

The Infusion of Local Wisdom on Forest Preservation In The Teaching of Wood- Carving At Kite' Kisi' Wood-Carving Workshops In North-To raja District, South-Sulawesi Province, Indonesia

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Abstract: *Indigenous peoples who inhabit villages around potential forests to support forest conservation efforts in order for forests to provide benefits for various community needs. This study is a case-study conducted on a community group whose lives are heavily dependent on forests that are groups of woodcarver communities living in Ke'te Kesu District of Toraja-Utara, Sulawesi-Selatan Province, Indonesia. The objective of the study was to uncover the local wisdom practiced by the woodcutter community in relation to forest conservation and how the local wisdom was transmitted to the younger generation of novice woodcarvers. The data collection was done by in-depth interview technique to the engraver and participant-observation technique to observe the engraver activity. The results show that the local wisdom practiced by the engraver community in Ke'te Kesu in relation to forest conservation is the practice of a myth containing abstinence on things that should not be done on the forest and the unwritten rules agreed upon by the community. The local wisdom is transmitted to the novice engraver by (1) delivering myths, excerpts, and unwritten rules about forest preservation in the form of stories, and (2) modeling by senior engraver acting as role model in the application of abstinence and unwritten rules about forest conservation in everyday life. The challenges faced in efforts to apply local wisdom about forest preservation today are challenges that stem from the dynamics of societal change and the effects of global currents.*

Keywords: *local wisdom, forest preservation, and learning-carving.*

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I. Introduction

Mankind today faces a severe challenge that is how to keep the natural environment in order to remain able to sustain life. In the early days, the natural resources of the environment overflowed beyond human needs. As population growth and increased living demand, the natural environment is continuously exploited at an increasing rate. Studies show that there has been a degradation of the natural environment that is worrying because of excessive exploitation.

One of the most exploited aspects of the natural environment is forests. Forests cover 31% of the land surface which is the foundation of human life, among others in the form of foodstuff, fresh water, traditional medicine, and shelter. According to the World Wild Life organization, forests around the world are threatened by sustainability due to deforestation that will greatly disrupt the benefits of forests that have been enjoyed so far. This deforestation occurs due to forest fires, conversion of forests into agricultural land, illegal logging, and climate change. The role of humans against deforestation is very worrying because, after all, it is humans who benefit from the sustainability of forests.

Behind human activities that damage the forest, there are other human activities that actually try to preserve the forest. This is seen in communities living in forests that directly benefit from forests. One of these communities is the People who live in Ke'te 'Kesu'. Ke'te Kesu 'is a scenic village located in Toraja-Utara District, Sulawesi-Selatan Province, Indonesia. In this village there are cultural artifacts in the form of graves (burrows) carved on Rock Mountains, stone monuments (menhir), traditional house buildings (tongkonan) and a typical and artistic rice barn (alang) filled with beautiful carvings. Cultural artifacts contained in this village is a reflection of the original belief of ethnic Toraja, the indigenous village of Ke'te 'Kesu,' namely Aluk Todolo. Aluk Todolo which means "ancestral way" or "ancestral religion" is a thing to be followed by Toraja people because it is believed to be an order of gods delivered by the ancestors. Although today Torajans generally have Christianity, Catholicism, and a small part of Islam, in fact they still practice Aluk Todolo as seen in the implementation of Aluk Todolo rituals such as rituals on occasions such as marriage (rambu tuka ritual) and rituals of grief due to death (solo ritual ritual).

The village of Ke'te 'Kesu' is famous for producing wood and bamboo carvings. Wooden Engraver Ke'te 'Kesu' is still actively producing wood carvings for both sacred and profane purposes. Engraver in Ke'te 'Kesu' which uses wood and bamboo materials in carving realize that they must preserve the forest so that the wood and bamboo used in carving is always available. For that, the engraver at Ke'te Kesu has a tradition that can be viewed as local wisdom in preserving the forest. The carvers realize that the local wisdom in preserving the forest is very necessary to be passed on to the young generation, especially those who are interested to engage the engraver profession, for the availability of raw materials for the purpose of carving. For that, in carving learning activities that take place informally in the studio (studio) carving, local wisdom is one aspect that is taught.

