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Muhu Holy Forest, Protected Area of Mahuze Clan as A Natural and Cultural Conservation

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ABSTRACT

Muhu Holy Forest is a protected area located in district Muting, Merauke. This holy forest belongs to the Mahuze clan, one of the large clans of the Marind tribe. The aim of this study was to describe the Holy Forest as one of the protected areas that serves to conserve nature and the culture of the Mahuze clan itself. This type of research is descriptive qualitative research with data collection methods are observation and interview. Observations were made by looking directly at the Holy Forest area, and interviews were conducted with several people with the name Mahuze and also customary elders of the Mahuze clan themselves. The results showed that the Holy Forest area contained various types of plants and animals. Some plants and animals in the Holy Forest are sago, rattan, coconut, bird of paradise, wild boar, and others. This Holy Forest is maintained by the Mahuze clan from various offers from both the government and the private sector for the development of oil palm plantations. The attitude of defending their area indirectly has preserved nature and also preserved the culture of their own ancestral heritag.

Keywords: *Muhu Holy Forest, Marind Clan, Nature Conservation, Culture Protected, Local Wisdom*

1. INTRODUCTION

Muting District is one of the districts in Merauke which is one of the areas that is used as the Merauke Integrated Food and Energy Estate (MIFEE) program by the government. This program is carried out based on cooperation between the government and the private sector. The existence of this program makes a lot of forest areas opened only to be used as agricultural land or oil palm plantations. At Muting, the clearing of forest land is destined for oil palm plantations. This land clearing sacrifices the community's area / forest.

The area in Muting, mostly still in the form of forests with a variety of plants such as sago, rattan, nibun, coconut, bamboo, rambutan, areca nut, betel, and others. In addition, the forest there is also home to several typical Papuan animals, such as *sakil* (bird of paradise), *bik* (wild pig), *saham* (kangaroos), *tuban* (ground mice), cassowaries, *unik* (leaf snakes), and others. One of the plants that are often found in the Muting forest area is sago. Sago is a typical food of the Papuan people. In addition to daily food, the type of food with sago-based ingredients can be found in traditional Papuan events [1].

There are five large clans of the Marind tribe who live in district Muting. The clans are Mahuze, Gebze, Ndiken, Kaize, and Basik-Basik. Each clan has its own customary area which is still a forest. Of the five large clans there, only the Mahuze clan has a holy forest called the "Holy Forest of *Muhu*". It called a holy forest, because it is considered to have a holy value that is believed to be hereditary in the Mahuze clan.

Muhu holy forest belongs to all the families in the Mahuze clan. In addition, each family has their own backwoods. *Muhu* holy forest cannot be processed in general like the backwoods that is owned by each family. *Muhu* holy forest can only be processed if it receives permission from the Chairperson of the Mahuze clan and indigenous elders.

The *Muhu* holy forest and the backwoods owned by each family in the Mahuze clan, is one form of Mahuze clan defense from the opening of oil palm land by the private sector. The main reason for the Mahuze clan to defend their area is to preserve local wisdom which is the legacy of their ancestors. In addition, they also want grandchildren to be able to enjoy what they have taken care of. In this study holy forests will be discussed as a

form of nature conservation and cultural preservation by the Mahuze clan.

1.1. Mahuze Clan and Muhu Holy Forest

The Marind tribe is an indigenous tribe from Merauke Regency. The Marind tribe itself is divided into three, namely *Marind Pantai*, *Marind Deg* (Forest), and *Marind Bob* (Island). The Marind people who live in the Muting district are *Marind Deg* [2].

The Mahuze clan is one of the great clans in the Marind Deg tribe. The Mahuze clan inhabits most of the Muting area. The word Mahuze himself, comes from the word *Muhuze*. The word Mahuze means sago. The indigenous people who have this clan respect the sago plant as a socio-cultural identity and also relate to their ancestors which in this case are sago plants. Therefore, the use of sago plants must go through the process of traditional rituals and get proper respect [3]. If there is a violation of tradition related to their clan, according to their belief something bad will happen to the perpetrator of the tradition violation. For example, if you hoe the sago, then the pulp from the sago should not be scattered around the lap area.

The Mahuze clan in the Muting District, lived from the tip of the cape to the river of *Mbilanggo*. Within the area, there is a special village whose contents are only families with the Mahuze clan. The village was named *Mbilanggo* village. The number of family heads in *Mbilanggo* village to date is 150. In this year and next year, 50 houses will be built for 50 heads of families with the Mahuze clan. So that the total number of the Mahuze family is 200 families.

The Mahuze clan living in Muting also has its own customary area. Based on the customary area, the Mahuze clan has the following rights:

- 1) Property rights, namely the rights that the Mahuze clan has over the customary territories that are owned jointly or the area owned by individuals to fulfill their needs.
- 2) The right to manage land, which is the right that the Mahuze clan has to manage the land or customary land that has been occupied by them. The management of the land can be done jointly or individually.
- 3) The right to collect results is the right that the Mahuze clan has to collect from the form of plants or animals obtained from their land or customary land.

