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# ETHNO-ECOLOGICAL CITIZENSHIP IN THE BAYAN INDIGENOUS COMMUNITY AMID TOURISM DEVELOPMENT: CUSTOMARY NORMS, WASTE MANAGEMENT, AND ENVIRONMENTAL CONSERVATION

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**ABSTRACT**

This study aims to analyze the role of customary norms as customary institutions in environmental conservation and identify challenges in household waste management in Bayan District, North Lombok Regency. The study used a qualitative case study design to examine the values, norms, social practices, and institutions of the indigenous community. Data were obtained through observation, interviews with customary leaders, community leaders, and village government officials, and a review of documents related to forest and waste management. The results indicate that "*awiq-awiq"* has a strong role as a mechanism for controlling community behavior in the use of customary forests. However, the effectiveness of "*awiq-awiq"* has not yet extended to household waste management. This study concludes that strengthening ecological citizenship in Bayan society is not enough to rely solely on forest conservation through awiq-awiq. However, it requires a reinterpretation and revitalization of customary norms to address contemporary environmental issues, particularly waste related to tourism development. Integrating customary institutions, village governments, communities, and tourism actors is a crucial strategy for building more participatory and sustainable environmental governance.

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## INTRODUCTION

It must be acknowledged that the tourism sector has had a significant impact on driving the local economy. The existence of tourism objects that are frequently visited by tourists can be a catalyst that stimulates the growth of other sectors, as well as increasing revenue in agriculture and fisheries. In addition, the tourism industry plays an important role in increasing the country's foreign exchange earnings, absorbing labor, and driving economic growth. Therefore, it is not surprising that local governments are competing to boost the region's tourism potential.

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However, massive tourism activities can also have complex side effects. Research by Vitriani et al. (2017) found that the tourism sector has at least three main impacts: economic, socio-cultural, and environmental. Various environmental impacts that arise from tourism activities include massive land conversion, tourism enclaves, the increasing volume of household waste, and environmental pollution problems such as liquid waste, food waste, garbage accumulation, air pollution, and water quality degradation (Dodds & Butler, 2019). Most of the waste generated by tourism activities is organic, with high potential for recycling, but in practice it is still mixed with inorganic waste and ends up in landfills.

One of the areas that is currently aggressively promoting tourism growth is West Nusa Tenggara Province (NTB). Strategically located near the island of Bali, which has already boosted tourism, the central government has promoted the idea of a 'New Bali,' a term used to build a tourism image distinct from Bali's. West Nusa Tenggara Province (NTB) experienced growth in the tourism sector. Tourism is growing rapidly due to the development of the Mandalika Special Economic Zone, Gili Trawangan, and various tourist villages (Tri Rahayau et al., 2024; Hafifi, 2024). In West Nusa Tenggara (NTB) itself, the negative impacts of tourism can be found in various forms, such as coral reef damage, vegetation damage, pollution in the mountains, and solid and liquid waste pollution. Saputra (2019) explains that beach tourism activities trigger the degradation of coral reefs in Gili Trawangan, caused by fishing, pollution, waste, and other unsustainable tourism practices. One square kilometer of coral reef damage can cause coastal erosion along one kilometer (Cesar, 1996)

Therefore, a more concrete alternative solution is needed to prevent the expansion of the negative impacts of tourism activities. As a solution, these problems cannot be solved by practical actions alone. A paradigm shift in the concept of sustainable tourism is needed. The concept of *ethno-ecological citizenship, which is implemented by placing society, is not only a subject but also a process of creating, testing, and evaluating* solutions to environmental problems. Tripayana et al. (2021) explain that ethno-ecological *citizenship* is an ecological citizenship concept grounded in local culture. This is an effort to build awareness among everyone about environmental conservation by maintaining relationships and harmony grounded in shared values.

