



Sasi Laut as a Culture of Natural Resources Conservation to Overcome the Tragedy of the Commons in Maluku Province

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Abstract

This research focuses on the cultural practice of conservation known as "Sasi Laut" in the Maluku Islands, Indonesia, and how this practice plays a role in overcoming the "Tragedy of the Commons" in natural resource management. "Tragedy of the Commons" refers to a situation where the shared use of natural resources by a number of parties leads to over-exploitation to the detriment of all. This research is based on a qualitative approach with data collection through in-depth interviews, participatory observation, and documentation studies related to local customs and traditions. The results show that Sasi Laut is a practice that emerged from the local wisdom of the Maluku Islands community to maintain the sustainability and abundance of natural resources. Sasi Laut is implemented by setting restrictions or prohibitions on the use of certain natural resources in certain water areas for a certain period of time. Through this system, local communities collaborate in monitoring and enforcing mutually agreed rules. This practice is not only rooted in local tradition and culture, but also forms strong social ties among community members. This research also analyzes the effectiveness of Sasi Laut in preventing natural resource degradation and promoting conservation. The results show that Sasi Laut has been successful in maintaining the sustainability of the marine ecosystem and preventing overexploitation. In addition, this practice also maintains the cultural heritage and traditions of the Maluku people who are attached to nature and their environment. In conclusion, this research provides a deeper understanding of how cultural practices such as Sasi Laut can be a valuable solution in addressing the "Tragedy of the Commons" and opens up opportunities to apply similar approaches in other regions facing similar problems in natural resource management. Collaborative efforts by communities and government to preserve and promote Sasi Laut practices are essential to achieve long-term conservation and sustainable development goals.

Keywords: Sasi Laut, Maluku, Tragedy of the Commons

Introduction

For some people, the ocean may seem to have unlimited resources because the biota in it can reproduce. This is why many people exploit and even destroy marine resources. In fact, marine resources also need time to regenerate. If all fish are caught, including small fish, then how will the fish grow up and reproduce. In the past, the ocean was often viewed as an open access resource and common property. This view meant that anyone could enter the ocean and extract its resources with any equipment and in unlimited quantities. This view of the ocean as common property is the basis for explaining the crisis of marine resources (Persada et al., 2018). The absence of rules or laws governing the utilization of marine and fisheries resources can result in a "tragedy of the commons". The tragedy of the commons, a concept popularized by Garrett Hardin, (1968), refers to a situation where individuals act for their own benefit, leading to the depletion of resources (Frischmann et al., 2019).

The theory most often used to explain these conditions is the tragedy of the common from (Dutta & Sundaram, 1993). De et al., (2020), explained that in common property resources, exploitation by individuals (fishermen) will continue even though the number of catches is decreasing. In other words, despite the fact that the number of catches is decreasing, fishermen will not reduce their efforts to catch (so that the resource can recover), but will increase their efforts even though their profits are decreasing (Gross & De Dreu, 2019).

Although at the individual level this can be seen as rational, but according to Hardin, (1968), at the community/collective level, this action is a tragedy. If fisheries management refers to the concept of tragedy of the commons, then people will exploit fisheries until fisheries stocks are depleted because they consider the sea and fish as a shared resource. Asafu-Adjaye argues that to overcome and avoid the tragedy of the commons, a customary law known as Customary Marine Tenure (CMT) can be applied in coastal communities (Asafu- Adjaye, 2000).

In the Maluku Islands, this customary system is known as sasi. Sasi laut applied in Maluku can be one of the efforts to manage marine and fisheries resources traditionally based on local communities (Haulussy et al., 2020). Sasi is a form of local wisdom to protect fisheries and marine resources that has been widely applied in the Maluku Islands, namely in Buru, Seram, Ambon, Lease, Watubela, Banda, Key, Aru, and Southwest Islands (Betaubun et al., 2019). Not only that, the sasi tradition can also be found on the island of Papua and its surrounding islands. However, it turns out that there are some areas that do not apply sasi, such as the area around Sawai Bay in North Seram and West North Seram Districts, Central Maluku Regency (Satria & Mony, 2019).

However, custom-based fisheries management can also lead to legal problems and community (FAO, 2004). Although the 1945 Constitution already recognizes indigenous peoples and their rights. However, to date the government has not passed the Indigenous Peoples Bill, which would outline what rights indigenous peoples are protected, including property rights or customary rights on land and at sea (Kennedy et al., 2019). This research aims to determine the role of sasi laut as a culture for natural resource conservation in overcoming the "tragedy of the commons" in the Maluku Islands.

