

ASSESSING THE ROLE OF STATE AND NON-STATE ACTORS IN PROMOTING ENVIRONMENTAL SECURITY: CASE STUDY OF ISYO HILLS ECOTOURISM DESTINATION IN RHEPANG MUAIF VILLAGE, JAYAPURA REGENCY

Floranesia Lantang¹, Gusti Patading², Muhammad Yamin³

^{1,2}Pelita Harapan University

³Jenderal Soedirman University

E-mail: floranesia.lantang@uph.edu, gusti.patading@uph.edu, muhammad.yamin@unsoed.ac.id

ABSTRACT

Deforestation has become the primary concern of environmental security in Jayapura Regency Papua Province due to massive logging and illegal wildlife hunting. This research focuses on the role of state and non-state actors in promoting environmental security in Rheapang Muaif Village Jayapura Regency through the Isyo Hills ecotourism destination. Indigenous peoples in Rheapang Muaif Village harbored concern about land clearing in their customary forest caused by palm oil company activities. To support the research, a qualitative research method with thematic analysis is conducted with primary and secondary data collection. This research found four main actors, namely the state/government, academics, NGOs, and the youth community. Each actor significantly contributes to supporting the achievement of environmental security in Rheapang Muaif village. The government plays a role in forming regulations that support conservation and infrastructure assistance. Academics play a role in conducting research and community services. Additionally, NGOs play a role in the initial mapping of Rheapang Muaif village and its biodiversity potential. Meanwhile, the youth community plays an important role in promoting ecotourism and raising the potential of this village to receive the 2024 Tourist Village Award.

Key words: Deforestation, Environmental security, Rheapang Muaif Village, Isyo Hills, Papua

ANALISIS PERAN AKTOR NEGARA DAN NON-NEGARA DALAM MENDUKUNG KEAMANAN LINGKUNGAN: STUDI KASUS EKOTURISME ISYO HILLS DI KAMPUNG RHEPANG MUAIF, KABUPATEN JAYAPURA

ABSTRAK

Deforestasi telah menjadi perhatian utama keamanan lingkungan di Kabupaten Jayapura Provinsi Papua akibat pembalakan liar dan perburuan ilegal satwa endemik. Penelitian ini berfokus pada peran aktor negara dan non-negara dalam mempromosikan keamanan lingkungan di Kampung Rheapang Muaif pada Kabupaten Jayapura melalui destinasi ekowisata Isyo Hills. Masyarakat adat di Kampung Rheapang Muaif menaruh perhatian pada pembukaan lahan pada hutan adat sebagai dampak kegiatan perusahaan kelapa sawit. Penelitian kualitatif dilakukan dengan analisis tematik dimana data dikumpulkan secara primer melalui wawancara, dan secara sekunder melalui kajian literatur. Penelitian ini menemukan bahwa terdapat sinergitas peran antara aktor negara yaitu pemerintah pusat dan daerah serta aktor non-negara seperti akademisi, NGOs, dan komunitas pemuda. Pemerintah berperan dalam menyusun regulasi dan bantuan infrastruktur. Akademisi berperan dalam pemetaan potensi mula-mula kampung Rheapang Muaif, serta melalui berbagai program penelitian dan pengabdian kepada masyarakat. NGOs berperan dalam mendukung pemetaan dan potensi kampung. Sementara komunitas pemuda berperan penting dalam mempromosikan ekowisata dan meningkatkan potensi kampung sehingga mendapatkan anugerah desa wisata pada tahun 2024.

Kata kunci: Deforestasi, Keamanan Lingkungan, Kampung Rheapang Muaif, Isyo Hills, Papua

INTRODUCTION

Environmentalists and officials alike are becoming increasingly concerned about Indonesia's rapidly increasing pace of deforestation. Indonesia, which houses the world's third-largest tropical rainforest after Brazil and the Democratic Republic of Congo, has experienced a substantial decline in its forest area in recent years (Margono et al., 2014). The escalating pattern has significant ramifications for biodiversity, climate change, and the sustenance of indigenous groups

reliant on these forests for their life (Abram et al., 2016). As the second largest island in Indonesia, Papua is, known for its exceptionally pure and biodiverse forests, yet currently faces challenges of deforestation due to massive logging and land clearing. Meanwhile, Papua's forests provide sustenance for the indigenous communities and serve as a natural habitat for a wide range of unique species, such as the renowned bird of paradise (*Cenderawasih*) (Marshall et al., 2007).