Regarding the role of ethno-ecological citizenship in environmental preservation, Certoma & Notteboom (2015) stated that environmental damage is addressed more successfully when it receives community support as a social movement. This is understandable because various programs and government policies require active community participation in maintaining and sustaining environmental conservation programs. Therefore, various environmental conservation programs should be in harmony with society's values and norms, as expressed through sacred traditions and culture. Research conducted by Tripayana, et al. (2024a;2024b) in several tourist villages in Bali known as Desa Bali Aga or Bali Mula Village. In their conclusion, the researchers stated that the key to preserving forests in the local village area is the preservation of awiq-awiq as a form of restorative environmental governance and a manifestation of ecological *civic virtue*. In addition, the values and norms held by local communities are

regarded as ancestral heritage that must be respected and obeyed.

Various forms of ethno-ecological citizenship described in their findings include: 1) *dewasa ayu,* namely the restrictions on harvesting trees or plants based on auspicious days. 2) *kayu tenget*, which functions to give a horror impression to the public so that people do not disturb the plants. 3) Mythical stories about forest dwellers, aimed at limiting community activities encroaching on the forest, in order to prevent deforestation. 4) *Awiq-awiq* contains material sanctions and social weight as a deterrent effect for those who are thinking of committing violations. The results of this study provide an important basis for examining villages in West Nusa Tenggara, including the Bayan Traditional Tourism Village. Bayan Village, located in Bayan District, North Lombok Regency, is known for its customary forest area. An extensive customary forest, clear springs, and natural resource management practices based on indigenous people. Geographically, the Bayan region is influenced by the Mount Rinjani ecosystem to the south and the coastal area to the north. Local communities are aware of the need to protect the environment and support conservation efforts.

Citizen awareness of environmental conservation in the context of Pancasila and Citizenship Education is related to the concept of civic virtue. Dobson (2007) explains that civic virtue is a civic character that is realized through social responsibility, concern for the common good, participation in solving public problems, as well as a commitment to the sustainability of social life. Civic virtue is realized not only through compliance with formal law, but also through social customs that develop within the community. Therefore, community development that is oriented towards environmental sustainability needs to strengthen civic virtue so that environmental conservation efforts are not merely driven by government regulations, but rather grow as a collective societal awareness. This condition indicates a research gap. First, research on environmental conservation efforts focuses primarily on the technical and economic aspects of the environment, while the ecological citizenship dimension has not yet become a primary focus. Second, research on ecological citizenship is more often applied to urban innovation, smart cities, and digital transformation than to community-based tourism in rural areas. Third, the relationship between local norms, community participation, and the formation of civic *virtue* in environmental conservation efforts in tourist villages has not been comprehensively explored.

## RESEARCH METHOD

This research uses a qualitative approach with a case study design to examine, in depth, the social conditions and practices of the community regarding environmental management in Bayan District, North Lombok Regency, West Nusa Tenggara Province. The case study design was chosen because it allows researchers to understand a phenomenon in depth in a real-life context by examining environmental management as a case studied comprehensively within the social, institutional, and local-wisdom context of the Bayan community. The research location was chosen purposively, given that Bayan is one of the tourist villages with natural, cultural, and religious tourism potential and still maintains a strong system of traditional institutions and *awiq-awiq*. The research

subjects were selected using purposive sampling, including traditional leaders, community leaders, and community members. Data collection was carried out through observation, in-depth interviews, and documentation studies. Data analysis was carried out interactively using the Miles and Huberman (1994) model, which includes data condensation, data presentation, and the drawing and verification of conclusions. Data validity was ensured through source triangulation, technique triangulation, member checking, and peer debriefing.

## RESULTS AND DISCUSSION

### 1. Existence of Bayan Community Customary Institutions

Bayan Traditional Village is an actively developing cultural tourism village. This village is known as the cultural center of the Sasak Bayan community, which still maintains various customary traditions, such as *Maulid Adat* (Customary Maulid), *Lebaran Adat* (Traditional Eid), *and Ngaji Makam* (grave Recitation). The preservation of traditions is supported by the preservation of cultural heritage, such as the Bayan Beleq Ancient Mosque and the existence of a traditional forest that is still maintained to this day. These conditions have made Bayan Village one of the top 300 in the Indonesian Tourism Village Award (ADWI) 2023 and have promoted it as a tourism destination based on culture and conservation. The cultural richness of Bayan Village is also supported by a stunning natural landscape, including vast rice fields, traditional forests, springs, and the foothills of Mount Rinjani, which are among the tourist attractions of North Lombok Regency.

