

PERCEPTIONS OF THE WOGO VILLAGE PEOPLE REGARDING THE WAJA BETHO TRADITION IN PRESERVING BAMBOO FORESTS

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ABSTRACT

Bamboo is a versatile plant that offers a diversity of ecosystem services for the environment, so its existence needs to be preserved. The existence of bamboo in rural areas, especially in Wogo Village, is closely related to the culture and traditions of the local community, which can be used to regulate the lifestyle of the community towards the existence and preservation of bamboo forests. Community perception will help see the perspective, response and sensing of a group of people in an area towards events or phenomena that occur in their environment. This research examines community perceptions of the Waja Betho Tradition, as one of the community's local knowledge in relation to the preservation of bamboo forests. To explore information about the data, a descriptive qualitative method is used and the search for accurate information data in the field through observation, interview and documentation techniques to be able to study more deeply. Based on the results obtained, it can be concluded that some village communities already have the perception that the waja betho tradition which is an ancestral heritage plays an important role in the preservation of bamboo forests. The community's perception of the waja betho tradition in preserving bamboo forests is influenced by individual interests, interaction with the environment and economic motives. The waja betho tradition also contains environmental conservation values in this case to preserve bamboo, where there is a prohibition on harvesting bamboo for a specified period of time to keep the bamboo able to grow lush and quality, before it can finally be used again.

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INTRODUCTIONS

Bamboo forests play a vital role in ecosystems and in the lives of communities, particularly in rural areas. As a natural resource that is closely integrated with daily life especially for those living in the countryside, bamboo serves not only as a household and community economic driver but also provides significant ecological and environmental functions. Widely recognized as a multifunctional plant, bamboo holds an essential role in human life by offering ecological, social, economic, and cultural benefits (Irawan et al., 2019).

Bamboo, as a versatile plant that thrives in various climates and soil conditions, provides ecosystem services comparable to those of forests or grasslands (Ayer et al., 2023). According to Utomo (2018a), the rapid growth rate of bamboo compared to timber trees makes it a promising option for addressing deforestation issues. Therefore, bamboo has the potential to serve as an alternative solution to a range of environmental challenges (Sujarwanta & Zen, 2023).

Bamboo holds significant potential for soil erosion control, water conservation, land rehabilitation, and carbon sequestration (Qiao et al., 2021). However, despite the widely recognized importance of bamboo forests, many regions across the globe face serious threats to their sustainability. Climate change, illegal logging, land conversion, and urbanization are among the key factors endangering bamboo forest ecosystems. Amid these pressures, the presence of local communities and their traditional knowledge becomes critically important (Meena et al., 2019).

Local wisdom comprising knowledge, practices, beliefs, and values accumulated over centuries forms the cultural foundation and way of life for communities living near bamboo forests. The existence of indigenous local wisdom is shaped by cultural values and the deep dependence of indigenous communities on the natural environment (Abas et al., 2022).

Local communities often possess a deep understanding of bamboo forest ecology, including the plant's life cycle, growth patterns, and the dependence of other species on bamboo (Mekonnen et al., 2022). They have also developed various sustainable forest management practices, such as regulating appropriate harvesting periods and employing environmentally friendly planting techniques (Utomo, 2018b). Moreover, local value systems and beliefs frequently promote environmental conservation, as bamboo forests are often regarded as the dwelling place of spirits or spiritual entities (Saung et al., 2021).

This ultimately encourages communities to preserve all elements of nature that play a vital role in supporting their livelihoods, including bamboo forests (Bain, 2021). One tradition that is rich in both cultural and environmental values is the Waja Betho tradition found in Wogo Village. This tradition functions not only as a ritual but also as a means of conserving bamboo forests, which serve as a vital source of life for the local community. Therefore, understanding community perceptions of this tradition is essential for sustaining the conservation of bamboo forests.

