

Research Article

Global Governance in the Management of Komodo National Park as a UNESCO World Heritage Site

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Abstract.

Komodo National Park is a UNESCO World Heritage Site which holds significant ecological, cultural, and social value. This research examines the implementation of global governance in managing the park, focusing on coordination among international, national, and local actors. This research uses qualitative descriptive methods, including literature review and document analysis. The research highlights the complex coordination between the Indonesian government, international organizations such as the World Wide Fund for Nature (WWF) and UNESCO, and local communities. The approaches of governance involve species conservation in the Komodo Islands, rehabilitation of vital habitats, and sustainable tourism development. Advanced technologies such as satellite and drone surveillance are used to monitor illegal activities and ecosystem health. The biggest challenge in managing Komodo National Park lies in balancing conservation efforts with tourism-based economic development. To address this, a zonation approach and putting in place programs to train the locals in ecotourism would be one way forward. This research evaluates how sustainable coordination, integrated approaches, and stakeholder collaboration contribute to preserving the park's universal value.

Keywords: global governance, Komodo national park, sustainable tourism, UNESCO

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1. Introduction

The emergence of global governance has taken place in response to the transformation in the international political and economic landscape by the neoliberal paradigm. Accordingly, the first step in that direction is to prioritize capital and market mechanisms instead of state power, in what is regarded as a governance gap that allows for private actors and civil society to be active participants while the state retains the overall responsibility(1). This accounts for the various schools of thought when defining global governance, underpinned by some significant and pressing issues. The concept of

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global governance relates to a mesh of actors transgressing borders, such as governments, international organizations, civil society, and the private sector, to resolve complex global problems(2).

This concept of global governance becomes relevant when applied to the management of specific issues, such as the preservation of UNESCO World Heritage Sites, which require cross-sector and cross-border coordination to maintain global cultural and natural values. UNESCO World Heritage Sites are places that are considered to have extraordinary cultural or natural values and are important to humanity as a whole(3).

National parks are nature conservation areas with an original ecosystem, administered under a zoning system that supports the functions of research, education, conservation, and community empowerment. In these areas, ecosystem protection goes hand-in-hand with sustainable economic and social development. National parks have become internationally accepted symbols of universal values, especially by designation as UNESCO World Heritage Sites. This designation testifies to national parks being considered global assets, which imposes a shared responsibility on governments, local communities, and the international community at large(4).

The second primary example of co management works on a global basis for the governance of World Heritage sites. The park was formally established in 1980, and in 1991 it was included as a World Heritage Site, bringing the site under international supervision and protection. Other than the Komodo dragon (*Varanus komodoensis*), which is endemic to the area and considered to be the largest living reptile, also known for its unique biodiversity, many other aspects make this national park known. Various marine ecosystems exist within Komodo National Park, including coral reefs and fish populations that sustain the local livelihood. The management of Komodo National Park will thus involve different interested parties: at the international level, the national level, and the local level. The Indonesian government, in collaboration with international organizations such as WWF, Global Environmental Conservation, and UNESCO, implements various conservation programs to protect the Komodo National Park ecosystem. Various advanced technologies such as satellite and drone surveillance are used to monitor illegal activities such as poaching and deforestation that threaten the ecosystem. However, the main challenge in the operation of Komodo National Park is balancing conservation interests with the needs of the rapidly growing tourism-based economic development in the area. On the other hand, local communities whose livelihoods depend on natural resources have a critical role in the successful management of the area. Therefore, an integrated and sustainable approach is essential.

Komodo National Park is a UNESCO World Heritage Site that has great universal significance. It not only has the endangered species - the Komodo dragon or the *Varanus komodoensis*, but it also possesses a high volume of marine and terrestrial biodiversity. The Komodo National Park's ecosystem is made up of various habitat types which include savannahs, mangrove forests, and coral reefs. These habitats support a variety of endemic species. The management of Komodo National Park must take into account all these factors, therefore requiring an integrated approach – including consideration of social, economic, and cultural aspects alongside the ecological ones.

The global governance practices in Komodo National Park prioritize the protection of the Komodo, the world's largest reptile, found only in the area in cooperation with the Indonesian government and the international community for the protection of endangered species and their natural habitats. These conservation programs involve monitoring the Komodo population, restoration of critical habitats, and management of human activities that can damage the ecosystem. It is also our policy in conservation to protect marine ecosystems like coral reefs and fish resources, on which the local people depend for their livelihood. The application of the principles of global governance is thus quite crucial to creating a just balance between the benefits of conservation and economic development based on tourism.

