

# The Roles of Bayan Indigenous Communities in Protecting Forest: Making the Forest A Sacred Place

Muhamad Soimin<sup>a,1,\*</sup>

<sup>a</sup> Program Studi Kehutanan, Fakultas Pertanian, Universitas Nusa Cendana, Jl. Bougenvile, Lasiana, Kec. Klp. Lima, Kota Kupang, Nusa Tenggara Timur, 85228, Indonesia

<sup>1</sup> [muhamad.soimin@staf.undana.ac.id](mailto:muhamad.soimin@staf.undana.ac.id)

\* corresponding author:

## ARTICLE INFO

### Article history

Received: June 16<sup>th</sup>, 2025

Revised: July 29<sup>th</sup>, 2025

Accepted: July 29<sup>th</sup>, 2025

Published: July 31<sup>st</sup>, 2025

### Keywords

Forest,  
Indigenous Community,  
Bayan,  
Local Wisdom,  
Sacred Place.

## ABSTRACT

Forests provide immense benefits to human beings and must be protected. One strategy to safeguard the forest involves utilizing indigenous values and wisdom, making it a sacred place. The indigenous community of Bayan, which heavily relies on forest ecosystem services, primarily for water sources for daily life and agriculture, protects its forest through this approach. The qualitative study aimed to explore and elaborate on these practices. The results indicate that the indigenous community protects the forest by using indigenous values and wisdom, designating it as a sacred place called *Pawang Mandala*. This practice is not only a practical method of forest protection, but it has also been internalized in their religious beliefs. However, along with human advancement, it faces significant challenges and therefore requires a strategic approach to overcome these challenges while promoting opportunities. A proposed strategic approach that could serve as a solution is promoting the indigenous practice and the sacred forest of Pawang Mandala as a tourist attraction through strengthening collaborative governance between governments, the indigenous community of Bayan, and other stakeholders.

This is an open access article under the [CC-BY 4.0](https://creativecommons.org/licenses/by/4.0/) license.



## 1. Introduction

Forests are considered one of the most important ecosystems on Earth, owing to their pivotal ecosystem services, which include provisioning, regulating, supporting, and cultural services (Wani & Sahoo, 2020). First, forests provide goods in various forms, particularly timber (Zhang et al., 2020). Moreover, as an ecosystem, forests serve as a mediated space where biogeochemical cycles occur, maintaining the balance of the forest ecosystem (Osburn et al., 2021). Additionally, forests are a source of water, supporting not only the organisms that inhabit them but also human beings (Jones et al., 2022). In this regard, the existence of forests is crucial for mitigating the impacts of climate change, such as droughts

or other climate change-induced natural disasters. Furthermore, for forest-dependent communities, forests are a natural resource pool for their livelihoods (Mahdavi et al., 2024). Therefore, given all the ecosystem services they provide, forests must be protected to ensure that forest ecosystems can maintain their functions and balance.

Recognizing the importance of forests, humans have begun to protect them from anthropogenic threats that jeopardize their sustainability. Long ago, before science evolved as it has today, humans had already taken steps to safeguard their natural surroundings, including forests (Achiso, 2020). This effort aims to ensure that forests continue to be a source of livelihood (Leberger et al., 2020). However, with human population growth and development, there is a greater demand for natural resources (Kumar et al., 2022). As a result, more resources have been extracted from the forests, leaving them increasingly vulnerable (Leberger et al., 2020).

In response to this, humans have begun to implement natural protection efforts for forests through protected areas or a conservation approach (Achiso, 2020; Bicknell et al., 2017). This aims to achieve two main objectives: protecting forests as a natural resource while ensuring that forest-dependent communities can sustainably utilize ecosystem services (Achiso, 2020). The protected area approach has gained wide recognition in various parts of the world and has become a policy tool for states to safeguard their forests (Phillips & World Conservation Union, 2002). Many conservationists, along with organizations such as IUCN, FAO, CBD, and WWF, have proposed nature protection frameworks to ensure that protected areas can achieve desired outcomes, including both conservation and community resilience.

Indonesia, one of the tropical countries, is blessed with a huge tropical rainforest, along with the Congo and Amazon rainforests. With this evidence, it is important to prevent our forest from degradation due to anthropogenic threats, such as logging, mining, forest conversion into agricultural lands, or oil palm plantations (Nurhidayah & Alam, 2020). This necessitates a strong commitment from national governments to expand forest areas that are considered protected areas. This strategy requires collaborative environmental governance from stakeholders so that the forests are well protected (Roengtam & Agustiyara, 2022).

