can be seen from the sea, such as a palm tree, sand dune, church roof, and other natural features (Forman, 1967).

From the perspective of fishermen, visual triangulation generates a spatial configuration-shaped visual imagination map as a tool to facilitate activity at sea. However, when the weather is not conducive, fishermen use an alternative navigation method that relies on wind speed and velocity (Forman, 1967).

Several researchers have discovered similar findings regarding cognitive skills and their shaping into distinctive and exceptional skills. Diegues (2001) defines this as “a distinct cognitive realm,” while Maldonado (2005) defines it as “the cognitive skills of fishermen.”

In addition, the fishermen also have other skills regarding digging for information on all matters related to fisheries, including the taxonomy of fish, the classification of habitat and fish behaviour (Diegues, 2001), and the location of fish habitats and navigation channels (Maldonado, 2005).

2.1.4. Sea as a Place of Secrecy

In the constellation of marine and resource utilization, there is the phenomenon of secrecy. This is a common habit of the majority of fishermen and manifests as a concealment of information about the location of fish habitats. Individually, the purpose of this secrecy is to maximize efforts for fish resource extraction. Nevertheless, Forman (1967) stated that secrecy is a mechanism to create spaces that are useful to minimize competition and inhibit the occurrence of excessive fishing. Forman (1967) later termed confidentiality as an ecological adaptation mechanism.

2.1.5. Sea as a Place Where Sea Ownership Rights Exist

The sea is a common space (Acheson, 1981), and ownership cannot be claimed. However, there are a

number of claims in the name of the requirement for sea ownership rights. Cunha (2005) states that the "sea does not belong to anyone. The sea is the property of anyone."

Some researchers have defined ownership rights to sea space as an attempt by local fishermen to limit, maintain and own the rights to maritime resources (Begossi, 1995; Cordell, 1985). Within the Dullah fishing communities in the Maluku Sea, sea ownership rights are capitalized by fishermen as a political asset, especially during the election of the village head (Adhuri, 2004).

2.1.6. Sea as a Territory

Another phenomenon that occurs in the sea space is territoriality, which, as well as the phenomenon of the rights of ownership of the sea, fundamentally contradicts the principle that the sea is a free space and resources are shared (Durrenberger, 1987). Territoriality is understood and interpreted as a collection of strengths and processes that limit fishermen to sail to certain areas only as a vehicle for the exchange of interest (St. Martin, 2001). This involves both resource allocation factors and the meaning and history of utilization (Marshall, 2004). Therefore, territoriality is related to both restrictions and maintaining the space and social and cultural space (Jackson, 1995). However, Akimichi (1984) perceives it from a different perspective: territoriality is seen as a form of social and economic equity in access to resources, conflict avoidance, and the conservation of interests.

3. Study Findings and Discussion

3.1. Marine Resource Use

3.1.1. Utilization Patterns of Takat and Timpusu

Takat and Timpusu in the study area have a long history related to patterns of use of marine resources in the Sapeken sub-district. An NGO volunteer who had worked on Saseel Island in 2005 said that the exploitation of Takat in the Sapeken sub-district had been undertaken exclusively where fishing communities were not permitted to catch fish in Takat originating from the inventor's family. Although the use of Takat in the study area has now changed to inclusive use, it remains limited to artisanal fishermen who live in seawater within the Sapeken sub-district. Fishermen outside Sapeken or even from outside Sumenep are not permitted to utilize resources in the waters and waters of the Sapeken seawater. This explanation states that the use of Takat and Timpusu has undergone a significant change from what was originally exclusive to inclusive.

3.1.2. Fishing Cycle

The activities of artisanal fishermen in Sapeken depend on the season. Fishermen understand the phenomenon and character of the season and know how to manage it.

In addition to determining the location of catch and Takat, the season also affects weather conditions, which ultimately impact fishing activities.

