



## Legal Protection of Taka Bonerate Coral Reefs: Community Empowerment Perspective

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### ABSTRACT

Takabonerate is one of the national parks and the third-largest atoll area in the world. The Indonesian government has designated Selayar Regency, South Sulawesi, as a tourist destination because of its charming underwater panorama, which attracts foreign tourists to visit and see hundreds of species of fish and other natural resources. The aim of this research is to analyze the protection of the Takabonerate Coral Reef through community empowerment. This study uses a qualitative approach that refers to legal norms. The study results show that several international agreements regulating the importance of communities being involved in coral reef management have been ratified by the Indonesian Government and have been implemented in several laws and regulations.

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## INTRODUCTION

A community of interdependent coral animals called as zooxanthellae depend on one another to form coral reefs. Directly benefit coral reefs by providing a haven for fish populations, attracting tourists with their eye-catching forms and hues, and serving as a study subject for the natural resources that surround coral reefs. Coral reefs also serve as a wave barrier on beaches and a source of biodiversity, which are indirect benefits. On the other hand, coral reefs are currently exhibiting signs of diminished functionality. Repercussions Coral reef ecosystems are impacted when coral reefs become less functional. One of the decreases In Indonesia, coral reefs are used for fishing, and their destruction allows for the capture of more fish and changes in climate. (Bruno and Selig 2007). Currently, 28% of Indonesians, or 1.65 million people, rely on reefs for their livelihood as fishermen, 12.1 million rely on them to protect their homes, and reefs generate revenue for the country as a tourist destination. \$2 billion USD a year. Regarding the state of the coral reefs in Indonesia, according to Thirukanthan et al. (2023), 32% are severely degraded and only 5% are in excellent condition. As a result, Indonesia's coral reefs are becoming less functional.

Due to damage and degradation, the Taka Bonerate coral reef in Selayar Regency is currently seeing a moderate decline in both quality and quantity. Latondu Kecil Island sustained moderate damage, defined as damage criteria of 25 to 49.9%, according to data from the waters. On the mainland of Tinabo Kecil as well as in the seas, the coral reefs suffered severe damage, with damage ranging from 0% to 24.9%. Explosive and potassium-based fishing is still practiced, along with the removal of coral reefs for raw materials. (Pranato, I.B., 2015). Regulations that seek to give local governments and communities utility and certainty are necessary in order to protect and preserve coral reefs (Lasalimu et al. 2018). The 1982 United Nations Convention on the Law of the Sea (UNCLOS), Article 192, mandates that states safeguard and conserve their natural resources. Moreover, Article 193 states that the state retains the sovereignty and right to use its natural resources as long as it complies with its duties. Thus, there are still community behaviors that have an impact on the destruction of the Takabonerate coral reef.

This research differs from earlier studies. According to Zulkifli Aspan, conservation is required to preserve the Taka Bonerate coral reef, and sites should be chosen according to their capacity to support coral reefs (Trimirza, Ramlan, and Repindowaty 2021). Next, Muhammad Rusli investigated the Taka Bonerate coral reef ecosystem's legal protection (Tovar et al., 2021). According to Supriharyono and Daniel R. Moninja, there are three different kinds of coral fish that can be found in the waters around Taka Bonerate: fish that are caught using fishing gear that is forbidden and fish that is suggested as a sustainable technology, like ( 1) squid fishing rods, (2) fishing rods, and (3) samba/kulambi (Park et al. 2001).. Three studies come to the same conclusion: in order to preserve sustainability and allow the local community to use the Taka Boneless coral reef, it must be legally protected from human activity. In the interim, this study looks at how community literacy can be used to legally

protect the Taka Bonerate Coral Reef. Therefore, the goal of this research is to respond to the following question: how is the Taka Bonerate Coral Reef in Selayar Regency protected using the concept of community empowerment? In order to ensure the preservation of regional natural resources, this research is urgently needed to protect the Taka Bonerate Coral Reef from community activities that could harm coral reefs.

## **LITERATURE REVIEW**

### ***Coral Reefs***

Article 1 paragraph (2) of Government Regulation No. 22 of 2021 defines coral reefs as an ecosystem that exists at the bottom of the ocean and takes the shape of limestone rock formations that are home to coral polyps and other microscopic organisms that live in colonies. (Government of the Republic of Indonesia 2021). Furthermore, in Article 1 paragraph (1) Decree State Minister for the Environment No.4 of 2001 concerning Standard Criteria Coral Reef Damage What is meant by coral reefs is a collection of corals and/or a coral ecosystem that is built primarily by lime-producing marine biota together with the biota that live in other seabed and other biota that live freely in the waters surrounding (No.4 2001).

Coral reefs are the foundation of marine life, which is diverse and dynamic. The coral reef ecosystem serves as a barrier and a source of medicinal benefits, among other things. In addition to providing fishing power and shelter, deep waves also serve as a tourist attraction and shield the coast from abrasion. (Trimirza, Ramlan, and Repindowaty 2021). Furthermore, Article 35 of Law 27 of 2007 states that every person is directly or indirectly prohibited from mining, taking, destroying coral reef ecosystems (Government of Indonesia 2007). Thus coral reefs are reef ecosystems Corals must be protected from things that can damage their function Coral reefs.