Nonetheless, governments themselves will not be able to deliver successful forest protection as they need local or indigenous communities to support that strategy. In many parts of Indonesia, forests have been considered as a sacred place, particularly for the indigenous communities who have inhabited the forest for a long ago (Dhiaulhaq & McCarthy, 2020). The indigenous communities protect their forest as a sacred place with their indigenous values and wisdom (Abas et al., 2022; Purwanto, 2022). This strategy has also been acknowledged by national governments, thereby strengthening the indigenous communities' strategy in protecting their forest through indigenous values and wisdom (Abas et al., 2022). National governments, from a legal perspective, established the cultural forest, so-called "hutan adat", as a legal form of forest conservation strategy (Apricia, 2022).

In Indonesia, from Aceh to Papua, thousands of indigenous communities are given the rights and are responsible for protecting their cultural forest through their indigenous values and wisdom (Abas et al., 2022). One of them that has been an example is the Bayan Forest in Rinjani mountain valley on the island of Lombok.

Bayan indigenous communities have been protecting their forest through utilizing their indigenous values and wisdom, thereby making their forest a sacred place. These practices have been living along with the communities from generation to generation. Protecting their forest is also an integral part of their religious and cultural beliefs. However, along with human development and modernization, the values and wisdom are facing huge challenges,

including their practices and how to ensure future generations are aware of this (Simarmata, 2024).

Therefore, this research aims to explore and elaborate on indigenous values and wisdom as a tool for forest conservation by the Bayan indigenous communities. This research explores how the Bayan indigenous community manages the Pawang Mandala forest as a sacred site, and what challenges and opportunities this presents for sustainable forest governance. Therefore, it can amplify the indigenous practices in protecting the forest and ensure this strategy can be maintained and inherited by future generations amid global development challenges. Moreover, the research will also provide an elaboration on potential challenges and opportunities in the future, and therefore, the challenges can be anticipated while the opportunities can be developed for better and continuous Bayan forest conservation through internalization of indigenous values. The case of the Bayan indigenous forest can also be considered as a tool model for forest protection in other places with similar features of the indigenous communities with their indigenous values.

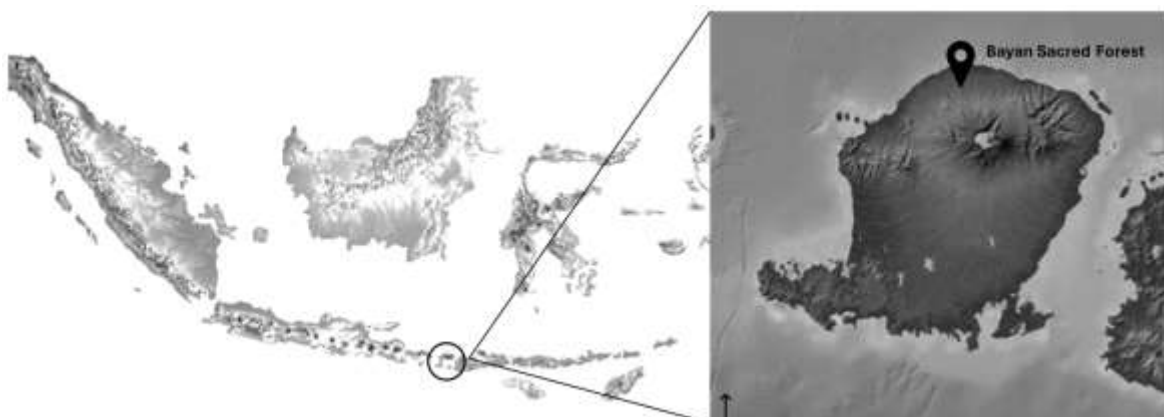
## 2. Research Method

### 2.1 Method

The researcher approached this research qualitatively, utilizing descriptive-exploratory methods. It aims to explore phenomena and practices of forest protection as a sacred place by the Bayan indigenous communities. The data were collected using an in-depth interview method, direct observation of indigenous communities' cultural and behavioral practices in protecting their forests, and an extensive analysis of the literature. A number of respondents were selected purposively from related stakeholders within the Bayan indigenous community, 3 respondents representing the Bayan Indigenous community itself (represented by *Pemangku Adat*), 2 respondents representing *Pemerintah Desa* of Bayan Village, and 5 respondents representing local people (including farmers).