Papua has seen several noteworthy attempts to lessen the effects of deforestation and

enhance environmental security, despite the dire circumstances. An instance of this can be seen in the establishment of the Birds of Paradise Ecotourism Center in Rheapang Muaif Village, Nimbokrang District, Jayapura Regency, Papua Province. This conservation program, which is focused on community participation, has united several stakeholders, such as government entities, non-governmental organizations (NGOs), and indigenous tribes, to safeguard the forests and their diverse range of species (WWF Indonesia, 2018). The conservation village's use of a collaborative approach has been praised as an exemplary example of managing forests sustainably and empowering the community (Rumbiak, 2021). Nevertheless, there is a scarcity of studies investigating the precise functions and contributions of various participants in this cooperative endeavor and its effects on environmental security in the area.

This study seeks to address this deficiency by examining the roles of governmental and non-governmental entities in advancing environmental security towards the deforestation challenge in Grime Valley's forest. This study aims to analyze the roles and contributions of various stakeholders, such as government agencies, NGOs, and indigenous groups, to gain a better understanding of how multi-stakeholder partnerships may effectively tackle intricate environmental issues. In addition, this article places the case study in the larger framework of environmental security and sustainable development. This contributes to the expanding collection of literature that emphasizes the significance of collaborative governance in attaining the Sustainable Development Goals (SDGs) as outlined by the United Nations in 2015.

This article's main contention is that efficient cooperation between state and non-state actors is responsible for the Birds of Paradise Conservation Village's effectiveness in achieving environmental security. Through utilizing their capabilities and knowledge, these individuals have successfully created and executed a thorough conservation plan that effectively addresses both environmental requirements and the needs of the nearby populations. This cooperative strategy has not only reduced the immediate risks to the forests and their variety of life but also established the basis for enduring and environmentally friendly progress in the area. The results of this research have significant ramifications for policymakers, conservationists, and indigenous populations that are dealing with comparable environmental difficulties in different regions of the globe.

The notion of environmental security has experienced notable growth in popularity in the past few years due to the mounting concerns

surrounding climate change, deforestation, and other environmental issues. As stated by the United Nations Development Programme (1994), environmental security is considered one of the seven facets of human security, which also includes economic, food, health, personal, community, and political security. This perspective emphasizes the interconnectedness of environmental sustainability and human well-being, and the necessity of a comprehensive strategy for tackling environmental concerns (Barnett, 2001). According to UNDP, threats to environmental security include climate change, environmental degradation, droughts, diminishing water sources, and grazing land. To respond to existential threats, UNDP further promotes four approaches to be applied in national plans such as people-centered, comprehensive, context-specific, and prevention-oriented (The United Nations Trust Fund for Human Security, 2016). Nevertheless, the notion of environmental security is a subject of debate, since several academics contend that it is excessively expansive and lacks a precise delineation (Deudney, 1990).

Environmental deterioration can have serious consequences for both national and international security, a fact that is becoming increasingly acknowledged despite the continued discussions about it. Homer-Dixon (1994) contends that environmental scarcity, encompassing the exhaustion of renewable resources, the deterioration of the environment, and the uneven allocation of resources, can result in social and political instability, and perhaps escalate into violent conflicts. This phenomenon is especially noticeable in developing nations, where the deterioration of the environment frequently coincides with poverty, inadequate governance, and other social and economic difficulties (Khagram et al., 2003). The Niger Delta in Nigeria serves as a prominent illustration of the interplay between environmental deterioration resulting from oil exploration and the subsequent rise of societal discontent and war (Obi, 2010).

The international community has also acknowledged the connections between environmental deterioration and security. The United Nations Security Council has conducted multiple discussions regarding the security consequences of climate change. In 2007, it released a presidential statement expressing apprehension about the possible effects of climate change on global peace and security (United Nations Security Council, 2007). This event represented a notable change in the global conversation about environmental security, as it raised the topic to the highest echelons of global governance. Nevertheless, the global reaction to

environmental security concerns has faced criticism for its fragmented and insufficient nature, prompting some experts to advocate for a more comprehensive and proactive strategy (Conca & Dabelko, 2002).

