Lamba tree: environment wisdom and its resistance to development

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Abstract. This article aims to explain the meaning of lamba trees in the culture of the Toraja-Mamasa community and its position as a cultural heritage. The ecological value of Lamba also contributes to the sustainability of the Mamasa watershed (Daerah Aliran Sungai, abbreviated as DAS), which has been a source of livelihood for the local community. The dilemma arises when infrastructure development is carried out also for public needs. The need for electricity supply as well as the ineffectiveness of the old Bakaru PLTA has prompted the government to build a new hydropower plant in the Mamasa watershed. The conclusion to be reached in this paper is to encourage government efforts in development by paying attention to aspects of local wisdom, especially for people in the Mamasa watershed who have an emotional and religious attachment to Lamba as one of the things in their environment.

1. Introduction
The Bakaru PLTA in Pinrang is one of the largest sources of electricity and since the 90s has supplied the electricity in South Sulawesi and its surroundings. However, the Bakaru PLTA does not have a direct impact on the surrounding community. Some villages that are adjacent to the power plant do not get electricity. Kariango, Letta and some residents of Bakaru themselves have not received electricity from Bakaru. Not to mention the construction of the Bakaru Hydroelectric Power Plant has left a bit of traumatic violence due to land acquisition that was applied at that time tended to be carried out by the authorities. The area of forest that is rich and has become the foundation of past livelihoods by the local community has become more limited because of the area taken over by the Bakaru hydropower plant. Some areas in Bakaru have continued to be claimed by local people as no man's land which has encouraged them to open up agricultural land that is quite vulnerable. The condition of Bakaru dam is currently experiencing sedimentation, which is suspected due to land clearing in the Saddang watershed. Relying on sedimented river currents causes the Bakaru dam to be increasingly ineffective in supplying power to electricity, while on the other hand, electricity demand is increasing. This electricity problem has prompted the government to increase electricity through a national electricity program. One of them is by increasing the powerhouse in Bakaru by building a new dam that can be a source of 65 MW of electricity in Pokko on the Mamasa river flow. Also, the Pokko dam also functions as a sediment catcher in planning with a reservoir capacity of 85 million m3 and an inundation area of 1,194 ha [1].

The inundation area of 1,194 ha is included in 2 sub-district areas, including Messawa District in Mamasa Regency, West Sulawesi Province and Lembang District in Pinrang Regency. The area of this inundation is a 'fear' for residents who live and own agricultural land in the two sub-districts, the same as...
those experienced by people around Bakaru. The problem of land acquisition is primarily the most highlighted because for the people do not want the term 'ganti-rugi' and want the term 'ganti-untung' (both of them means compensation, but the latter one is slightly more beneficial in terms of the term). Their economic impact is very much noticed, primarily agricultural land in the area surrounded by protected forest areas. Agricultural land that is so narrow by the community is a threat to the future if later it will be directly affected by the inundation. The livelihoods of residents, who are generally garden farmers and lowland rice farmers, who are still rainfed rice fields, are claimed as customary land. Likewise, protected forests are still used for the needs of local community boards. The population continues to grow and is not balanced with the land available in the region. On the other hand, even though the local population is dynamic, it cannot be denied that cultural characteristics are still hidden. What is the central part of the article is the socio-cultural aspects that must be emphasized in the development plan.

International regulations on infrastructure development programs require attention to cultural heritage and Indigenous People (IP). The area in the planned Pokko hydropower project is an area inhabited by residents who still hold tightly to customs and cultural sites that are relatively rich. The area of Messawa and Lembang inhabited by residents is still known as the cultural area of Toraja-Mamasa which still enforces traditional rituals which are the ancestral heritage of Toraja [2–5]. Although the majority of the population adheres to Catholic and Protestant religions but in the rituals that are still carried out to this day are relics of the Aluk faith or ancestral beliefs. One of them is the rite of death of a rambu solo that shows the tendency of the people who value death. This rite relates to the relics of ancestral tomb sites that are scattered in the region and still show cultural ties to the local community. Lamba trees are a marker of solo signaling rites that have been done in the past. The coffin was buried under the lamba tree to remind of the ancestors of the local community. Therefore these lamba trees also keep hidden rationalization (indigenous knowledge) or local wisdom in terms of ecological preservation of watershed areas that are culturally inherited through sacralisation of lamba trees. It is estimated that there are hundreds of lamba trees scattered in the Mamasa watershed area that is strong enough to be sacred and become ancestral markers.

Plans for the construction of the Pokko and hydropower plants that take up the Mamasa watershed area where there are still cultural heritage sites will attract much attention. The government needs to continue to promote infrastructure development in the public interest. However, on the other hand, infrastructure development programs must also pay attention to local cultural heritage, especially if it is related to environmental preservation. This socio-cultural aspect is what the writer tries to describe and how the community reacts to the construction of the Pokko hydropower plant, which later can synergize with the local community who have cultural values.