The Mahuze clan has an area that is not allowed by other people (Holy Forest) except themselves. This area has an area of 500,000 hectares. The forest area owned by the Mahuze clan can be found in various types of plants and animals. One of the most common plants is

sago. The sago plants grow naturally and some are planted by them. Their use of sago is more for daily consumption.

The indigenous people of Merauke still hold strong their respective cultural customs. They believe that it is their cultural customs that until now have affected the lives they lived. Including sago plants that grow naturally form sago forests, are considered as the culture of indigenous Papuans. Sago forest is considered as a place to store food and a source of life for men which is a gift from God and will be passed on to the next generation.

1.2. Sago Plant

The sago forest in Merauke is the largest sago forest in Papua with an area of 1,232,151 hectares or around 25.9% of the sago forest in Papua [4][5]. The Merauke region which is lowland is dominated by swamps which are the best places to grow sago. This makes Merauke rich in sago plants.

Sago plants for the people of Papua, especially Merauke, have an important role in daily life. Aside from being a daily food source, other parts of sago plants are used for other uses. Sago leaves are used as roofs for houses, walls, and also house dividers. Sago stems are used as a substitute for wood. The role of this multipurpose sago causes sago to be considered as a fundamental ethno-biological species [6].

Sago plants themselves are large carbohydrate-producing plants after rice, corn, and tubers. According to some experts, dried sago starch contains 71.0-87.7% carbohydrates, 0.31-0.70% protein, 0.20-0.25% fat, 0.18-0.40% ash, 1, 35-2.20% fiber, and 10.2-13.7% water [7]. In addition, according to the results of the study, sago is very good for the digestive process, therefore it is best consumed in the morning [8]. The content and benefits that are present in this sago makes sago can be used as a solution for food security in Indonesia, especially in sago-producing areas, such as Merauke.

Sago plants can also be used for health. Sago-resistant starch can serve as a preventive measure for cancer, reduce the effects of blood sugar levels after meals, reduce the risk of gallstones formation, and increase mineral absorption [9]. Besides being used for health, sago plants are also developed into bioethanol by the Ministry of Forestry [9].

Aside from being a solution for food security, sago plants also have benefits for the environment. An area with many sago plants, the area also has a good water supply. This is in accordance with the benefits, sago can maintain the surrounding water system. The root system of sago also makes sago plants absorb water and mineral

salts from the soil [10]. This is good for sago growth itself.

Sago plants are also good for CO₂ absorption. The results showed that sago plants can absorb 240 tons of CO₂ / ha / year [11]. Among the food crops in Indonesia, sago plants are food plants with the highest CO₂ absorption system [11]. Sago plants are also resistant to natural disasters such as flood and also drought [12]. A strong root system that is embedded in the soil properly, making sago plants resistant to floods. The ability of sago to absorb mineral water and salt also makes sago plants resistant to drought.

1.3. Oil Palm Plantation

Palm oil (*Elaeis guineensis*) is one of the plants that taken into account in Indonesia. This plant has become Indonesia's flagship product because it has high economic value and a strategic role for foreign exchange sources [13]. Palm oil is the main ingredient in making cooking oil.

Palm oil plants are processed into palm oil and become the best-selling oil in the world because it has high productivity. Indonesia, which is one of the biggest palm oil producers, makes the government open agricultural land or oil palm plantations. Based on data from the Directorate General of Plantations in 2014, oil palm plantations are divided into three, namely large private plantations (PBS) of 51.86%, smallholder plantations (PR) of 41.42%, and large state plantations (PBN) of 6.72 % [14]. The opening of oil palm land every year also increases. Until 2015, land for oil palm plantations in Indonesia had reached 11.44 million hectares [14].

Extensive oil palm plantations have a positive impact on the Indonesian economy. However, the opening of oil palm land also has a negative impact on the environment. Negative impacts include, among others, deforestation, increased carbon emissions, environmental changes, thus causing environmental disturbances [14].

Oil palm plants need a lot of water. This requirement can disrupt ground water supply for other plants outside of oil palm plantations [15]. An oil palm tree requires water of 2.0-5.5 mm / day or 140-385 l / hectare / day [15]. Deep water needs this large amount has an impact on water balance and has an effect on reducing water discharge by around 30-40% [16]. The opening of oil palm plantations also makes it difficult for communities around plantations to get water [17].

Oil palm plantations also have an impact on the lives of animals around the plantation. Oil palm plantations must produce waste both from pesticide fertilization and liquid waste. In West Sumatra, oil palm plantations have an impact on sea water pollution which results in

extinction of marine biota [18]. The quality of seawater around plantations decreases due to sediment fertilization due to the erosion of oil palm plantations [18]. As a result of this incident, fishermen live in low-income economies and also children their child is dropping out of school.

