

## Waqf Forest: How Waqf Can Play a Role In Forest Preservation and SDGs Achievement?

Khalifah Muhamad Ali<sup>1\*</sup>, Salina Kassim<sup>2</sup>

\*Corresponding author

**Abstract.** *Previous studies about waqf for forest conservation mostly concentrated on its potential or its prospect for forest preservation or environmental protection. In contrast, a detailed discussion about how to establish a waqf forest to support the SDGs is still noticeably absent. This paper aims to formulate a scheme of productive waqf forests that can help the achievement of Sustainable Development Goals (SDGs). To our knowledge, this is the first paper that provides a scheme of productive waqf-based forest. The present study was conducted using a literature study method and interpretative analysis. The result shows that a productive waqf forest should supply not only intangible benefits but also generate tangible benefits that can be used for the waqf forest development. Both benefits which support some main points of SDGs, such as in reducing poverty and hunger, maintaining climate, health, biodiversity, and water supply, are mainly delivered to the mauquf'alaihi.*

**Keywords:** *Islamic social finance, SDGs, waqf, waqf forest*

JEL Classification: D64, G23, Q01, Q23, Z12

**Abstrak.** *Kajian-kajian sebelumnya tentang wakaf untuk pelestarian hutan sebagian besar terkonsentrasi pada potensi atau prospeknya untuk kelestarian hutan atau perlindungan lingkungan. Sebaliknya, pembahasan rinci tentang bagaimana membangun hutan wakaf untuk mendukung SDGs masih terasa belum ada. Makalah ini bertujuan untuk merumuskan skema hutan wakaf produktif yang dapat membantu pencapaian Tujuan Pembangunan Berkelanjutan (SDGs). Sepengetahuan kami, ini adalah makalah pertama yang memberikan skema hutan wakaf produktif. Penelitian ini dilakukan dengan menggunakan metode studi literatur dan analisis interpretatif. Hasil penelitian menunjukkan bahwa hutan wakaf produktif tidak hanya memberikan manfaat yang tidak berwujud tetapi juga menghasilkan manfaat berwujud yang dapat digunakan untuk pengembangan hutan wakaf. Kedua manfaat yang mendukung beberapa poin utama SDGs, seperti dalam mengurangi kemiskinan dan kelaparan, menjaga iklim, kesehatan, keanekaragaman hayati, dan pasokan air, sebagian besar diberikan kepada mauquf'alaihi.*

**Kata Kunci:** *keuangan sosial Islam, SDGs, wakaf, wakaf hutan*

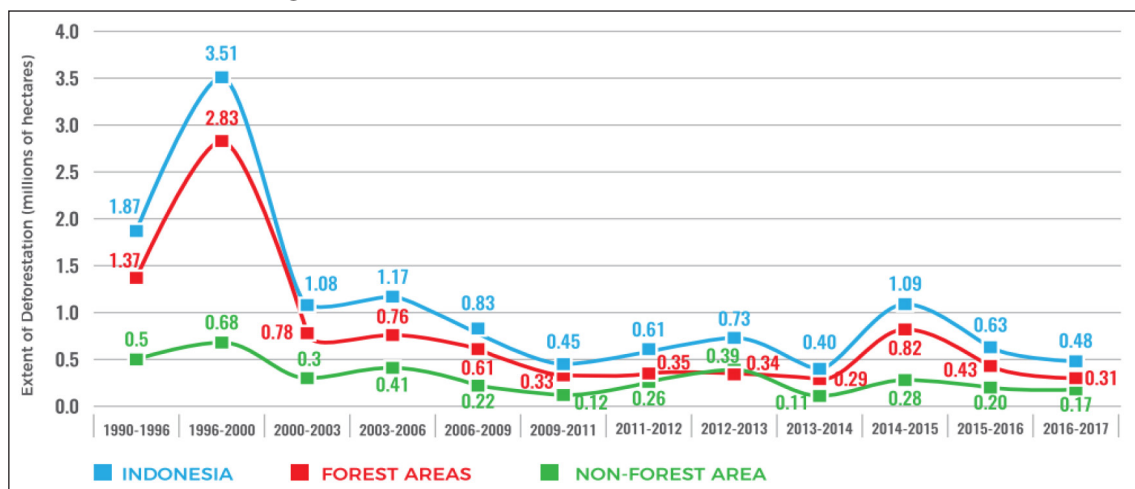
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## Introduction