Some studies conducted in Indonesia (Lisdionyono, 2015, Sumarmi, 2015, Darusman, 2014, Fahrianoor, et.al 2013, Tallei and Sumarto, 2012; Suhartini, 2009) indicate a form of local wisdom practiced by various other ethnically related with environmental preservation. Local wisdom is basically based on the view that man with nature is a unity and therefore humans should build a relationship that is harmony with nature.

This study aims to reveal the practice of both forest conservation conducted by the community of the 'Kesu' Pengukte of Toraja-Utara District, South Sulawesi Province, Indonesia, through the application of local wisdom which they believe and through the way they continue such good practices to the younger generation. The questions of this research are: (1) What is the form of local wisdom about forest preservation that is practiced and taught by the community of Ke'te 'Kesu'? and (2) how do senior carvers instill awareness of the local wisdom to the junior carver?.

II. Literature Review

The degradation of the natural environment means the deterioration of air, water, soil conditions; ecosystem damage, and wildlife extinction. The degradation of this natural environment can be caused by humans (directly or indirectly) and by others (volcanoes, earthquakes, etc.). According to The Encyclopedia of World Problems and Human Potential, humans change the natural environment in three ways: (1) transforming land and sea in the form of land clearing, dredging, mining, etc. commonly referred to as "development activities," (2) altering the state of the inhabitants of nature through the hunting of animals, fishing, etc., and (3) changing the biogeochemical main cycles of carbon, nitrogen, water, and synthetic chemistry. Degradation of natural resources is mainly due to the accumulation of farmers, households and industry actions for better socio-economic outcomes.

In the context of forest degradation due to deforestation, this is very concerning because according to World Wild Life organization (2018), forests produce the most important oxygen in life and become wildlife dwellings. Directly, the earth's inhabitants benefit from the forests in the form of foodstuffs, clean water, clothing, and traditional medicine (herbs), and shelter materials. Forests play a role as absorbers of carbon dioxide which, if not absorbed, will roam freely in the atmosphere that can affect climate patterns. Furthermore, World Wild Life says that deforestation has actually occurred with an estimate of the area comparable to 27 football fields every minute.

Concerns about deforestation, especially tropical forests, have long been voiced. The World Bank, for example, warned in 1999 that forest loss had impacts on climate, biodiversity, timber supply, flooding and soil degradation that further affected economic activity and threatened the life and cultural integrity of the community whose life depends on the forest. With reference to the United Nations Food and Agriculture Organization report, the World Bank warns that during the 1980s, about 15, 4 million ha (hectares) of tropical forest lost annually and in the first part of the 1990s, forest loss was estimated at 12.7 ha lost annually (World Bank, 1999, p.73). According to The Japan International Cooperation Agency (2016, p.2), the drastic decline of tropical forests began in the 1970s when newly-emerging countries began actively exploiting their forests in pursuit of economic growth. It is mentioned that in this world, 80% of deforestation is concentrated in three regions namely Brazil, tropical Africa and Indonesia.

Greenpeace International publishes that massive deforestation in Indonesia is the impact of industrial activities to meet the global trading needs of palm oil and paper. This sacrifices the environment which, according to official records from the Ministry of Forestry of the Republic of Indonesia, of damaged tropical forests in Indonesia is 31 million ha since 1990 (2015, p.5). In the publication of Greenpeace International it is mentioned that the Indonesian government has been in the planning process to support the Government of Indonesia's plan to fully restore forests in 2010 (2015, p.2). Indigenous Indonesians inhabiting villages around the forest are considered important to be involved in maintaining environmental sustainability because they have the potential to play a role (Sufia et al., 2016, p.730); (Ubbe, et.al, 2013, p.101). The importance of engaging indigenous peoples is confirmed by Dudgeon and Berkes by saying that local governance and local community participation are both options. From an ecological perspective, local culture must be supported to survive in ecological contexts so that it continues and adapts to change "(Dudgeon and Berkes, 2003, p.92).