3.1.3. Fishing Patterns

Sapeken fishermen use traditional tools to extract marine resources. They use traditional fishing boats with fishing rods to catch fish. From the observations, the use of these tools results from mutual agreement after changes in the use of Takat and Timpusu's, which are initially exclusive to inclusive. This is done to avoid the extinction of marine resources due to overfishing and to conserve natural resources.

In doing so, the fishing communities in the study area do not have a regular or fixed time to fish. Thus, there is no specific pattern regarding the activities of the fishing communities in the study area.

When traditional fishing methods are applied, the results obtained are less than those from fishing activities using modern equipment. Furthermore, the catches obtained from fishing are predominantly used for personal consumption.

3.1.4. Family Involvement

The majority of the population in the Sapeken sub-district, especially on the islands of Sapeken, Saseel, Saredeng Besar, Saredang Kecil, Sepanjang, and Tangjungkiaok village, have a livelihood as traditional fishermen and other activities related to the sea. This profession allows traditional fishermen to retain local knowledge about marine biodiversity by applying traditional fishing patterns.

The process of utilizing marine resources still promotes the tradition of "involvement of family members," for the purpose of fishing in Takat and Timpusu, and for seaweed cultivation. Ensuring the existence of the Takat and Timpusu (the phenomenon of confidentiality) has been present since the beginning of the discovery of these areas. However, this phenomenon disappears when the inclusiveness norm replaces the exclusivity norm.

The division of tasks is a natural provision in artisanal fishing families. Boys have an important role in using marine resources, which are the main resources in the Takat and Timpusu. The women (wives of artisanal fishermen) and their daughters, who are approximately 155 years old, are invited to participate in planting seaweed in the water. This is a representation of women's involvement in the utilization of marine resources.

3.1.5. Socio-economic Activities

Social interactions that occur in fishing communities in Sapeken are common and occur naturally throughout

the lives of the artisanal fishermen. The intensity of social interaction among traditional fishermen from several islands in the Sapeken sub-district is unique because they have varied “meeting rooms” both on land and at sea during marine resource use activities.

However, the life of the traditional Sapeken fishermen does not always happen at sea. Therefore, social activities still occur on the mainland. Artisanal fishermen go fishing and return from the sea at unscheduled times. Therefore, social interaction often occurs in territorial waters among artisanal fishermen. In addition, information dissemination among traditional fishermen related to social activities, such as the commemoration of the National Day, is undertaken in the territorial waters.

However, social dynamics are still ongoing in the territorial waters after harvesting seaweed, and the economic transaction of harvesting raw seaweed is still performed in the middle of the sea.

3.2. Local Tradition of Maritime Society at Sapeken

The life patterns of the Sapeken maritime community have inspired the emergence of local traditions that were consciously agreed upon. There are two traditions that have emerged in the maritime context.

- Rambangan Tradition: Derived from the term Bajo, Rambangan is associated with kinship or genetic relationships, meaning that the fishing community always discusses the kinship system in the form of socio-culture that is approved against local agreements. These include the use of fishing gear and the utilization of cultivation space between grass farmers in the sea.
- Lelebusayan Tradition: Derived from the term that means a small boat. This is considered local wisdom about Sapeken fishermen, which consists of taking as needed, sharing with others, and not being greedy in exploiting marine resources.

3.2.1. Rambangan Tradition

3.2.1.1. Kinship System

Kinship in this context is not only limited to family ties but also by neighbors, friends or community members.

Saibus fishermen and also fishermen from Big Saredeng Island and Small Saredeng Island usually catch fish in groups. The number of members in each group varies. There are groups of 5–10 people, but there are groups of up to twenty people. The number of group members who fish at sea depends on the location, distance, and equipment used.

In addition, Saseel artisanal fishermen catch fish in groups. This is evident in the crab seeker fishermen. The number of members of each group can also vary, and the number can reach over ten people. In addition to artisan fishermen, Saseel farmers who plant seaweed also undertake activities to use marine resources in groups. They board large boats that can accommodate dozens of people to reach the seaweed cultivation location. The presence of friends in fishing activities implies interaction between farmers, and consciously or unconsciously, this will begin to form the fabric of the kinship system.