Literature Review

"Sasi Laut" is a cultural conservation practice originating from the people of the Maluku islands, Indonesia (Rakuasa, 2022). This practice is used to address the "Tragedy of the Commons" problem that often occurs in natural resource management (Sanjatmiko, 2019). Tragedy of the Commons refers to a situation where multiple parties sharing the same natural resources collectively manage them in a way that harms all parties (Janssen et al., 2019). In the absence of effective regulation or monitoring, individuals or groups often tend to overexploit these natural resources for personal gain without thinking about the long-term impacts. As a result, natural resources may be depleted or damaged, to the detriment of all parties involved.

In order to overcome the "Tragedy of the Commons," communities in the Maluku islands have developed a system of "Sasi Laut." Sasi Laut is a term in the Moluccan language that means "sea ban." This practice involves the restriction or prohibition of the use of certain natural resources within a certain water area for a certain period of time. For example, local communities may set limits on certain fisheries or regulate harvesting periods to allow fish resources and marine ecosystems to recover (Prasetyo, 2019).

Sasi Laut is based on local traditions and customs that have lasted for generations in Maluku communities. It allows communities to collaborate in the sustainable management of natural resources. When a sea area is designated as Sasi Laut, the local community will jointly maintain and supervise its implementation. The practice of Sasi Laut has proven effective in addressing the "Tragedy of the Commons" and contributing to the conservation of natural resources in the Maluku islands. This method not only conserves biodiversity and the abundance of natural resources, but also maintains cultural heritage and local traditions in the community.

Research Method

This research uses a qualitative approach where this method is used in examining a natural object condition that can occur due to a paradigm shift in seeing a certain phenomenon (Mukhid, 2021). With this method the data obtained will contain deep meaning which is the value of the data. According to Hamilton & Finley, (2019), qualitative research is a research procedure that produces descriptive data in the form of written or spoken words from people or individual behaviors that can be observed. The approach used in this method is a case study used in knowing and understanding an existing problem by collecting information to be processed into a solution so that the problem under study can be resolved. The general characteristics of this writing approach include, among others, a natural setting with direct data sources, the instrument used is human, descriptive in nature, concerned with the process rather than results or products, inductive data analysis, the purpose or purpose of research is to express a meaning. Therefore, it can be revealed that qualitative research focuses more on an in-depth understanding of a problem, the technical analysis carried out is also in-depth by examining the problem specifically because of qualitative understanding considers the nature of a problem different from one another (Burdine et al., 2021).

The writing methods used are Documentation Techniques and Case Studies. Documentation technique is a study that focuses on the analysis or interpretation of written data based on the context of a problem, information can be obtained through facts in the form of documents in the form of books, journals, articles, magazines, films, and similar sources used in digging up information in the past (Roller, 2019). The form of information is in the form of written items so that the data search process is processed from the results of searching for existing data about a person or group of people, events, or events that occur in social situations that are useful in qualitative research.

This documentation technique also includes theories, arguments, or laws related to each problem of a particular research so that it needs to ensure credibility through the authenticity of the source text. According to Stake, case study techniques are natural from a certain phenomenon based on culture or the author's interest in a particular phenomenology, the characteristics of case studies are usually single targets, problems are simple to complex, the aim is to understand a case in depth. The data collection technique used is literature deepening where researchers will conduct literature searches in the form of secondary data obtained either from internet publication pages or other literature studies, then the data obtained will be classified briefly so that it can then be analyzed. The analysis process in qualitative research is an effort made by finding an important thing. From the analysis, data presentation is then carried out to strengthen the results of the researcher's analysis in descriptive form which is then concluded by aligning the results of the researcher's research with the data that has been obtained where this is the last stage of the writing process.

Result and Discussion

Tragedy of the commons in Maluku Waters

Property rights In most cases, common property resources are part of the natural environment and are characterized by either clear state or common property rights. Without proper enforcement, state resources may end up resembling open access resources or 'free for all' scenarios (Prasetyo, 2019). In his seminal paper Hardin, (1968), stated that in the case of common property where private property rights do not exist, society will utilize communally owned natural resources with the aim of maximizing individual utility without the need to make investments to ensure resource maintenance. This, Hardin (1968) explained, eventually leads to the degradation and depletion of communally owned natural resources. Such a situation is dubbed the 'Tragedy of the Commons' (Hardin, 1968).