2. RESEARCH METHOD

This research was carried out in Muting district, Merauke Regency. The object of this study was the *Muhu* Holy Forest, the holy forest belonging to the Mahuze clan, and also the backwoods owned by the family in the Mahuze clan.

The type of research used in this study is descriptive qualitative research. The purpose of this study is to describe the *Muhu* Holy Forest as a place of nature conservation as well as a place for cultural preservation.

Data collected was done by observation and interview techniques. Observations were made by observing the *Muhu* Holy Forest directly in the Muting district, as well as other backwoods owned by the Mahuze family. The interview was conducted on some Malind people, especially Mahuze clan and their customary elders.

Furthermore, the data was analyzed through several stages. First, checking validity of the data through triangulation of sources, namely checking the answers of several informants. After that, data is selected that is in accordance with the research objectives, namely the role of the *Muhu* forest as a place for natural and cultural protection. Final stage is displaying the data in the form of communicative sentences and drawing conclusions on all the results obtained.

3. RESULT AND DISCUSSION

3.1. *Muhu* Holy Forest as Nature Conservation Place

The *Muhu* Holy Forest which is an indigenous area belonging to the Mahuze clan has an area of 500,000 hectares. In this forest is dominated by sago plants. In addition there are also several other plants such as rattan, coconut, areca nut, betel, rubber, and others. The forest is also a place to live for a number of animals such as love birds, wild pigs, leaf snakes, and others.

The *Muhu* Holy Forest is a holy place for the Mahuze clan. This forest is also a place maintained by the Mahuze clan from the opening of oil palm land. The Mahuze clan who defended the Holy Forest, indirectly preserved nature and also protected their environment from damage caused by oil palm plantations.

The sago plants that dominate the *Muhu* Holy Forest area and also the neighborhood where the Mahuze clan

lives, make this area never lack of water. This is because the role of sago as a plant can regulate ground water supply. Especially at this time, Merauke has begun to enter in the dry season.

From the results of direct observation at Muting, some areas that did not have sago plants had experienced dryness. Most of the wells owned by the community have experienced drought so they have difficulty getting water. This did not occur in the area inhabited by the Mahuze clan and other communities living in the vicinity of the special area of the Mahuze clan. They still have water supply, because their wells still produce water.

The results of interviews with the Chairperson of the Mahuze clan and also some of the community about the water supply, they said that they never lacked water. Even during the dry season, even though the amount of water decreases, their wells have never experienced drought. Even because of the availability of water they have, sometimes some people who have experienced drought come to ask them for water.

Muting District is also one of the districts that had hot weather. Most of the Muting area has become an oil palm plantation. The weather and also the hot weather can be caused by the opening of oil palm plantations. As is known, one of the impacts of oil palm plantations is the emission of carbon dioxide gas which is one of the greenhouse gases [14]. The oil palm plantations that are quite large also produce a lot of carbon dioxide gas. Increase the amount of carbon dioxide gas, causing the increase in temperature in the area of oil palm plantations and also the surrounding area.

Unlike the area around the *Muhu* Holy Forest and also the residence of the Mahuze clan, it still feels cool. The large number of plants, especially sago plants, is enough to reduce carbon dioxide emissions. As is known, trees are the best carbon dioxide absorber because trees need carbon dioxide for photosynthesis. That is enough to make the area around the Holy Forest still cool. However, the comparison of the area of oil palm plantations with the Mahuze clan is very different, where the area of oil palm plantations is larger, also causes absorption of carbon dioxide gas not as much as carbon dioxide gas produced.

The Mahuze clan customary area also still looks very shady compared to other areas in the Muting district. The processing of Holy Forest which has the rules, causes the beauty and preservation of plants and animals that live in that place are also maintained. Not only in the *Muhu* Holy Forest, but also in the backwoods owned by each family in the Mahuze clan. If they process and take the results from the Holy Forest or backwoods, they immediately replace it with new plants. This is the teaching of their previous people. It is

this new plant change that causes, plants in their area never run out.

Animals that live in the Holy Forest are also protected. Their food is always available from nature. In addition, their food is not contaminated by waste originating from oil palm plantations, making it safe for consumption. Not only animals, the Mahuze clan who take natural products from the Holy Forest and their backwoods, do not need to worry about consuming anything from the area. Due to the absence of environmental pollution such as the area of oil palm plantations.

3.2. *Muhu* Holy Forest as Culture Conservation Place

Muhu Holy Forest is one of the ancestral cultural heritages in the Mahuze clan. According to their beliefs, everyone with the Mahuze clan came from the forest. As time went on, one by one came out of the forest and lived around the holy forest of *Muhu*. Therefore, they considered the *Muhu* Holy Forest as a holy place for the Mahuze clan.

