

# Tau Taa Wana Bulang Community's Local Forest Conservation Culture

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## Abstract

This study was conducted through a quantitative and qualitative method in three regions of Central Sulawesi: Tojo Una-Una, Banggai, and Morowali. The informants of this study were Forestry Governmental Agency and Office for Natural Resources Conservation Central Sulawesi Province, the traditional assembly of Central Sulawesi, Environmental activists (Walhi, PuGAR, FFI), Traditional Community activists (JKMA, AMAN, YRBI), head of sub-district, head of adat community, and some local figures. It is obtained that the local community of Tau Taa Wana Bulang has local wisdom that puts forward the principles of natural balance and forest preservation, which can encourage residents to be involved, individually and collectively, in preserving the community's forests in the vicinity. The factors were analyzed by Wana community's local wisdom ( $R^2=0.92$ ). The strategy of participative policy developed by the community of Wana was the improvement of the religious system, local tradition, and the socialization of traditional obedience, sacred areas, and other collective activities. The practice of cultural anticipation has resulted from forest preservation according to seven indicators: eternal forest preservation; control of forest destruction; permanently controlled forest; protection of forest area; diversity of Flora-Fauna; protection of biota a-biota ecosystem; and collective tradition conservation management unit.

## Keywords

conservation; diversity; forest; participation; wana

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## INTRODUCTION

Human culture, livelihood, diversity, systems, and aesthetics are all topics of interest in social anthropology (Leach et al. 2020). Indonesia is well-known for its natural resources and indigenous peoples, who are primary stakeholders because the forest is central to their culture, way of life, religion, and habitat. Both anthropology and forestry were introduced in our country during colonial rule to meet the needs of administration, revenue, and timber harvesting (Ma et al. 2021). Community forestry is rapidly growing in popularity these days. This condition follows the Minister of Forestry Decree No.31/2001 on Community Forests, which states that community forests belong to a state with a forest management system that aims to empower local communities without interfering with their primary functions. One of the government's efforts is the community forestry program. This community program is essential because many forest areas throughout Indonesia are prone to threats of damage, primarily due to the arrival of many parties and investors who are interested in using forests and their commodities in large quantities without paying attention to sustainability (Aisher and Damodaran 2016). For example, in the plains forest area of Bulang, Central Sulawesi Province. This forest area is inhabited by local people who have lived there for generations, namely Tau Taa Wana Bulang, a local community that grows for generations and is very dependent on the sustainability of the Bulang forest area. Previously, the forest area was all-natural without much human intervention. However, especially since the Indonesian New Order era around 1998, more people came and settled in the area through the Indonesian transmigration program, and they relied heavily on forests and their commodities to sustain the lives of their people. This condition is threatening to the forest's existence in the Bulang area if these forests and commodities' utilization do not pay attention to sustainability. According to Abraham Kekka it could lead to a conflict of interest between people who live

around forest boundaries and residential locations (Kekka 2018).

Ideally, the community's active involvement in managing the local forest can provide information to the government about what should be done to conserve the forest environment (Leach et al. 2020). These efforts are following the aspirations and interests of the local community itself. The more people are allowed to participate in managing local forests, the higher the sense of belonging to the forest among the local community. In this context, the community's role in preserving local forests is no less important than business people and the government. It is very positive in sustainably protecting forests in the long term, both in terms of social, economic, and political aspects, because local people tend not to be exploitative in utilizing forests and their commodities.

In the context of local communities which are generally still very traditional, the collective aspect tends to be put forward in local forest conservation participation. Environmental management tends to occur in a broad range, including participation at the individual level and includes groups and organizations' participation in society. The collectivity and local forest conservation actions are significant because they are usually much more effective, and forest utilization is not only for individual interests but more for the benefit of the common environmental welfare in the long term (Leach et al. 2020). Although participation is often associated with the right to democratic life, in forest communities that are still traditional, this active involvement is reflected through collective actions based on cultural values that have lived and been recognized as guidelines for a long time in the community (Fischer 2018). With this cultural value, forest conservation participation tends to be voluntary, not because of coercion or persuasion and outsiders, including the government or other politically dominant forces.

Thus, adat law communities' participation tends to occur because there is a moral incentive to live in harmony and balance with nature, without economic-politi-

cal aims. Forests are considered to have an economic function. However, members of the local community generally realize that forests' economic function is not too high than the importance of forest protection functions for attaining welfare in a broader sense concerning the forest's cultural and spiritual nuances. This value does not get adequate attention in public participation studies in public activities in modern contexts in general.

Forests have essential functions for the lives of surrounding community members, especially in state forests with a management system that aims to empower local communities without disturbing their primary functions (Wenner 2002). The community forestry program is one of the government's efforts to motivate the community to participate in forest management and its sustainability. Generally, before this program started, the people living around the forest already had local wisdom that encouraged them to become involved, individually and collectively, in conserving forests that have become their residential areas.