The Indonesian forests, as the third-largest tropical rain forest in the world (Margono et al., 2016), should be preserved because it can play a vital role in supporting the achievement of the Sustainable Development Goals (SDGs). In SDGs context, the forest, which is one of the most crucial ecosystems on the planet can generate not only income for the people (supporting SDGs number 1), but also provide food and medicine (supporting SDGs number 2 and 3). Forest also can deliver freshwater and maintain the earth's temperature (supporting SDGs number 6 and 13) and protect sources of biodiversity (helping SDGs number 15) (Seymour & Busch, 2017).

Figure 1. Indonesian deforestation trends, 1990-2017



Source: Ministry of Environment and Forestry (2018)

Unfortunately, deforestation is a problem that keeps happening in Indonesia (Figure 1). From 2009 until 2013, 1.13 million hectares of forests in Indonesia are lost every year. It even said that in 2012, Indonesia had lost its annual primary forest bigger than Brazil, even twice because Indonesia lost 0,84 Mha while Brazil lost 0,46 Mha. Although, in 2017, the deforestation number already decreasing into a 60% drop compared to the previous year (2016), there are still more things to do to conserve forest (FWI (Forest Watch Indonesia), 2018; Hamzah et al., 2018; Margono et al., 2014).

In Indonesia, forest conservation/protection mentioned in the Law of The Republic Indonesia Number 41 of 1999 regarding Forestry. Unfortunately, the Indonesian government's budget for forest management/security is limited, only around IDR 7 trillion/year (around USD 500 million/year). In contrast, the forest area that should be protected is about 124 million hectares. Hence, the budget for forest protection is only about US\$4 each year (Herman, 2018). Thus, another source of funding is needed to help Indonesian forest preservation.

Islam has a social finance instrument called *waqf* (Islamic endowment). Genuinely, waqf is mentioned as a part of *sadaqah* and *infaq*. Waqf is “a perpetual or temporary holding of a *Maal* (asset or usufruct) that produces repeated services, products, or revenues or an objective of general or private righteousness” (Kahf, 2008).

Most Muslim jurists recognize the waqf as perpetual, irrevocable, and inalienable. Perpetuity of the waqf means that it lasts as long as the assets itself because it no longer belongs to the Waqif, but Allah SWT. Irrevocability means once a waqf established, it cannot be denounced. It means that the waqf will stay stable; the beneficiaries cannot be intimidated (because they cannot be prevented from receiving the waqf's income). Inalienability prevents waqf from being changed, sold, granted, and inherited. However, the waqf assets may be exchanged for an equivalent property, or it may be sold, according to the judges grant, to fulfill the goals of the waqf (Al-Anzi & Al-Duaij, 2004). In line with that, if a waqf purpose already fulfilled or not available anymore, the benefits from this waqf should be delivered to another closest beneficiaries, or it should be utilized for the poor and needy people (Kahf, 2003).

Waqf benefits can be described as extensible, and it can be utilized to respond to social needs and urgencies. One of the beneficiaries of the waqf is the natural environment (Al-Anzi & Al-Duaij, 2004). The trees, woodlands, forests, and all biodiversities in that area are the essential things to be conserved in the environment (Ozdemir, 2002). Budiman (2011) stated that waqf might be influential in overcoming environmental problems in Indonesia. In the next following years, it is projected that the management of waqf in Indonesia will pay more attention to environmental issues. Together with the problems of food sovereignty and maritime affairs, ecological commitments have been declared as one of the targets for the use of waqf utilizations (Ministry of Religious Affairs, 2019).