2. Methodology
Writing of this article is based on research using ethnographic methods. Ethnographic research characteristics are part of a qualitative approach. Therefore, finding data through ethnographic research: 1) the reality that occurs in the field can be revealed in-depth and in detail, and 2) Can find the meaning of a phenomenon that occurs in the field because it is inductive and descriptive naturalists. The results of the study show case-based emic and idiographic that direct attention to some instances [6].

The research locations were in two sub-districts located in different provinces, namely: Messawa District, Mamasa Regency, West Sulawesi Province and Lembang District, Pinrang Regency, South Sulawesi Province. The choice of this location is none other than the Mamasa watershed is located in the Pokko Hydroelectric Power Plant development plan site. In addition, this area is the place for sacred lamba trees due to the Toraja beliefs and culture that are still held firmly by the local community. The two domains are subject to discussion in this paper to be analyzed in an argumentative manner.

Ethnographic data collection is carried out through in-depth interviews, observations, and focus group discussions. Data collected by in-depth interviews were mainly about the description of rites and cultural heritage sites through community leaders and local traditional leaders combined with observations to be able to complete descriptions of sites within the research area while the FGD was used to capture the
variations of views and reactions of the local community towards the Pokko hydropower development plan, and their expectation related to the plan.

Data analysis starts from the presentation of data, verification, and data validation, then continues with the interpretation of data as is done in research with an ethnographic qualitative approach [7]. The analysis is like a case study to look at fragments and ensure the realm of the object of research is appropriate, and present various interpretive alternatives to people's understanding of rites and lamba trees [8]. The purpose of the analysis technique is to describe, summarize various conditions, various situations, or various phenomena of social reality that exist in society that are objects of research that seek to attract reality to the surface as a characteristic, character, character, model, sign or picture of conditions, situation, or local community rite phenomena [9].

3. Results and Discussion

3.1. Electricity development

The Indonesian government in 2015 began to promote a national electricity program of 35,000 MW. One program that is considered ambitious is to catch up with development, especially in eastern Indonesia. The government has argued that since Indonesia's independence, there were no more than 50,000 MW that was successfully built so that it continues to strive to build a power plant in the next five years. The Indonesian government plans and starts building on strategic areas in Indonesia. There are 59 locations in Sumatera Island, 34 locations in Java, 49 locations in Sulawesi and 34 locations in Eastern Indonesia. These programs then attract private companies from abroad and within their own country [10].

To develop hydropower in Indonesia, PT. PLN (Persero) will build a roller compacted concrete (RCC) type dam with a height of 122 m and a width of 409 m, reservoir capacity of 85 million m³, inundation area of about 1,194 ha, repair of access roads along 34 km from Pinrang to Makula, new road construction along 4.6 km from Makula to the powerhouse and construction of 275 kV SUTET transmission tower from the Pokko substation to Bakaru Substation.

However, the current condition of electricity development still leaves the issue of exploitation of natural resources. The people who were driven by local NGOs have long highlighted land reforms which are considered to leave environmental damage as one of the sources of life for the local community. Land disputes followed by community dynamics also become an equally crucial issue at the time of land acquisition. In addition, the construction of river water DAM seizes many socio-cultural problems. Cultural infiltration is thought to cause changes in the patterns of social life and cultural order. Ancestral heritage sites are sometimes victims of development.

The Mamasa watershed area has considerable potential. Mountain topography with heavy river currents and adequate water volume so that the Mamasa watershed can be utilized for the construction of hydropower electricity. However, the Mamasa watershed is not only an uninhabited area, but it is also a cultural area called pitu ulunna salu, a cultural community unit divided into seven regions. Aside from being a cultural area, pitu ulunna salu is also attached to geopolitical issues in Mamasa Regency [11]. Each region has traditional rulers who enforce their respective customs.

3.2. The Culture of Toraja Mamasa

The Mamasa region is a mountainous region and the Mamasa watershed in West Sulawesi Province. As soon as the Suppiran, Mesakada and Sali-Sali areas in Pinrang Regency, South Sulawesi. Both are the same cultural area from Toraja. From tracing the history of speech and research [4], the Toraja cultural area is divided into two, namely Toraja Sa'dan and Toraja Mamasa. Both traditions and rites are almost similar in the central mountains of South and West Sulawesi. The language used is also still in the Toraja language family even though there are dialect differences between the Mamasa region and the language parent Toraja [3]. However, the community still recognizes that they speak Toraja, which is used for generations. The history and traditions of the Mamasa people are inherited through speech traditions and very lack of historical texts made by the Mamasa people.
Before the dominant religions of Christianity and Islam were absorbed, the Mamasa people embraced ancestral beliefs called Aluk beliefs. This belief rests on ancestral messages and respect for ancestral spirits. The livelihoods of people who still adhere to the Aluk belief are related to the supernatural dimension of natural and human cosmology. Because of that, ancestral spirits got a position in every tradition and culture of the local community. The form of ancestral spirits is expressed through the rite of rambu solo and rambu tuka. While the rite of signaling solo is a series of ceremonies for the death of adat leaders or large people who are later buried in liang (stone graves). This rite has been done for a long time, which can be proven archeologically and through the speech traditions of the Mamasa community [12, 13]. This belief in ancestral spirits is still very sacred in a transcendent relationship that later becomes the legitimacy of the origins of the Mamasa people.