The community living around the forest has a concept of environmental conservation, which allows forest maintenance measures to be taken in line with, or even support, the government's forest conservation efforts. It is crucial because, without forest conservation, activities by the surrounding community will be considered illegal (Muttaqin etl. 2019).

Forest resources are classified as renewable natural resources (Marzuki 1995). Natural resources, from agriculture, forestry, and oceans, can be arranged to benefit the present and the next generation constantly. In essence, natural resource conservation is preservation and protection and their wise use economically, aesthetically, and ethically (Mustofa 2010).

The principle of conservation of living natural resources and their ecosystems is undoubtedly synonymous with preserving environmental capabilities. A harmonious and balanced environmental capacity must be declared and interpreted by the environment (perpetuating and not changing)

(Danusaputro 1982). Therefore, for every change that is a consequence of the development process, efforts to reduce or eliminate adverse impacts must be made so the environment becomes harmonious and balanced at a new level (Fischer 2018).

The importance of socio-cultural capital in local wisdom in local communities' forest conservation is fascinating. It can be studied more in-depth, especially in outskirts or hinterland areas outside Java, such as the Tau Taa Wana Bulang community in Central Sulawesi Province. There are two reasons to study local wisdom-based participation in forest conservation.

First, the alternative of environmental conservation and forest protection is offered by involving the Wana community. The offer is based on the fact that the Wana community is not the perpetrator of forest burning and illegal logging in their environment. The burning occurred because farming activities had lasted an extended period marked by an intentionally placed sign and a sign of the life of the creatures that resided there.

Second, in the Wana indigenous community, the relationship with the environment is significant, fostered since the beginning of their life, even since the community's early life. The community develops many life patterns and traditions with their respective local wisdom to protect their sustainability. In preserving the forest, we often find ecological wisdom shrouded in mysticism or superstition, for example, forests that are not allowed to enter and illegally cut down trees that grow there.

Several parties consider this sacred belief illogical, but it plays an enormous role if it is related to protecting specific natural resources. Animals, trees, and other plants inhabit the forest are safe from hunting and logging. The community will consider every violation destroying the adat order they have followed throughout life, so they need to impose sanctions as punishment.

In many aspects, environmental preservation is shrouded in mystique and superstition. This means that local people tend to use religion-magical thoughts in dealing with nature, especially in preserving natu-

re. Such traditional thoughts will usually be imbued with the element of belief in spirits or ghosts who occupy the entire universe and various natural phenomena, plants, animals, human bodies, and objects. Thus, traditional and local ecological knowledge emerges through processes of cultural adaptation to the environment. The motivation to use local resources arises because of local practitioners' interests in ensuring their long-term survival in specific locations. In interaction with their cultural environment, indigenous people work by shaping biodiversity and positively impacting natural resource conservation (Fischer 2018).

This study aimed to analyze the practice of the Wana community's local wisdom in using forest commodities and cultural participation, based on local wisdom, to conserve the surrounding forest. It will also demonstrate the participatory strategy, based on local wisdom developed by the Wana community, to implement sustainable forest functions and commodity functions in forest conservation in the future.

This study acknowledged that knowledge tends to be geographically specific. It is often found among communities that have been involved in using natural resources in a particular place for a very long time as indigenous people. Its presence in traditional societies is generated through practical experiences with the natural world throughout everyday life, locally based, locally specific, and passed down orally (Awang 2003).

The concept of participation is related to the idea of democracy. The basic principle that characterizes democracy is public control (popular control) and political equality (Nayak & Berkes 2008). Through community control, people act as agents who can determine their fate and voice various issues affecting their lives. Meanwhile, through political equality, society can cede its fate, and that capacity is the same for everyone. Everyone should have the right to influence collective decisions (Atmis et al. 2009).

Such a principle is known as political participation. Liberal constitutionalism assumes that the constitution must facilitate pluralism's politics to recognize society's

various interests. Community participation implies equal participation among different groups, including industry, trade unions, non-governmental organizations, or other social groups. This participatory approach can be called an interest group or stakeholder participation (Nayak & Berkes 2008).

The participation of community members at the local level is the participation of indigenous peoples. The term "adat community" refers to the type of community that lives a traditional life based on adat rules that strictly govern its behaviour. Life in this society reflects that culture contains the essence of the need to fulfil basic desires. Humans can continue to live, adapt to the environment, and organize and use it to continue their future generations.