### 2.2 Location

The research site is situated in the Bayan sacred forest in Bayan village in the North Regency of Lombok, West Nusa Tenggara province. The forest is situated in the northern part of Rinjani Valley. The research site can be located on the map (*Figure 1*).



**Figure 1.** Research location. Bayan Sacred Forest is situated in the northern part of Rinjani mountain valley on the Island of Lombok, Indonesia.

### 3. Results and Discussion

In Lombok, like many other regions in Indonesia, it is blessed with natural resources, including forests. The forested area on the island of Lombok covers 578,645,97 Ha area equal to 29% of the total island size (Ministry of Environment and Forestry, 2024). Most of the forested landscape on Lombok Island is located in the northern part of the island, around Rinjani mountain valley. Given that Rinjani is an international Geopark (Unesco, 2018), along with its forest functions as one of the most important natural resources on the island (Ma'shum & Idris, 2021). Therefore, forests in Lombok must be protected, not only for benefitting humans within a specific spatial scale of the island, but also in the national region as a part of climate change mitigation.

One of the regions that depends on the forest function and ecosystem services is the northern region of Lombok. Nevertheless, forest areas in this region are being threatened by anthropogenic activities, such as logging and the conversion to agricultural land expansion. According to data, 54.74% of forest areas in the region are vulnerable (Ministry of Environment and Forestry, 2024) due to anthropogenic pressures. In this regard, strengthening forest conservation efforts and initiatives is increasingly important.

#### 3.1. Indigenous Community of Bayan

Although the forests in the region are being threatened, the remaining forests need to be protected at all costs, necessitating the roles of stakeholders, including the governments and communities. One of the forest areas where the indigenous community takes responsibility for being a frontier is located in Bayan village. In this village, indigenous practices with values and wisdom are implemented as a tool for forest conservation. Indigenous values, within the context of Indonesian societies, refer to norms existing within an indigenous society that are believed and have become guidance in life (Effendy et al., 2020), whereas indigenous wisdom refers to beliefs or thoughts that are derived from the cultural values of the communities (Rahayu et al., 2024). The indigenous communities of Bayan have been utilizing their indigenous values and wisdom to protect their forests for a long time. Within their indigenous practices, protecting the forest has been an integral part of their religious beliefs.

Historically, the indigenous community of Bayan was originally called the Sasak ethnic under the region of *Kedatuan* Bayan. *Kedatuan* Bayan is different from the state governmental structure called a village, but rather a specific term of the indigenous government's structure. *Kedatuan* Bayan includes 12 main sub-regions called “wet”, including *Biluk Perung*, *Barangdira*, *Bayan*, *Anyar*, *Sukadana*, *Sembarge*, *Semokan*, *Salut*, *Gumantar*, *Sesait*, *Sembalun*, *Wet Sajang* (BRWA, 2025). Each of these “wet” areas occurs around Rinjani mountain valley and has an indigenous practice in protecting their forest as a sacred place.

In this research, the focus of the exploration and elaboration is on the Bayan indigenous forest that is located in Bayan village.

The indigenous community of Bayan acknowledges the rights of land based on local wisdom, including the rice field (called “*bangket*”), agroforestry land (called “*kebon*”), a centre for cultural events (called “*kampu*”), and the forest (called “*pawang*”). The indigenous community also has its own traditional structure of institutions called “*masyarakat hukum adat*”, including traditional rulers, decision-making mechanisms, and a set of local wisdom in managing forest resources.

### 3.2. Forest of Bayan Indigenous Community as A Sacred Place

The indigenous community of Bayan, within their traditional structure, protects their forest by utilizing local wisdom and thereby recognizes the forest as a sacred place. The name of the sacred forest occurs in the village of Bayan village called Mandala forest, “*pawang mandala*”. Pawang refers to one form of the rights of land embedded in the indigenous community. According to the traditional rulers of the Bayan indigenous community, the name of Mandala comes from two local words: “*man*” means gift, and “*dala*” means God. Thus, the *Pawang Mandala* forest is recognized as a blessing from God. It indicates that the indigenous community has internalized forest protection as an integral part of their beliefs.

From a historical perspective, the concept of establishing the forest as a sacred place emerged a long time ago, when the majority of the indigenous community of Bayan was illiterate, indicating that not many of them were exposed to education at school. Nonetheless, they already acknowledged that the natural resources, including forests, must be protected, even before Indonesian national law and regulations were established. This evidence indicates that the indigenous community of Bayan in the past was highly dependent on natural resources as a source of livelihood. Much research has uncovered the evidence that indigenous communities are dependent on forest resources (Helmi et al., 2023), as the forest provides them with food and water resources (Abas et al., 2022).

