



THE JURASSIC PARK AND *ATA MODO* IN EASTERN INDONESIA, A CASE IN KOMODO NATIONAL PARK

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Abstract

Komodo National Park (KNP) in Labuan Bajo, Indonesia, is famous for its Komodo dragons and rich underwater ecosystems, attracting global visitors. KNP's development plan, initiated by Indonesia's central government in 2020, sparked controversy. The plan includes constructing offices, clinics, public spaces, and more, which the government claims are conservation efforts. However, UNESCO opposes the plan, citing concerns about its impact on the park's Outstanding Universal Value (OUV). Local communities also fear it will harm Komodo dragon habitats and disrupt tourism.

*This paper explores the role of local tribes, *Ata Modo*, in KNP's development. Contrary to removing them, it argues for their involvement in decision-making through a bottom-up approach. Collaboration with stakeholders can benefit both conservation and the local economy.*

Keywords: *Komodo National Park, Ata Modo, Development, Infrastructure, Local People*

Abstrak

Taman Nasional Komodo (TNK) di Labuan Bajo, Indonesia, terkenal dengan komodo dan ekosistem bawah laut yang kaya, menarik pengunjung global. Rencana pembangunan TNK, yang diprakarsai oleh pemerintah pusat Indonesia pada tahun 2020, memicu kontroversi. Rencana tersebut termasuk membangun kantor, klinik, ruang publik, dan banyak lagi, yang diklaim pemerintah sebagai upaya konservasi. Namun, UNESCO menentang rencana tersebut, dengan alasan kekhawatiran tentang dampaknya terhadap Nilai Universal Luar Biasa (OUV) taman tersebut. Masyarakat setempat juga khawatir hal itu akan merusak habitat komodo dan mengganggu pariwisata.

Makalah ini mengeksplorasi peran suku-suku lokal, *Ata Modo*, dalam pengembangan TNK. Bertentangan dengan penghapusan mereka, ia berpendapat untuk keterlibatan mereka dalam pengambilan keputusan melalui pendekatan bottom-up. Kolaborasi dengan pemangku kepentingan dapat bermanfaat bagi konservasi dan ekonomi lokal.

Keywords: *Taman Nasional Komodo, Ata Modo, Pembangunan, Infrastruktur, Masyarakat Lokal*



A. Introduction

In the last century, tourist arrivals and receipts in the Asia-Pacific region increased faster than in the rest of the world, nearly double that of industrialized countries¹. Southeast Asia and Indochina countries have also experienced remarkable growth in international tourism in recent years. However, the financial crisis shocked Southeast Asia's tourism industry, and the terrorists attacked exclusive tourist resorts in Malaysia and the Philippines in 2000. It was followed by the terrorist attacks in New York and Washington in 2001, which resulted in a dramatic and devastating decrease in international travel and an impact on the tourism sector².

Specifically, tourism has developed into a critical sector in Indonesia within the last three decades. Cochrane³ states that visitor arrivals to Indonesia increased by over 400% in 1985–1994, reaching over 5 million by 1996. The tourism industry became the country's third-largest foreign exchange earner, generating \$5,172 million in 1995. The investment and partnerships within Australia, Japan, and other Southeast Asia countries have also nourished the tourism expansion. Unfortunately, Hitchcock et al.⁴ stress the decline of tourism image in Indonesia by the Bali bombing on October 12, 2002, and October 1, 2005, followed by the tsunami disaster in Aceh in 2006.

Ultimately, tourism remarkably recovered from all the disruptions and natural disasters. According to the World Travel and Tourism Council, travel and tourism are expected to contribute \$43.2 billion to the region's GDP and be directly responsible for 6.69 million jobs in 2005, rising to \$88.3 billion and 8.5 million jobs⁵. After the terrorist attacks and disasters, tourist destinations stabilized with moderate improvements in visitor arrival statistics and industry revitalization. Regarding the redevelopment of tourism in Bali, Gurtner⁶ declares the national and regional government, local industry, and the host community implemented various strategies to increase and promote general safety and security and improve the overall tourism crisis and disaster management capacity.

During this period, Komodo National Park (KNP) has also become a prominent and favorite destination for visitors locally and globally. Mous et al.⁷ contend that:

Famous for its unique Komodo dragons (*Varanus Komodoensis*), the KNP also features one of the world's richest marine environments, including coral reefs, mangroves, seagrass beds, seamounts, and bays. These habitats harbor more than 1,000 species of fish, 260 reef-building corals, and 70 species of sponges. In addition, dolphins, whales, and sea turtles are found in the park. There are four villages inside the park, inhabited

¹ Chon, Kaye. *Tourism in Southeast Asia : A New Direction*. The Haworth Hospitality Press (Hong Kong: Haworth Hospitality Press, 2000), 2

² Hitchcock, Michael, Victor T King, and Michael Parnwell. *Tourism in Southeast Asia: Challenges and New Directions*. Honolulu (University of Hawaii Press, 2009), 9

³ Shah, Kishore, and Vasanti Gupta. *Tourism, the Poor and Other Stakeholders: Experience in Asia*. London (University of North London Business School, Stapleton House, 277-281, 2000), 12

⁴ (Hitchcock, King, Parnwell, & et, p. 10)

⁵ (Hitchcock, King, Parnwell, & et, p. 11)

⁶ Gurtner, Y. *Returning to Paradise: Investigating Issues of Tourism Crisis and Disaster Recovery on the Island of Bali* (Journal of Hospitality and Tourism Management, 2016), 11

⁷ Mous, Peter, A Halim, G Wiadnya, and J Subijanto. *Progress Report on The Nature Conservancy's Komodo Marine Conservation Project*. TNC Southeast Asia Center for Marine Protected Areas. Bali (TNC Southeast Asia Center for Marine Protected Areas, 2004), 10

by ca. 3000 people who mainly depend on fishing for their livelihood. About 17,000 people live in the direct surroundings of the park.