Culture has three forms, namely: ideal form, the form of behaviour, and physical form (Tennie et al 2020). The ideal form of culture is a complex of ideas, values, and norms. The structure of cultural behaviour is a complex of patterned and human behaviour activities in society, while humans' physical form is made by humans (Koentjaraningrat 1932). In traditional society, "adat" is an ideal form of culture that can be further divided into four more specific levels: cultural values, the level of norms, the level of general law, and special rules.

Furthermore, Marzuki argues that law must first be understood as part of a culture. Hazairin states that law (adat) is a law found in adat as an integral part of its completeness (Hardjosoemantri 1993; Hazairin 1974). There are three components: substance (the substance of the rule), structure, and legal culture (Hazairin 1974). The legal system's substance is a set of legal rules commonly referred to as statutory regulations that cover the definition of written legal principles and include unwritten adat law rules (Tennie et al. 2020).

Charnley et al. argue that knowledge includes integrated knowledge, practices, and beliefs concerning local wisdom (Awang 2003). Knowledge tends to be place-based and very geographically specific. It is often found among communities involved in natural resources in a particular place for

a long time, such as indigenous people. Its presence in traditional societies is generated through practical experiences with the natural world throughout everyday life, is locally based, highly local specific, and passed down orally (Awang 2003).

Thus, traditional and local ecological knowledge emerges through processes of cultural adaptation to the environment. The motivation to use local resources arises because of local practitioners' interest in ensuring long-term survival in specific locations. In interaction with their cultural environment, indigenous people work by shaping biodiversity; it positively impacts natural resource conservation. Among the local people's knowledge are spiritual and sacred values related to the forest and how to respect and treat the natural world. Knowledge includes human and non-human matters, including plants, animals, minerals, landscape features, and spiritual awareness and feedback.

## METHOD

This research was conducted using quantitative methods, supported by qualitative methods, to examine the largest community of Tau Taa Wana Bulang in three districts of Central Sulawesi Province, namely Tojo Una-Una Regency, Banggai Regency, and Morowali Regency. This research area was defined by a purposive sampling method based on the population's socio-economic conditions, namely one village area (Lipu Mpoa). Which represents relatively advanced socio-economic conditions and six other areas (Lipu Keblenga, Lipu Ueveyao, Lipu Sabado, Lipu Vatutana, Lipu Ratuvoli, Lipu Partamburg) represent social conditions that are less developed or are still isolated. This method was chosen to find a location inhabited by the Tau Taa Wana Bulang tribe. Banggai Regency is represented by Lipu Mpoa and Lipu Ueveyao, Morowali Regency is represented by Lipu Keblenga and Lipu Sabado, while Tojo Una-una Regency is represented by Lipu Vatutana, Lipu Ratuvoli, and Lipu Partambung.

To reveal the problems posed, the ap-

proach used in this research is normative legal research (doctrinal) And empirical legal research (non-doctrinal). In addition to examining the principles, norms, and rules of law, both written and unwritten (adat law), this research also reveals the sociological facts of the work of law in adat law communities, especially those relating to control and forest management. Therefore, the informants and respondents of this study were the Forestry Governmental Agency and Office for Natural Resources Conservation Central Sulawesi Province, the tradition assembly of Central Sulawesi, Environmental activists (Walhi, PuGAR, FFI), Traditional Community activists (JKMA, AMAN, YRBI), head of sub-district, head of adat community, and some local figures.

The primary data were obtained through questionnaires and in-depth interviews, while secondary data were obtained through documentary techniques. Data on the practice of local wisdom in the Wana community in forest products and their cultural participation in managing forests and forest products based on local wisdom were analyzed using descriptive analysis techniques. Data regarding the factors influencing the Wana community's cultural participation in conserving the forest, namely age, education, land area, income, experience, forest knowledge, conservation experience, insight, attitudes and motivation, and local wisdom, were analyzed using multiple regression analysis techniques. Data on the impact of cultural participation based on the Wana community's local wisdom on implementing forest functions and forest commodities were analyzed using multiple regression analysis techniques. Data on the participation policy strategy, based on local wisdom developed by the Wana community. The forest conservation function's sustainability in the present was analyzed with a qualitative descriptive method (Kijtewachukul et al. 2004).

The data used are primary data obtained through questionnaires and in-depth interviews, secondary data obtained by questionnaires and in-depth interviews, and secondary data obtained through do-



cumentary techniques. Data that contains the practice of local wisdom in using forest products, management, and utilization based on local wisdom were analyzed using descriptive analysis techniques. Data on the community's cultural participation influencing factors, such as age, education, land area, income, experience, knowledge about forest, conservation experience, insight, attitudes and motivation, and local wisdom, were analyzed using regression analysis techniques. Multiple data regarding the effect of cultural participation based on local wisdom of the Wana adat law community on the implementation of forest functions and forest commodities in the present were analyzed using multiple regression analysis techniques, and data on the strategy of participatory policies based on local wisdom developed by the Wana adat law community for the sustainability of forest conservation functions in present analysis with qualitative descriptive.