### ***Community Empowerment***

As per Article 1 paragraph (31) of Law No. 1 of 2014, community empowerment refers to efforts aimed at furnishing facilities, motivation, or support to the community and traditional fishermen, to enable them in making the most optimal decisions regarding the sustainable utilization of resources on the coasts and small islands. Concurrently, the perception of a society is made up of local communities, indigenous populations, and people who live along the coast and on small islands under customary law (Government of the Republic of Indonesia 2014).

One of the foundations in the Law of Protection and Environmental management is a participatory principle. This principle has One of the principles in the 1982 Rio Declaration is community participation in environmental protection and management (Traveling 2020), one of which is coral reefs. Coral reef management effectively by involving community groups and users. Management of coastal areas is not only carried out by the government but also the community also has an obligation to protect and

preserve coastal areas (Sakti 2023). Thus community empowerment is needed in protecting and preserving coral reefs.

## **METHODOLOGY**

This research is qualitative research, using empirical normative studies. The normative aspect examines several international agreements regulates coral reef management, and has been implemented in laws and regulations in Indonesia. Meanwhile, the empirical aspect examines its application to people who carry out activities in the Takabonerate National Park, Selayar Regency. The data source uses primary data in the form of interviews with related agencies and community figures. Meanwhile, secondary data uses library research. Next, the data sources obtained from the research results will be analyzed qualitatively and described.

## **RESEARCH RESULTS**

There are 30 coral reefs, 5 sandbars (bungin), and 17 islands in the Taka Bonerate National Park area. Administered by the Taka Bonerate District, this park is situated in the Flores Sea and borders South Sulawesi to the north, the Banda Sea to the east, the Flores Sea to the south, and the Java Sea to the west.. An area management system based on zoning is used in Taka Bonerate National Park. It includes Zone Core (8,341 ha), Marine Protection Zone (21,188 ha), Special Zone (357 ha), and Utilization Zone (500,879 ha), which is divided into zones for internal communities, the community surrounding the area, the community in general, and zones for tourism. The decision was made by the Directorate General of PHKA Number: SK. 150/IV-SET/2012, dated September 17, 2012. (Taka et al. 2018).

Management of Taka Bonerate National Park based on (Taka et al. 2018):

- (a) Law Number 5 of 1990 concerning Resource Conservation Biological Nature and Its Ecosystems.
- (b) Law Number 32 of 2009 concerning Protection and Management of the environment
- (c) Law Number 41 of 1999 concerning Forestry.
- (d) Government Regulation Number 28 of 2011 concerning Management Nature Reserves and Nature Conservation Areas
- (e) Government Regulation Number 108 of 2015 concerning Amendments to Rules Government Number 28 of 2011 concerning Management of Asylum Areas know.
- (f) Minister of Forestry Regulation P.56/Menhut-II/2006 concerning Guidelines Zone

In accordance with Regional Regulation No. 8 of 2010 concerning Reef Management, community empowerment in coral reef management is granted the following rights: access to information about how the coral reefs are used in his village; involvement in the development of policies relating to the management of coral reefs; and counseling and training in community empowerment. Aside from that, the community must contribute to preserving the ecological role of coral reef (Government of the Republic of Indonesia 2014). The role of the community based on article 91 Regional Regulation No. 5 of 2012 concerning the Selayar Islands Regency Spatial Planning Plan for 2012-2032 states that the community plays a role in every stage of spatial planning, starting from the planning stage to controlling space use, and its implementation can be done through local wisdom, namely *tudang sipulung*. Furthermore, to increase the role of the community, local governments build information and documentation systems that can be accessed by the community (Selayar 2012). Likewise, the community's role in implementing action plans is mentioned in Article 22 of Regional Regulation No. 10 of 2011 concerning Management of Coastal Areas.

The mentioned regulations have been made in accordance with Law No. 17 of 1985 concerning the ratification of the 1982 Law of the Sea Convention and Law No. 5 of 1994 concerning the United Nations Convention on Biological Diversity. The government that ratified UNCLOS 1982 is accountable for taking action against damage to coral reefs, and the state is responsible for safeguarding and maintaining the marine environment in order to fulfill its international obligations. Via the coral reef rescue program, Indonesia has been actively involved in coral reef preservation since 1998. Similarly, one outcome of the UN Conference on Environment and Development (UNCED) is the Convention on Biological Diversity, an international agreement among nations to address global issues, particularly the management of biodiversity towards sustainability. The convention recognizes states' sovereign rights to use biological resources for development, which is one of its advantages (Ministry of the Environment 2021). On the agenda, the community is involved in the operations of the Coral Triangle Initiative on Coral Reefs, Fisheries, and Food Security (CTI-CFF). Building the Coral Triangle Marine Conservation Area System is one of CTI's objectives, and it includes boosting community resilience and offering advantages for the social and economic facets of sustainable marine resource use. (Ministry of Foreign Affairs of the Republic of Indonesia 2023). Thus, coral reef management laws and regulations are the implementation of international conventions.