Nevertheless, because of forest degradation, hunting and trade, and natural catastrophes, much of Indonesia's wildlife, including Komodo dragons, is threatened with extinction. This problem has been heightened by overseas markets' demand for Indonesian wildlife and wildlife products⁸. Consequently, the central government efforts to protect endangered species from the threat of extinction by the issuance of law, namely *Undang – Undang* (constitution) number 5 of 1990 concerning Conservation of Biological Natural Resources and Ecosystems, followed by other central, provincial, and local regulations. This law mentioned that a national park, as one form of biodiversity conservation, is used for research, science, education, cultural support, tourism, and recreation⁹

The majority of local people's livelihood in *Kampung* Komodo is traditional fishers, depending on the KNP's marine¹⁰. Besides, locals have started to switch professions to the ecotourism sector, and some programs are designed by stakeholders, including the central and local government, the Indonesian State Bank, and Our Komodo Foundation. Each stakeholder has a role in supporting the participation of the *Kampung* Komodo community by providing human resource development training, capital assistance, and equipment assistance¹¹

However, budget constraints, apathy, and low public awareness hinder the participation of the *Kampung* Komodo community in ecotourism development. Tosun¹² argues it should be challenging to persuade host communities to participate in tourism that seems to have no or little direct contribution to their primary and felt needs. Therefore, it is a fact that citizens tend to experience only when strongly motivated to do so, and most of the time, they are not motivated¹³. Guide training that the KNP Office has held to improve the guidance skills of the local community is constrained because there is no initiative for local people to join the training.

Along with the awareness of tourism as one of the primary sources of revenue, the central government issued a regulation of Peraturan Pemerintah (central government's law) number 50 of 2011¹⁴, encompassing tourism development guidance, including developing the National Tourism Strategic Area (NTSA). Since the stipulation of NTSA, the tourism sector in KNP and its surrounding area has grown massively. Its surroundings have attracted various parties to use the resources and space in KNP¹⁵. As Shah & Gupta¹⁶ assert, since tourism's

⁸ Walpole, Matthew J. *Dragon Tourism in Komodo National Park. Indonesia: Its Contribution to Conservation & Local Development* (University of Kent, 1997 <https://doi.org/10.22024/UniKent/01.02.86399>), 44

⁹ Muthohharoh, Nur H, E Soetarto, and S Adiwibowo. Contestation of Spatial Utilization in Komodo National Park: Access and Exclusion Perspectives (*Jurnal Sosiologi Pedesaan* Vol. 09, 2021), 39

¹⁰ (the KNP Office Strategic Plan 2010-2014)

¹¹ Idris, M. H. , and Destari R Selva. Pengaruh Destinasi Pariwisata Pulau Komodo Terhadap Beberapa Aspek Pembangunan Di Kabupaten Manggarai Barat (*Jurnal Ilmu Administrasi*, Vol. 7 No. 1, pp. 56-68, 2019), 64

¹² Tosun, Cevat. Towards a Typology of Community Participation in the Tourism Development Process (*Anatolia*, 1999), 347

¹³ (Tosun, p. 346)

¹⁴ (Peraturan Pemerintah Republik Indonesia Nomor 50 Tahun 2011 Tentang Rencana Induk Pembangunan Kepariwisata Nasional Tahun 2010 – 2025.)

¹⁵ (Muthohharoh, Soetarto, Adiwibowo, & et, p. 39)

¹⁶ (Shah & Gupta, p. 9)

potential impact on livelihoods is rarely well understood and is frequently hostile, it must be improved by developing strategies.

In 2019, the Minister of Environment and Forestry announced that the central and Provincial governments would jointly manage Komodo Island as a world-class tourism and investment. The Ministry of Tourism and Creative Economics Indonesia enacted regulation number 12 of 2020 about the ministry's Strategic Plan between 2020 and 2024. KNP became one of the targets to be developed regarding connectivity and infrastructure. Furthermore, the Ministry of Public Works and Public Housing decided to focus on developing facilities and infrastructure on Rinca Island, which is part of the infrastructure development of the Labuan Bajo NTSA in East Nusa Tenggara (NTT) Province¹⁷

This development includes regional planning, roads, supply of raw and clean water, waste management, sanitation, and improvement of residential areas through a master plan for infrastructure development in Rinca Island. The total budget spending is approximately 902.47 billion Rupiah (more than \$60 million) in 43 different constructions, and the total for development in Rinca Island is about 69.96 billion Rupiah (about \$5 million).

These plans raise several conflicts and questions around local people, government, local organizations, and international organizations. The government of Indonesia persuaded citizens that this erection was a conservation effort for protection, preservation, and utilization. The government argues that the development has been following environmental considerations and that the local people of *Kampung Komodo* are not spectators in the story. Still, they have been involved in this tourism business¹⁸.