The position of the indigenous community of Bayan today is strong, as the rights of the indigenous community to its land in Indonesia are recognized by the constitution. For example, the rights of the indigenous community are guaranteed and protected as stated in Article 18 b-2 of the national constitution. From regional to local regulations, from 2021, the legal position of the bayan indigenous community was also stated in the provincial regulation No. 11 Tahun 2021, regent regulation No. 42 Tahun 2022, and No. 153/13/DP2KBPM/2023.

From a religious perspective, the indigenous community of Bayan has religious beliefs called “*wetu telu*”. In delivering the religious beliefs, the community utilizes “*wetu telu*” as a philosophical foundation in doing religious practices. Along with this, in this philosophical principle, it is believed that as human beings, we have to remember where we come from and where we will return. This can also indicate that, when human beings utilize forest resources, they have to remember that the forest is a God-given gift and therefore must be protected for future generations, because when human beings die, they will return to God and God will ask for their responsibility in managing the forest. This religious value is expressed in a principle of “*wetu telu itu arak kon dirik, ulek ngaro dirik*”. In commemorating the Prophet of Muhammad, the community also performs traditional rituals not only in the traditional mosques of Bayan Beleq but also in *Pawang Mandala*, emphasizing that the forest is sacred and the only activities allowed there are related to religious and cultural practices, as well as other non-extractive ones.

As a sacred forest, the natural resources of Mandala forest (*Pawang Mandala*) cannot be utilized without concern; therefore, a set of regulations was established by the indigenous community of Bayan. First, to utilize the forest resources, the community has to pass a decision-making process through cooperative discussion called “*musyawarah adat/gundem/sangkep/romo-romo*”. Moreover, a set of regulations that includes what is allowed and not allowed, called “*awig-awig*” has been institutionalized in a village



regulation No. 1 Tahun 2016. For example, illegal logging in the forest or fishing in the river using poison will be punished, such as the suspect must pay a certain amount of money or pay using animal farms (buffalo or cow). These regulations ensure that vegetation and all biodiversity inside *Pawang Mandala* are protected because the punishments are expensive.

In addition, the indigenous community of Bayan acknowledges the importance of *Pawang Mandala* as a spring, a source of water for people and for agricultural irrigation. During the rainy season before rice planting, the community performs a traditional ritual in the forest called “*selamat olor*”. The ritual aims to pray for God to provide enough water for agriculture. Following this, another ritual called “*tun bibit*” is performed to prepare rice seedlings. All these traditional rituals indicate that the community is internalizing its religious beliefs in real life, respecting the forest as God gift with its extensive benefits.

### 3.3. Challenges and Opportunities

On the one hand, indeed, utilizing indigenous values and wisdom in protecting nature is widely recognized within the context of Indonesia, but the challenges remain (Tran et al., 2020), as does in case of the sacred forest of *Pawang Mandala*. Tran et al. (2020) highlighted that in many parts of the world, indigenous communities themselves will not be able to succeed without support from governments and other stakeholders. Often, indigenous communities, without state recognition supporting their rights, are vulnerable due to inadequate resources, income, and education (Gabriel et al., 2020). As a consequence, without collaboration and government support, indigenous communities are also vulnerable to displacement from their lands of forests (Jerez, 2021). Most importantly, as the elderly will be gone, rejuvenation of the indigenous community leaders is necessary to ensure that indigenous values and wisdom remain. Therefore, the challenge of the continuation of protecting the forest through the utilization of indigenous values and wisdom must be passed to the young generations (Abas et al., 2022).

On the other hand, establishing the forest as a sacred place does not undermine its other potential but rather optimizes the various ecosystem services it provides. In addition to extracting goods such as timber and other forest products, forests also offer cultural ecosystem services (Zhang et al., 2020). Therefore, enhancing these services represents a choice. In the case of *Pawang Mandala*, the indigenous community of Bayan has internalized these values and wisdom into their daily lives, allowing it to function as a cultural ecosystem service. One area that can be developed, which has concerned the community, is tourism, both eco-tourism and edu-tourism. Making forests as tourism attractions is ecologically friendly (Lee & Youn, 2022) and economically beneficial (World Bank, 2024).