Two research stages were carried out to obtain relevant data for the problem formulation: library research and field research. Literature research is intended to analyze legal materials: primary, secondary, and tertiary legal materials. These legal materials are obtained at:

- Tadulako University Library, Palu,
- Library of the Faculty of Law, University of Tadulako, Palu
- Palu Documentation and Information Center, and
- Tadulako University Post-Graduate Library

### Sampling Technique

The sampling population of this study was the three districts, namely Banggai Tojo Una-Una and Morowali Regencies. From Banggai District, two villages were designated as sample locations, namely Lipu Mpoa and Lipu Ueveyao; from Tojo Una Una Regency, there were three villages: Lipu Partambung. Lipu Ratuevoli and Lipu Vatutana, and from Morowali District, there are two villages, Lipu Keblenga and Lipu Sabado.

The sample determination of the three

districts' research population for the seven villages as the research sample was carried out using a purposive method. This method is used to find locations inhabited by the tribes who are isolated from Tau Taa Wana Bulang, apart from the fact that these seven villages are the center of activity and meeting places among other villages if there are essential things that need to be discussed and resolved in this village and the implementation. Many traditional ceremonies were performed in seven selected samples.

Primary data from this population were taken from research respondents determined by non-probability sampling. Considering the existence of various social groups in the three study areas aged 17 to 65, the sample was included in the sampling frame made with the Lipu chairperson's assistance and the adat leader in the research village. The sampling frame in Lipu Mpoa contains 214 people consisting of 117 men, 97 women, and 60 families; Lipu Ueveyao includes 52 people comprised of 30 men, 22 women, and 18 families. Lipu Sabako has 175 people consisting of 94 men, 81 women, and 44 families; Lipu Keblenga contains 168 people consisting of 84 men, 84 women, and 38 heads of households, Lipu Vatutana, contains 88 people consisting of 43 men, 45 women, and 22 families; Lipu Ratuevoli, 39 people consisting of 19 men, 20 women, and 14 families; and Lipu Partambung 96 people, consisting of 41 men, five women, and 22 families.

## RESULTS AND DISCUSSION

### The Wana community's local wisdom practices

Community participation aims to achieve constructive cooperation and extensive acceptable outcomes that can finally be justified from different perspectives and encourage some related people (figures) to commit to its implementation (Kitjwachakul et al. 2004).

Wana people in Central Sulawesi are relatively subsistence people and apply their local wisdom traditions in their daily lives

without much dependence on the outside communities. One form of local wisdom the Wana community applies is using forest products as a livelihood source and conserving them through custom-based social behaviour. In that context, their treatment of land and trees in the forest looks very heavy with the meaning of forest as parents and sacred places. The procession of forest processing is required with various traditional rituals of the Wana community.

Based on field research results, at least some ritual practice is carried out by the Wana community to preserve the forest and the surrounding environment. The ritual practices are manziman tana, ra'a pakuli, panto'o, palampa tuvu, mangapaka roso lipu, nunju, ranja polobian rituals with the following explanation:

First, Manziman Tana, is a ritual asking permission from the Lord of the Land (Lamba). So, the Ruler of the Springs (Malindu Maya) and the Ruler of Estuary (Malindu Oyo) if the community wants to open new land so that the planted land can produce good results expected. The ritual's purpose is to ensure clearing the new land does not cause harmful impacts in the future, both for the Wana community and the existing forest. This ritual shows an exemplary attitude in the Wana community toward all forms of natural destruction.

Second, Ra'a Pakuli, the ritual of treating failed rice (pae) and trees. During the treatment ceremony, no fuss is allowed. It usually lasts for up to three days. After treatment, the rice and trees were planted again. With their experience so far, the Wana community understands that it is possible for the seeds planted to die or fail to grow correctly at the beginning of planting. Therefore, people need to anticipate that cultivated plants can live and thrive. This ritual shows that the Wana community must predict crop failure by performing the Nyepi ritual while paying attention to its initial growth.

Third, The Panto'o ritual is a ritual of giving thanks to all supernatural powers that have given life force to their plants and trees. In this Panto'o, all materials used in the party (para'a) are prayed for. The Wana

people who are successful in harvesting crops, cocoa trees, and coffee are obliged to invite Worotana (experts to see good land locations) and other lipu-lipu to perform panto'o and para'a (thanksgiving feast) jointly. The Wana community deliberately holds this ritual to be grateful for all kinds of goods, from planting plant seeds in the agricultural area they work on.