The intricacy and interdependence of the issues at hand make environmental security one of the main concerns to be addressed. Environmental degradation frequently arises from the intricate interaction of social, economic, and political elements. To tackle these difficulties, a comprehensive approach including multiple sectors and stakeholders is necessary (Levy, 1995). The concept of collaborative governance is applicable in this context. Collaborative governance is the practice of convening a wide range of stakeholders, such as government agencies, civil society organizations, and local communities, to cooperatively tackle intricate issues (Ansell & Gash, 2008). Collaborative governance in the realm of environmental security can serve as a means to connect top-down policy interventions with bottom-up community-based efforts. This approach promotes a more comprehensive and efficient response to environmental concerns, fostering inclusivity and effectiveness (Gerlak & Heikkila, 2011).

The Birds of Paradise Conservation Village in Rheapang Muaif, Papua, Indonesia, is a remarkable illustration of how environmental security may be advanced through collaborative governance. The conservation village was created through a collaboration between the local indigenous community, government agencies, and international NGOs. Its purpose is to safeguard the distinct biodiversity of the area and simultaneously support sustainable livelihoods for the local population (WWF Indonesia, 2018). The adoption of this cooperative strategy has effectively reduced the risks associated with deforestation, illicit logging, and other environmentally harmful activities. Furthermore, it has enabled the local population to actively participate in the preservation of their natural resources (Rumbiak, 2021).

The efficacy of collaborative governance as a mechanism for advancing environmental security is underscored by the accomplishments of the Birds of Paradise Conservation Village. Collaborative governance facilitates the development of more efficient and enduring solutions to intricate environmental problems by uniting many parties and utilizing their unique skills and experience. Nevertheless, the effectiveness of collaborative governance relies on other elements, such as the eagerness of stakeholders to participate in discussions and collaboration, the presence of sufficient resources and support for capacity building, and the

presence of a conducive policy framework (Emerson & Nabatchi, 2015). As the globe faces increasing challenges from environmental degradation, the significance of collaborative governance in advancing environmental security will continue to rise. Previous literature regarding Nimbokrang District and Deforestation remains limited in the scope of ecological and anthropological context. Research (Pangau-Adam et al., 2021) Explores how logging poses a negative impact on bird-dispersed plants in the Nimbokrang District (Pangau-Adam et al., 2021). Subsequently, other research from (Sufaati et al., 2017) Reveals that the Indigenous community's knowledge of the conservation of their customary forest is well established, yet support from both government and nongovernmental actors is crucial to improving ecotourism in Rheapang Muaif Village. Meanwhile, only one existing literature related to this research focuses on the establishment of Isyo Hills in countering Palm Oil Company in Rheapang Muaif Village with the support of the local government and WWF Foundation. (Murib et al., 2023). Based on the existing literature, research about Rheapang Muaif Village remains focused on anthropology and ecology perspectives. Therefore, this research provides a new perspective through the lens of security studies, especially environmental security. Furthermore, the assessment of collaborative efforts both from state and non-state actors such as NGOs, Universities, and the Youth community is still not elaborated on in the previous studies.

METHOD

The study uses a qualitative design, which is appropriate for examining intricate social issues and documenting the viewpoints and experiences of various participants (Creswell & Poth, 2018). Qualitative research provides a comprehensive understanding of the background, procedures, and results of collaborative governance between state and non-state actors in promoting environmental security in Rheapang Muaif Village, Nimbokrang District, Jayapura Regency, Papua Province. This methodology allows the researchers to collect comprehensive and subtle data that can contribute to the creation of theories and recommendations for policies.

Primary data were collected through field research involving interviews and observation in Rheapang Muaif Village. Interviews were conducted with 6 individuals representing relevant stakeholders such as Indigenous peoples in Rheapang Muaif Village, NGOs, and community leaders who assist in the promotion of the Rheapang Muaif ecotourism site. Interviews

were carried out in a snowball technique and analyzed through the thematic process (Braun and Clarke, 2006). There are two main themes of data collected for this research. First, data about the threat to environmental security and the initial establishment of Isyo Hills' ecotourism site. Secondly, data about state and nonstate actors' efforts in promoting environmental security in Rhepang Muaif Village. Meanwhile, secondary data were collected through library research from documents such as journals and local newspapers. The interview and focus group data are transcribed exactly as spoken and analyzed using a combination of deductive and inductive coding. The deductive codes are formed from the study questions and theoretical framework, but the inductive codes arise directly from the data. The codes are further categorized into themes and sub-themes that encompass the primary patterns and insights derived from the data. The process of document analysis is employed to cross-reference and provide a broader framework for the conclusions drawn from the interviews and focus groups. (Lincoln & Guba, 1985). The conclusive examination is conveyed through a comprehensive account that incorporates the viewpoints of various stakeholders and emphasizes the crucial insights gained from the cooperative management of the Birds of Paradise Conservation Village.