The people of Wogo Village maintain a close relationship with bamboo forests, which serve as sources of building materials, handicrafts, and food. However, with the passage of time and the influence of modernization, many traditional practices—including the Waja Betho tradition—are gradually being forgotten. This raises concerns about the potential loss of knowledge and practices that have been passed down through generations. Therefore, it is important to examine how the community of Wogo Village perceives this tradition and its impact on bamboo forest conservation. This study aims to explore community perceptions of the values and meanings of the Waja Betho tradition in the context of environmental conservation.

The Waja Betho tradition embodies profound values, including gratitude, mutual cooperation (*gotong royong*), and respect for nature. Its practice involves the participation of all community members, fostering a sense of togetherness and solidarity. Furthermore, the tradition serves as a reminder of the importance of preserving bamboo forests for future generations. As bamboo forest areas continue to decline due to land conversion and exploitation, this tradition becomes increasingly relevant and worthy of preservation. This study is expected to provide new insights into how local traditions can contribute to environmental conservation.

In the context of this study, a qualitative method will be employed to explore community perceptions in depth. Through interviews and participatory observation, the researcher will obtain rich data on how the people of Wogo Village understand and practice the Waja Betho tradition. The findings of this study are expected to provide a clear picture of the relationship between the tradition and the conservation of bamboo forests. Additionally, this research aims to identify the challenges faced by the community in preserving this tradition amid social and environmental changes.

The significance of this research lies not only in its academic contribution but also in its practical implications for both local communities and policymakers. By understanding community perceptions, strategic actions can be taken to support the preservation of the Waja Betho tradition and bamboo forests. Policies grounded in local wisdom are

more likely to be accepted and effectively implemented by the community. Moreover, this study can serve as a reference for broader conservation efforts in Indonesia, particularly in the context of sustainable natural resource management.

Community perceptions of the Waja Betho tradition also reflect the values upheld by the people of Wogo Village. These values include respect for nature, cultural identity, and social responsibility. By understanding these values, researchers can provide more appropriate recommendations for the development of conservation programs that actively engage the community. This study is expected to make a positive contribution to policy development that supports the preservation of bamboo forests and local traditions.

In an era of globalization and modernization, the challenge of preserving traditions is increasingly significant. The community of Wogo Village must find ways to integrate traditional practices with modern developments without losing their cultural essence. This research will explore how the community adapts to change while maintaining the Waja Betho tradition. Thus, the study is not only relevant to Wogo Village but can also serve as a model for other villages facing similar challenges.

Ultimately, this research is expected to contribute to the academic literature on cultural and environmental preservation. By amplifying the voices of local communities, it will enhance our understanding of the relationship between culture and ecology. The findings of this study may serve as a foundation for developing more inclusive and sustainable policies. Through this approach, it is hoped that the Waja Betho tradition will continue to thrive and contribute to the conservation of bamboo forests in Wogo Village and beyond.

METHOD

This paper is based on research conducted using a qualitative method. Qualitative research is a procedure that produces descriptive data in the form of written or spoken words from people and observable behavior. The study was conducted in Wogo Village, Golewa Subdistrict, Ngada Regency. The selection of Wogo Village as the research site was based on the presence of the Bamboo Campus (Kampus Bambu), which serves as a center for bamboo conservation and processing in Ngada Regency. Data collection techniques employed in this study included observation, documentation, and interviews.

RESULT AND DISCUSSIONS

Wogo Village is one of the villages located in Golewa Subdistrict and is a result of the administrative division of Ratogesa Village, covering an area of 13.474 square kilometers. According to village data from 2024, bamboo is the most significant forest product in the area, surpassing other forest commodities such as teak, ampupu, and albesia).