One of the potentials of indigenous Indonesians inhabiting villages around the forest is the local-indigenous knowledge shared by the indigenous people. Local wisdom can be interpreted as knowledge, attitude, and behavior that grows and develops in a society as an effort to build a harmonious pattern of life with the Creator and the environment. Thus, local wisdom involves a wide area involving all aspects of human life in the context in which it is situated. According to Sirtha (Sartini, 2009, p.13), local wisdom in society can be values, norms, ethics, beliefs, customs, customary laws and rules. Sumarmi and Amiruddin (Sufia, et al. 2016, p.727) make it clear that local wisdom is a local knowledge of society that integrates with longstanding belief systems, norms, and cultures and has become a tradition and myth. This tradition and myth has become a marker of the identity and glue-social of a society. Because of this nature, local wisdom is always associated with ethnicity because historically, local wisdom grows and develops in an ethnic. Although local in character, local wisdom contains universal values because it is a manifestation of human response to life.

Local wisdom in relation to the natural environment has been widely studied. Berkes et al (2000, p.1251) who conducted an international survey of local wisdom in the field of environment (process management and ecosystem function) found that local communities offer alternative knowledge based on their practical experience in using natural resources. Because the practical experience is local, there are a variety of unique ecosystem management practices. In relation to the terminology of local wisdom in environmental management, Berkes introduces the term "traditional ecological knowledge" which means the same meaning as local wisdom in the field of environment that is "a cumulative body of knowledge, practice and belief, evolving by adaptive processes and handed down through generations by cultural transmission, about the relationship of living beings (including humans) with one another and with their environment "(Dudgeon and Berkes, 2003, p.76).

Research in Indonesia on local wisdom associated with environmental management, especially forest management, was carried out by Karhab and Setiadi (2017) who researched in East Kalimantan; Sufia. et.al (2016) who researched in Banyuwangi, East Java; Darusman (2014) who studied the community in Kampung Naga, Tasikmalaya District, and in Kampung Kuta, Ciamis District, West Java; and Tallei and Sumarto (2012) who researched in Bitung, North Sulawesi. The study indicated the presence of local-wisdom distinctiveness at each site studied.

The sustainability of a local wisdom in a society is inseparable from the role of community leaders, including the practitioners of religious rituals. Educational activities that take place in the community are also very important in an effort to instill awareness of the importance of local wisdom to the younger generation. The education that takes place within the traditional community is informal education that takes place at home or workplace. ILO (2011, p.1) views the practice of informal education like this as apprenticeship and classifies it into two types: (1) Traditional apprenticeship, ie apprenticeship that takes place inside the household in the form of transfer of knowledge and expertise from father or mother to child or other family members; and (2) informal apprenticeship, which is a traditional apprenticeship that is open because it involves outsiders to learn. Greetings et. Al (2015, p. 9) who studied informal education taking place in the engraving environment in Ke'te 'Kesu identified three types of apprenticeship system (1) traditional apprenticeship which took place in the household of the engraver followed by family members (currently still exist); (2) informal apprenticeship in the presence of an expert engraver attended by outsiders to learn (past and present no longer exist); and (3) apprenticeship in the form of teen work groups without a master / peer / peer apprenticeship.

III. Research Methods

This study was a case study conducted at Ke'te 'Kesu' of Toraja-Utara District to reveal the local wisdom about forest preservation practiced and taught by the woodcarver community by research questions: (1) What local wisdom was practiced by the engraver in Ke'te 'Kesu' in relation to forest conservation; and (2) How was the local wisdom about preserving the forest implanted to the novice carver? The data sources of this research were (1) people, namely sculptors and community leaders and (2) engraving activities that take place at home or workplace (workshops / studio). Data collection was conducted through in-depth interviews of 21 people (engravers, indigenous peoples, and cultural experts) and observations participated in carving activities in several workplaces. The data were analyzed qualitatively to illustrate the answer of the research question.

IV. Research Results and Discussion

Local Wisdom on Forest Preservation Practiced by Engravers The forest that grows around Ke'te 'Kesu' which is the source of wood and bamboo for the engraver is a customary forest belonging to an ancestor whose heirs today are big Sarunggallo family which two of them become the customary figure in Ke'te 'Kesu' namely Tingting Sarunggallo as chairman of adat and Layuk Sarunggallo as chair of the foundation of Ke'te 'Kesu' Area. These two community leaders are the ones who coordinate the customary forest management.