RESULTS AND DISCUSSION

a. Threats on environmental security and the initial development of Isyo Hills Ecotourism Destination

Rhepang Muaif Village stretches for 190.5 km² and is located in the Grime Valley in Jayapura Regency, Papua Province. This valley covers an area of approximately 900.000 ha from Kemtuk District in the East to Airu District in the South (Greenpeace, 2024). There are nine family clans inhabits this area, namely the Wouw, Bay, Bano, Waipon, Waisimon, Demongkreng, Bernifu, Kekri, and Tecuari. (Saroh, 2016). Road access from the capital of Papua Province to Rhepang Muaif Village is around 2 hours and 30 minutes by vehicle.

Since 2012, Grime Valley has been facing the challenge of deforestation due to massive logging and land clearing, as well as illegal wildlife hunting of the birds of paradise. Of all these challenges, the biggest concern has been focused on land-clearing conducted by Permata Nusa Mandiri Company (PNM Company) which concentrates on palm oil plantation. This company obtained a forest estate release permit from the Ministry of Forestry of the Republic of Indonesia to cover an area of 16.000 ha in Grime Valley

since 2014. In 2018, PNM Company even obtained cultivation rights on land over several plots of land in Grime Nawa Valley (Greenpeace Indonesia et al., n.d.). Contrary to the government's regulation that permits land clearing for PNM Company, the indigenous peoples of Grime Valley instead raised concerns about customary forest and illegal permits of the company under indigenous' customary law. In 2022, the tension between companies and Indigenous reaches its peak when 100 representatives of indigenous peoples from Grime Valley (Namblong tribe) submitted their proposal to the Regent of Jayapura to revoke the decree issued in 2014 regarding environmental permits to PNM Company operating in the Grime and Nawa areas (Wicaksono, 2022). In April 2022, The Ministry of Forestry revoked the forest release permit of PNM Company. Following this, the local government under the regent of Jayapura also issued a letter to revoke the PNM Company permit and operation. However, even though the land clearing permit has been revoked, indigenous peoples still find PT PNM operating in the valley of Grime and Nawa area. (Agung et al., 2023).

The existential threat on Grime Nawa's forest encourages Indigenous peoples from Grime Valley to protect and manage their customary forest. One of the successful efforts is the establishment of an ecotourism center named "Isyo Hills" which focuses on educational and leisure purposes. Isyo Hills offers special tourism activities mainly bird watching of the birds of paradise and other Papuan endemic animals such as cassowary, butterflies, insects, and papuan frogmouth. Isyo Hills was established by Alex Waisimon in 2016 as his initiative to protect Rhepang Muaif's forest. (Costa & Alfajri, 2022).

Recently, Isyo Hills has employed 15 individuals, especially from two family clans' of Waisimon and Wouw. Both clans are responsible for protecting the customary forest, identifying endemic animals inside the forest, and serving domestic and international tourists for leisure, educational, and research purposes. For instance, when tourists want to spot wild cassowaries, the Waisimon clan will be responsible for managing the trip as cassowaries' natural habitat is inside Waisimon's customary forest (Interview, CW 2024).

Most of the visitors who visit Isyo Hills are dominated by foreign visitors mainly from America and Europe with a special interest in research and bird watching the birds of paradise, butterflies, and grasshoppers (Interview, AM, 2024). International visitors usually come from May to October (EW, Interview, 2024). Meanwhile, domestic visitors' interest is usually

in group or company outings. Isyo Hills' facilities include lodges and a hall area with a dining room built with local materials. Visitors could experience local culture through traditional food served by Isyo for example "swamening" or processed sago food mixed with coconut and various local spices wrapped in sunset hibiscus leaves. Since its establishment in 2016, Isyo Hills has received support both from state and non-state actors. State actors from national to local government show their role as regulators to protect Grime Nawa's customary forest. Nonstate actors such as Non-governmental organizations, academics, and the youth community provide educational and technical assistance to support Isyo Hill's program in conserving Grime Valley's forest as well as empowering indigenous peoples in the region.