Fourth, Palampa Tuvu, a ritual to reject the dangers that will come. In general, this ritual is carried out in Banua Bae if there is a place where a disaster is suspected and if outsiders want to disturb the Wana community forest by cutting trees carelessly. It is also used if the government wants to control adat land by moving the Wana community to another place (resettlement). When associated with environmental preservation, this ritual is closely related to ecological conservation because it discourages people with evil intentions.

Fifth, Mangapaka Roso Lipu, a ritual to strengthen Lipu to keep the forest sustainable and not damaged by outsiders or people interested in the forest (for example, taking wood). This ritual is deliberately held to strengthen the aura of forest protection in the Wana community. The trees in the forest can be safe from disturbance by interested parties and are generally irresponsible.

Sixth, Nunju is a ritual to drive out evil spirits that often disturb people in managing forests. This ritual is carried out deliberately because the Wana people realize that not all spirits who live in the middle of the forest are good spirits of natural rulers. Some spirits are interested and do not want to share forest areas with humans. As the elder in the Wana community, the adat leader feels that a special ritual must be held to exorcise the spirits that have been proven evil toward humans, especially the Wana community members themselves. Expulsing these spirits does not mean that the adat leader does not establish harmony with the spirits of the rulers of nature. Instead, he shows an uncompromising attitude toward the evil natural rulers that the Wana people already have a proper attitude in protecting and utilizing the forest.

Seventh, *Ranja*, a ritual performed to expel/move the plague in society and plants or trees. Rituals like this are only carried out when community residents or plants or trees around them experience a dangerous plague. This ritual is carried out to carry out expulsion or transfer of the plague from a person, plant, plant, or tree to other objects that can receive it. This ritual is a form of community concern in the forest environment to always protect plants or trees in the forest and provide them with a prosperous life.

Eighth, *Polobian*, this ritual aims to see the land's location to be planted through a wood that is a foot long. Then a tradition is given by rubbing it by hand for three days. If the wood changes in length or increases by one centimeter in length, then the land is suitable for planting. If it does not increase in length, then the land is not suitable for cultivation or cultivation. According to the Wana people's view, it is forbidden by God (Pue) or the guardian of the forest. Generally, the Wana people perform the *Polobian* Ritual, a ritual to see the land to be cultivated. The ritual intends to get God's approval (Pue) so that the plants thrive.

Before traditional rituals, regular meetings are held in a large house (*Banua Bae*) in *Lipu Mpoa*. The Wana community's continuous implementation of traditions shows that their local wisdom is traditional. According to the Wana people, local wisdom combines God's religious values with various existing values. Therefore, local wisdom as a cultural product of the past should be used as a continual life guide. This study's results indicate that *Tau Taa Wana Bulang* has local wisdom that puts forward the principles of balance and sustainability of the forest, encouraging its citizens to voluntarily and collectively in preserving the surrounding community forests.

The Wana community uses local wisdom extensively for forest conservation. A survey found 92.7% of respondents still adhere to local wisdom as *adat* rules. The indigenous people in the Wana community believe life is currently regulated by *adat*, especially local wisdom. This situation results

from their stable holding of *adat* and implementing it with full responsibility.

### Practices of cultural participation in forest conservation and its affecting factors

This study indicates that the Wana community's cultural participation practices are manifested in several traditional ceremonies that directly or indirectly impact the preservation of the surrounding forest. This cultural participation shows positive practices toward using forest products that consider forest conservation principles (Nagendra & Gokhale 2008). Some of the participatory techniques used by the Wana community in conserving forests based on local wisdom are: (a) forest growth facilities; (b) creation of seed reserves of different species; (c) the characteristics and accommodation of many forest values; (d) forest management planning, related to land use; (e) integration into national legal management; and (f) active collaboration with conservation concerned parties.

Based on the practice of local wisdom, and participatory techniques, this participation practice produces types of cultural participation that have a positive impact on the maintenance of forest functions and forest commodities, including (a) creation of a religious system (ritual); (b) prioritizing *adat* institutions; (c) socialization of compliance with *adat* law; (d) observing a particular place; (e) emphasis on taboo aspects; (f) prohibition of illegal forest encroachment; and (g) collective action of all citizens.

The Wana community's influence on the environment received immediate and firm attention and was regulated carefully in ceremonies or rituals. The Wana community's local wisdom also links the Wana community's beliefs and ecological balance. The Wana community has local wisdom in the form of a religious system that has a role in interpreting and adapting to natural disasters, such as floods and forest fires. The role of traditional ceremonies or rituals in regulating forest management is a characteristic of the Wana community culture.



Wana community believes that a forest is a sacred place for cultural and religious life. As a place for cultural life, many ways of thinking, behaving, and expressing themselves are based on their environment's concrete experiences. The Wana people also believe that their ancestors' spirits will still help sustain life while on earth. These spirits can be summoned from time to time. Therefore in the Wana community conception, ancestral spirits' settlements are not far away but exist in adat forest areas. Destroying adat forests means driving out the gods of help and saviour.