Artisanal fishermen who sail individually cannot be denied and will create a kinship system while at sea. Some traditional fishermen claim that they often meet other traditional fishermen at sea, which triggers interaction. There are various patterns of interaction, such as greeting one another, exchanging information about catches and the condition of the marine environment, and even having lunch together. These interactions that occur in an unconscious condition have formed a kinship system.

Some traditional fishermen in Saseel Island habitually catch fish for personal consumption. However, if the results obtained exceed their requirements, they will distribute the fish caught to relatives or close neighbors.

3.2.1.2. Spatial Behavior in Resource Exploitation

Traditional fishermen and seaweed farmers have different usage zones between the extraction of marine resources (by traditional fishermen) and the utilization of sea space (by seaweed farmers). This difference is influenced by the abundance and quality of marine resources and the suitability of nature for resource extraction and utilization of sea space. Evidence shows that determining the location of resource exploitation is based on agreed rules.

3.2.1.2.1. Exploitation Zone for Seaweed Farmers

The location of sea space utilization for Saseel farmers' seaweed farming consists of a relatively wide area that includes Toro Sapa, Sapa Samo, Bo Alo, Toro Kadarat, Sapa Ongko, Tobo Lintoh, Release, and Takat Pakarangan. It is spatially apparent that the area used by Saseel farmers covers a wide and evenly distributed area throughout the study area except around Tanjungkiaok. Furthermore, the seaweed cultivation zones of Tanjungkiaok village farmers differ from those of Saseel farmers. Seaweed cultivation locations include Mumunu, Luwakoh, Bungin Lure, Bungin Tinggi, and Takat Lanjah, where this area is located closest to Tanjungkiaok village. For more details, their zone is shown in figure 3.

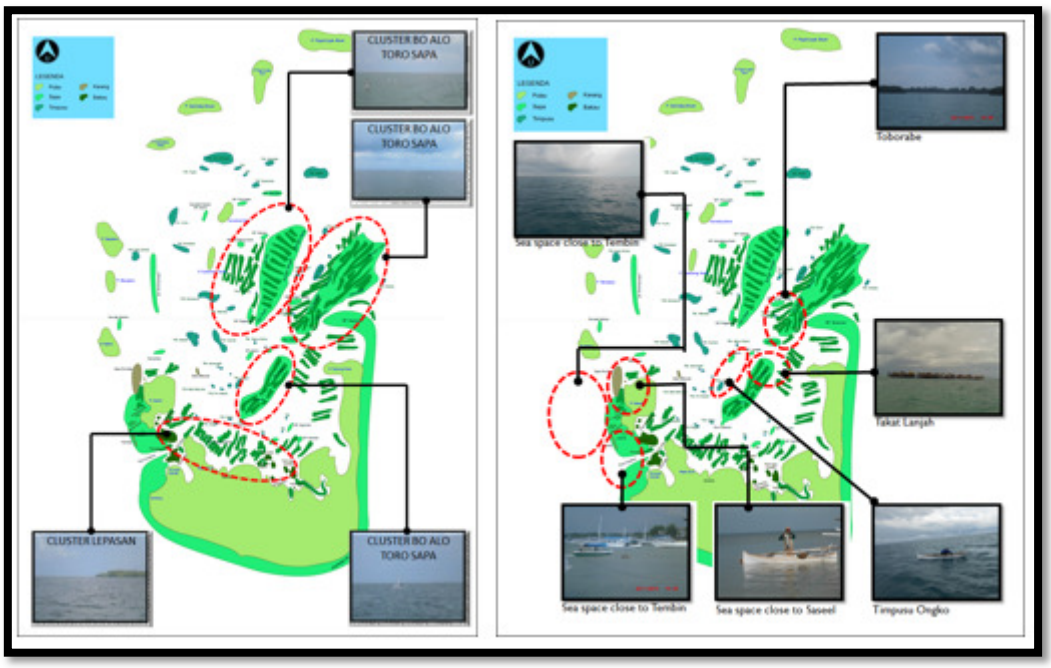

Figure 3: Seaweed Zone of Saseel Farmers (Left) and Fishing Zone of Saseel Fishermen (Right)
Source: Analysis Results, 2017