Figure 1. Hall area of Isyo Hills

Source: author's documentation



Figure 2. Traditional Kitchen at Isyo Hills

Source: author's documentation



Figure 3. Customary forest at Isyo Hills

Source: author's documentation

b. The Role of State and Non-State Actors in Promoting Environmental Security

Coping environmental security threats requires comprehensive approaches both from governmental and non-governmental entities. This research identified four main actors involved in promoting the environmental security of Rheapang Muaif Village through the Isyo Hills ecotourism destination. The government contributes to policy-making that supports indigenous peoples' aspiration towards deforestation challenges. Non-state actors such as academics, Non-governmental organizations, as well as youth community provide technical and educational support to Isyo Hills in developing an ecotourism program. These four main actors play their significant roles as depicted in the figures below.

Governments	NGOs	Academic (Universities)	Youth Community
<ul style="list-style-type: none"> •Support infrastructure developments • support the ecosystem through animal release program •Circular Letter from the Governor of Papua 2017 •Circular Letter Ministry of Environment and Forests about Birds of Paradise Conservation 2018 • Regent's decree in 2018 regarding the designation of Isyo Hills ecotourism as a customary forest 	<ul style="list-style-type: none"> •Conduct early Mapping and survey to strengthen locals capacities •Provide knowledge assistance for species identification (in collaboration with universities) •Encourage the development of "environmental service" on bird watching to avoid illegal logging •Annual monitoring and evaluation 	<ul style="list-style-type: none"> •Mapping potential sources from the jungle (Local wisdom, local medicines, local food) •Mapping indigenous plants where the bird inhabits •Support the ecotourism through series of sustainable community development program 	<ul style="list-style-type: none"> •Promote the ecotourism through social media •Assist the ecotourism to be recognized nationally through achieving an award (in order to attract more visitors)

Figure 4. System of support from state and non-state actors to Birds of Paradise Conservation Village-Rheapang Muaif

Source: Author

State actors, in this case, the central government local governments, and state-owned enterprises play an important role in aspects of regulations, infrastructure developments, and conservation programs. Despite initially PNM

Company's permit was granted by the government, this policy was later withdrawn. Instead of allowing the land clearing, governments revoked the company's permit and turned to support Indigenous efforts on ecotourism through Isyo Hills. Subsequently, strong support from the government later shown through Jayapura regent's letter about Nimbokrang customary forest in Rheapang Muaif Village and especially Isyo Hills. In addition to that, in 2017, the governor of Papua issued a circular letter regarding the limited use of the birds of paradise as accessories and souvenirs. This was then strengthened by regulations in a circular letter from the Minister of Environment and Forestry in 2018 with the contents of the regulation, namely not using accessories for real birds of paradise to prevent hunting and illegal trade.

Besides regulations made by national to local government, the Papua Natural Resource Conservation Agency often conducted animal release programs in Isyo Hills' customary forest. In 2021, 76 endemic animals, such as cassowaries, black-headed muskrats, cockatoos, and mambruk, were released inside the Rheapang Muaif forest. (Kementerian Lingkungan Hidup dan Kehutanan, 2021). In 2022, 38 endemic animals such as mambruk, cockatoo, musk parrot, parrot, Papua butcher, and chef's cockatoo were released in Isyo Hills. These animals were mostly caught from East Java due to illegal smuggling and some of them were handed over from the community in Jayapura. (Jubi, 2022). In 2017, support was also provided by State-Owned Enterprises (BUMN) consisting of PT Garuda Indonesia, PT Telkom Indonesia, PT Bank BNI Tbk, PT Wijaya Karya, PT Bank Mandiri, PT PLN, and PT Pembangunan Perumahan. The assistance provided is the construction of infrastructure such as natural school classrooms, homestay facilities and infrastructure, natural libraries, bird observation monitoring towers, and improvements to nature trails. (Paino, 2017).

Non-state actors also play a significant role in empowering Indigenous peoples to further develop ecotourism in the Isyo Hills area. We identified three non-state actors such as academics, Non-governmental organizations, and the youth community. Academics' contribution mainly to research and community empowerment programs. Cenderawasih University, for instance, has conducted forest exploration, herbarium, and identification of medicinal plants inside Isyo Hills' forest area. Research from Maryuni et al. Identified 28 types of medicinal plants inside Isyo Hills' forest that can be used to treat wounds, infections, fever, malaria, digestive system, toothache, shortness of breath, and internal

diseases. Some of these plants are papaya, ant nest, striped wood, *mesung sabi*, *wasino*, cat's whiskers, lemongrass, bitter, plantain, galangal, *giawas*, and water guava (Maryuni et al., 2010). Other research from Raunsay et al. conducted an identification of the diversity of the birds of paradise. From the research that was conducted in 2016, there were several species identified namely lesser bird of paradise (9 individuals), twelve-wired bird of paradise (2 individuals), king bird of paradise (7 individuals), and sickle bill bird of paradise (2 individuals). (Raunsay et al., 2016). Additionally, another research conducted by the Department of Biology of Cenderawasih University focuses on the diversity of tree species where the birds inhabit. Of 64 tree species identified, 5 of them are significant for the birds of paradise, especially for playing, perching, eating, and chirping of the bird of paradise (Lahallo et al., 2022). Recently, academics also working to support garden construction in the front area of the Isyo Hills site (Interview, CW 2024).