The actual meaning depends on the context, but an essential basic understanding of adat is proper behavior in relationships with other people and nature. The local knowledge system in preserving and utilizing forest resources in the Wana community's adat territory is adat law. This adat knowledge system is the basis for managing forest resources unique and different from one another among indigenous communities in the Wana community.

Conceptually, forests are a source of wealth and biodiversity, it protects land and water. It also produces timber and non-timber, such as rattan, resin, fruits, medicinal plants, honey, animals, and water source or springs.

To maintain forest sustainability, the Wana community uses adat institutional mechanisms to regulate relationships between human-human and human-nature. Places inhabited by spirits often disturb humans. Likewise, there is an obligation for the Wana community for specific trees so that the trees concerned remain sustainable, especially native trees such as meranti trees and long-lived fruit trees such as durian.

According to the Wana community, the large banyan tree should not be cut down because it is considered a residence for evil spirits. The existence of the banyan tree is very beneficial for the habitat of birds and reptiles. The Wana people's belief in supernatural powers related to everyday life and events beyond the human mind's reach to answer them, such as cycles of seasons and natural disasters. According to ancient

assumptions of providing offerings, myths also have power; performing ritual ceremonies or performing dances with something mythical means maintaining the cosmic and world order. According to Daeng, through myths, humans are helped to be able to live up to these magical powers as a force that influences and controls nature and the life of their tribes, providing a present guarantee, in the sense that by staging or presenting an event that has happened before, then a similar effort is guaranteed to happen now (Charnley et al. 2007).

The Wana community adheres to forest preservation principles that develop evolutionarily and are passed down from generation to generation. The main principle is that humans and nature have a harmonious and balanced relationship. The Wana community around the forest conducts forest management oriented towards adat interests; in other words, the Wana community uses the forest according to an ecological perspective. The forest's integrity and its resources must be carefully guarded because if one element is damaged, it will affect other elements' balance.

These occult signs can be in the form of extraordinary events or unusual dreams, such as being pegged by a poisonous snake, seeing a large fire, or seeing strange events. Natural signs can be the sounds of individual birds, the screeching sound of wild animals as a sign of impending disaster and calamity.

The multiple regression analysis results show factors that influence the Wana community's cultural participation in conserving forests include age, education, land area, income, experience, forest knowledge, conservation experience, insight into forest management, attitudes toward conservation, and motivation in conserving forests, as well as local wisdom. These factors significantly influence cultural participation based on local wisdom in the Wana community ( $R^2 = 0,92$ ).

The closeness of the relationship between the factors that influence participation is high. It means that the higher the value of the factors of age, education, land area,

income, experience, forest knowledge, conservation experience, insight into forest management, attitudes toward conservation, and motivation to conserve forests, as well as local wisdom, the higher the cultural participation of the Wana community in forest conservation, except education and income are not significant. The influence of eleven factors on the community's cultural participation is 92.1%, while 7.9% is influenced by other variables not included in this study.

In principle, the previous environmental management goals involving capital and business interests are not the right choice because this group will cause ecological damage to the forest. According to Primmer and Kyloenm, community participation presupposes community control over public issues that can affect the community's life. One of the best forest management alternatives involves local wisdom from indigenous peoples in forest conservation programs (Nayak & Berkes 2008). In this context, the decentralization of natural resource management has become an increasing trend in various countries worldwide (Nagendra & Gokhale 2008).

According to the opinion about the decentralization of forest management, participatory management involves the devolution of power. However, the state tends to maintain control and accumulate power. Therefore, it is possible that transferring forest management authority to traditional local communities will also be accompanied by a tendency to co-optation (Jdaeng 2000).

### **The influence of cultural participation in forest conservation and external influences on forest use**

This study indicates that the Wana community's cultural participation practices manifest in several traditional ceremonies that directly or indirectly impact the preservation of the surrounding forest. One example of community participation at the local level is the participation of indigenous peoples. The term adat community refers to the type of community that lives a traditional life based on adat rules that strictly govern community members' behavior. Life in

this conventional society reflects that culture contains the essence of the need to fulfill basic desires: behaviors, environmental adaptation, and nature sustainability. The determination of values becomes the basis for each member of the indigenous community to cooperate, participate, fulfill, and maintain matters related to tradition for collective welfare and always be in harmony with the surrounding environment. In essence, indigenous peoples have several traditions, customs, and local cultural values that guide and benchmark their daily life activities.

In the Tau Taa Wana Bulang indigenous people in Central Sulawesi, several community groups living around the forest have lived in Lipu for generations until now. Their adat leaders have developed various rules governing community life, including legal regulations. According to their local wisdom, Adat law was transformed into a law that has lived a long time, namely adat law as a traditional society; they uphold the ideas followed by their predecessors.