From the in-depth interviews and observations, it was revealed that the local wisdom about forest preservation practiced by the engraver at Ke'te Kesu were: (1) myth and abstinence, and (2) unwritten rules.

Myth, abstinence, and unwritten rules are believed to be something to follow as it is a tradition passed down from generation to generation so that it becomes the identity of Torajan people.

Myths and taboos The Ke'te 'Kesu' Engraver respects myths, especially myths relating to their profession as carvers. For them, the myth is not just an ordinary story that explains phenomena or events, but contains the value of truth because it is believed to come from an ancestor. Respect for the myth is further strengthened because the myth contained taboos, which is not to be done, which if done the perpetrator and perhaps also his family will be struck catastrophe. The myth for Toraja people is a form of Aluk Todolo derived by Puang Matua, the Creator, for human life to be orderly and orderly. In order for the Aluk Todolo to work properly, Puang Matua commissioned a three-tailed Puang Titanan Tallu to oversee its implementation and punish those who violate it. Here are myths related to forest conservation that become a reference for the engraver in behaving.

1. The forest has supernatural powers as a manifestation of the gift of the creator's god to man.

The plants and animals that exist in the forest are guarded by a subtle spirit which, if disturbed or destroyed, will be known by the gods who will soon execute punishment in the form of catastrophe. Therefore, in utilizing the wood and bamboo found in the forest as a gift of the gods, people need to be careful, not origin and first ask permission to Dewata Puang Titanan Tallu which controls the earth and its contents Puang Banggai Rante. This permission application is realized in the form of rituals in the hope that the wood and bamboo used are lively and provide salvation. Prudence is especially necessary if wood or bamboo is needed to be used for sacred things such as for use as an indigenous building material (tongkonan). It was reported that the appropriate wood for use for the tongkonan necessity offered itself to be felled which was communicated to Tominaa who led the Aluk Todolo ritual.

2. Felling of trees for carving and other sacred objects, done at any time with care.

Tree felling is done at the beginning of the full moon until the fifth day. Tree felling should be carried out with great care. At the time of logging, the falling direction of trees should be taken into account that should not fall to the south or west because the two wind direction is related to death. The fallen tree to the south and west at the time of harvesting, abstinence to be used as carved material. Similarly, if in the felling of trees there is an accident that is the presence of a person stricken by the tree, so that the person is injured or died, then the tree trunk is abstinence used because it will bring disaster. In fact, a tree that has been logged safely can be a restriction used when the tree is ready to be transported, then there are workers suddenly died, then the wood is automatically abstinence is used.

3. From the physical point of view, the tree that will be used as the carving material is the tree of choice that the quality of wood is good and not deformed. In terms of quality, tree wood is used as a carving material is a jackfruit tree (*artocarpus heterophyllus*) and sandalwood (*santalum album*). But, not all jackfruit trees and sandalwood deserve to be carved. Jackfruit tree or sandalwood that had been struck by lightning or hit by a tornado so that the top of the broken, abstinence for use as a carving material.

4. In terms of origin, the tree to be used as a carving material is a tree that is clearly the origin and status of its ownership. The abstinence to use wood is not clear the origin and status of ownership as carved material. Includes such timbers as disputed or illegally harvested or covert timber.

Unwritten Rules

Local wisdom on forest preservation in the form of unwritten rules is the rule that has become a community agreement that is practiced for generations. In the Toraja community, customary deliberations are commonplace for discussing the issues faced by the community. Indigenous deliberations led by leaders community and took place in tongkonan resulted in unwritten rules but were agreed upon by the community. Here were the unwritten rules in relation to forest conservation.

1. Tree felling for construction of tongkonan and carving purposes, should be done selectively-cutting that only cut down the jackfruit tree and sandalwood that is enough, and not defective. Young trees should not be felled.