Along with academics, Non-Governmental Organizations (NGOs) such as Greenpeace and World Wildlife Fund (WWF) contributed to the transfer of knowledge through consultations, research, monitoring, and campaigns. Greenpeace carries out three forms of monitoring, namely ecological monitoring, compliance monitoring, and policy monitoring. In terms of ecological monitoring, Greenpeace identifies threats of deforestation and environmental damage by collecting actual data in the field. Second, in terms of compliance monitoring, Greenpeace monitors company licensing compliance and also local government compliance. Third, in terms of policy monitoring, Greenpeace identifies relevant policies and provides recommendations for improving policies to prevent deforestation. (Agung et al., 2023).

Significantly, the World Wildlife Fund (WWF) Papua Program also provided long-standing support for ecotourism conservation ever since the initial development of Isyo Hills. WWF conducted a mapping of ecotourism potential focusing on environmental services and non-timber forest products. As a result of WWF's mapping, Isyo Hills' forest area is prospective to be developed as an environmental service program. Community-based conservation through Indigenous knowledge in Rheapang Muaif Village will highly likely strengthen environmental services to protect their forest but at the same time improve the livelihood of local peoples (Interview, L, 2024).

In addition to NGOs, the youth community is also part of the rising actor who consistently provides technological support and environmental

services in promoting Isyo Hills as a sustainable ecotourism destination. Isyo Hills has employed youth in their respective village as tour guides. Some of them previously engaged in illegal logging activities around Nimbokrang's forest. Their involvement in Isyo Hills shows how an ecotourism destination could become a positive arena where youth could participate and educate themselves as well as the tourist regarding Papuan endemic animals (Interview, DW, 2024).

Furthermore, a youth community group from the nearby village of Jayapura Regency was voluntarily involved in supporting Isyo Hills' ecotourism as well as Rheapang Muaif Village. As a youth-led community organization based in Yoboi Village, *Pace Kreatif* not only promotes Papuan ecotourism but also provides technological and administrative support to Isyo Hills. This youth community succeeded in bringing Yoboi Village to obtain the title of top 50 "Tourist Village Award" by The Ministry of Tourism and Creative Economy of The Republic of Indonesia in 2021. This youth-led group collaborated with Isyo Hills to promote Rheapang Muaif Village in 2024 and was successful in bringing Rheapang Muaif to the top 50 of the Tourist Village Award. The election of Rheapang Muaif as a tourist village in Papua Province will certainly open the way for various collaborations between governmental and non-governmental entities in the future (Interview, BT, 2024).

CONCLUSION

Papua's forest has received increasing attention due to land-based extractive industries activities including palm oil plantations. In Jayapura Regency of Papua Province, indigenous peoples have struggled to tackle these challenges by establishing an ecotourism destination called "Isyo Hills" in 2016. Located in Rheapang Muaif Village, Isyo Hills focuses offers leisure and educational purposes, with a specific excellence on bird-watching the birds of paradise. Ever since its establishment, Isyo Hills has received support both from state and non-state actors. State actors mainly central to local government provide regulatory support to indigenous peoples in Rheapang Muaif Village. Additionally, non-state actors such as academics, NGOs, and the youth community contributed to educational and technological support to develop Isyo Hills' ecotourism potential. Academics from local universities show support through research and community service programs. NGOs such as WWF supported biodiversity mapping as well as identifying environmental services for Isyo Hills' ecotourism potential. Moreover, Greenpeace conducted advocacy and campaigns to protect

Grime Nawa's forest at large. Furthermore, youth communities such as "Pace Kreatif" from Yoboi Village provide technological assistance and transfer knowledge in bringing Rheapang Muaif Village to be recognized as a "Tourist Village Award" in Indonesia. The role of state and non-state actors in supporting Isyo Hills ecotourism shows how environmental security could be effectively achieved comprehensively. Subsequently, the direct involvement of indigenous peoples in Rheapang Muaif Village to support Isyo Hills is a key strength of how a people-centered and context-specific approach to environmental security is implemented. However, a focus on a prevention-oriented approach should be considered in the future, especially regarding forest permits that include indigenous peoples.