Table 1. Wogo Village Forest Products

No	Forest Products	Area width
1	Bamboo	750 m3/th
2	Jati	25m3/th
3	Ampupu	37m3/th
4	Albesia	15m3/th

Sumber: RKP DESA WOGO, 2024



Figure 1. Bamboo Forest Turetogo

This shows that the existence of bamboo in Wogo Village is still very much maintained. Based on the results of research conducted using interview methods, observation and documentation, the following data were obtained:

Table 2. Data Hasil Wawancara

Village Community Perception Indicators Regarding Bamboo Forests	Research result
Community knowledge regarding bamboo forest conservation	
a. Traditions and culture related to bamboo forests	The community believes that Ngada traditions and culture are deeply connected to bamboo, hence bamboo must be preserved as part of their ancestral heritage.
b. Methods of bamboo conservation	According to community perception, traditional methods of bamboo conservation have been practiced habitually and are proven effective in maintaining bamboo quality.
c. Benefits of bamboo conservation	The community acknowledges that bamboo, as an ancestral heritage, provides numerous benefits including use as building material (especially for traditional houses), tools for cultural and ritual arts, and as an economic resource.
Community belief in the Waja Betho tradition related to bamboo forest conservation	
a. Waja betho Tradition	Most community members recognize that prohibitions against cutting bamboo trees are necessary to ensure better growth, thus preserving both the quality and quantity of bamboo.
b. Consequences of violating Waja Betho rules	Community perception indicates that violations of Waja Betho prohibitions can bring misfortune to the community, such as fires.
Community opinion on the Waja Betho tradition related to bamboo forest conservation	
a. The ecological benefits of preserved bamboo forests for Wogo Village and surroundings	Community perception is that bamboo forest conservation provides ecological benefits for Wogo Village and its neighboring communities.

b. Bamboo forest conservation supports and enhances community livelihoods	According to the community, preserving bamboo forests helps sustain their livelihoods. Bamboo is involved in many traditional activities and currently holds economic value as it is processed and sold as household furniture.
c. Importance of the Waja Betho tradition as an ancestral heritage	The community perceives the Waja Betho tradition as vital to preserve because it is closely linked to bamboo forest conservation. This tradition influences community behavior in environmental stewardship, viewing the bamboo forest as a valuable village asset.

1. Community Knowledge Regarding Bamboo Forest Conservation

The customary leader holds a very positive perception regarding the relationship between tradition and culture with bamboo forest conservation, whereas the general community tends to view tradition as a mandate inherited from their ancestors and a habitual practice. Knowledge about customs and cultural practices related to bamboo forest conservation is found to be lacking among female respondents and younger respondents (Sumarmi et al., 2022).

a. Traditions and Culture Related to Bamboo Forests

Traditions and cultural practices related to bamboo forests include the construction of traditional houses using bamboo, the use of bamboo in customary rituals, bamboo as a tool in artistic performances, and bamboo as an ancestral heritage that must be preserved and passed down through generations. These traditions and cultural knowledge are widely recognized among community members across various age groups.

Knowledge of these traditions and cultural values is often transmitted to younger generations through traditional ceremonies such as Reba and Ka Sa'o, which help the youth understand the importance of bamboo in the cultural life of the village community.

b. Methods of Bamboo Forest Conservation

The community of Wogo Village perceives that several local knowledge practices indirectly contribute to bamboo forest conservation. These include the Waja Betho tradition, prohibitions against cutting bamboo in the morning, harvesting bamboo at a height of 30–40 cm above the ground, harvesting based on the “panu bambu” (bamboo fungus) indicator, and restrictions on harvesting during the full moon. Among these, the Waja Betho tradition and harvesting bamboo at 30–40 cm above the ground are the most widely known practices within the community (Ben-zhi et al., 2005).

Younger respondents demonstrated a lack of local knowledge regarding bamboo forests, and female respondents were found to be unaware of the bamboo conservation rules. The younger generation appears to be more interested in modern trends, while female respondents are generally less familiar with handling bamboo. A traditional elder noted that few young people today show interest in the traditions and cultural practices related to bamboo forest conservation. This situation is concerning, as the loss of traditional knowledge and cultural heritage among younger generations could lead to the gradual erosion of local wisdom that has long contributed to the preservation of bamboo forests (Mohan et al., 2022).