Hardin (1968) notes that there is no incentive to invest in the conservation of common property, as other members are likely to benefit without sharing the investment costs, thus having a 'free ride'. Hardin's (1968) 'Tragedy of the Commons' perspective has been criticized for failing to distinguish common ownership from open access, given that the former can be associated with effective resource management as long as there are strong institutions, particularly social capital, that enable the development and smooth functioning of formal and informal institutions (Janssen et al., 2019). However, the 'Tragedy of the Commons' is more

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applicable to natural resources regulated through open access regimes due to the characteristics of open access resources (Quinn et al., 2007, Ostrom, 2008).

One example of the Tragedy of the commons that occurs in Maluku waters is Illegal, Unregulated and Unreported (IUU) fishing; theft of marine resources with the use of destructive fishing gear (bombs and potassium) and direct trade of live fish from fishermen directly to foreign vessels. This can damage the marine ecosystem and cause the income level of local communities to decline, so good management is needed from the local government to overcome the Tragedy of the commons problem that has occurred recently.

Management and Utilization of Marine Resources

With the advent of regional autonomy in 1999, Indonesia has undergone profound changes in its legal system. Management of coastal and other natural resources has shifted from the central government to local governments, and the legislative sphere is considered to have a greater role in drafting and overseeing legislation. Coastal resource management also received greater attention with the establishment of the Department of Marine Affairs and Fisheries (DKP). In line with the autonomy era, since 2001 local governments have clear authority to manage coastal resources and small islands responsibly in accordance with Article 10 of Law No. 22/99. However, the capacity of local governments to manage these potential resources is still relatively limited, especially non-fishing marine development. On the other hand, these marine resources are utilized by various parties irresponsibly (intruders) such as destructive fishing, theft of fish at sea, and coastal reclamation that does not pay attention to environmental sustainability (Rudyanto, 2018)

Currently, there is a tendency that the implementation of regional autonomy is a replication of the sector approach that tends to exploit its resources. Existing laws and local regulations are more oriented towards the exploitation of coastal resources without regard to the preservation of resources and other regulations, resulting in physical damage. Meanwhile, awareness of the strategic value of sustainable, integrated and community-based management of coastal areas is relatively lacking. In addition, the rights of indigenous/local communities in the management of marine resources such as sasi, seke, panglima laot are also still underappreciated so that the space for community participation in coastal resource management is still limited.

In the last two decades, there has been a change in the approach to the management and utilization of marine and fisheries resources. Previously, the state authorized companies or industries to manage marine and fisheries under an open access regime that gave access to resource management anywhere. However, there are currently changes in fisheries and marine governance such as limited access regimes and the increasing participation of other actors such as fishing communities, NGOs, and even consumers who want sustainable products. Such limited access regimes can be in the form of property rights or territorial rights that restrict the utilization of resources by non-titled parties (FAO, 2004).

The rise of limited access regimes is inseparable from stakeholders' realization that marine and fisheries resources are finite and will not meet global needs if exploited

continuously. Globally, capture fisheries have approached the productive threshold with total annual production reaching 80 million metric tons. FAO data in 2012 showed that more than a quarter of the world's fisheries stocks have been overexploited (United Nations, 2016). Therefore, more and more people are campaigning for a return to traditional or customary and community-based ways of managing fisheries and marine resources sustainably. (Tawari et al., 2020) explained that returning management rights to the community is necessary because fisheries resources are a sustainable source of livelihood for them. In addition to restoring fisheries stocks, this method is considered more effective in solving other marine and fisheries problems, including illegal fishing, environmental pollution, and maintaining biodiversity.

Departing from this perspective, the concept of Community-Based Fisheries Management (CBFM) emerged, which actually has its roots in Customary Marine Tenure (CMT) which has been running for a long time in various coastal communities in the world, including Asia, Africa, the Caribbean and Latin America to the Pacific Islands (Ruddle et al., 1992). Bennett, (2012), explains the elements in CMT, namely 1) custom, referring to a system rooted in tradition and part of customary law and local wisdom with adjustments to current conditions, 2) sea, referring to marine ecosystems, ranging from beaches, lagoons, coral reefs, open seas and surrounding islands, 3) ownership, referring to social processes related to resource access rights and control over territory.

Customary Marine Tenure (CMT), also known as customary marine rights, has long been developed in coastal communities as an effort to protect marine resources and ensure their sustainability for local communities. In Aceh, there is a tradition of panglima laut or panglima laot. In the Talaud Islands, North Sulawesi, there is the mane'e tradition. In the Maluku Islands and parts of West Papua there is a tradition of sasi. These customary sea rights have generally been in place for generations and are maintained in accordance with local customs.