2. Literature Review

The management of Komodo National Park involves various parties, such as the national park office, tourism office, business actors, and local communities. The management of this area involves various international, national, and local actors that require a more coordinated and holistic approach (5) (6). The community uses institutions who supported by BUMDes to maintain their legal access, as shown in research (7) (8). There is also research (9) that shows the involvement of international actors, the United Nations Convention on Biological Diversity in Gunung Leuser National Park through the formation of national laws related to forestry, spatial planning, and natural resource conservation. The dynamics of community access to tourism resources, but does not cover how various global and national actors contribute to the management of this area. This shows that in-depth research on the application of global governance as an approach to managing Komodo National Park as a UNESCO World Heritage Site is still very limited. Therefore, this research aims to fill this gap by analyzing the application of global governance in Komodo National Park, involving global, national, and local

actors, and evaluating its impact on environmental conservation, sustainable tourism development, and community empowerment.

3. Research Methodology

This research uses a descriptive qualitative approach. The method in this research is a literature study. Literature study is a series of activities related to the method of collecting library data, reading and recording, and managing research data objectively, systematically, analytically, and critically. This research aims to find out, and describe an event or information. The data analysis technique in this research uses content analysis. Data analysis begins by analyzing the research results from the most relevant, and quite relevant, then by looking at the year of research starting from the most recent, and gradually backing down to older years. The researcher then reads the abstract of each previous study to provide an assessment of whether the problems discussed are those to be solved in the study. Furthermore, note the important parts relevant to the research problem.

4. Research Result and Discussion

The management of Komodo National Park as a UNESCO World Heritage Site is a complex example of global governance involving various actors at various levels, from the Indonesian government to international organizations and local communities(10). In this context, efforts to protect and conserve the Komodo dragon (*Varanus komodoensis*) and its biodiversity are the main focus that requires a comprehensive and collaborative approach. International cooperation with organizations such as World Wide for Nature (WWF), Global Environmental Conservation, and UNESCO has resulted in a series of innovative conservation programs, including research and monitoring using advanced technologies such as satellites and drones to monitor key threats such as poaching and deforestation(11).

Figure 1 is Komodo National Park which is a World Heritage Site where the complexity of Komodo National Park management is increasingly visible in efforts to balance nature conservation and tourism-based economic development. The tourist area around Komodo National Park has great appeal for domestic and international tourists, especially those interested in seeing Komodo dragons directly. On the other hand, the development of the tourism sector brings significant challenges to sustainable natural



Figure 1: Komodo National Park. *Source: Tempo.co.*

resource management. Without wise handling, tourism can cause serious environmental damage, such as coral reef degradation, pollution, and pressure on sensitive ecosystems(12). Therefore, a global governance approach must be able to create the right balance between environmental conservation efforts and economic development interests.

Realizing balance, for Komodo National Park's management strategy, local community assistance is significant. The Government of Indonesia, along with international allies, has set forward an inclusive tactic – empowering conservation by the local populace. Enabling participation in ecotourism, environmentally conscious, and giving training to traditional natural resource-dependent fishermen and farmers. Local communities tap into tourism management and emerge as economic gainers, protectors of the ecosystem also, active ones. It mirrors global governance participatory indeed. The essence of this is that each stakeholder's role is strategic in preserving the ecosystem's Komodo National Park's uniqueness.

The technology of the modern variety dramatically reshapes the way Komodo National Park is monitored and under the watchful gaze. The categorization of tracking and prevention of illegal activities falls to the usage of satellites and drones capable of detecting environmental harm. Activities such as deforestation and poaching can be detrimental. In addition, this advanced technology provides the ability to precisely monitor the condition of the Komodo species and its habitat, allowing for dynamic

adjustments in conservation strategies. High operational costs and human capital skill inadequacies top the trouble list. Unquestionably, the overall achievement of its implementation leans heavily on extensive support from involved parties. Stakeholders in the conversation encompass government bodies, the private sector (of questionable relevance), and, of course, international powers.

Komodo National Park's conservation work, and critical habitat restoration in it indispensable. Mangrove woods, savanna lands, and coral reefs, these key components of the initiative for wildlife survival rehabilitation. They're not just lush greenery, they're critical ecosystems that support species hanging by the thread of extinction. Habitat threats, like unwanted weeds in a garden, their mitigation come from clever cooperation - Indonesian officials partnering with big international organizations. Good examples are mangrove forestry management, the coastal bulwark it becomes, plus the breeding site for fish it serves. All these make an ecological system more interconnected and sustainable(5).