ACKNOWLEDGMENTS

This article was funded by The Research and Community Service Institute (LPPM) Pelita Harapan University under contract number P-42-FISIP/VII/2023. We would like also to thank the Isyo Hills ecotourism site and *Pace Kreatif* youth community who assisted with our fieldwork in Jayapura.

REFERENCES

- Agung, B., Rahman, W., Putrawandi Karjaya, L., Dewanto, P. A., & Estriani, N. (2023). Peran Greenpeace Indonesia dalam Melindungi Lembah Grime Nawa dari Deforestasi di Papua. *Indonesian Journal of Peace and Security Studies*, 5, 91–114.
- Ansell, C., & Gash, A. (2008). Collaborative governance in theory and practice. *Journal of Public Administration Research and Theory*, 18(4), 543–571. <https://doi.org/10.1093/jopart/mum032>
- Barnett, J. (2001). The meaning of environmental security: Ecological politics and policy in the new security era. Zed Books.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Budiharta, S., Durrant, A., Fakhruzzi, A., Runting, R. K., Gaveau, D., & Mengersen, K. (2016). Oil palm–community conflict mapping in Indonesia: A case for better community liaison in planning for development initiatives. *Applied Geography*, 78, 33–44. <https://doi.org/10.1016/j.apgeog.2016.10.005>

- Conca, K., & Dabelko, G. D. (Eds.). (2002). *Environmental peacemaking*. Woodrow Wilson Center Press.
- COSTA, F. M. L., & ALFAJRI, I. (2022). *Cenderawasih Penyelamat Hutan Nimbokrang*. <https://www.kompas.id/baca/ilmu-pengetahuan-teknologi/2022/02/03/cenderawasih-penyelamat-hutan-nimbokrang>
- Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). SAGE Publications.
- Deudney, D. (1990). The case against linking environmental degradation and national security. *Millennium*, 19(3), 461-476. <https://doi.org/10.1177/03058298900190031001>
- Emerson, K., & Nabatchi, T. (2015). *Collaborative governance regimes*. Georgetown University Press.
- Gerlak, A. K., & Heikkila, T. (2011). Building a theory of learning in collaboratives: Evidence from the Everglades restoration program. *Journal of Public Administration Research and Theory*, 21(4), 619-644. <https://doi.org/10.1093/jopart/muq089>
- Guest, G., Bunce, A., & Johnson, L. (2006). How many interviews are enough? An experiment with data saturation and variability. *Field Methods*, 18(1), 59-82. <https://doi.org/10.1177/1525822X05279903>
- Homer-Dixon, T. F. (1994). Environmental scarcities and violent conflict: Evidence from cases. *International Security*, 19(1), 5-40. <https://doi.org/10.2307/2539147>
- Indrawan, M., Sumule, A., Wijaya, A., Kapisa, N., Wanggai, F., Ahmad, M., Mambai, B. V., & Heatubun, C. D. (2019). A time for locally driven development in Papua and West Papua. *Development in Practice*, 29(6), 817-823. <https://doi.org/10.1080/09614524.2019.1609907>
- Jubi. (2022). *Bird Watching Isyo Hills setahun dikunjungi hingga 400 wisatawan*.
- Kementerian Lingkungan Hidup dan Kehutanan. (2021). *BBKSDA Papua Lepasliarkan 76 Ekor Satwa Endemik Papua*. <https://ppid.menlhk.go.id/berita/siaran-pers/6066/bbk-sda-papua-lepasliarkan-76-ekor-satwa-endemik-papua>
- Khagram, S., Clark, W. C., & Raad, D. F. (2003). From the environment and human security to sustainable security and development. *Journal of Human Development*, 4(2), 289-313. <https://doi.org/10.1080/1464988032000087604>
- Krueger, R. A., & Casey, M. A. (2015). *Focus groups: A practical guide for applied research* (5th ed.). SAGE Publications.
- Lahallo, W., Tanjung, R. H. R., Suharno, & Sujarta, P. (2022). Diversity, composition, and important tree species for Cenderawasih bird activities in Rhepang Muaif ecotourism forest, Jayapura, Papua, Indonesia. *Biodiversitas*, 23(2), 741-749. <https://doi.org/10.13057/biodiv/d230219>
- Levy, M. A. (1995). Is the environment a national security issue? *International Security*, 20(2), 35-62. <https://doi.org/10.2307/2539228>
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. SAGE Publications.
- Margono, B. A., Potapov, P. V., Turubanova, S., Stolle, F., & Hansen, M. C. (2014). Primary forest cover loss in Indonesia over 2000-2012. *Nature Climate Change*, 4(8), 730-735. <https://doi.org/10.1038/nclimate2277>
- Marshall, A. J., Beehler, B. M., & Kartikasar, S. N. (2007). *Ecology of Indonesian Papua*. Periplus Editions.
- Maryuni, A. E., Siallagan, J., Agustini, V., & Adetyaningsih, D. C. (2010). PENDATAAN DAN PENANGKARAN TANAMAN OBAT TRADISIONAL DARI HUTAN ISYO HILL RHEPANG MUAIF, DISTRIK NIMBOKRANG, KABUPATEN JAYAPURA. *SAINS*, 10(1), 16-20.
- Obi, C. I. (2010). Oil extraction, dispossession, resistance, and conflict in Nigeria's oil-rich Niger Delta. *Canadian Journal of Development Studies*, 30(1-2), 219-236. <https://doi.org/10.1080/02255189.2010.9669289>
- Paino, C. (2017). *Tujuh BUMN Dukung Ekowisata Pemantauan Burung di Papua*. <https://www.mongabay.co.id/2017/11/20/tujuh-bumn-dukung-ekowisata-pemantauan-burung-di-papua/>
- Patton, M. Q. (2015). *Qualitative research & evaluation methods: Integrating theory and practice* (4th ed.). SAGE Publications.