3.2.1.2.2. Exploitation Zone for Artisanal Fishermen

The majority of Saseel's artisanal fishermen go to the sea in the morning. When the climate is good, they leave after the Morning Prayer and return in the afternoon. Saseel artisanal fishermen are known as fishermen who care about the preservation of marine resources. They are committed to preserving the sea for their future offspring. This is evident through their use of fishing gear in the form of conventional equipment such as fishing rods, bait and simple diving equipment. The exploitation zone was collectively agreed upon by the artisanal fishermen of Saseel, located around the islands of Saseel, Timpusu Ongko, Takat Lanjah, and Toborabe. The majority of Tanjungkiaok artisanal fishermen go to sea in the morning. They go out to sea at 6 am and return home in the afternoon before sunset. However, some traditional fishermen go to sea at 5 pm and return around dawn. The equipment used is also simple and includes a fishing line, bait, and simple diving equipment. The exploitation zones were agreed collectively around Tanjungkiaok, Timpusu Pasabah, Takat Salubar, Takat Susunan, and Takat Mumunu (Figure 4).

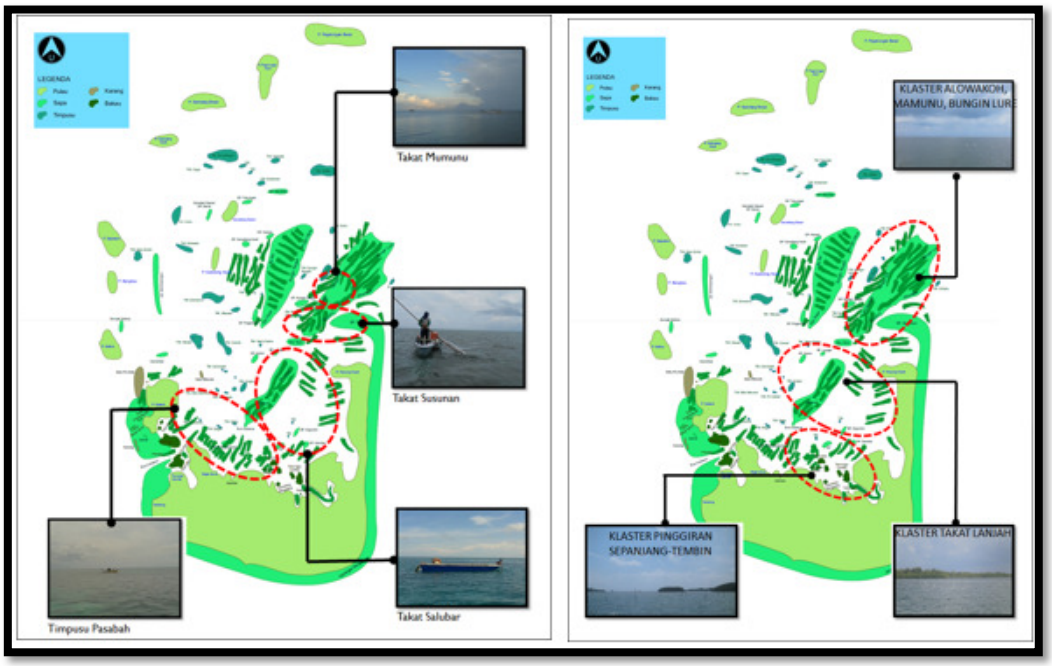

Figure 4: Fishing Zone of Tanjugkiaok Fishermen (Left) and
Seaweed Zone of Tanjungkiaok Farmers (Right)
Source: Analysis Results, 2017

3.2.1.3. Contract System of Seaweed Farmers

Seaweed cultivation is bound by local rules, which are adhered to by all members of the maritime

community. The rules exist in the form of the recognition of sea rights for seaweed cultivation. Unwritten rules that are collectively and consciously formulated are an agreement of the farming community. Some farmers explained that the pattern of management of sea space for seaweed cultivation consists of ownership of the sea area and the terms of its use.