Conversely, locals complain about infrastructure development, considering their proximity to nature and Komodo. History shows this proximity happened a long time ago and assembled Komodo as friends and even relatives until the term *Ata Modo* appeared, which means that the natives of the island of Komodo. *Ata Modo* firmly rejected this plan because the development in KNP could endanger conservation by entering heavy equipment and land use for development. *Ata Modo* considers the population of ancient animals that have survived for hundreds of years without human intervention. Meanwhile, the action carried out for the sake of the economy and tourism is only based on humans' instincts without considering the impact on the animals. *Ata Modo* also protested the government's action to allow entrepreneurs to use more than 600 hectares of land for development. At the same time, they were previously prohibited from cultivating and utilizing the ground, which led to diverting livelihoods from fishers and gathering forest products to tourism industry players.

Environmental activists and the Indonesian Forum for the Environment (WALHI) East Nusa Tenggara Province also consider that when the government strategizes as a national tourism area by involving business in the natural landscape, Komodo will be more vulnerable to the climate crisis. Komodo's habitat will be threatened, and building construction will destroy nature. The people's living space is getting narrower, and the big companies starting their business means the people's economic condition will be increasingly depressed.

As an international organization, UNESCO also refused this plan by enacting a refusal document. UNESCO World Heritage Committee document number WHC/21/44.COM/7B

¹⁷ (CNN, Mengenal Proyek 'Jurassic Park' di NTT, 2020)

¹⁸ (CNN, Mengenal Proyek 'Jurassic Park' di NTT, 2020)

published on 16-31 July 2021, states the State Party should not proceed with any tourism infrastructure project in KNP. It may affect the Outstanding Universal Value (OUV) of the property before a review of the relevant Environmental Impact Assessment (EIA) by the International Union for Conservation of Nature (IUCN). The Director WALHI of East Nusa Tenggara Province also asserts his party and *Ata Modo* agreed to UNESCO's request that the construction of tourism projects in KNP be stopped and regrets the lack of coordination between the organizations.

Based on the issues raised, this research paper will examine and analyze the impacts of the KNP establishment on local people and the environment and how the infrastructure development creates a tourism economy that benefits local people.

B. Method

This paper uses a systematic literature review method, which helps evaluate theory or evidence and examine a particular theory's validity or accuracy. Moreover, literature reviews are helpful when the aim is to provide an overview of a specific issue or research problem, for example, to create research agendas, identify research gaps, or simply discuss a particular matter¹⁹. In brief, this paper collects and discovers a different concept in the issue of infrastructure development in KNP instead of another scholar's perspective. Walpole and Goodwin²⁰ find out that economics and facilities are the prominent aspects of tourism, while UNESCO considers the environment in development. In contrast to popular belief, this paper indicates a significant role of local people, known as *Ata Modo*, in the KNP establishment. This paper's findings propose that *Ata Modo*, as local people.

This research method identifies and critically appraises relevant research and collects and analyzes data from said research. With a qualitative approach, this paper will assess the strength of findings from different studies in KNP and compare the results. Therefore, the systematic literature review will help collect the sources, and the qualitative approach will be used to assess them²¹.

C. Result and Discussion

Komodo National Park

The Komodo dragon (*Varanus Komodoensis*) is an extraordinary animal found in KNP and is specified as an endangered animal nowadays. It is located only in East Nusa Tenggara Province, Indonesia, with a length of up to 10 feet (3 meters) and a weight of up to 150 pounds (70 kg). Nestled in a volcanic chain known as the Lesser Sunda Islands, Indonesia's Komodo National Park (KNP) encompasses nearly half a million acres of land and sea²².

As seen in Figure 1, KNP is located in Labuan Bajo, East Nusa Tenggara Province, Indonesia's archipelago, with three prime islands: Rinca, Komodo, and Padar. In 1980, KNP was established in a total area of 173,000 ha. Some international acknowledgments are given to KNP, including Man and Biosphere Reserve (1977), World Heritage Site by the United Nations Educational, Scientific and Cultural Organization (UNESCO) in 1991, and The New Seven Wonders of Nature in 2011.

19 (Snyder H. , 2019), 334

20 (Walpole & Goodwin, Local Economic Impacts Of Dragon Tourism In Indonesia. Annals of Tourism Research, 2000), 571

21 (Snyder H. , p. 335)

22 (Mous, Halim, Wiadnya, & Subijanto, p. 10)

Muthohharoh et al.²³ describe *Kampung Komodo*, which is on Komodo Island, as having a high potential for the fishery with diverse types of fishes and forest products, among others bee honey, tamarind, and *srikaya* fruits. Labuan Bajo, the administrative center of the Komodo subdistrict, has seen the most rapid growth in transport infrastructure, namely an airstrip, ferry terminal, and harbor for larger vessels. Walpole and Goodwin²⁴ add the towns of Sape and Labuan Bajo have become market centers for marine and agricultural produce, and a trading community has developed in these areas.