2. Every tree felling is followed by planting the seedlings so that there will be continuity of tree growth. Personally, Tinting Sarunggallo, who oversees the customary forest management of Ke'te 'Kesu', makes a rule for himself, which seeks to plant trees every week in a season suitable for planting.

3. Tree planting should be done regularly by not mixing between common trees with bamboo because it can be interfere with each other.

The above-mentioned myths, abstinence, and unwritten rules are the local wisdom applied by the carver in the effort of forest conservation in Ke'te 'Kesu'. Local wisdom in the form of myth and abstinence that comes from the belief of Aluk Todolo, still followed by the engraver even though they have embraced Christianity, Catholic, and also Islam. For the engraver of belief Aluk Todolo basically has the same spirit with religion that is for the good and the benefit of society. The calamity that befell those who violate the taboos, the

more awakening they will need to abide by the taboo. Layuk Sarunggallo narrates that a citizen who is not concerned with abstinence in building his house finds his house damaged by a storm. After the repair, the house was again hit by a catastrophe of fire.

The local wisdom practiced by the engraver community in Ke'te 'Kesu' has similarities to the local wisdom practiced in various parts of Indonesia. For example, the Asmat tribe community in Papua respects the forest by choosing wood materials indiscriminately, ie only wood that is worthy to be engraved in order to gain luck (Opu, nd: 1). The indigenous population of East Kalimantan living in the forests and spread in three districts of Berau, East Kutai and West Kutai have local wisdom of forest preservation practiced for generations which requires the maintenance of forests to prevent the people from calamity. (Karhab and Setyadi, 2017, p.72).

Along with the dynamics of the development of society, new problems arise that become a challenge for forest conservation efforts. If in the early days of needing to carve only for sacred purposes only, which certainly does not require wood and bamboo are many, so today the manufacture of carvings for non-sacred purposes such as making carvings for souvenirs demands the amount of wood materials and bamboo a lot. Another challenge is the influence of a global outlook that can undermine the traditional views of the people that have been adopted.

How to Plant Local Wisdom on Forest Preservation by Carvers Local-wisdom cultivation of forest conservation in wood carving activities in Ke'te Kesu takes place in an informal interaction between a senior engraver who acts as a teacher, and a junior / novice engraver who acts as a disciple. The local wisdom-planting done by the senior engraver is done by: (1) telling about the myths about the need to respect forests by avoiding their abstinence repeatedly so that it is embedded in the minds of a junior carver. Examples of the havoc experienced by those who violate abstinence, are an important part of the story. It is also emphasized by the senior engraver that Aluk Todolo's beliefs that are the source of myth and abstinence are the heritage of the ancestors that need to be preserved in an effort to preserve the cultural identity of the Toraja people, even though they have adopted a new religion. (2) Role model in forest conservation by avoiding abstinence and adhering strictly to the unwritten rules on forest conservation agreed upon by the community. Because the nature of local wisdom-planting is informal, the time and place are not tied down namely whenever senior carvers and junior carvers interact in daily life.

V. Conclusion and Suggestion

The woodcarver community in Ke'te 'Kesu' Toraja-Utara District, Sulawesi-Selatan Province, Indonesia plays an important role in conserving the environment by participating in maintaining customary forests around their settlements. These woodcarvers realize that by participating in the preservation of the forests, they have essentially done their own advantage: keeping the availability of wood and bamboo as their raw material in carving.

The role of these carvers in forest conservation is done by practicing the crystallized local wisdom on the myths and abstinence that accompany it and the unwritten rules agreed upon by the community. These local-wisdom practices that positively impact on forest conservation are: respect for the forest as a form of the gift of the gods by not cutting trees indiscriminately but with care, logging is done legally by only cutting timber and bamboo of good quality for use as a carving material, and planting in an orderly and sustainable manner. It awareness of local wisdom is transmitted to new generation engravers through informal interaction through storytelling and role modeling in forest conservation.

Along with the development of the times, new challenges arise in the effort of forest conservation is a challenge that comes from the dynamics of local communities and external challenges of the influence of globalization.

It is recommended that the local government take the necessary steps to ensure that local forest-related wisdom practiced by Ke'te Kesu communities is managed to remain relevant to the times.

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