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The Role of Waqf Forests in the Prevention of Natural Disasters in Indonesia



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The Role of Waqf Forests in the Prevention of Natural Disasters in Indonesia

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Abstract

Natural disasters that occur in Indonesia are closely related to deforestation. One of the causes of natural disasters in the country with the third-largest tropical forest in the world is forest destruction. Damaged forests have caused flooding, landslides, and the climate crisis. One solution to overcome this problem is waqf forest, a forest built on waqf land. Waqf forests can reduce disasters from at least three perspectives, namely ecological, economic, and social-humanitarian. From an ecological perspective, nazhir of waqf forest can organize ecological programs to reduce the potential for disasters. From an economic perspective, Nazhir of waqf forests can manage economic programs with local communities to become environmentally friendly livelihoods. Nazhir of waqf forest can also organize disaster management training for residents living around the forest from a social-humanitarian perspective. The Bogor Waqf Forest Foundation is developing these three programs. The several future agendas that need to be prioritized are strengthening socialization, the collaboration between waqf stakeholders, and strengthening regulations to strengthen the existence of waqf forests.

Keywords natural disaster, waqf, waqf forest

Introduction

Indonesia begins 2021 with floods and landslides in a row. The natural disasters remind us of the beginning of the previous year, which also started with a disaster. Based on the Indonesian National Board for Disaster Management BNPB (2020), nearly 3,000 disasters in Indonesia resulted in 370 deaths and more than 6 million people displaced throughout 2020.

Interestingly, more than half of the disasters that occurred in Indonesia were floods and landslides (Figure 1). It is well known that one of the leading causes of floods and landslides

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is forest destruction. Deforestation reduces water catchment areas. Water that is not absorbed flows swiftly, causing flash floods and landslides in the upstream area and flooding in the downstream area.

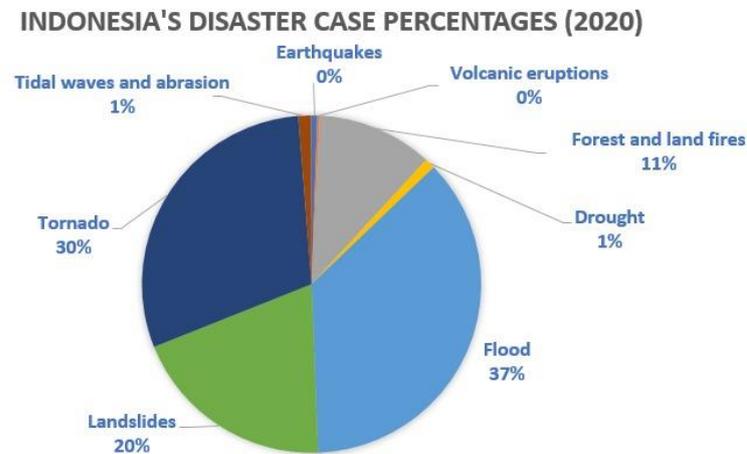


Figure 1. Indonesia's disaster case percentages (2020)
Source: BNPB (2020), modified

On the other hand, forest destruction also affects climate change and carbon emissions. Seymour and Busch (2016) state that deforestation can contribute to climate imbalances, leading to increased poverty. Regarding climate change and carbon emissions, Tumiwa and Mursanti (2020) state that emissions in Indonesia have increased by 140% in the period 1990-2017.

Forest rehabilitation, therefore, must be carried out consistently so that the role of forests as water catchment areas and preventing climate change can be restored. Forest rehabilitation requires collaboration from various stakeholders, not just relying on the government alone as the authority. Alamsyah (2021) states that although the forest rehabilitation budget in the Ministry of Environment and Forestry is already in the highest rank, the capacity for reforestation per year is only 200,000 Ha, which is still less than the expected capacity, which is 800,000 Ha/year.

Rehabilitation, however, is not sufficient. Many lands are being rehabilitated to spend much state budget. After the land starts growing into forests, the land is converted into non-forest lands, such as plantations or settlements, as stated by representatives from the Ministry of Environment and Forestry (KLHK) in the Cibunian Village ZCD Kick-Off activity on November 21, 2020, that the Ministry of Environment and Forestry had spent trillions of Rupiah to rehabilitate the forest. However, monitoring and evaluation showed that the forest

had been converted into non-forest land such as settlements (Yayasan Hutan Wakaf Bogor, 2020b).