Tau Taa Wana Bulang community members are very obedient to their traditional customs because they are motivated by the belief that traditional leaders are representatives of God. These leaders have been tested based on natural signs and because they have fulfilled the conditions needed to carry out their duties and responsibilities. The conditions where adat leader must possess are accuracy, firmness in upholding the customs of simplicity in their daily life, both in speaking, dressing, eating, and so on, as well as in having a firm attitude and acting so that they are obeyed and become an example by the members of the community. With local wisdom based on adat law, the community members of Tau Taa Wana Bulang as a group of people who have been living in their present places from generation to generation, have lived together with the natural environment without destroying it. In general, it can be said that the Wana people in Central Sulawesi are relatively subsystem communities and apply their local wisdom traditions to live their daily lives without much dependence on the existence

of outside communities.

One form of local wisdom the Wana community applies is using forest products as a livelihood source and their efforts to preserve it through custom-based social behavior. In that context, their treatment of land and trees in the forest deeply involves the forest's meaning as parents and sacred place. Forest processing processions are required utilizing various adat rituals of the Wana adat law community.

Based on the results of field research, it can be seen that there are at least some forms of ritual practices carried out by the Wana adat law community in the framework of preserving forests and the surrounding environment. The ritual practices are Ritual Panto'o, Palampa Tuvu, Mangapaka Roso Lipu, Polobian, Manziman Tana, Mompoyoni, Monovo, Monunju, Monguyua Sua, Mpopondoa Sua, Ra'a Pakuli, Kapongo Tumputana, Lipu, Nunju, Ranja.

Ritual practice is based on the subsistence principle (according to the needs), following a selective slash and burn system, limited to collecting branches and deadwood, not neglecting neighbors' needs. It follows the majority decision where villagers are the determinants, according to forest resources' availability, and applies ecological sustainability principles to convert them into productive businesses.

This positive impact is marked by forest preservation, with the tendency that the higher the local wisdom of the community in managing their natural environment, the higher the community's participation in forest conservation. The result is forest sustainability, which is indicated by (1) sustainable forest management; (2) controlling forest damage; (3) controllability of forest harvesting; (4) protection of forest areas; (5) flora and fauna species diversity; (6) protection of biotic & abiotic ecosystems; and (7) collective adat conservation management unit.

### **Cultural participation strategy for sustainability of forest conservation function**

This study's results indicate that the Wana community's cultural participation strategy,

so far, is developing a religious system, prioritizing adat institutions, socializing adherence to customs, observing certain places, emphasizing taboo aspects, and prohibiting illegal forest encroachment.

Participatory strategies in developing local wisdom are: (1) continuing the existence of adat law in the Wana community; (2) cooperate with the government to conserve forests; (3) using adat institutions to manage forest destruction; (4) protecting forests from illegal logging; (5) increasing the welfare of forest communities; (6) provide guidance/assistance to the Wana community.

The practice of cultural participation results in forest sustainability as indicated by seven indicators, including: (1) sustainable forest management, namely the use of forest products in a balanced and controlled manner; (2) controlling forest damage; (3) controllability of forest harvesting, namely the large proportion of forest that is still protected compared to forest that is utilized, both in terms of the number, area, and the average percentage of protected areas, (4) protection of forest areas, namely the low intensity of disturbance of protected areas including from fire hazards; (5) Flora-Fauna species diversity, namely the condition of flora and fauna species diversity in protected areas in various forest formations; (6) protection of biotic and abiotic ecosystems, namely the condition of water resources, soil, unique ecosystems and landscapes that are still well protected; and (7) collective adat conservation management unit, namely the existence of adat institutions in efforts to conserve forests in the surrounding environment. The better the practice of local wisdom in the Wana community, the better the conservation carried out by the Wana community. It shows that the Wana community's local wisdom is very feasible to maintain because it can preserve environmental conservation in the Wana community. Now what is needed is an adjustment between adat values and modern knowledge values to complement each other so that all parties' local wisdom of the Wana community is logical and understood.

Therefore, the forest function division

pattern reflects local wisdom that produces a good forest use pattern that balances the need for economic development and forest ecosystem conservation demanded by local community members without causing any damage to nature (Kekka 2018; Soekanto 1985).

In Tau Taa Wana Bulang indigenous people in Central Sulawesi, several community groups living around the forest have lived in Lipu for generations. Their traditional leaders have developed various rules to govern the community's life, including legal regulations. The adat law is developed according to the development of their local wisdom, transformed into a law that has lived a long time, namely adat law as a traditional society. Based on the law, they uphold the ideas that were followed since their predecessor ancestors' period.

In the end, the study on participation based on local wisdom of the Wana community found four main points as a manifestation of the benefits of this research.