The most fundamental challenge in the management of Komodo National Park is managing potential conflicts between conservation interests and economic development. The rapid growth of tourism is often directly proportional to the risk of environmental degradation, such as the decline in seawater quality and damage to coral reefs. To address this, global governance has developed a smart zoning policy, where certain areas are set aside for pure conservation, while other areas are designated for controlled tourism activities. This approach allows for a balance between nature conservation and sustainable economic development.

Essential to the ecosystem, steering Komodo National Park's management are international figures. Supporting resources, conservation program funding – this aspect's relevance cannot be overlooked. Contributions significant from organizations like the Global Environmental Conservation and WWF – research financing, habitat reclamation, and more monitoring importance among them. UNESCO, a party of special relevance here, supervises the preservation of Komodo National Park's standing as a World Heritage Site; it is tied in with sustainable management and specific conservation requirements. The presence of international actors confirms that Komodo National Park is a global responsibility that transcends national boundaries.

Policies for the conservation of diverse nature on an international scale can be utilized more complete and efficiently. Not counting animals in the Komodo population is not the focus; holistic management takes priority over everything else, with attention to

habitat control, threatening species, and mitigation of such threats. Long-term success all hinges on the participation of local communities, being active partners in conservation instead of simply affected parties. Stakeholders' ability to carry out the principles of inclusive, adaptive, sustainable global governance ultimately defines the endurance of the Komodo National Park. Policy-making surely requires perfect coordination between the government at central and regional levels, organizations of international standards, and local communities, and must be in harmony. To ensure the priceless world heritage of the Komodo National Park, an approach emphasizing balance among ecological, economic, social, and cultural dimensions must be taken into account.

4.1. The Impact of Global Governance on Komodo National Park

UNESCO, as a leading instrument in the national governance framework, has an impact in addressing broader environmental, political, and socio-economic issues that affect the conservation of Komodo National Park(13). This can be seen from several indicators such as Climate Change and Environmental Degradation, Sovereignty and Governance, Biodiversity Conservation, Funding, and Resources(14).

The first impact Rising sea levels and fluctuating temperatures pose an alarming effect. On Komodo National Park, it's potentially disturbing the ecosystem, as well as extreme weather occurrences. UNESCO, through the Convention on Biological Diversity (CBD), the Paris Agreement, and international frameworks, does all the international guidance, but it's unclear how directly it affects the park's vegetation or animal life, which could be mitigated by preventing climate change impacts there. The biodiversity of the park is largely sustained by factors out of local control and is much dependent on the kind of international agreements signed at those big global meetings. The action of mitigating efforts, collaborative and cooperative, seems to be addressing local worries, yet its origin, being governed by global structures, makes it more of a long-term vision with less immediate effect and relevance to the local government's political life.

The second impact is related to Sovereignty and Local Governance, despite UNESCO's significant international influence, Indonesia retains sovereignty over Komodo National Park(15). UNESCO's role is to support Indonesia in balancing global conservation goals with national interests, particularly in protecting local communities and encouraging their participation in conservation efforts. Global governance, through UNESCO, promotes cooperative approaches that respect national sovereignty while advancing global goals.

Biodiversity conservation is the third effect. In this park of Komodo, to be precise, a plethora of extraordinary creatures live. The most famous is the Komodo dragon, of course. A wide-ranging ecosystem that's rather diverse holds the likes of 277 animal creatures - a mix one could potentially classify as native to Asia and Australia. For example, the mammalian lot; the park has a count of 32 types. The feathered creatures' 128 kinds or species belong there. The scaly reptiles total 37 species. As for the Komodo dragon, there are sorts of animals on land, finned, and birded varieties with low numbers or small habitats - about 25 counted as protected. In addition to these, some reefs located within the park are brimming with color. A minimum of 253 species exist within corals that build reefs, and an estimated 1,000 kinds belong to the fish family too. Advocacies for the old are present from bodies like UNESCO, aiming to salvage biodiversity plight using means such as the Convention on Biological Diversity and several global agreements. Here, UNESCO aids in competent management practices within the park, indirectly assisting the Indonesian government to establishing appropriate measures for species near extinction and ecosystems battling threats like poaching, loss of habitat, or over-exploitation(16). These positive effects that UNESCO spreads mean conservation of diversity rests heavily on them.