Ata Modo

Before TNK was well known for global tourism and obtained some international recognition, a traditional inhabitant who lived there for a long time was known as *Ata Modo*. *Ata* means people of the forest, and *Modo* means dragons. *Ata Modo* stands for the tribe in *Kampung Komodo* who believe Komodo as their family members' ancestors and will never hurt them. Historical records claim that *Ata Modo* lived on Komodo Island for 2,000 years²⁵. *Ata Modo* and Komodo began a human-animal relationship; they lived side by side, sharing space and food²⁶.

Most *Ata Modo* are Muslim and speak a distinctive dialect that distinguishing them from the Flores people. Since KNP was established in the 1980s, the local government occupied KNP, and *Ata Modo* was being relocated. Restriction of hunting forest products replaced them with fishers. In the 1990s, the conservation area was widening to the ocean, and *Ata Modo* was forced to exchange professions to become handicraftsmen, social workers, and tour guides. *Ata Modo*, who typically roam in the forests and beaches, should stay for occupying 17 hectares of land with 2,000 other people. At the beginning of 2019, *Ata Modo* was shocked again by the central government's decision to construct a "Jurassic Park," which again will distract their livelihood and result in relocation issues.

Jurassic Park

The construction in KNP generates disapproval of *Ata Modo* as local people and communities are regarding the environmental issues, the existence of Komodo, and the livelihood of *Ata Modo*. Figure 2 depicts the design of infrastructure development on Rinca Island, which totals about 69.96 billion Rupiah (about \$5 million). Specifically, the total budget will be divided into three allocations: 21.25 billion Rupiah to establish facilities and infrastructure, 2.41 billion Rupiah for the water supply system, and 46.3 billion Rupiah to develop Loh Buaya.

Rinca Island is one of the largest islands in KNP, with about 20,000 hectares. The construction focuses on Loh Buaya, with a total development of 1.3 hectares. The concept in Figure 2 is to erect the deck on the Loh Buaya beach to accommodate ships carrying passengers who will see the Komodo dragons. The design embeds ideas to maintain safety and comfort for the tourists and rangers and boundaries for visitors to interact or picture with the dragon.

²³ (Muthohharoh, Soetarto, Adiwibowo, & et, p. 40)

²⁴ (Walpole and Goodwin, 562)

²⁵ Kusumo, R. *Kisah Dilema Suku Ata Modo yang Dipecundangi di Tanahnya Sendiri*. Jakarta, Agustus 11, 2021.

²⁶ (Dale & Afioma, p. 4)

Jurassic Park arose from an architect who formed the design and imitated the dinosaur movie. A real-life Jurassic Park went viral after a noticeable photo of a Komodo on social media facing down a truck at the beginning of the ambitious construction. People emphasized that this was the first time Komodo had heard a machine and smelled exhaust smoke.

In general, as depicted in Figure 3, a significant number of Komodo is in Kampung Komodo from around 1727, followed by Rinca Island with 1049 dragons in 2018. Gili Motang and Nusa Kode contain 58 and 57 individuals, respectively, while Komodo in Padar is only 6. In 2019, the population estimation of Komodo on Rinca Island was approximately 1,300, whereas its population in Loh Buaya is around 66.

Defend and Prosecute: The Infrastructure Development

The impact on the environment

Borchers²⁷ differentiates the development of the KNP from 1997 to 2002. Initially, the KNP was still tiny in terms of tourism infrastructure, facilities, accommodation, transportation, and food. Other destinations nearby are likewise in poor condition, such as Rinca Island, Loh Liang, and Loh Buaya. The implication is that the local community's economy did not benefit from tourism. In 2002, the facilities, including restaurants and a local museum in *Kampung Komodo*, were upgraded. Unfortunately, due to a reduction in the number of tourists, the involvement of residents also diminishes. The significant issues are English skills and a low level of education. Some training was conducted to improve diving, guiding, woodcarving, and handicrafts, yet the accessibility is limited only to families who can afford the training programs.

KNP became one of the objects to be developed in the utilization zone that will improve quality and strengthen resilience to natural disasters and climate change. The central government outlined the Medium-Term National Development Plan 2020 – 2024 and decided on KNP as one of the World-Class Ecotourism Destinations. As the central government designed a "Jurassic Park" in KNP in 2020, there is controversy about this decision. The central government guaranteed that the implementation of this property was under the EIA and did not exceed the specified EIA limits.

While the government of Indonesia persuaded citizens that this erection was a conservation effort for protection, preservation, and utilization, UNESCO refused this plan by enacting a refusal document. UNESCO World Heritage Committee document²⁸ number WHC/21/44.COM/7B, published on 16-31 July 2021, declared conservation issues in KNP could potentially affect the livelihoods of local communities and trigger local protests. Also, the lack of enforcement of sustainable tourism practices will increase illegal fishing activities on the property, including in no-take zones.

Some prominent arguments confessed by UNESCO during the World Heritage Committee meeting in Fuzhou, China, written in the Draft Decision: 44 COM 7B.93. Firstly, the UNESCO World Heritage Committee requests the State Party to provide detailed information on how the OUV of the property will be safeguarded in the plan's design and how projects will increase tourism at the property and can thus ensure the protection of the property

27 (Hitchcock, King, Parnwell, & et, p. 274)

28 (UNESCO, p. 253)

the OUV. Secondly, the committee requests the State Party to revise the EIA for the tourism infrastructure projects on Rinca Island and resubmit it to the World Heritage Centre for review by IUCN as a matter of urgency. Thirdly, the committee urges the State Party to halt all tourism infrastructure projects in and around the property that can potentially impact its OUV until the revised EIA is submitted and reviewed by IUCN. Lastly, the committee requests the State Party to invite a joint World Heritage Centre/IUCN Reactive Monitoring mission to the property to assess the impact of ongoing development on the OUV of the property and review its state of conservation.