Implementation of Sasi Laut in Maluku Islands

At least since the 17th century, Maluku communities have realized the importance of sustainable resource management where they apply a customary law called sasi (Rato et al., 2020). Sasi is a prohibition to take certain natural resources as a conservation effort to maintain the quality and population of biological resources (Sofyaun, 2012). This prohibition does not apply continuously but is limited to certain times. There is a sasi closing period, when sasi is implemented in an area and people are prohibited from taking resources, and there is a sasi opening period, when people are allowed to utilize resources. The tradition of opening and closing sasi is usually carried out with rituals or traditional ceremonies (Mossy, 2020). Sasi can be applied to various resources, including forest products, agricultural products, and marine products.

In general, each region in Maluku has a number of sasi. The implementation of sasi is generally divided into four categories, namely 1) individual sasi, which is enforced by the landowner personally; 2) general sasi, which only applies at the dusun and village levels; 3) church sasi & mosque sasi, which is implemented in accordance with the agreement of the church or mosque congregation; and 4) state sasi, which is approved by the local government. In addition, sasi can also be applied according to the location and type of natural resources.

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Generally, sasi can be divided into four locations, namely 1) sea sasi; 2) river sasi; 3) forest sasi; 4) beach sasi (Persada, 2018)

In general, sasi laut is applied at sea according to the agreement between the customary government and the local community. According to Nikijuluw, (2001), sasi laut (marine tenure) is an institutional system that regulates the prohibition of fishing fishery resources within a certain period of time so that they can multiply until they reach consumption size and can be utilized sustainably. Considering that the Maluku Islands cannot be separated from the utilization of fisheries and marine resources because 90% of the Maluku Province area is ocean marine management to ensure the sustainability of the lives of the Maluku people is important (BPS Provinsi Maluku, 2019).

Some of the rules that generally apply to the customary law of sasi laut in Maluku are: 1) Prohibition of fishing in certain areas during sasi closing and only allowed during sasi opening; 2) Prohibition of using poison/explosives to catch shrimp and fish; 3) Prohibition of cutting mangrove trees; 4) Prohibition of taking mangrove tree bark for net reinforcement because it can cause the destruction of plants; 5) Prohibition of taking live corals in the sea; 6) Prohibition of catching fish with meshes that are too small; 7) Prohibition of catching fish from the boat when the shoal of fish is entering the lagoon. If these sasi prohibitions are violated, the community can impose social sanctions and even arrest the perpetrators and hand them over to the police.