- Raunsay, E., Akobiarek, M., Matani, D., Ramandei, L., & Simbiak, M. (2016). ANALYSIS OF THE DIVERSITY OF CENDERAWASIH BIRD POPULATIONS IN RHEPANG MUAIF, JAYAPURA REGENCY, PAPUA PROVINCE. *The Seybold Report Journal*. <https://doi.org/10.5281/zenodo.7501072>
- Rubin, H. J., & Rubin, I. S. (2012). Qualitative interviewing: The art of hearing data (3rd ed.). SAGE Publications.
- Rumbiak, W. (2021). Perjalanan Panjang Rheapang Muaif dalam Pengelolaan Hutan Berbasis Masyarakat. Mongabay. Retrieved from <https://www.mongabay.co.id/2021/06/05/perjalanan-panjang-rheapang-muaif-dalam-pengelolaan-hutan-berbasis-masyarakat/>.
- Rumbiak, W. (2021). Perjalanan Panjang Rheapang Muaif dalam Pengelolaan Hutan Berbasis Masyarakat. Mongabay. Retrieved from <https://www.mongabay.co.id/2021/06/05/perjalanan-panjang-rheapang-muaif-dalam-pengelolaan-hutan-berbasis-masyarakat/>
- Saroh, M. (2016). *WWF Masih Fokus Teliti Habitat Cenderawasih di Jayapura*. <https://tirto.id/wwf-masih-fokus-teliti-habitat-cenderawasih-di-jayapura-b4KW>
- United Nations Development Programme. (1994). Human Development Report 1994: New dimensions of human security. Oxford University Press.
- United Nations Security Council. (2007, April 17). Security Council holds first-ever debate on the impact of climate change on peace, and security, hearing over 50 speakers [Press release]. <https://www.un.org/press/en/2007/sc9000.doc.htm>
- United Nations. (2015). Transforming our world: The 2030 agenda for sustainable development. United Nations, Department of Economic and Social Affairs. <https://sdgs.un.org/2030agenda>
- WWF Indonesia. (2018). Kisah Kampung Konservasi Cenderawasih di Rheapang Muaif, Papua. WWF Indonesia. Retrieved from <https://www.wwf.id/kisah-kami/kisah-kampung-konservasi-cenderawasih-di-rheapang-muaif-papua>
- WWF Indonesia. (2018). Kisah Kampung Konservasi Cenderawasih di Rheapang Muaif, Papua. WWF Indonesia. Retrieved from [https://www.wwf.id/kisah-](https://www.wwf.id/kisah-kami/kisah-kampung-konservasi-cenderawasih-di-rheapang-muaif-papua)
- Assessing the Role of State and Non-State Actors in Promoting Environmental Security: Case Study of Isyo Hills Ecotourism Destination in Rheapang Muaif Village, Jayapura Regency
(*Floranesia Lantang, Gusti Patading, Muhammad Yamin*)