Furthermore, the UNESCO World Heritage Committee confirms the role of local organizations as the third party that informs the planned developments. One is the Indonesian Forum for the Environment (WALHI) East Nusa Tenggara Province, a legal environmental organization that strictly rejects this development. The Director WALHI of East Nusa Tenggara Province responded that UNESCO's actions were late regarding reports from residents through legal organizations since 2020 concerning the construction on Rinca Island and the concessions of private companies, which are almost complete in 2021.

The Impact on Local People

Walpole and Goodwin²⁹ describe the rapid growth of accommodation and restaurants emerging in response to tourism demand in Labuan Bajo and Sape. Many restaurants in Labuan Bajo serve not only national styles but also Chinese, European, and Western cuisine. The data shows that most hotel owners are nonlocal. At the same time, the local workers are predominantly unskilled or semiskilled, such as boat crew, waiting in restaurants, and domestic duties in hotels. Most have not received additional training or education beyond secondary school, and few speak English. Consequently, they experience tourism jobs that are not well-paid and below the minimum wage.

Idris et al.³⁰ (2019) also present local communities' participation in Kampung Komodo. In 2013, Kampung Komodo was inaugurated as a Kampung Tourism, embracing the concept of local community involvement and providing proposals and recommendations for conducting the program. Also, locals become village infrastructure development workers in constructing village roads with paving blocks, village sewers, restroom facilities, and coastal roads. Furthermore, the locals participate in the ecotourism business as artisans of Komodo statues, selling souvenirs and naturalist guides, managing homestays, and renting motorboats. The community also joined a community empowerment group called the Community Forestry Police Partner in environmental conservation.

The arrangement of locals' livelihood and lives in KNP is distracted by the development of Jurassic Park in 2020. In general, the existence of a private lodging business in KNP will diminish the local community's businesses that undoubtedly return to the sea looking for fish and instead would damage coral reefs and bring disadvantages to local tourism actors³¹. Locals proclaim that about 70% of the community on Kampung Komodo makes their living from tourism, and the idea of fewer tourists coming due to the development is disastrous for them. The displacement anxiety from the island is also why local people deny the action. Henschke

29 (Walpole and Goodwin, 566)

30 (Idris, Selva, Destari, & al, p. 64)

31 Radar Lombok. Pro Kontra Pembangunan Jurassic Park Komodo, HMPI Gelar Webina. Lombok, Desember 6, 2020

and Wijaya³² narrate local people protesting about relocation and proving the living harmony between Komodo and humans. The replacement will force them to return to hunting and fishing, which could worsen the environment. In detail, the villagers will be forced to go back to the sea, and they might start using unsustainable methods again to catch the fish, like using bombs, which will destroy the park's marine life, or they will go back to the forest and carry out illegal logging³³.

The impact on the local economy

It is written in the UNESCO World Heritage Committee document that there was International Assistance from 1993 to 1995 for a total of USD 119,500 for purchasing the boat, strengthening the KNP's infrastructure and facilities, and purchasing equipment and staff training for KNP. A paradoxical situation occurs whereby tourists spending the most on their visit to KNP contribute the least to the local economy. Tourism to KNP conforms to its traditional political-economic view as perpetuating existing inequalities between the developing periphery and the urban core³⁴.

Borchers³⁵ mentions the most tourism revenue has thus far been generated outside the local economy by the tour and cruise ship operators in Lombok, Bali, Java, and overseas. Chon³⁶ adds that investors tend to capitalize on the ecotourism market regardless of whether or not it is being practiced responsibly. Conversely, Syahadat and Putra³⁷ emphasize that tourism development can trigger economic leaks.

Since the central government's involvement in the financial management of KNP, the role of the province and local government, even the local people in economic aspects, is unfavorable. However, the provincial government continues to spur economic growth by making tourism a driving force. Therefore, all stakeholders need to mobilize solid entrepreneurial power by expanding community awareness and involvement to be the host and active actors of the new economy. The budget allocation from the central government for current development is approximately 902.47 billion Rupiah (more than \$60 million), while the provincial government spends around 100 billion Rupiah (about \$6.7 million).

The central government convinces the Jurassic Park development to impact new livelihoods by involving the community in the projects and engaging in ecotourism. Since *Ata Modo* switched professions to handicraftsmen, social workers, and tour guides, their income, which depended on the number of visitors, has gradually diminished. So that, this improvement is assured as a next step to attract more tourists.

Government Deliberation

On July 5, 2020, there was an agreement between the Ministry of Public Works and the Ministry of Environment and Forestry about environmental permits for infrastructure

32 (Henschke & Wijaya, 2022)

33 (Henschke & Wijaya, 2022)

34 (Walpole and Goodwin, 572)

35 (Hitchcock, King, Parnwell, & et, p. 274)

36 (Chon, p. 4)

37 (Syahadat & Putra, p. 53)

development in KNP. Additionally, this development is based on the Regulation of Environment and Forestry Minister Number 16/2012 as the foundation in action to control the habitat and behavior of Komodo. The government also coordinates and consults actively with the province and local government and other stakeholders in planning, implementing, and maintaining the development to avoid the Komodo's habitat and behavior.