Waqf could be introduced into forest protection and regeneration program in terms of funding (Hasanah & Hakim, 2017; Yaakob et al., 2017). Waqf is "*holding the assets and donating the yields*." Waqf has several unique characteristics that suitable for developing forest preservation, namely: waqf cannot be sold (*laa yubaa'*), cannot be granted (*laa yuuhab*), and inherited (*laa yurats*) as well As-Sa'di, 2002). In terms of waqf for forest conservation, a forest that became a waqf land will be sustainable, because waqf rule forbids to change the land use to another use until the end of the world.

Waqf forest can be defined as a forest developed on waqf land (Ali & Jannah, 2019). It can be acquired from a waqf land or a cash waqf collected from society. The waqf forest is not a new concept in Islam. Even though it was not a forest, the first waqf made by Rasulullah SAW's friends was waqf of the date palm plantation in Khaibar, by Umar ibn Khattab (Awang et al., 2018). Then, based on historical research, it is known that in the Ottoman period, Turkey, there was an Evkaf Forest (waqf forest), covering more than 107 thousand hectares (Dursun, 2007; Özden & Birben, 2012).

The first waqf forest in Indonesia was established in 2012 in Aceh Province called "*Hutan Wakaf Jantho*" (Waqf Forest Jantho). They invited people to donate cash waqf and used it for buying critical land. The land will be converted to a waqf forest (Hutanersisa.org, 2018). Some volunteers manage the waqf, identified themselves as Komunitas Hutan Wakaf. "*Wakaf Leweung*" or Waqf Forest was established by the local government of Bandung Regency. Similar to Aceh, the government persuaded the people in Bandung Regency to donate a cash waqf to build a waqf forest in a critical land (Humas BWI, 2013). The newest

waqf forest was at Cibunian Village, Pamijahan District, Bogor Regency. This waqf forest was established by some scholars from IPB University, Bogor West Java (Ali, 2020).

Waqf research for Muslim society is essential and potential for elaborating the potentials of waqf in strengthening the ummah's economy (Rusydia & Al Farisi, 2016). Previous research stated that waqf could be used to support environmental and forest sustainability. Budiman (2011) stated that waqf as a charitable institution in Islam has potentials and could be employed as a vital instrument for environmental protection. Also, Yaakob et al. (2017) argued that waqf could be introduced into forest conservation and regeneration program due to inadequate fund for forest regeneration and development. Utilize varied function of waqf to protect the environment are demonstrated in Kuwait, Brunei, Indonesia, Singapore, and also the United Kingdom.

Hasanah & Hakim (2017) also stated that the waqf scheme is also possible to buy spacious land for the urban forest and finance the cultivation and the maintenance. Based on those articles, we can conclude that waqf as an instrument of Islamic social finance can be used as a potential and prospective source of funding for saving the tropical rain forests in Indonesia.

Unfortunately, previous studies about waqf for forest conservation mostly concentrated on its potential or its prospect for forest preservation or environmental protection, for example, its potential and possibility of waqf that can be used for forest conservation and maintenance. Also, detailed discussions about how to establish a waqf forest to support the Sustainable Development Goals are still scarce, especially in Indonesia.

Therefore, the objective of the research is to formulate a scheme of productive waqf forest, which describes the flow of a productive waqf forest that can support several main goals of SDGs. Based on the research objective, the research question in this study is how a productive waqf scheme can be formulated and described, started from the beginning until the *mauquf'alaihi* can utilize the benefits of the waqf forests. At the same time, it can support several main goals of SDGs. To our knowledge, this is the first paper that provides a scheme of productive waqf-based forest.

This study is essential to give insights for more researchers to explore the potential of waqf to finance the environment and forestry sectors in the form of a productive waqf forest scheme. The results of the study also will be necessary as a reference for the development of waqf forest studies in the future, especially for the relevant stakeholders, such as regulators, academics, practitioners, and communities.

This paper is organized into five sections. First, it describes the background and the aim of the study. The next part is the research methodology. Then, the result and discussion of the study are presented, starting with a productive waqf scheme. It followed by the details of every part of the scheme based on the stakeholders and their relationship. Finally, the article ends with a conclusion and recommendations for future studies.