Co-management occurs when more than one actor is utilizing resources in the same place. The following is a case of co-management in the management of marine space with regard to seaweed cultivation found in the field:

Mr. Amir is a seaweed farmer who already has a sea space around Takat Lanjah, but Amir wants to plant seaweed around Takat Alowakoh, which is famously productive. Mr. Banu is a seaweed farmer who has a sea space around Takat Alowakoh, but Mr. Banu does not have the capital to farm, so an agreement has been made between Mr. Amir and Mr. Banu. The agreement stated that Mr. Amir is allowed to grow seaweed around the sea space around Takat Alowakoh belonging to Mr. Banu, but Mr. Banu receives 40% of the harvest.

3.2.2. Lelebusayan Tradition

Lelebusayan tradition, in the case of the local fishing community in Sapeken, means small boat. Philosophically, Lelebusayan terminology refers to the local knowledge of the traditional Sapeken fishermen who are to be used as role models.

3.2.2.1. Behavior of Resources Exploitation

The behavior of resource exploitation within the Lelebusayan tradition in the Sapeken sea space consists of:

- The general behavior displayed by artisanal fishermen in the study area is to utilize natural resources as needed, and not to over-exploit resources. The activity of utilizing marine resources produces a social system that is typical of fishing communities. Social strata appear among traditional fishermen. This creates two professional categories, namely Juragan and Pandega. The terms Juragan and Pandega have different understandings between villages and islands. On the islands of Saseel, Saredeng Besar, Saredeng Kecil, Tanjungkiaok village, and Tembin village, Juragan are people who work as collectors who collect sea catches. Pandega is a fisherman who goes to sea to extract marine resources. On the island of Saibus, Juragan are people who go to the sea and have the equipment required to extract marine resources, while Pandega are fishermen who go to sea without the necessary equipment to extract sea resources.
- Utilization of marine space as seaweed farming. Seaweed cultivation is performed by following certain seasons naturally, where there are "good seasons and bad seasons" for seaweed cultivation. The phenomenon of seaweed cultivation drives both the economic activities of the Tanjungkiaok and Saseel communities and raises the social system for the maritime community. Seaweed farmers in Saseel and in Tanjungkiaok can be categorized into two: Juragan and Pandega. Juragan is seaweed farming agents who work as collectors of seaweed harvest, and they have ownership rights to sea space for seaweed cultivation. Pandega are actors in seaweed cultivation that do not have sea space for seaweed cultivation. The existence of these two actors has produced a management pattern that governs the socio-cultural and economic relations between Juragan and Pandega.

3.2.2.2. Sustenance Concept in the Perspective of Sapeken Maritime Communities

Sustenance is divided into two categories based on the perspective of seaweed farmers and the perspective of artisanal fishermen. The concept of sustenance in the context of seaweed is influenced by several factors: weather/season, quality of plant factors, ownership of sea space, and collector factors. On the other hand, the concept of fortune from the perspective of fishermen is influenced by several factors: weather/season, shipload factors, the need for personal consumption factors, and the need to share with family/community factors.