Regarding UNESCO's refusal, the central government has provided the following information, which is mentioned in the UNESCO World Heritage Committee document numbered WHC/21/44.COM /7B³⁸ :

- The State Party is developing an Integrated Tourism Master Plan (ITMP) for Labuan Bajo, including the islands of Rinca and Padar. It is moving away from mass tourism and towards quality tourism.
- The 10-year Medium-Term Management Plan of the property (2016-2025), which is part of the Long-Term Plan 2000-2025, identifies seven goals for the property to become a "World-Class Ecotourism Destination" and "the Leading National Pride in Conservation Area Management."
- Facilities located within the "utilization zone" of the property are being updated to improve their quality and strengthen their resilience to natural disasters and climate change. An Environmental Impact Assessment (EIA), realized following the IUCN World Heritage Advice Note on Environmental Assessment, is underway, and several other actions are planned to address the potential urgent risks to the OUV of the property.

The central, provincial, and local governments persuade other stakeholders that the KNP development is simply for replacing the inappropriate facilities and infrastructure with international standard infrastructure to prevent damage to ecosystems and the environment³⁹. Thus, the project on Rinca Island will not disturb the Komodo dragon population (the total population of Komodo dragons in KNP is 3,100 individuals) and sources of food (deer, buffalo, wild boar), savanna ecosystems, also mangrove forests. Supervision and further action will be taken to control this development.

Recent Issues

In December 2021, the Director of Conservation of Natural Resources and Ecosystems declared the erection percentage on Rinca Island to be nearly 95%. The central government ensures that construction is carried out safely following the EIA and protects the Komodo's habitat. There were about 8 Komodo dragons during construction, most often active around the construction area. His party continues to monitor the impact of human activities, and it is not proven that any dragons have been killed or died.

UNESCO and IUCN representatives visited KNP from March 3 to 6, 2022. The team met the government and the representative of an environmental organization. They stopped over on Rinca Island and observed the arrangement of the natural tourism infrastructure in Loh Buaya. The director of the KNP Office explained that the Loh Buaya project is a ranger guard post redesigned to be durable for long-term function, not only for ecotourism activities. Ranger posts will support the implementation of resort-based management in collecting scientific data through various monitoring activities by the Komodo National Park Rangers. The EIA expert

38 (UNESCO, p. 254)

39 (BBC News, 2021)

team also directly explained the details of the environmental impact assessment to the UNESCO and IUCN teams at Loh Buaya Resort.

With the clarification and direct review, the UNESCO and IUCN team stated that the development of natural tourism at Loh Buaya Resort positively impacted and applied the precautionary principle. There was no ecosystem damage at Loh Buaya Resort, and no significant environmental damage was imposed on terrestrial and aquatic ecosystems, as alleged by third parties. Observations and dialogues have been conducted with local people representatives to prove to the assessment team that the opportunity for community economic productivity and access to business space within the KNP area is also facilitated by the KNP Office. The UNESCO and IUCN teams even appreciated the quality of the Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) documents prepared by the EIA expert team in a structured and scientific data-based manner IUCN Guidelines. The UNESCO and IUCN teams previously suspected that the resort development was a luxury resort of a tourism venture in nature, referring to allegations made by third parties. The IUCN team mentioned the results of the field review would be analyzed over the next six weeks. They will produce several recommendation points for the Government of Indonesia through the Indonesian National Commission for UNESCO⁴⁰.

During the meeting, representatives of the third party, Sunspirit for Justice and Peace, voiced their opposition to the development of buildings in a utilization zone. They insisted that the resort's construction would destroy the nature of KNP and ensured the government's statement contradicted the facts on the ground. In the Loh Buaya area, right next to the elevated deck building, there is a private-sector concession on 22.1 hectares, which will be used to build rest area facilities such as resorts, villas, and restaurants.

In 2023, a Ministry of Environment and Forestry representative visited Rinca Island and witnessed the locals' participation as naturalist guides to accompany the tourists and operate a cooperative canteen managed by the local community⁴¹. Accordingly, if there is community participation, it will increase regional revenue and ultimately return to maintaining the TNK itself.

The arrangement of the Rinca Island area of the Komodo National Park was inaugurated by the President of the Republic of Indonesia, Joko Widodo, on July 21, 2022. One of the conservation areas in Komodo National Park has been reopened since October 2022, with a target of 1,000 people visiting it daily.

D. Conclusion

The infrastructure development in KNP is an effort of modernization and improvement in Indonesian tourism to reach short-term and long-term goals as an international tourist destination. The government should carry out a total evaluation of the entire grand design of KNP. Establishing good communication and a bottom-up approach between the government, other stakeholders, and local people is an excellent decision to consider the various points of view and to avoid misunderstanding and misleading information.

40 (Taris & Prasetya, 2022)

41 (Antara, 2023)

The role of *Ata Modo* is also paramount to boosting economic life on the island and overcoming their financial burden since they only rely on natural resources. The relocation issue of *Ata Modo* losing income and livelihood should be reconsidered by involving them in ecotourism activities and establishing Jurassic Park. It is also vital to ensure the participation of local people and the preservation of the KNP in terms of sustainability and ecotourism.