## Methods

The type of research is exploratory qualitative research. Exploratory research deals with a phenomenon, focused on collecting primary or secondary data to interpret them (Shukla, 2008). This research is using secondary data, with a literature study method to collect the data. The secondary data of this research are gathered from books, journals, working papers, reports, web pages, and other documents relevant to the topic of waqf, forest, SDGs, and other related issues.

The data analysis method of this research is interpretative analysis. There are three stages in interpretative analysis, namely deconstruction, interpretation, and reconstruction (Miles & Huberman, 1994). The first step is a deconstruction, including separating the secondary data into some elements to be analyzed (Sargeant, 2013). The concept of productive waqf forest and SDGs are being deconstructed to see what is included in this concept.

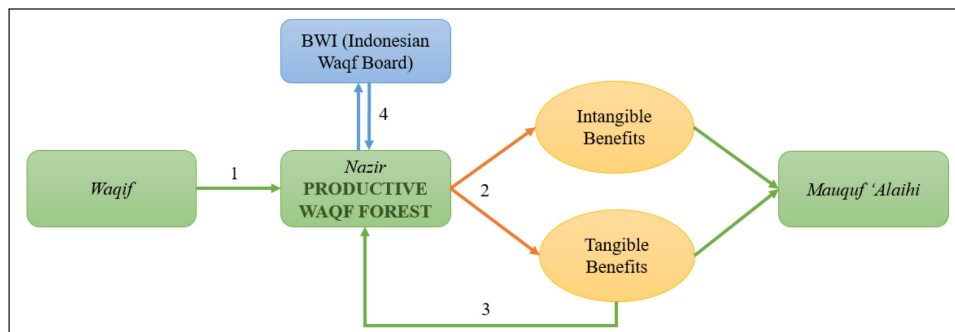
Interpretation is the next step, proposed to interpret the data elements. In this step, every aspect also will be compared across another to find their connections (Sargeant, 2013). In this research, this part includes finding the relationship between the elements of a productive waqf forest, for example, stakeholders involved. The last part is a reconstruction, intended to reconstruct those elements in the right position according to their relationship and explain it principally based on the previous theory and knowledge (Sargeant, 2013). In this research, the reconstruction of the data will be presented in the form of a productive waqf forest scheme.

## Result and Discussion

### Productive Waqf Forest Scheme

Figure 2 shows a productive waqf forest scheme. First, the *waqif* gives *waqf* to the *nazir* to be managed. The *nazir* will manage the waqf forest into a productive waqf, which has tangible and intangible benefits/profits. Some of the tangible advantages will be used for the *waqf* development managed by *nazir*. The rest tangible and intangible benefits are dedicated to the *mauquf 'alaihi*.

Figure 2. Productive Waqf Forest scheme



The tangible profit sectors are *da'wah*, education, health, social, economy, and ecology, while the intangible profits are fresh air, clean water, energy, soil protection, biodiversity,

and aesthetics. By dedicating those benefits for the beneficiaries, a productive waqf forest is supporting the SDGs, especially some goals regarding environmental aspects.

Al-Anzi & Al-Duaij (2004) stated that Islamic waqf involves four human elements, namely waqf donor (*waqif*), trustee, or waqf manager (*nazir*), waqf beneficiaries (*mauquf'alaihi*), and judge (*qadi*). The role of BWI (Indonesian Waqf Board) is vital for the controlling function. The Nazir of Waqf forests must provide regular reports to BWI regarding the productivity and stability of the waqf assets under its management.

### ***Waqif (Waqf Donors)***

*Waqif* (donor of waqf) is an individual (or organization) who dedicated his/her assets (can be in the form of property or money) as a waqf (Ali et al., 2018; Khalfan, 2014). Waqf has a role in purifying the *waqif's* heart, leading him or her to soul purification, descendant purification, properties purification, and sense purification (Huda et al., 2017). Waqif can be divided into two groups. They are individual waqif and organizational waqif. The organizational waqif can also split into two different groups; they are profit organization and non-profit organization. The profit organization can allocate their CSR (Corporate Social Responsibility) into a waqf. On the other hand, the non-profit organization such as zakat or Islamic philanthropy organizations can allocate their collected charity to finance waqf forest.