In Takabonerate National Park, area disturbance occurs despite regional regulations controlling coral reef management. About 11 instances of fishing with a purse seine, 28 instances of fishing with a compressor, and even multiple instances of coral mining happened in 2020–2021, but they were settled through mediation, with the offenders being ordered to return the coral to its proper location. The Selayar District Prosecutor's Office has prosecuted 20

cases of destructive fishing over the past five years. When fish are stunned by bombs, coral reefs will be harmed. Illegal fishermen typically have low educational backgrounds and don't even attend school. Therefore, in order to deal with fishing that can be done while destroying coral reefs, cooperation between all parties is required, including the community (Fajar-makassar, n.d.). Aside from human activity, environmental factors like coral bleaching brought on by rising sea surface temperatures due to global warming also harm coral reefs. Therefore, efforts at adaptive conservatism are required (Grand 2020). Additionally, harm to coral reefs other than what has been mentioned above is also (Basmatulhana 2022):

1. Illegal harvesting of coral reefs, usually carried out by tourists to make accessories or decorations that have economic value
2. Sand dredging and reclamation projects along the coast can lead to erosion because they obstruct sunlight entering the water.
3. Seawater can be contaminated by pesticides and waste, as well as by using pesticides on land for coastal agriculture. Similarly, machine operations and domestic waste can contaminate marine environments and harm coral reefs.
4. Mangrove forest felling. The function of mangrove forests is as a deterrent abrasion and water filter. If these two functions are not present, it can damage coral reefs and their ecosystems.

One of the public figures in Selayar Regency said that bomb fishing is still practiced, that plastic waste is still being thrown into the sea, and that coastal development is still happening. The local economy may suffer if this is allowed to continue unchecked. Furthermore, it is impossible to separate the community's operations from the Selayar Regency Maritime and Fisheries Service's oversight. The absence of facilities and infrastructure, such as speed boats and jolloros, inadequate supervision resulting from a shortage of human resources relative to the workload, and a lack of government funding are issues that impede the monitoring and preservation of coral reefs. On the other hand, the institutional tools for coral reef protection are not optimal, there are still village motivators who do not understand their duties and responsibilities. Thus, public awareness to maintain the function of coral reefs is highly expected.

Despite the fact that laws govern the responsibilities and rights of community empowerment in the management of coral reefs, some people still have no regard for the environment. As a result, it has an impact on coral reef quantity and quality. For this reason, community literacy is crucial in public education. Nearly everyone uses a smartphone these days. The use of technology in village communities is a crucial strategy for increasing access to knowledge and information. It can also enhance the quality of villages, particularly with regard to the long-term viability of coral reef functions.

## **DISCUSSION**

Threats to coral reefs come from sources that are both natural and human-made. Coral bleaching and rising sea surface temperatures are two effects of global warming. Coral reefs are harmed by human activity such as destructive fishing and discarding plastic waste into the ocean. Through legislation, the government has worked to protect coral reefs and has sent letters to interested parties, communities, fishermen, and other relevant parties. However, there were still bombings and purse seine arrests of fish. The organization is tasked with overseeing it faces challenges due to a shortage of personnel and other resources. According to the statutory regulations, the community is empowered to engage in coral reef monitoring. Encouraging the community to take on supervisory roles requires that supervisors possess knowledge and information that can be shared with other communities, as socialization and counseling are community rights. Therefore, it is the community's right to learn about coral reefs.

Coral reef interest groups in the community can provide information on coral reef management. Local governments have the ability to establish community institutions, such as those relating to fisheries cultivation, marine tourism, and coral reef management. Communities can receive training and information from this organization regarding the advantages of reefs and coral as a valuable natural resource. Moreover, the community institution can supervise in line with its responsibilities. By fostering literacy among those who use it, community institutions can make the most of technology Coral reefs. Nowadays, community literacy is required as an easily accessible online information resource. particularly the use of smartphones as a communication tool for information and education to spread knowledge throughout society.

Community institutions can access the official website to obtain information or knowledge about coral reefs that they can then share with the public, enabling them to use the information to protect coral reefs. The function of coral reefs for human life is literacy, which society needs. Knowledge or information acquired can be used in an indirect way to observe those who rely on the sea for their primary source of sustenance. In the event that actions are discovered that are against marine use laws and regulations and have the potential to harm coral reefs, the community will react and promptly report on relevant parties. As a result, the community cannot be given immediate supervisory authority.

## **CONCLUSIONS AND RECOMMENDATIONS**

Community empowerment in providing protection to the Taka Bonerate Coral Reef in Selayar Regency can be done by forming community institutions that are interested in coral reef management. These community organizations can be given the authority to oversee coral reefs in accordance with their responsibilities. One suggestion that could be made is that community organizations use technology to raise public awareness among visitors to Taka Bonerate National Park regarding the value of coral reefs to

humankind. Local governments may find this idea useful in stopping the destruction of coral reefs. As a result, it's critical to coordinate coral reef management efforts among all parties involved.

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