Wulandari (2013) explained that the forests in the Bayan area have experienced damage due to logging and land conversion since 1981, accounting for 4.77% of the forest area. Wulandari's research found that the damage was caused by land leases granted to newcomers, leading to exploitation. Furthermore, in 1993, large-scale logging again occurred in customary forest areas, particularly in Tiu Rarangan, Pengempokan Singang Kelok, and Batu Menjor. The cleared customary forest areas were converted into rice fields, each covering 2 hectares. Wulandari's research (2013) attributed the second logging to state officials. Participatory mapping published in 2025 (Wulandari, 2013) showed that the four customary forest areas of Bayan Village had a total area of approximately 82.02 hectares, or a decrease of approximately 1.18 hectares compared to the 2005 mapping results, which recorded 83.2 hectares. The research findings indicate that although customary institutions are still functioning and customary forests are relatively well maintained, the area's sustainability still requires institutional strengthening, supervision, and ongoing community involvement.

Interviews with traditional elders and community leaders revealed that the negative experiences of forest encroachment by the Bayan community in 1981 and 1993 became a turning point in the emergence of community awareness and in efforts to play an active role in protecting and fighting for forest management rights. This has been proven since 1994, when local leaders and communities have taken various concrete steps to stop forest encroachment. These efforts include: 1) protesting and fighting for

customary forest management rights to the local government. 2) carrying out massive reforestation, initiated by traditional institutions and government officials. 3) reviving traditions to sanctify or make sacred areas within customary forests. 4) enacting and disseminating regulations in *awiq-awiq* which aim to limit the use of resources in customary forests. 5) The use of forest products must go through customary processes and obtain approval *toaq lokaq*.



**Figure 1**. Environmental conditions at the entrance to one of the Bayan customary forests

The bitter experience of forest encroachment by newcomers to Bayan prompted the Bayan Village customary institution to take legal action to assert forest ownership and management rights, in order to prevent government officials or external parties from interfering in the management of customary forests. In collaboration with a local non-governmental organization (NGO), the Yayasan Pemberdayaan Masyarakat Pedesaan (YPMP), Bayan community leaders held discussions and hearings on forest resource management. This dialogue and mentoring process successfully strengthened the customary institution's beliefs, shifting the emphasis from utilization and compliance to rights, responsibilities, and authority to obtain recognition and actively participate in customary forest management. This shift in perception then became an important foundation for the re-strengthening of customary institutions and community awareness of the importance of maintaining customary forests as part of community identity as well as an ecological resource that must be protected and passed on to future generations.

## 2. The Actualization of *Ethno-Ecological Citizenship* in Bayan Society

Ethnoecology is the science of humans or communities relating to their natural surroundings, which is unique to each region. Ethnoecology is literally a combination of ethnology and ecology (Hilmanto, 2010). *Citizenship*: In Indonesian, citizenship is often translated as "citizen". This relates to the science that discusses citizens, including rights and obligations, participation, organization, human rights, and roles and awareness within the state. Thus, *Ethno-Ecological Citizenship* can be understood as a form of

citizen awareness in environmental preservation efforts, grounded in the community's customs and culture. Tripayana (2024a) explains that *Ethno-Ecological*, or tradition- and local-wisdom-based, preservation has been implemented in various countries worldwide and has succeeded in increasing agricultural yields or preserving the environment. Khan et al. (2013) found that indigenous communities in the Naran Valley, Khyber Pakhtunkhwa, Pakistan, can continue to improve the welfare of their people by utilizing biodiversity for food, animal feed, grazing, fuel, wood, and medicine through locally wisdom-based conservation.

Another study by Zapico (2015) found that indigenous tribes in Sarangani Province, Mindanao Island, Philippines, maintain traditional farming practices as part of their culture and have successfully maintained cultural diversity. This agricultural pattern has successfully maintained food availability for the indigenous people of the Sarangani highlands amidst cultural intrusions, socio-political forces, and climate change, while still preserving their natural environment. They first had to fight for the legal rights to manage their forests with the government, so that the forests their ancestors cared for could once again be managed by indigenous communities. This effort succeeded in urging the government to return forest management rights to the community.