An important point to consider in overcoming the challenges and to facilitate the aforementioned opportunities, the Bayan indigenous community's practice in protecting its forest as a sacred place requires strategic approaches. According to collaborative environmental governance frameworks, establishing a forest as a tourist attraction requires stakeholder engagement (Roengtam & Agustiyara, 2022). Therefore, the Bayan indigenous community, along with governments and other stakeholders, should strengthen collaborative governance, starting from planning, decision-making, and implementation.

#### 4. Conclusion

To summarize, it is undeniable that forests, regardless of location, provide tremendous benefits for humans. This is also true in the forest along the Rinjani mountain valley, such as in the Village of Bayan, where the indigenous community of Bayan heavily relies on forest ecosystem services, primarily for water sources used in daily life and agriculture. Accordingly, the indigenous community protects the forest by utilizing their indigenous values and wisdom, making the forest a sacred place called Pawang Mandala. This practice serves not only as a practical means of forest protection but has also been internalized in their religious beliefs. Nonetheless, along with human advancement, this indigenous practice faces significant challenges and therefore requires a strategic approach to both overcome these challenges and promote new opportunities. A proposed strategic approach that could serve as a solution is to promote the indigenous practice and the sacred forest of Pawang Mandala as a tourist attraction by strengthening collaborative governance among the government, the indigenous community of Bayan, and other stakeholders.

Regardless that the Bayan indigenous forest size is not as large as other customary forests in Indonesia, such as Rumbio forest in Riau (Nasution et al., 2018) or Yano Akrua in Papua (Suryawan, 2022), it is considered an important strategy for forest conservation, emphasizing not only indigenous values as conservation tools but also as values to be respected. A notable difference is that the Bayan indigenous community has been nationally recognized by the state, with the respective legal status, such as regulation, from the village to provincial and national levels. Although every customary forest in Indonesia shares almost similar foundation of protection through indigenous values, in practice, they are different depending on each indigenous community's values and beliefs. The case of Bayan Sacred Forest, an example of successful indigenous values implementation in forest protection, could contribute to theoretical domains in incorporating the human dimension into nature protection, as highlighted by scholars, particularly in understanding nature and culture as inseparable variables to successfully protect nature.

#### 5. Acknowledgement

The author thanks all people who helped with this research, particularly colleagues and friends from the indigenous community of Bayan for their valuable information.

#### 6. 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.
- Achiso, Z. (2020). Biodiversity and human livelihoods in protected areas: a worldwide perspective—a review. *SSR Institute of International Journal of Life Sciences*, 6(3), 2565-2578.
- Apricia, N. (2022). Hak Negara Dan Masyarakat Hukum Adat Atas Hutan Adat. *SIBATIK JOURNAL: Jurnal Ilmiah Bidang Sosial, Ekonomi, Budaya, Teknologi, Dan Pendidikan*, 1(7), 1255-1262.
- Bicknell, J. E., Collins, M. B., Pickles, R. S., McCann, N. P., Bernard, C. R., Fernandes, D. J., ... & Smith, R. J. (2017). Designing protected area networks that translate

international conservation commitments into national action. *Biological Conservation*, 214, 168-175.

- BRWA. (2025). Wilayah Adat Bayan. (Online). <https://brwa.or.id/wa/view/b0xKTmJmX2dTb00>
- Dhiaulhaq, A., & McCarthy, J. F. (2020). Indigenous rights and agrarian justice framings in forest land conflicts in Indonesia. *The Asia Pacific Journal of Anthropology*, 21(1), 34-54.
- Effendi, M. R., Setiadi, E., & Nasir, M. A. (2020). The Local Wisdom Based On Religious Values A Case Of Indigenous People In Indonesia. *Internasional Journal of Humanities & Social Sciences Reviews*.
- Gabriel, A. G., De Vera, M., & B. Antonio, M. A. (2020). Roles of indigenous women in forest conservation: A comparative analysis of two indigenous communities in the Philippines. *Cogent social sciences*, 6(1), 1720564.
- Helmi, H., Pebrianto, D. Y., Hafrida, H., Kusniati, R., & Saputra, B. (2023). Local Wisdom in Indonesia: Assessing its Legal Status and Role in Forest Protection. *Jambe Law Journal*, 6(2), 125-141.
- Jerez, M. M. (2021). Challenges and opportunities for Indigenous Peoples' sustainability.
- Jones, J., Ellison, D., Ferraz, S., Lara, A., Wei, X., & Zhang, Z. (2022). Forest restoration and hydrology. *Forest Ecology and Management*, 520, 120342.
- Kumar, R., Kumar, A., & Saikia, P. (2022). Deforestation and forests degradation impacts on the environment. In *Environmental degradation: Challenges and strategies for mitigation* (pp. 19-46). Cham: Springer International Publishing.
- Leberger, R., Rosa, I. M., Guerra, C. A., Wolf, F., & Pereira, H. M. (2020). Global patterns of forest loss across IUCN categories of protected areas. *Biological Conservation*, 241, 108299.
- Lee, H., & Youn, Y. C. (2022). Relevance of cultural ecosystem services in nurturing ecological identity values that support restoration and conservation efforts. *Forest Ecology and Management*, 505, 119920.
- Ma'shum, M., & Idris, M. H. (2021, November). The future of Wallace region in Lombok: the pristine natural resource under climatic and anthropogenic threat. In *IOP Conference Series: Earth and Environmental Science* (Vol. 913, No. 1, p. 012049). IOP Publishing.
- Mahdavi, L., Hashemi, F., & Yazdani, S. (2024). Forest-Dependent Communities and Livelihood Diversification: A Case Study. *Journal of Selvicoltura Asean*, 1(6), 259-270.