Regarding the environment, the government asserts that EIA has met the requirements and that development is not located in a conservation area prohibited from the action. There was no damage to the habitat or disturbance to the Komodo. The government should embrace public participation in planning, formulation, implementation, and evaluation to stimulate a fair and transparent development process.

Finally, subsequent development must be based on a cultural approach. It involves *Ata Modo* and third parties like activists and environmental organizations since they lived and grew in the area before development was announced. Moreover, it is crucial to avoid the establishment of skyscrapers and impressive buildings such as hotels and resorts around KNP. The focus of property development is preferably on the island closest to the KNP or an area not included in a conservation area.

Bibliography

Antara, N. (2023, Februari 1). *KLHK pastikan pengelolaan kawasan TN Komodo berbasis tapak*. Diambil kembali dari <https://kupang.antaranews.com/berita/105924/klhk-pastikan-pengelolaan-kawasan-tn-komodo-berbasis-tapak>

AUDE; Higher Education Founding Council for England. (2006). *Guide to Post Occupancy Evaluation*. England.

BBC News, I. (2021). *Komodo dan peringatan UNESCO: Mengapa pegiat khawatir dampak pariwisata di Taman Nasional Komodo?* Jakarta.

Chon, K. (2000). *Tourism in Southeast Asia : A New Direction*. The Haworth Hospitality Press. Hong Kong: Haworth Hospitality Press.

CNN, I. (2020, October 26). *Mengenal Proyek 'Jurassic Park' di NTT*.

CNN, I. (2020). *UNESCO Nilai RI Tak Transparan soal Proyek Pulau Komodo*. Diambil kembali dari <https://www.cnnindonesia.com/internasional/20211227195904-134-739305/unesco-nilai-ri-tak-transparan-soal-proyek-pulau-komodo>.

Dale, C., & Afioma, G. (2020). *Puzzling Confluence of Conservation and Ecotourism in Komodo National Park, Indonesia*. *Transdisciplinary Studies Working Paper Series (TDWPS)*, 1-18.

Davis, J., Mengersen, K., Bennett, S., & Mazerolle, L. (2014). *Viewing systematic reviews and meta-analysis in social research through different lenses*. Brisbane: SpringerPlus .

Departement for Culture, M. a. (2008). *Guide to Safety at Sports Grounds*. *Green Guide, 5th Edition*. TSO.

FIFA. (2011). *Football Stadiums, Technical Recommendation and Requirements*. *5th Edition*.

FIFA. (t.thn.). *FIFA Stadium Safety and Security Regulations*.

- Gurtner, Y. (2016). *Returning to Paradise: Investigating Issues of Tourism Crisis and Disaster Recovery on the Island of Bali*. *Journal of Hospitality and Tourism Management*, 28, 11-19.
- Henschke, R., & Wijaya, C. (2022, July 26). *The Fight for Dragon Island*. Diambil kembali dari bbc uk: https://www.bbc.co.uk/news/extra/5bBE5791M9/The_fight_for_Dragon_Island
- Hitchcock, M., King, V. T., Parnwell, M., & et, a. (2009). *Tourism in Southeast Asia: Challenges and New Directions*. Honolulu: University of Hawaii Press.
- Hoskin, K. (2004). *Fire Protection and Evacuation Procedures of Stadium Venues New Zealand*. Master of Engineering in Fire Engineering, University of Cartenbury.
- Idris, M. H., Selva, Destari, R., & al, e. (2019). *Pengaruh Destinasi Pariwisata Pulau Komodo Terhadap Beberapa Aspek Pembangunan Di Kabupaten Manggarai Barat*. *urnal Ilmu Administrasi*, Vol. 7 No. 1, pp. 56-68.
- Island, U. R. (2021). *Walhi: The Document Becomes A Warning To The Government*. Diambil kembali dari <https://voi.id/en/berita/72997/permintaan-unesco-soal-pulau-komodo-walhi-dokumen-tersebut-jadi-peringatan-bagi-pemerintah>
- Kusumo, R. (2021, Agustus 11). *Kisah Dilema Suku Ata Modo yang Dipecundangi di Tanahnya Sendiri*. Jakarta.
- Lake, R. C., Rayawulan, R. M., & Arakian, D. (2018). "Keberlanjutan dan Perubahan" Orientasi Permukiman Kajian Fenomena Permukiman Airmata Di Bantaran Kali Kaca Kota Kupang. *Seminar Nasional Riset dan Teknologi Terapan (RITEKTRA 8)* (hal. TA-28 - TA-36). Makassar: Fakultas Teknik Unika. Atma Jaya Jakarta.
- Liu, Y., Liu, D., Badler, N., & Malkawi, A. (2011). *Analysis of Evacuation Performance of Merging Points in Stadiums based on Crowd Simulation*.
- Lynch, K. (1960). *The Image of the City*. Cambridge, Massachusetts: MIT Press.
- Menteri Pekerjaan Umum. (2007). *Peraturan Menteri Pekerjaan Umum Nomor 45/PRT/M/2007 Tentang Pedoman Teknis Pembangunan Bangunan Gedung Negara*.
- Menteri Pemuda dan Olahraga. (2013). *Peraturan Menteri Pemuda dan Olahraga Nomor 0400 Tahun 2013 Tentang Standar Nasional Stadion Atletik dan Sepakbola*.
- Mous, P., Halim, A., Wiadnya, G., & Subijanto, J. (2004). *Progress Report on The Nature Conservancy's Komodo Marine Conservation Project*. TNC Southeast Asia Center for Marine Protected Areas. Bali: TNC Southeast Asia Center for Marine Protected Areas.
- Muthohharoh, N., Soetarto, E., Adiwibowo, S., & et, a. (2021). *Contestation of Spatial Utilization in Komodo National Park: Access and Exclusion Perspectives*. *Jurnal Sosiologi Pedesaan* Vol. 09.
- Parabowo, H. (t.thn.). *Arsitektur, Psikologi dan Masyarakat*. Jakarta: Gunadarma.
- (t.thn.). *Peraturan Menteri Lingkungan Hidup Nomor 16 Tahun 2012 Tentang Pedoman Penyusunan Dokumen Lingkungan Hidup*.
- Peraturan Pemerintah Republik Indonesia Nomor 50 Tahun 2011 Tentang Rencana Induk Pembangunan Kepariwisata Nasional Tahun 2010 – 2025*. (t.thn.).