The Mahuze clan maintains the Holy Forest area and also their area of residence, because they consider the area to be a gift from God that must be preserved and maintained. This is a hereditary message from their ancestors. God gives the forest and its contents, so that they are not difficult to find food and to survive. This is what they must guard and maintain.

In addition to respecting God's gift for the forest and everything in it, defending the *Muhu* Holy Forest and other villages is meant to pass everything to their children and grandchildren later. If they do not care for and maintain, they cannot leave anything to posterity. If that happens, then in the future, their children and grandchildren will find it difficult to find food and to survive, because everything has run out. Their children and grandchildren also cannot know the culture left by their ancestors.

Maintaining the customary area for the Mahuze clan is very important. One other reason that caused them to maintain the *Muhu* Holy Forest and their backwoods is also to maintain their traditions and culture. For the Mahuze clan, giving up their customary territories is tantamount to giving up the existing sago plants. This means they have eliminated their culture and traditions related to sago.

As is known, sago for the Mahuze clan is considered their ancestor, therefore they must treat sago well. In addition, they also must maintain and preserve sago. In the custom of the Mahuze clan, there is a rule that sago must be appreciated and utilized properly. If it's not like that, then there will be sanctions for those who violate the rule. The Mahuze clan believes that sago comes

from nature, when nature exists, sago also exists. Therefore, they must preserve the sago.

In the *Muhu* Holy Forest and also their backwoods, many sago plants were found. One of the hereditary cultures in the Mahuze clan is sago being their staple food every day. Not only that, in every customary event, there must be processed food from the basic ingredients of sago, such as sago *sep*. The Mahuze clan culture that is related to sago is also sago palm. If they do not maintain the Holy Forest and the backwoods, it means that the sago plant will also be lost replaced by oil palm. This has indirectly eliminated sago culture as a staple food and also sago breeding activity.

Sago as the staple food of the Mahuze clan, has been passed down from their ancestors. Based on the results of the interviews, although the presence of sago is now threatened by rice as a staple food, it does not happen to the Mahuze clan itself. Some of the people interviewed related to staple food, they claimed that if they ate rice, they would quickly feel hungry again and be weak quickly. For example, if they eat rice this morning, then in the afternoon they will get hungry quickly and feel weak. It is different from eating sago. If they eat sago this morning, then they can last until the afternoon and don't feel weak at all. They will eat again at night.

The strength they get when eating sago is not free from the sago content itself. Sago is a plant that contains carbohydrates that are quite high and also other nutrients [7]. It is not surprising, if when consuming sago, they will last longer. In addition, the benefits of sago as a plant that facilitates digestion, makes them never attacked by diseases related to digestion.

Sago plants, besides being used as daily food, other parts of sago plants can also be used. Sago leaves are usually used by the Mahuze clan as the roof of the house or the roof of the people in their house. Strong and large sago stems, they usually use and process them as boats. This boat is used to cross the river and also fish in the river. Things like this also make them keep preserving the sago plants.

The management of sago for the Mahuze clan is only limited to daily staples. But this does not make them close the possibility to process sago into various other foods. Some of the mothers interviewed, they actually wanted to process the sago into other variety and then sell it. This is to be done so that they have a busy life besides being a housewife. In addition, they also want to increase income in their respective families. However, this has not been fulfilled, because they do not know how to process sago into various other foods. To earn income, they sago and sell it in the form of raw sago. Even this is done if there is a request from an outsider.

4. CONCLUSION

The Mahuze clan has until now maintained their customary area from private offerings to open oil palm plantations. The customary area in question is the *Muhu* Holy Forest and also the backwoods owned by each family. The customary area cannot be processed without the approval of the Head of the Marga and also the indigenous elders of the Mahuze clan.

The customary area maintained by the Mahuze clan is carried out for various reasons. Two main reasons are to preserve the culture and also preserve their own nature. One of the cultures that they must maintain and preserve in the area is sago plants. Aside from being a culture, the preservation of sago plants is also used as a natural or environmental preservation. Sago plants are useful as good water storage and also absorb large amounts of carbon dioxide.

Opening of oil palm land by the private sector, should receive special attention from the government. A review should be carried out for the opening of oil palm land, namely by reviewing in terms of the balance of the environment and also cultural preservation.

Forests in the Muting district are mostly indigenous areas of each clan, which are inherited from their ancestors. Therefore, the government should not immediately sell the area without taking into account the culture of the Marind tribe who live there. In terms of the environment, large-scale opening of oil palm can have an impact on environmental balance. The opening of oil palm land means sacrificing other plants and animals in the forest. Besides that, the opening of oil palm land can disrupt the availability of water around the environment and can also increase carbon dioxide gas emissions.

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