There exists an impact of primordial importance: the impact of financial resources. A global governance scheme would be fundamentally incomplete without a solid financial footing for conservation endeavors. UNESCO operates on the front line, allowing for better acquisition of funds from the international community. For instance, they have a finger in the pie of the World Heritage Fund. But, it is a fund endowed with vital importance in conserving, protecting, and managing heritage like this. Projects are covered here, not to mention research undertakings. Sustainable development objectives are important, they play a significant role in the balance. It's one of the ways of implementing measures of conservation in the park and its adjacent areas.

4.2. Challenges and Opportunities of Global Governance on Komodo National Park

Despite significant contributions from UNESCO and global governance structures, challenges remain in the management of Komodo National Park:

Balancing Conservation and Economic Development: Demand for tourism, local livelihoods, and economic development often conflict with conservation objectives. While

UNESCO advocates sustainable tourism, there is a constant need for effective management strategies that balance these competing interests(17,18).

Stakeholder Pressure: Different stakeholders, including local communities, businesses, and government agencies, often have different views on park management(19). Stakeholders, such as the government, may face pressure from various sectors, including within the park, to open up more areas to development or extractive industries. Stressing about the safeguarding of Komodo National Park the government, yet at times there are economic and political strains that conflict with the goal of conservation in policies. The equilibrium between quick financial progress and slow-moving environmental persistence usually sets the scene for conflict. UNESCO plays an unseen role; it stitches up discussions and unites those who might not agree with one another. This is something they do between those involved in managing the park. The governance of the park finds its success through it, but how that is achieved is not evident to all.

Environmental crushing: it's not just humanity's shenanigans; nature faces threats too, like alien species and climatic upheaval. Tremendously difficult to deal with their aftereffects. On top of it all, lizards like the Komodo and wildfowl, reptiles too, are victims of uncouth hunting and trade, for which humans are responsible - a big danger for the variety of life itself. The Trouble is, human-driven conservation will only get us so far, illegal hunting for everything from rare species is a persistent hurdle to biodiversity. Also, the park is home to a huge inflow of tourists on an annual basis, which can unbalance its sensitive ecosystem. Man's growing intrusion can mean habitat damage, a dirtier environment, increased wildlife stress, and pressure - especially on the Komodo dragon. Popular spots near diving and hiking trails suffer from overcrowding, leading to distorting nature beyond repair. UNESCO is an important figure on the world stage, guiding support and action to deal with these mounting concerns.

5. Conclusion

Komodo National Park is ecologically extraordinary. A UNESCO World Heritage Site, the ideas of culture and society interwoven within it have world-class stature and value that they encompass. The significance of collaboration is revealed by a global governance approach to managing Komodo National Park. Numerous parties are involved - from local communities and international organizations to the Indonesian government - and

sustaining this area relies on their partnership. However, challenges abound, tourism-based economic growth in conflict with conservation interests is one such example. But it remains the case that precise management, holistic and integrated, must be the key to achieving long-range goals for sustaining the park's ecstasy and endurance.

Komodo National Park management uniting doesn't just strictly hinge on rare species conservation, like the Komodo dragon. But it must also include saving and restoring the larger ecosystem too; a multitude it features: microorganism reefs, mangrove forest areas, plus savannas. Zoning, one method used, is an example of governance globally aiming and dividing this area as its conservation areas and areas for tourism uses too. Impact lessening of the tourism sector on Komodo National Park and global policy specifically for such is needed. The unique use of technology yearns to advance to monitor this area as an immaculate tool, such as damage activity tracking. Also, to force and regulate data-based, still clear decisions, in support of policy actions contribute.

Crucial is the direct participation of residents of the locality in the process of administration. Not to be left out, they have been trained and given chances in activities of sustainable ecotourism, all very much profitable, financially speaking, to the community. The implication is that they take part in preserving the enduring nature of the Komodo National Park. Global oversight, in this reminiscent situation, works to put ecology preservation and lasting progress on the same scale, offering perks to every player who is part of the game. Expectations lie with all parties: local governance, the community, and even international bodies, for fostering and pushing the boundaries of holistic and enduring strategies. A robust operation within the confines of Komodo National Park calls for enhanced synchronization among a multitude of differing parties and resources adequately provisioned. Should the right method of approach be employed, this park may well stand as an example of successfully applying global regulations over natural resources—not just for conserving the world's secrets, but facilitating lasting advantages to local peoples and humans scattered globally as well.

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