Therefore, in our opinion, planting is essential, but providing permanent land for forests is also very crucial. One of the ways to provide permanent land for forests is through waqf forests. Waqf forests have developed in various regions in Indonesia, namely in Aceh, Bandung, Bogor, Wonosobo, and Surabaya (Ali, 2020). The growing waqf forest is new hope for forest conservation in Indonesia, the third-largest tropical forest owner.

Literature Review

'Waqf' is one of the main instruments in Islamic social finance. Waqf means "to hold the assets and give the results," as conveyed by Rasulullah SAW to Umar bin Khattab (Kathir, 1999). As-Sa'di (2002) explains that a waqf asset has become the property of Allah SWT, so it cannot be sold (*laa yubaa'*), given (*laa yuuhab*), and also inherited (*laa yurath*). An asset that has the status of waqf, the sustainability of the asset should be maintained, such as the endowment of Uthman bin Affan's well, which still exists until now, even the results can be used for pilgrims (Awqaf SA, 2020).

Currently, waqf is often understood to only relate to mosques, prayer rooms, educational facilities, or cemeteries. However, several studies have revealed that waqf can play an essential role in protecting natural resources. Budiman (2011) explains that the concept of waqf can be an alternative solution to environmental protection in Indonesia. More specifically, Yaakob and others (2017) stated that waqf could be an alternative solution to maintaining forest sustainability. Hasanah and Hakim (2017) also explain that waqf can be developed into urban forests.

The Islamic concept of protecting land for the environment is not new at all. During the time of the Prophet Muhammad, several types of land use were known, such as *hima* (conservation zone), *harim* (protected zone), and *ihya al mawat* (reviving abandoned land) (Majeri Mangunjaya & Elizabeth McKay, 2012). The way of protecting the forest according to the Islamic concept is waqf forest. Waqf forest is a forest developed on waqf land (Ali & Kassim, 2020).

The history of the waqf forest has started since the time of the Prophet Muhammad and his companions. One of the first forms of waqf at that time was garden waqf. An example is the date palm plantation in Khaibar, endowed by Umar bin Khattab (Rohmaningtyas & Herianingrum, 2017). Then, during the Ottoman Empire in Turkey in 1870, it was known that there were four types of forest, one of which was the *evkaf* (waqf forest), covering an area of

107.295 hectares (Dursun, 2007). In addition, waqf forests have also existed in Bosnia (Trakic, 2009).

One of the waqf forests currently being developed in Indonesia is the Bogor Waqf Forest, located in Cibunian Village, Pamijahan District, Bogor Regency. The waqf forest has been developed since 2018 by lecturers from IPB University. One of the development goals of this waqf forest is to prevent landslides that occurred in the village in 2015 (Ali, 2019).

Nowadays, studies on waqf forest are growing. Setyorini and others (2020) explain that forest protection through waqf forests is one part of the solution for sustainable development and intergenerational justice. Protecting the forest through the concept of waqf forest allows future generations to obtain the environmental quality that is as good as today.

Ali and Kassim (2020) explain that waqf forest plays a vital role in achieving all sustainable development goals (SDGs), including its relation to disaster management because it helps fulfil SDG 3 (increasing human health), SDG 13 (climate change adaptation with co-benefits for mitigation), and SDG 15 (healthy terrestrial ecosystem). As for legality, the potential for sustainability of forests built on waqf land is more significant because it is protected by two laws in force in the Republic of Indonesia, state law and religious law (Jannah et al., 2020).

Results and Discussion

The Role of Waqf Forests in Disaster Prevention

Waqf forests can play a role in preventing disasters, at least in three perspectives: ecological, economic, and social-humanitarian perspectives (Figure 2).