The success of the Bayan community in returning forest management rights to the indigenous community prompted Bayan traditional leaders to take three main steps: 1) codifying *awiq-awiq* in village and regional regulations. 2) revitalizing customary institutions to refresh the organization by integrating the role of monitoring and protecting customary forests. 3) conducting participatory mapping to clarify the boundaries of customary forest areas. These three steps taken by the Bayan indigenous community aim to secure legal standing for the customary institutions responsible for managing, monitoring, and imposing sanctions on forest destroyers. Thus, customary institutions with strong authority have been effective in managing and supervising customary forests in the Bayan region to preserve forests and prevent the recurrence of exploitation in the future. This has proven effective in restoring customary forests that had been exploited and converted, and have since been successfully reforested.



**Figure 2**. Academic visit to Bayan

After forest supervision and management officially came under the control of customary institutions, reforestation activities were carried out extensively. Over the years, reforestation activities have become increasingly frequent, carried out by customary institutions, government agencies, local communities, the private sector, and outsiders. The Bayan indigenous people have also adopted sacred practices by reviving traditional rituals that have been observed for generations in customary forest areas, especially in the Mandala and Bangket Bayan areas. These include the Olor celebration, which is part of the Pawang Mandala management practice, as well as the concept of pemalik and various taboos and restrictions on the use of forest resources. The ritual not only functions as a ceremonial or religious activity but also serves to strengthen the community's social relationship with the ecological space they consider sacred. This practice shows that forest conservation in the Bayan community is built through a combination of customary rules, beliefs, rituals, and social practices. For the Bayan indigenous community, forests have strong spiritual, social, and ecological values.

The existence of the toaq lokaq as a ritual and customary leader, together with rituals and awiq-awiq, forms a socio-ecological system that enables the Bayan community to control the use of natural resources while maintaining the forest's ecological functions. An interview with the Head of Bayan Region stated that there are several prohibitions and sanctions, namely: 1) a prohibition on the sale and purchase of all kinds of resources found within the customary forest area. 2) a prohibition on conducting plantation and agricultural activities within the customary forest area. 3) a prohibition on certifying part or all of the customary forest area land for individual

interests. 4) Hunting, grazing livestock, and burning within the customary forest area are prohibited. 5) Violations of these prohibitions are subject to customary sanctions in the form of material sanctions and social sanctions, supported by evidence and the presence of at least two witnesses. 6) The level of social sanctions imposed on violators is determined through customary deliberation (*village*). If the same person repeatedly disregards customary rules that have been imposed on him, social sanctions will be imposed, "skaumang" (exclusion), including being expelled from the village.

Based on the results of observations and interviews with Bayan community leaders, it is explained that products from the Bayan customary forest cannot be used for personal interests and may only be used for public purposes, such as the renovation of the Bayan Ancient Mosque, the Traditional Hall, and *Berugak Agung.* Meanwhile, logging for non-customary purposes is allowed only in non-customary forests, namely Gawah and Tanaq Gege. However, the provisions of *awiq-awiq* also explain what is prohibited in customary forests, namely felling trees in customary forest areas, except under certain conditions, such as when the logger comes from a low-income family and is unable to work, so that they are truly in need. In addition, the results are used for personal interests such as building a house. This also applies to non-customary communities. Based on interviews with community leaders and village officials, it was found that customary law is highly effective in preserving forests. This is evidenced by the extent of the Bayan customary forest, which remains intact and has even increased due to the massive efforts of the indigenous community in the replanting program undertaken since the 2000s. However, the existence of *awiq-awiq, as an instrument for controlling behavior, has* less impact on waste management.