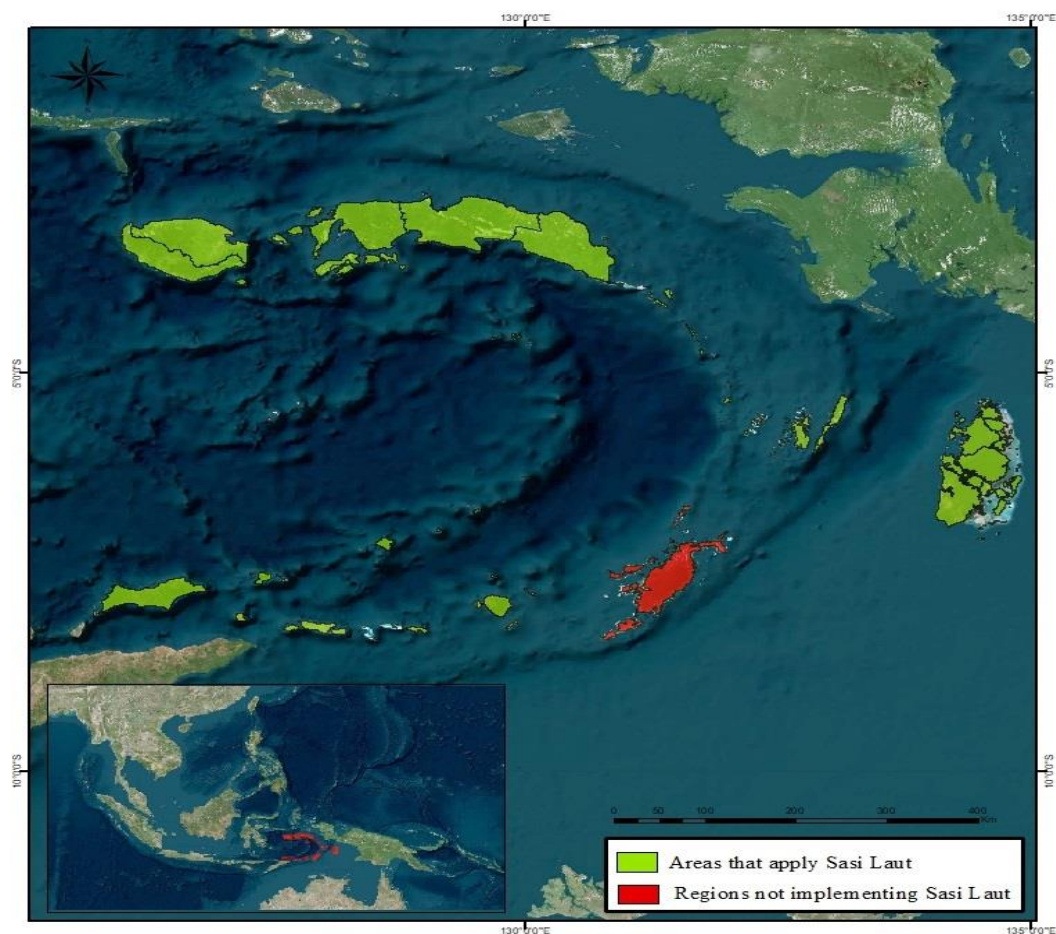


Image 1. Map of Maluku Pronvisi Area Implementing the Sasi Laut System

Sasi has been widely enforced in the Maluku Islands and Papua. In the Maluku Islands, sasi is applied in Buru, Aru, Southwest Islands, Banda, Kei, Watubela, Ambon, Seram, Ternate, and Halmahera (Persada et al., 2018) (Figure 1). In the Maluku coastal community system, sasi is not only a tradition, but is institutionalized and has a set of rules. Sasi has a set of rules because it has traditionally been run by the customary government in Maluku. In Maluku, the Negeri (village) government system is slightly different from other regions in Indonesia. Negeri (as the village is called) is still built on the basis of familial kinship and is led by the Raja Negeri. The Maluku Provincial Government also recognizes the government of Negeri based on the Maluku Provincial Regulation No.14 of 2005 concerning the Reestablishment of Negeri as a Union of Customary Law Communities in the Maluku Provincial Government Area (Nendissa, 2010). In the decentralization system adopted by Indonesia and since the enactment of regional autonomy, local governments can regulate their territory autonomously as long as it does not conflict with the 1945 Constitution and Pancasila..

The Negeri government in Maluku is also inseparable from the role of regional autonomy so that Negeri-Negeri, which is equivalent to a village in Java, can organize a legal government and be recognized by the state. Generally, one Negeri has at least three soa, each soa consists of several families or clans. The Negeri government has four institutions; namely Pamerintah (Regent, i.e. Village Official); Negeri Government/Saniri Raja Pattih (Village Government Body); Saniri Lengkap or Saniri Negeri (complete village council) and Saniri Besar (large village council) (Nendissa, 2010). In addition, there are also several village officials, namely Marinyo (spokesperson), Tuan Adat (Landlord), Kapitan and Malesi (Latu Kewang and Kewang).

In implementing sasi laut, the local government delegates its authority to village officials called kewang. They act as customary police. They guard and maintain the boundaries of the Negeri, enforce regulations and take action against violators of customary law, and supervise the implementation of sasi. Even in Negeris that do not have a sasi tradition, kewang is still important to ensure that natural resource management is in accordance with Negeri (village) regulations and applicable state regulations.

The Maluku community system that still upholds traditions and is based on family ties also keeps the sasi tradition alive until now. The existence of sasi laut customary law is also evidence of the local wisdom of the Maluku people based on sustainable principles. With the existence of sasi, the community cannot utilize marine resources excessively, but must be in accordance with agreed rules. The closing period of sasi, which can last for several months or years, provides time for the ecosystem and marine biota to renew themselves and reproduce. When open sasi is implemented, the community also gets abundant results.

Conclusion

Uncontrolled and unsustainable utilization of marine resources can lead to the tragedy of the commons. Hardin's concept predicts human behavior that tends to exploit the natural resources around it until it runs out if no prevention is taken. The customary law of sasi laut,

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which is applied in the Maluku and Papua Islands and has been implemented for centuries, is one example of customary marine tenure. Governance that gives authority to the lowest administration where local communities are located is considered more effective in solving problems in the community, including in the fisheries and marine sectors. If the central government recognizes the rights of indigenous peoples and encourages customary marine tenure, then management such as sasi laut will be legitimized by the government and can complement formal government management. If sasi management and formal management from the local government are combined, this will prevent the tragedy of the commons in the region. Not only that, the practice of sasi can also be replicated in other coastal areas in Indonesia so that the tragedy of the commons of Indonesian fisheries can be avoided.

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