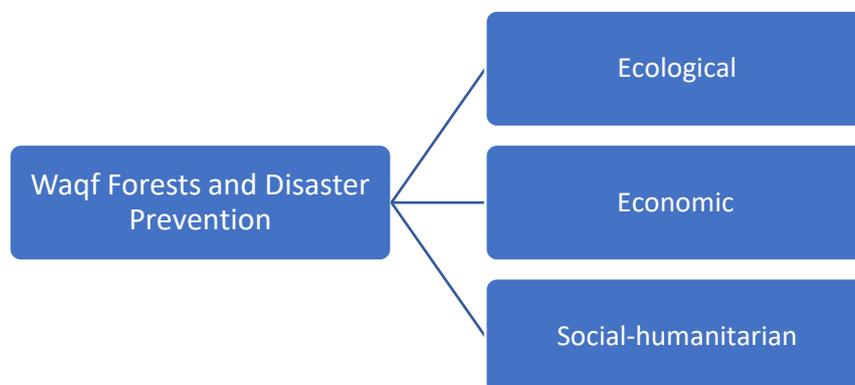


Figure 2. The role of waqf forests in disaster prevention

From an ecological perspective, one of the main activities in the waqf forest is land rehabilitation. Nazhir, together with the local community, can plant various types of trees on the waqf land. Planting trees in waqf forests has advantages compared to other places. Plants planted in waqf forests will be more sustainable because the land status has been registered with the Ministry of Religious Affairs through the Office of Religious Affairs (KUA) and the National Land Agency (BPN) as waqf, so the land is not able to be converted into other uses.

Waqf forests also cannot be sold, inherited or given away. This rule is stated in Law number 41 of 2004 concerning Waqf and also in Islamic *fiqh* books. On this basis, the ecological benefits of the waqf forest as prevention of floods and landslides can last longer, or even forever.

From an economic perspective, Nazhir can manage eco-friendly economic activities. Ecological programs in waqf forests can be synergized with economic activities. For example, in reforestation activities, plants can be selected to be both ecologically and economically beneficial. For example, waqf forest managers can choose fruitful forestry trees such as durian, jackfruit, and breadfruit. All three are tree species that can grow large so that they can be ecologically beneficial. At the same time, these three trees can produce fruit which can be a source of food or income for the local community.

A forest produces not only timber benefits but also non-timber forest products. The benefits of non-timber forest products are higher than the benefits of timber (Affandi et al., 2017). Apart from fruit, other examples of the benefits of non-timber forest products are bamboo, honey, herbs and ecotourism. These non-timber forest products can be developed in waqf forests in line with local forest characteristics.

From a social-humanitarian perspective, Nazhir can create a natural disaster management training program. Nazhir waqf forest can provide education and socialization of disasters to local communities. Moreover, the surrounding community can also be involved in protecting the forest. Nazhir must be able to convince local people that forests are essential to prevent floods and landslides. Thus, it is hoped that the community can become the guardian in preserving the waqf forest.

Case Study: Bogor Waqf Forest Foundation

Bogor Waqf Forest is one of the waqf forests in Indonesia that continues to be developed to overcome landslides and flash floods that continue to occur in Cibunian Village, Pamijahan District, Bogor Regency. On the other hand, protecting the forest in Cibunian Village can also be beneficial for people living in Jakarta because Cibunian Village is one of the villages located

in the downstream area of the Cisadane River (Trimarwanti, 2014), which is one of the main rivers flowing in the capital city of Jakarta.

The Bogor Waqf Forest Foundation collaborates with various parties to organize various programs, including ecological, economic, and social-humanitarian programs.

In the ecology program, The Bogor Waqf Forest Foundation mainly focuses on raising waqf funds from the community. The funds are used to buy private land, which is then converted into waqf land. At the location of the waqf land, vegetation is planted with various functions, including forest plants that have strong roots so that they can prevent landslides and floods. So far, more than 1000 forestry trees have been planted in waqf forests. These forest plants are increasingly growing, capturing rainwater, creating a microclimate, and reducing greenhouse gas emissions (Bull, 2010).

In the economic program, the Bogor Waqf Forest Foundation develops stingless bee cultivation (*Trigona* spp.). This program is in collaboration with and the Zakat Community Development (ZCD) Agency of the Indonesia Zakat Board or Badan Amil Zakat Nasional (BAZNAS) and the Ministry of Religious Affairs (Kemenag). *Trigona* bee cultivation was chosen because it is an ideal example of a green economy. Bees need forests as a source of food, and forests need bees as pollinators. The wider the *trigona* bee cultivation, the more extensive the greening in a place. *Trigona* bees like particular vegetation as a source of food. Therefore, the selected plants can adjust to the needs of the *trigona* bee, for example, mango and mangosteen trees that can produce resin, nectar, and pollen that bees need and fruit that humans can consume. So, waqf forests can reduce the potential for disasters and become a source of livelihood for residents.