C. Benefits of Preserving Bamboo Forests

Preserving bamboo forests is considered a form of local wisdom and a reflection of the community's obedience to ancestral mandates. This is because most of the bamboo forests owned by the community are inherited as part of the traditional house compounds, each of which includes a designated bamboo forest area. The relationship between the community and the bamboo forest demonstrates a deep connection between the indigenous people and bamboo, highlighting its cultural and spiritual significance (Paembonan et al., 2019).

2. Community Beliefs in the Waja Betho Tradition Related to Bamboo Forest Conservation.

The majority of the village community identifies as Catholic; however, they still uphold ancestral traditions and cultural practices that are influenced by animistic beliefs. Myths passed down through generations continue to be strongly held. According to the Waja Betho tradition, it is believed that violating the rules—particularly those prohibiting bamboo harvesting—will bring misfortune or disaster. This belief system has played a significant role in supporting bamboo forest conservation.

a. Waja Betho Tradition

Community members are required to adhere to the rules of the Waja Betho tradition, which includes a prohibition on bamboo harvesting for a period of four to five years. During this period, no one is allowed to use bamboo, whether dry or green, from the restricted area. A customary elder explained that this prohibition helps damaged bamboo regenerate, improving both the quality and quantity of bamboo growth (Luo & Feng, 2023).

b. Consequences of Violating the Waja Betho Tradition

Nearly all respondents agreed that those who violate customary rules will face consequences (Lacerda & Kellermann, 2019). The majority, including traditional leaders, stated that violators of the Waja Betho tradition are subject to binding customary fines. In addition to these social sanctions, natural consequences are also believed to occur, such as natural disasters—particularly forest fires. This indicates a growing awareness among the community that failing to preserve the environment can lead to negative outcomes, especially in relation to bamboo forests. Therefore, maintaining the Waja Betho tradition is viewed as essential for the continued conservation of bamboo forests.

3. Community Perceptions of the Waja Betho Tradition Related to Bamboo Forest Conservation

The community perceives that preserving bamboo forests brings significant benefits to the village. Among the respondents, the simplest and most well-known conservation practice is the application of the Waja Betho tradition to bamboo forests that show signs of degradation.

The community believes that maintaining the Waja Betho tradition is crucial, as it is closely related to environmental stewardship and the conservation of bamboo forests surrounding the village. Most respondents agreed that the local wisdom embodied in the Waja Betho tradition continues to serve as a behavioral and ethical guideline in their interaction with bamboo forests. Local customary figures emphasized the importance of preserving ancestral mandates, even though such values are gradually being forgotten. The Waja Betho tradition must be preserved to ensure the sustainable management of bamboo forests and the quality of bamboo harvested.

Mr. Marselus, a traditional leader, stated that if the Waja Betho tradition disappears, the community might lose their sense of environmental responsibility, which could ultimately harm the village. The presence of this local wisdom in Wogo Village has brought multiple benefits. The taboos embedded in the tradition instill fear among villagers against stealing or damaging bamboo resources. This inherited tradition and culture, passed down through generations, continue to shape community behavior toward the protection of bamboo forests (Noywuli et al., 2019).

Community perceptions in Wogo Village regarding the Waja Betho tradition and its role in bamboo forest conservation are influenced by individual interest, interaction with forest areas, and economic motives. This finding differs from that of Yeny et al. (2016), who argued that factors such as place of residence, level of education, and participation significantly shape community perceptions. Interestingly, respondents with lower levels of formal education in Wogo Village demonstrated a strong understanding of bamboo forest conservation. This suggests that a high level of formal education is not necessarily required to comprehend local knowledge systems like the Waja Betho tradition. Instead, such knowledge can be acquired through engagement with cultural practices and community customs (Li et al., 2021).

Community perceptions of the Waja Betho tradition in bamboo forest conservation also heavily depend on each individual's capabilities and circumstances, leading to varying interpretations. An individual's perception of their surrounding environment plays a crucial role, as it influences their actions within the community, including their engagement in environmental conservation (Yasin & Priyanto, 2019). Thus, it can be observed that community perceptions of local traditions or indigenous knowledge systems contribute significantly to their willingness and ability to conserve the environment. Accordingly, the Waja Betho tradition is considered essential as a form of environmental conservation, particularly in relation to the sustainable preservation of bamboo forests. This tradition supports the community in managing and utilizing bamboo resources more wisely and responsibly.