3.3. Traditional Structure of ‘Aluk’ Belief

Traditional structures and customary instruments that are still valid in the Toraja-Mamasa cultural region are still dating from the Aluk belief, which is passed down through generations. Besides one form of belief, aluk also regulates the order of customs and norms of society. Because aluk manifests into ancestral teachings regarding traditions, rites, and traditional stakeholder structures.

Each region currently in Mamasa is still marked as a cultural area. For example, Matande Village is an area with its own customary stakeholders, while Desa Sipai, Tanete Batu, and Sepang are within the unity of the traditional stakeholders. Suppiran, Sali-Sali and Mesak are also one cultural area. The adat leaders of the traditional territory are tomakaka, a title of traditional leaders and village heads in the past that are common in the central mountainous region between Luwu, Toraja, and Mamasa. Because of the social layer among the Mamasa community, tomakaka can only be held by the descendants of Tana Bulawan, the highest caste in the traditional structure of the Mamasa community. The next layer is Tana Bassi, an intermediate nobleman who has more role in helping Tomakaka in carrying out customary provisions. Tomakaka, apart from being in the position of community and village head daily, adheres to the belief of aluk. So that from the past to the present, it was so highly respected by the people. Even tend to be personified as people inherited the knowledge and power of ancestral spirits.

In each rite of death and burial, rambu solo, as stakeholders, tomakaka is the key to various rituals in it. Tomakaka with knowledge of customs regulates who is allowed to hold a rambu solo, because rambu solo is only permitted for noble descendants. Determine the number of buffaloes and pigs slaughtered for ritual purposes; read the family tree and the life history of the deceased person, and impose sanctions for those who violate adat after deliberating with village elders. The person who held tomakaka himself when he died, people would also held a rambu solo rite.

Different in the past, the rambu solo when commodified. One of them is completing the number of animals sacrificed during rites, such as buffalo, which is one of the symbols of Toraja-Mamasa culture. Because the local buffalo population is now increasingly limited. While on the rambu solo the number of buffalo slaughtered can reach tens. The shortfall was caused by the establishment of protected and reforestation forests that were carried out in the mid-1990s, so that the people were not traditionally raising buffaloes. The land that used to be a vast field to herd cattle is now a forest of pine trees. Another change is when the saved data no longer takes a long time. In the past, bodies that were stored for days were fed like living humans and carried out the drying process of bodies before putting them in coffins and buried in liang, stone graves. It is this water that is drained, which is collected in a jar and then planted and marked with lamba (banyan). In Matande, Sepang, Tanete Batu, Sipai, Suppiran, Sali-Sali and Mesakada Villages there are still many lamba trees that are quite close to the Mamasa river. The lamba tree is very sacred and is one of the representations of ancestral spirits in the culture and beliefs of aluk in Mamasa.

3.4 Lamba Tree and the Local Wisdom

Lamba trees or banyan trees can reach hundreds of years of age. Therefore, the choice of lamba tree as one of the instruments in the rite of death in Mamasa can be inherited from generation to generation. The lamba tree entity is inseparable from the belief of aluk as something sacred because it is directly related to
the ancestral spirits of the local community. Cutting down lamba trees even damages the branches too can bear fruit of customary sanctions. Local people also firmly believe that damaging lamba trees will result in anger from ancestral spirits. The sanctions imposed on people who cut down lamba trees will be subject to sacrifice tallu rara (three slaughters), including chickens, dogs, and pigs. From the information of people who have dealt with violations of lamba trees, they experience a 'mystical disorder' that they believe is due to the anger of ancestral spirits.

Land with lamba trees is not privately owned, but the status is customary land and managed communally. Thus, the areas around lamba cannot be applied unilaterally. Every clan of clans claims several lamba trees that they claim to be burial sites for their ancestors. So, when the lamba tree is damaged, it will cause one family to object, because it must be resolved by direct action as a person who is elder and has customary authority to impose sanctions. Also, there are lamba that are hundreds of years old and cannot be identified related to whose ancestors the community remains sacred. Even in the trust of the local community, the older the lamba tree, the more sacred it is, and also to be sacred and associated with supernatural powers. That is why lamba trees continue to grow around residential areas, have never been disturbed and become one of the monuments embedded in community forests that create an ecosystem that correlates with the culture and beliefs of aluk in Mamasa.