### 3. Implementation of Customary Institutions and Customary Laws in Waste Management

The Bayan people are known as a Sasak indigenous community that maintains various rules, values, and cultural practices that have been passed down through generations. This system is reflected in the existence of traditional leaders, traditional leadership structures, customary rituals, the management of customary forest areas, and collective norms that govern relationships among humans, fellow community members, and the natural environment. Various studies have shown that this customary system serves as a form of social capital that plays a crucial role in maintaining the sustainability of natural resources and the cultural identity of the Bayan people. From an environmental management perspective, the existence of *awiq-awiq* is understood not only as customary rules that regulate social relations, but also as a mechanism for controlling community behavior regarding the use of natural resources.



**Figure 3.** Customary Institutions, Awiq-awiq, and Household Waste Management

An environmental management perspective demonstrates that *awiq-awiq* is understood not only as customary rules governing social relations, but also as a mechanism for controlling community behavior regarding the use of natural resources. Several studies on the Sasak community show that *awiq-awiq* serves as an instrument for community-based environmental management, particularly in protecting forests, water sources, agricultural land, and sacred areas. Through social sanctions and collective oversight mechanisms, communities are encouraged to comply with mutually agreed-upon norms, thus creating a balance between individual and communal interests. However, a review of various documents indicates that these customary regulations have not been explicitly directed at managing household waste, which has increased due to increased tourism activity. Customary norms, which have been primarily oriented toward natural resource conservation, need to be adapted to address contemporary environmental challenges, including plastic and organic waste and changing consumption patterns. Therefore, revitalizing *awiq-awiq* (traditional customary rules) presents a strategic opportunity to strengthen community-based waste management.

The results of observations and interviews found that the waste management system in Bayan Village is still dominated by the collect–transport–dispose pattern, namely collection, transportation, and final disposal at the site. This approach shows that the orientation of waste management remains focused on removing waste at the source, while sorting, reducing, reusing, and processing organic waste have not yet become widespread practices in the community. These findings demonstrate that Bayan Village actually has strong social capital as a foundation for developing a community-based waste management system. The problem lies not in the absence of social values, but rather in the need to reinterpret traditional values to remain relevant to the challenges of sustainable tourism development.

The majority of Bayan Village residents work in the agriculture and livestock

sectors. This situation has triggered a relatively large increase in the volume of organic waste generated from household, agricultural, and livestock sources. The abundant production of organic waste in the form of agricultural residues, livestock manure, and household waste has the potential to be used as compost or to cultivate larvae (maggots). The maggot cultivation program, an environmentally friendly approach to waste management, especially for household organic waste, has been introduced to some Bayan residents. Unfortunately, the program is still limited to community empowerment activities and has not yet been developed into an integrated, large-scale village waste management system (Krajan.id). In other words, innovative waste management has been introduced to the community, but has not yet become a collective practice implemented by the majority of Bayan residents. From an ethnoecological citizenship perspective, this condition shows a gap between the potential of local wisdom and the actualization of environmental management.

Bayan has substantial organic waste potential, supported by strong community social capital. However, there is no institutional system capable of integrating all technical, economic, social, and cultural aspects into waste management. This is supported by observations indicating the presence of waste management instruments, including a comprehensive institutional structure, available fleets and supporting facilities, and a sufficient budget. However, improvements in institutional coordination and public awareness are still needed. This aligns with the view of Guerrero et al. (2013) that effective waste management is determined not only by the availability of physical facilities but also by institutional capacity, coordination among actors, and community participation. In the context of waste management in Bayan, the main problem is not simply the lack of waste management technology, but also the suboptimal utilization of local wisdom, such as *awiq-awiq* and local traditions, traditional institutions, government, tourism business actors, and the community in building a participatory waste management system.

## CONCLUSION

This study shows that household waste management in Bayan District, North Lombok Regency, still faces various challenges, including technical, institutional, community participation, and behavioral change driven by tourism activities, so the system remains based on a traditional approach of collect–transport–dispose, which does not optimally support environmental sustainability. Awiq-awiq has not explicitly addressed household waste management, which has increased due to tourism activity. Customary norms, which have been primarily oriented toward natural resource conservation, need to be adapted to address contemporary environmental challenges, including plastic and organic waste and changing consumption patterns. Therefore, revitalizing *awiq-awiq* presents a strategic opportunity to strengthen community-based waste management.

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