CONCLUSION

The findings indicate that the Waja Betho tradition, as an ancestral heritage, plays a vital role in the conservation of bamboo forests. Community perceptions of the Waja Betho tradition in relation to bamboo forest conservation are shaped by individual interests, environmental interactions, and economic motives.

The tradition also embodies strong environmental conservation values, particularly in the sustainable management of bamboo resources. One of its core principles includes a strict prohibition on bamboo harvesting for a designated period (typically four to five years), which is intended to allow bamboo to regenerate and reach optimal quality before it can be utilized again.

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REFERENCES

- Abas, A., Aziz, A., & Awang, A. (2022). A Systematic Review on the Local Wisdom of Indigenous People in Nature Conservation. *Sustainability*, 14(6), 3415. <https://doi.org/10.3390/su14063415>
- Ayer, S., Timilsina, S., Aryal, A., Acharya, A. K., Neupane, A., & Bhatta, K. P. (2023). Bamboo Forests in Nepal: Status, Distribution, Research Trends and Contribution to Local Livelihoods. *Advances in Bamboo Science*, 4, 100027. <https://doi.org/10.1016/j.bamboo.2023.100027>
- Bain, W. K. (2021). Traditional Wisdom and Practices Involved in Bamboo Based Crafts of the Lepcha Community of North Sikkim-A Case Study from Dzongu Reserve Area. *Heritage: Journal of Multidisciplinary Studies in Archaeology*, 9, 608–630.
- Ben-zhi, Z., Mao-yi, F., Jin-zhong, X., Xiao-sheng, Y., & Zheng-cai, L. (2005). Ecological Functions of Bamboo Forest: Research and Application. *Journal of Forestry Research*, 16(2), 143–147. <https://doi.org/10.1007/BF02857909>
- Irawan, B., Partasmita, R., Rahayu, N., Setiawati, T., & ISKANDAR, J. (2019). Indigenous Knowledge of Bamboos by Naga Community, Tasikmalaya District, West Java, Indonesia. *Biodiversitas Journal of Biological Diversity*, 20(5), 1423–1434. <https://doi.org/10.13057/biodiv/d200535>
- Lacerda, A. E. B., & Kellermann, B. (2019). What is the Long-Term Effect of Bamboo Dominance on Adult Trees in the Araucaria Forest? A Comparative Analysis between Two Successional Stages in Southern Brazil. *Diversity*, 11(9), 165. <https://doi.org/10.3390/d11090165>