On average, lamba trees from the Matande area in Mamasa to Mesakada in Pinrang are old and are close to the Mamasa river. Community settlements are on the riverbank, while cemeteries are placed on hills or higher areas of the settlement. The rambu solo rite that has been applied since hundreds of years ago has caused many lamba trees to be found along the fertile Mamasa watershed. In the end, lamba itself becomes part of the watershed ecosystem which is constructed through rites in the culture of the Mamasa community. The existence of these lamba trees in the Mamasa watershed forest area is often used as an indicator of the process of forest succession. Lamba or banyan (Ficus benjamina) is a species that has an ecological value, a very high role in natural forest areas or in forests that have much human intervention. Characteristics of the ability to grow Ficus as an epiphytic plant, semi-epiphytic and independent trees allow this plant to have a very old age, even in some places, it can live up to hundreds of years [14].

The lands overgrown with lamba trees in the Mamasa watershed are now threatened by plans for the construction of hydropower, especially in the Matande, Sepang, Tanete Batu, Suppiran areas in Mamasa Regency, West Sulawesi and Suppiran, Sali-Sali and Mesakada, in Pinrang Regency, South Sulawesi. The area is included in the area that will be directly affected by water. That means lamba and the surrounding forest and plantations until the community settlements will sink. Resettlement efforts from the government may not face significant obstacles, but the existence of sacred lamba trees, having religious emotional ties with the local community is a difficult obstacle. Another problem is the ecological function of the lamba tree which can preserve community forests in the Mamasa watershed area.

4. Conclusion
The existence of lamba trees that are part of the Toraja-Mamasa burial rite significantly contributes to the preservation of the forest and the Mamasa watershed environment. Because of that, the lamba tree marks local wisdom which is a cultural heritage. The development dilemma is faced with a complicated problem when dealing with the problem of local wisdom which should be maintained. While electricity needs must be met where there are still many regions in need of electricity and demands for infrastructure optimization as experienced by the Bakaru PLTA. Placing lamba as one of the sites by seeking relocation through an emotional and cultural approach is one of the steps taken. If the lamba has been regulated through adat and aluk beliefs, then the government that wants to build can follow the customary rules of the local community. Thus, solutions that rely on socio-cultural roots will receive support from the local community.

References
[1] Tobari 2019 Ingin Bangun PLTA , PT PLN Gelar Konsultasi Publik 1–2
[2] Kaudern W 1944 Ethnographical studies in Celebes: Result of author’s expedition to Celebes 1917-
1920, vo. 2: Migration of the Toradja in Central Celebes vol 1 (Göteborg: Erlanders Boktrckeri Aktiebolag)

[3] Nooy-Palm H 1979 The Sa’dan-Toraja: A study of their social life and religion (The Hague: Martinus Nijhoff)

[4] Buijs K 2009 Kuasa berkat dari belantara dan langit: Struktur dan transformasi agama orang Toraja di Mamasa Sulawesi Barat (Makassar: Ininnawa)

[5] Buijs K 2017 Agama pribadi dan magi di Mamasa Sulawesi Barat: Mencari kuasa berkat dari dunia dewa-dewa (Makassar: Ininnawa)

[6] Agussalim 2006 Teori dan paradigma penelitian sosial (Yogyakarta: Tiara Wacana)

[7] Cresswel J 2013 Research design: Pendekatan kualitatif, kuantitatif dan mixed (Yogyakarta: Pustaka Pelajar)

[8] Denzin N K 2009 Handbook of qualitative research (Yogyakarta: Pustaka Pelajar)

[9] Bungin B 2008 Penelitian Kualitatif: Komunikasi, Ekonomi, Kebijakan Publik dan Ilmu Sosial lainnya (Jakarta: Kencana Prenada Media Group)

[10] Sahama M 2015 Presiden Jokowi Luncurkan Program 35 Ribu MW Untuk Indonesia 6–8

[11] Asgart S M 2014 Kabupaten Mamasa: narrative report (Mamasa)

[12] Bernadetta 2011 Bentuk-bentuk wadah penguburan dalam sistem kepercayaan Mamasa Sulawesi Barat WalennaE 11 17–32

[13] Hakim B 2009 Jejak austronesia di Mamasa Sulawesi Barat: Kajian tradisi tutur, etnografi dan arkeologis WalennaE 11 1–16

[14] Baskara M and Wicaksono K P 2013 Tumbuhan Ficus : Penjaga Keberlanjutan Budaya dan Ekonomi di Lingkungan Karst Temu Ilmiah IPLBI (Temu Ilmiah IPLBI) pp 21–5