Meanwhile, the Bogor Waqf Forest Foundation Social-Humanitarian Program, in collaboration with BAZNAS Disaster Unit (BTB), launched the Community-based Disaster Management or 'Kampung Tanggap Bencana' (KATANA) program. The program is a disaster training program for local communities to be prepared for disasters. Communities are also taught how to prevent disasters, namely by taking an active role in protecting forests and the environment.

The programs are the main programs of the Bogor Waqf Forest Foundation. In April 2020 - March 2021, the Bogor Waqf Forest Foundation collected IDR 466,159,169, which came from Zakat, Infaq / Alms, and Waqf (ZISWAF) funds. Approximately 77% of the funds have been distributed, including IDR 138 994 750 for ecological programs, IDR 98 063 554 for economic programs, IDR 96 682 871 for education and da'wah programs, and IDR 10 345 000 for social and humanitarian programs (Yayasan Hutan Wakaf Bogor, 2020a).

Future Agenda

The role of waqf forests in minimizing the potential for floods and landslides can only be significant if the waqf forest has become a massive social movement in various regions in Indonesia. Currently, it is estimated that the total area of waqf forest identified throughout Indonesia has not reached 20 hectares. However, this is a good start and needs to be continuously supported and improved. Therefore, at least two agendas can be improved, namely collaboration between waqf stakeholders and strengthening regulations to strengthen the existence of waqf forests.

First, increasing socialization and collaboration. Socialization and education of waqf forest to the community needs to be intensified. It is essential to understand what waqf forest is, what it means, its urgency, and its role in preserving the forest. Currently, waqf is only understood as '3M', namely mosques, madrasas (educational institutions), and cemeteries. Innovation in waqf is legal. Article 22 of the Waqf Law states that waqf assets can be developed widely as long as they do not conflict with Islamic law and state regulations.

Nazhirs, Islamic social organizations, environmental activists, the Indonesian Waqf Board (BWI) and the Indonesian Ulema Council (MUI) need to collaborate. For example, MUI has issued many fatwas and books related to environmental protection. These fatwas and books on the environment need to be disseminated to the public so that their environmental concerns will be more enlightened.

However, until now, there has been no specific fatwa regarding waqf forest. This fatwa on waqf forest is critical to ensure that the waqf forest program is a program that is in line with the principles of Islamic law. The MUI needs to issue a fatwa on the legality of the waqf forest in Islamic law so that the public is more convinced that the assets donated are in line with Islamic law.

The authors are optimistic that Indonesia's people will welcome this waqf forest program because this program is a real solution to overcoming forest damage based on Islamic law. Based on the author's survey of 400 people in Bogor, the waqf forest program received a positive response from the community⁵.

Second, strengthening regulations. The authors are grateful that the waqf forest program has received moral and material support from the government, such as the Indonesian Ministry of Religious Affairs and the Ministry of Environment and Forestry and BAZNAS RI and the

⁵ Ali KM. 2020. Determinant factors of waqf-based forest participation: edivence from Indonesia. Presented in VISIF 2020, IIUM Institute of Islamic Banking and Finance, International Islamic University Malaysia.

Indonesian Waqf Board (BWI). This support has been stated explicitly as in the official website of the Indonesian Ministry of Religion and BAZNAS RI. The two institutions even have collaborated with the Bogor Waqf Forest Foundation to develop best practices for productive waqf forest management. Thus, the authors would like to express our deepest gratitude to all parties involved in developing the waqf forest. In general, the central government supports the development of waqf. The National Movement for Cash Waqf (GNWU) was launched by President Jokowi several months ago.

However, regulations for strengthening the waqf forest will also be needed in the future. The required regulations include recognizing the existence of waqf forests by the Ministry of Environment and Forestry. Currently, the term waqf forest is still unknown in our forestry regulations. Meanwhile, the authors hope that in the future, state land can be donated into waqf forests. It is essential so that the extension of the waqf forest can increase more rapidly. Hopefully, the waqf forest can continue to grow to play a significant and more sustainable role in reducing the risk of natural disasters in Indonesia.

Conclusion

Waqf forests can play an essential role in preventing natural disasters such as flooding, landslides, and climate crisis. Waqf forests can last longer because waqf is perpetual. In disaster management, waqf forests can play a role in at least three programs: ecological programs, green economy programs, and social-humanitarian programs. The role of waqf forest in disaster management will be even more massive if supported by the collaboration of various parties and regulatory support from the state.

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