- Li, W., Shi, C., Li, K., Zhang, Q.-J., Tong, Y., Zhang, Y., Wang, J., Clark, L., & Gao, L.-Z. (2021). Draft Genome of The Herbaceous Bamboo *Raddia Risticophylla*. *G3 Genes/Genomes/Genetics*, 11(2).
<https://doi.org/10.1093/g3journal/jkaa049>
- Luo, Y., & Feng, X. (2023). A Comparative Analysis between Timber Industry and Nontimber Forest Products Industry in Relation to Sustainability and Operators' Proactiveness. *Forest Products Journal*, 73(2), 94–103.
<https://doi.org/10.13073/FPJ-D-22-00065>
- Meena, R. K., Bhandhari, M. S., Barhwal, S., & Ginwal, H. S. (2019). Genetic Diversity and Structure of *Dendrocalamus Hamiltonii* Natural Metapopulation: a Commercially Important Bamboo Species of Northeast Himalayas. *3 Biotech*, 9(2), 60. <https://doi.org/10.1007/s13205-019-1591-1>
- Mekonnen, A., Fashing, P. J., Chapman, C. A., Venkataraman, V. V., & Stenseth, N. Chr. (2022). The Value of Flagship and Umbrella Species for Restoration and Sustainable Development: Bale Monkeys and Bamboo Forest in Ethiopia. *Journal for Nature Conservation*, 65, 126117. <https://doi.org/10.1016/j.jnc.2021.126117>
- Mohan, N., Dash, S. P., Mary Boby, N., & Shetty, D. (2022). Study of Bamboo as a Building Material – Construction & Preservation Techniques and its Sustainability. *Materials Today: Proceedings*, 60, 100–114.
<https://doi.org/10.1016/j.matpr.2021.12.263>
- Noywuli, N., Sapei, A., H. Pandjaitan, N., & Eriyatno, E. (2019). Kebijakan Pengembangan Budidaya Tanaman Bambu untuk Pengelolaan Berkelanjutan DAS Aesesa Flores. *Jurnal Pengelolaan Sumberdaya Alam Dan Lingkungan (Journal of Natural Resources and Environmental Management)*, 9(4), 946–959.
<https://doi.org/10.29244/jpsl.9.4.946-959>
- Paembonan, S. A., Bachtiar, B., & Larekeng, S. H. (2019). Vegetative Propagation with Branch Cuttings as a Solution for The Mass Development of Giant atter Species (*Gigantochloa Atter* (Hassk) Kurz) in Industrial Plantations. *IOP Conference Series: Earth and Environmental Science*, 343(1), 012049.
<https://doi.org/10.1088/1755-1315/343/1/012049>
- Qiao, Z., Sun, S., Jiang, Q., Xiao, L., Wang, Y., & Yan, H. (2021). Retrieval of Total Phosphorus Concentration in the Surface Water of Miyun Reservoir Based on Remote Sensing Data and Machine Learning Algorithms. *Remote Sensing*, 13(22), 4662. <https://doi.org/10.3390/rs13224662>
- Saung, T., Khai, T. C., Mizoue, N., Ota, T., & Kajisa, T. (2021). Condition of Illegally Logged Stands Following High Frequency Legal Logging in Bago Yoma, Myanmar. *Forests*, 12(2), 115.
<https://doi.org/10.3390/f12020115>
- Sujarwanta, A., & Zen, S. (2023). Pelestarian Tanaman Bambu Sebagai Upaya Konservasi Daerah Aliran Sungai Way Semaka Lampung. *Jurnal Lentera Pendidikan Pusat Penelitian LPPM UM Metro*, 8(1), 139–146.
<https://doi.org/10.24127/JLPP.V8I1.2877>
- Sumarmi, Su., Wahyuningtyas, N., Sahrina, A., & Mutia, T. (2022). Analysis of The Potential Bamboo Forest as an Effort Towards Local Wisdom-Based Ecotourism in Sustainable Spring Conservation. *Journal of Ecology and Environment*, 46, 14. <https://doi.org/10.5141/jee.22.032>
- Utomo, A. P. (2018a). Kearifan Lokal dalam Pembuatan Angklung Paglak sebagai Sumber Etika Lingkungan. *Bioma : Jurnal Biologi Dan Pembelajaran Biologi*, 3(2), 1–10. <https://doi.org/10.32528/BIOMA.V3I2.1615>
- Utomo, A. P. (2018b). Local Ecological Knowledge in Angklung Paglak of Using Community of Banyuwangi, Indonesia. *Applied Ecology and Environmental Research*, 16(3), 3215–3228.
https://doi.org/10.15666/aeer/1603_32153228
- Yasin, I., & Priyanto, A. (2019). Analysis of Bamboo Mechanical Properties as Construction Eco-Friendly Materials to Minimizing Global Warming Effect. *IOP Conference Series: Materials Science and Engineering*, 535(1), 012001. <https://doi.org/10.1088/1757-899X/535/1/012001>
- Yeny, I., Yuniati, D., & Khotimah, H. (2016). Kearifan Lokal dan Praktik Pengelolaan Hutan Bambu pada Masyarakat Bali. *Jurnal Penelitian Sosial Dan Ekonomi Kehutanan*, 13(1), 63–72.
<https://doi.org/10.20886/jpsek.2016.13.1.63-72>