- Preiser, W. F., Rabinowitz, H. Z., & White, E. T. (1988). *Post-Occupancy Evaluation*. New York: Van Nostrand Reinhold Company Inc.
- Radar, L. (2020, Desember 6). Pro Kontra Pembangunan Jurassic Park Komodo, HMPI Gelar Webina. Lombok. Diambil kembali dari <https://radarlombok.co.id/pro-kontra-pembangunan-jurassic-park-komodo-hmpi-gelar-webinar.html>.
- SCI-Network. (t.thn.). *An Insight Into Current POE-related Policies and Practices by European Public Authorities to Drive Sustainable Construction and Innovation*. London.
- Shah, K., & Gupta, V. (2000). *Tourism, the Poor and Other Stakeholders: Experience in Asia*. London: University of North London Business School, Stapleton House, 277-281.
- Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research* 104 (2019) , 333–339.
- Snyder, J. C., & Catanese, A. J. (1997). *Pengantar Arsitektur*. Jakarta: Erlangga.
- Syahadat, R., & Putra, R. (2021). Dampak positif dan negatif pembangunan di Komodo dan sekitarnya: sebuah tinjauan literatur. *Environmental Sustainability Journal*, 47-56.
- Taris, N., & Prasetya, A. (2022, 3 7). *Tim UNESCO dan IUCN ke TN Komodo, Tinjau Pembangunan Resort Loh Buaya* Artikel ini telah tayang di Kompas.com dengan judul "Tim UNESCO dan IUCN ke TN Komodo, Tinjau Pembangunan Resort Loh Buaya", Klik untuk baca: <https://travel.kompas.com/read/2022/03/07/>. Diambil kembali dari https://travel.kompas.com/read/2022/03/07/174853727/tim-unesco-dan-iucn-ke-tn-komodo-tinjau-pembangunan-resort-loh-buaya?page=2#google_vignette
- the KNP Office Strategic Plan 2010-2014*. (t.thn.).
- Tosun, C. (1999). *Towards a Typology of Community Participation in the Tourism Development Process*. Anatolia.
- Triyosoputri, E. (1992). *Evaluasi Purna Pakai Alun-alun Malang dengan Penekanan Aspek Fungsional*. Tesis Magister Arsitektur, Institut Teknologi Bandung.
- (t.thn.). *Undang-Undang Republik Indonesia Nomor 5 Tahun 1990 Tentang Konservasi Sumber Daya Alam Hayati Dan Ekosistemnya*.
- UNESCO. (2021). *Convention Concerning the Protection Of The World Cultural And Natural Heritage*. China: World Heritage.
- Walhi. (2021). *Publik Turut Mendesak Pemerintah Untuk Menghentikan Pembangunan Di Taman Nasional Komodo*. Diambil kembali dari <https://www.walhi.or.id/publik-turut-mendesak-pemerintah-untuk-menghentikan-pembangunan-di-taman-nasional-komodo>
- Walpole, M. (1997 <https://doi.org/10.22024/UniKent/01.02.86399>). *Dragon Tourism in Komodo National Park. Indonesia: Its Contribution to Conservation & Local Development*. University of Kent.
- Walpole, M., & Goodwin, H. (2000). Local Economic Impacts Of Dragon Tourism In Indonesia. *Annals of Tourism Research*. Vol. 27, No. 3, 559-576.
- Yafiz. (1994). *Evaluasi Purna Huni Perumahan Nelayan Type Rumah Panggung di Muara Angke - Jakarta Utara*. Bandung: Tesis Magister Arsitektur, Insitut Teknologi Bandung.

Figures

Figure 1

The Map of Indonesia and Komodo National Park

(Bright Hub. (2009). Komodo Dragon: Facts, Photos, and Threats. Environmental Science, Environment <https://www.brighthub.com/environment/science-environmental/articles/44257/>)



Figure 2

Jurassic Park Project Design at Rinca Island

(Daniels, J. M. (2020). Reptilian Resistance at Komodo Park?)



Figure 3

The Population of Komodo in KNP in 2018

(Henschke, Rebecca and Wijaya, Callistasia. (2022). The Fight for Dragon Island)