- Ministry of Environment and Forestry. (2024). Renstra 2020-2024 Pusat Pengendalian Pembangunan Ekoregion Bali dan Nusa Tenggara. Jakarta: Indonesia
- Nasution, F., Rahayu Prasetyaningsih, S., & Ikhwan, M. (2018). identifikasi jenis dan habitat jamur makroskopis di hutan larangan adat Rumbio Kabupaten Kampar Provinsi Riau. *Wahana Forestra: Jurnal Kehutanan*, 13(1), 64-76.
- Nurhidayah, L., & Alam, S. (2020). The forest and its biodiversity: Assessing the adequacy of biodiversity protection laws in Indonesia. *Asia Pacific Journal of Environmental Law*, 23(2), 178-201.
- Osburn, E. D., Badgley, B. D., Strahm, B. D., Aylward, F. O., & Barrett, J. E. (2021). Emergent properties of microbial communities drive accelerated biogeochemical cycling in disturbed temperate forests. *Ecology*, 102(12), e03553.
- Phillips, A., & World Conservation Union. (2002). *Management guidelines for IUCN category V protected areas: Protected landscapes/seascapes* (Vol. 9). Gland, Switzerland: Iucn.
- Purwanto, Y. (2022). Sacred Forests, Sacred Natural Sites, Territorial Ownership, and Indigenous Community Conservation in Indonesia. In *Sacred Forests of Asia* (pp. 261-276). Routledge.
- Rahayu, M. I., Susanto, A. F., & Sudiro, A. (2024). The Principle of Local Wisdom as a Basic Framework in the Formation of Cosmic Religious Environmental Law. *Indon. L. Rev.*, 14, 204.
- Roengtam, S., & Agustiyara, A. (2022). Collaborative governance for forest land use policy implementation and development. *Cogent social sciences*, 8(1), 2073670.
- Suryawan, I. N. (2022). Membangun Kampung Adat Dan Juga Melawan Investasi: Artikulasi Adat Di Kabupaten Jayapura, Papua. *Masyarakat Indonesia*, 48(1), 31-46.
- Simarmata, R. (2024). The The Current Updates of the Progresses and the Challenges of Recognition of Customary Forests in Indonesia. *Jurnal Ilmu Kehutanan*, 18(2), 142-152.
- Tran, T. C., Ban, N. C., & Bhattacharyya, J. (2020). A review of successes, challenges, and lessons from Indigenous protected and conserved areas. *Biological Conservation*, 241, 108271.
- Unesco. (2018). Rinjani-Lombok UNESCO Global Geopark. (Online). <https://www.unesco.org/en/igpp/rinjani-lombok-unesco-global-geopark>
- Wani, A. M., & Sahoo, G. (2020). Forest ecosystem services and biodiversity. In *Spatial modeling in forest resources management: Rural livelihood and sustainable development* (pp. 529-552). Cham: Springer International Publishing.

- World Bank. (2024). The Economic Benefits of Nature-Based Tourism. (*Online*). <https://www.worldbank.org/en/topic/environment/brief/nature-based-tourism>
- Zhang, Q., Li, Y., Yu, C., Qi, J., Yang, C., Cheng, B., & Liang, S. (2020). Global timber harvest footprints of nations and virtual timber trade flows. *Journal of Cleaner Production*, 250, 119503.