1. Participatory management involves the devolution of power (Jdaeng 2000). However, the state tends to maintain control and accumulate power, so there is a possibility that the devolution of forest management authority to traditional local communities is accompanied by a tendency of co-optation (Kitjewachakul et al. 2004). It means that the decentralization or devolution that was promised previously did not materialize. However, in Tau Taa Wana Bulang, the tendency of co-optation in participatory forest management does not occur because community forest management is mostly based on local wisdom, not the delegation of authority to manage the forest itself. In this case, even without formal involvement by the government so that the community can participate in forest conservation, the Tau Taa Wana Bulang people have participated automatically because they have their local wisdom, which underlies the implementation of various rituals, forest use patterns, cultural participation practices, and participatory policy strategies to support the sustainability of the forest itself.
2. Participation is often regarded as a modern concept and only applies to modern societies which are generally educated and have a high income. Modern education is related to the breadth of insight, while revenue is related to the many choices of activities according to financial freedom. In the context of a traditional society, the factors that tend to influence cultural participation based on local wisdom are not especially modern education and income, but age maturity, the breadth of the custom-based education process, the adequacy of the subsistence economy, the breadth of forest management experience in the community, positive attitudes towards the environment, and strong motivation to be involved in environmental affairs.
3. Citizen participation presupposes that there is community control over public issues that can affect the community's life itself (Nayak & Berkes 2008). Through community control, people act as agents who can determine their fate and voice issues affecting their lives. In that context, everyone has the same right to influence collective decisions and the interests considered when collective decisions are made. The conditions on the ground tend to show somewhat different things. The involvement of community members in forest management is not primarily to influence state policy on the forests around them but rather because of moral considerations to continue their existence as a community. It is indicated by the types of cultural participation that tend to be developed, namely: a) the creation of a religious system (ritual), b) the prioritization of adat institutions, c) the socialization of adherence to customs, d) observation of particular places, e) emphasis on taboo aspects, f) prohibitions illegal forest encroachment, and g) collective action of all residents. It tends to show that participation in forest conservation in the Wana community is not oriented "outwardly" to influence public policy at the state level but rather "inward" to continue their existence and communities around the forest environment based on the princi-



ple of balance between utilization and forest maintenance.

4. As mentioned above, cultural participation is not directed “outwardly” to influence public policymaking but “inside” to maintain the survival of communities around local forests. Therefore, the success indicators for gathering participation are not how far or healthy the influence in public policies, but how high is the level of forest sustainability in their environment. In the context of traditional local communities, which still prioritize local wisdom, the leading indicators of forest sustainability found in this study are: a) Sustainable Forest Management, b) Forest Damage Control, c) Forest Harvesting Control, d) Forest Area Protection, e) Species Diversity Flora-Fauna, f) Protection of biotic & abiotic ecosystems and g) Collective Indigenous Conservation Management Unit. This study’s findings’ practical benefits are significant when viewed from two aspects, theoretically and practically.

Theoretically, these findings show a different understanding of participation and application between modern and traditional communities. Rational participation in the modern community can be interpreted as oriented “outward” to influence public policy at the state level. In contrast, cultural participation in traditional societies is interpreted more “inwardly” to maintain the existence and society as a holistic, balanced, and sustainable entity and generation to generation. Meanwhile, such tendencies can be considered by the authorities in making forest development and conservation policies in the Tau Taa Wana Bulang community, both modern authorities at the state level and traditional authorities at the civil society level.

## CONCLUSION

Based on this study’s results, the following conclusions can be drawn: First, the local community of Wana has its local wisdom about forest balance and sustainability principles. It encourages the community to

be involved voluntarily and collectively in conserving the community forest in the vicinity. Some participatory techniques and patterns of forest utilization can positively affect the maintenance of forest functions and commodities. Second, the factors influencing the Wana community’s cultural participation in conserving forests are very high. The factors are age, education, land area, income, experience, forest knowledge, conservation experience, insight into forest management, attitudes toward conservation, and motivation (local wisdom belief). The higher the value of those factors, the higher the cultural participation of the Wana community in conserving the forest. The most influential factor in the Wana Community’s cultural participation is motivation; this hat shows that the motivation that appears in a person will encourage participation. Third, this study’s results indicate that the influence of cultural practices of the Wana community is manifested in several ritual ceremonies. Some of the cultural participation effects have positively impacted forest conservation carried out by the Wana community. This positive impact is marked by forest preservation, with the tendency that the higher the local wisdom of the community in managing their natural environment, the higher the community’s participation in forest conservation. Fourth, the Wana community’s strategy in preserving and maintaining local wisdom is to continue adat law and cooperation with the government to conserve forests, using adat institutions to manage forest destruction.

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