The sustenance concept from the perspective of seaweed farmers is as follows:

- Weather/Season Factor: Nature determines the pattern of seaweed cultivation. In certain seasons, as indicated by the direction and speed of the wind, the quality of seawater is an indicator of whether seaweed cultivation can be performed. Planting, which is undertaken in certain months, is divided into three phases, namely the planting phase, the harvest phase, and the non-growth.
- Harvest Quality Factor: This factor is related to the welfare of seaweed farmers in the villages of Pulau Saseel and Tanjungkiaok. It is measured by indicators of yields and income from plants, which then forms a trading system among seaweed cultivation practitioners. In addition to natural factors, seaweed farmers believe that the quality of plants is also influenced by the quality of their social interactions. Interaction among farmers is believed to be able to increase the knowledge and information they require during seaweed farming activities from seeding and planting to harvesting.
- Ownership of Sea Space Factor: The use of sea space for seaweed cultivation has its own uniqueness. The sea space used for cultivation has a mutually agreed pattern of ownership. If analogous to land, the sea area in the study area has been divided into sub-spaces that reflect the identity of ownership. The pattern of transactions between space owners and farmers is achieved through cooperation or contracts/leases.
- Collectors/Juragan Factor: Seaweed collectors generally dominate the market and determine the trade system. Farmers are dependent on the presence of collectors both during cultivation (planting) and during the growing season. Therefore, there are economic and socio-cultural relations between traders and farmers, both during the growing season and outside the growing season. Some farmers claim to have no economic and socio-cultural relations with collectors, but the risk is enormous for seaweed farmers.

The sustenance concept from the perspective of artisanal fishermen is as follows:

- Weather/Season Factor: In addition to trusting the existence of a marine resource availability cycle, artisanal fishermen also understand how to respond to and manage this cycle. The cycle/season greatly influences the pattern of extraction of marine resources. In this case, artisanal fishermen will easily adjust the extraction of marine resources to the cycle/season that occurs. This is characterized by sincerity in acquiring any resources and at any location in the sea space. In addition to impacting catches and determining the location of resources, the cycle/season also influences fishing activities.
- Boats Factor: Artisanal fishing communities in the study area have various methods of extracting marine resources. The majority of artisanal fishermen use traditional tools in their daily activities, such as traditional fishing boats and fishing lines, as is often performed by artisanal fishermen from Saseel. Some fishing communities from Saredeng Besar use bombs to exploit marine resources; however, this behavior is considered deviant by other island fishermen because it is not in accordance with the resource utilization norms. Therefore, local fishermen from Saredeng Besar are no longer allowed to take resources in the "deep" sea of Sapeken.
- Adequacy for Personal Consumption Factor. All artisanal fishermen from Saseel Island, Sepanjang, Tanjungkiaok village, Saredeng Kecil, Saredeng Besar, and Saebus have marine resource extraction activities with the primary motive of meeting family needs. Artisanal fishermen are not overly ambitious in acquiring marine resources; they take sufficient amounts for the needs of their own families.
- Adequacy to Share with Relatives Factors. In addition to taking marine resources for the benefit of the family, at certain times, artisanal fishermen also share their catches with their neighbors and relatives.

4. Conclusion

Two maritime traditions have emerged in the sea space of Sapeken:

- First is the Rambangan tradition, where Rambangan is associated with kinship or genetic relationships, meaning that the fishing community always discusses the kinship system in the form of socio-culture approved against local agreements. The manifestation of the Rambangan tradition touches on several aspects, such as the kinship system, the spatial behavior in resource exploitation, and the contract system of seaweed farmers.
- Second, the Lelebusayan tradition shows the local knowledge of artisanal fishermen within Sapeken to be a role model. The general behavior of resource exploitation based on the Lelebusayan tradition displayed by artisanal fishermen in the study area is to utilize natural resources as needed, to not overexploit resources, and to utilize marine space such as seaweed farming.

The sustenance concept from the perspective of seaweed farmers consists of several factors: weather/season, harvest quality, ownership of sea space, and collectors/Juragan. The sustenance concept from the perspective of artisanal fishermen consists of several factors: weather/season, boats, adequacy for personal consumption, and adequacy to share with relatives.

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