The waqf development shreds of evidence showed that the waqif had the authority to choose on various types of waqf benefits, not only religious but also general projects (Pitchay et al., 2014). The environment is now under serious threat, and *waqifs* are legally entitled to and indeed are encouraged to direct all part of the *waqifs* income in the service of environmental protection (Al-Anzi & Al-Duaij, 2004). Pitchay et al. (2014) have researched about Malaysian cash waqif's priority in terms of waqf development. Although the highest priority is still education, some *waqifs* already considering the environment as their intention for waqf. Al-Anzi and Al-Duaij (2004) stated that it is necessary to convince the *waqifs* about the importance of environmental protection and spending money to protect the environment.

### ***Nazir (Waqf Manager) of a Productive Waqf Forest***

According to Law No 41 of 2004 about Islamic endowment, *nazir* divided into three, namely: individual *nazir*, organizational *nazir*, and legal entity *nazir*. *Nazir* is a stakeholder that most responsible for the waqf assets, not only the waqf assets itself but also the benefits and the development. A *nazir* can be categorized as trustworthy (*Amanah*) if they have some characteristics, namely responsibility, efficiency, and professionalism (Ali et al., 2018; Kasdi, 2014).

Several things need to be done by *nazir*, such as: taking care of the certificate of the land ownership (for waqf land), advocating the endowment assets which are still disputed, and strengthening the productivity of the waqf property (Kasdi, 2014). *Waqif's* statement bounds the *nazir*. Once the *waqif* stated that environmental protection should be included in his/her pledge deed, the *nazir* is obliged to follow such requirements and spend the income

to realize this purpose. An environmentalist *nazir* will manage the waqf in a way that helps to conserve and preserve the natural environment and contributes the revenue accordingly (Al-Anzi & Al-Duaij, 2004). Besides, the *nazir* of the waqf forest should understand the basic knowledge of how to maintain forests and is an essential competency.

The benefits of waqf forest will be utilized not only by the *mauquf'alaibi* but also by the region because it will protect the natural ecosystem and environments. Forests absorb carbon dioxide, and it means forests help controlling air pollution. Forests also guarded the natural flow of the water by keeping the balance of the rain. For the land itself, forests can boost soil fertility; at the same time, it prevents land sliding and soil erosion (Abad-ur-Rahman & Ayaz, 2015; Jain et al., 2017).

Other intangible profits that should be considered are biodiversity, beautiful view, the protection from weather change, and carbon sequestration to the farmland and livestock. Last but not least, some benefits in social and cultural areas also could be utilized from the forests, especially by the local community (Bull, 2010). Beneficiaries of the waqf may be relatives, non-relatives, or public services (Al-Anzi & Al-Duaij, 2004). The recipients can be classified as direct beneficiaries and indirect beneficiaries. Direct beneficiaries are the person or the things that have been mentioned in the waqf deeds. For example, the family of the donor, the orphanage, the mosques, religious schools, or the library. Indirect beneficiaries are referring to the people who receive indirect benefits from the waqf assets, such as the people who work in the waqf building, the local people who live surrounding the waqf land, and use the facilities of the waqf properties (Ali et al., 2018).

For humankind, forests give abundant economic benefits. An example of the economic benefits includes as a source of many industrial products (for instance, sawn timber or Roundwood, which can be transformed into a lot of products such as furniture, paper, etc.). It also includes fuel-wood (such as converted woods into charcoal) and non-wood forest products (for example, plants for food, medicines, and others). Forests also provide employments, especially for the local people (Bull, 2010).

In the waqf forest, apart from the forest products like wood and NWFP (non-wood forest product), waqf forest can be managed into ecotourism, forest honey producers, or agriculture integrated with forestry in the concept of agroforestry. The profits can be used to cover management and development costs, including acquiring new forest lands so that the waqf forest will be more extensive in the future (Ali, 2018).

Similarly, in the waqf forest context, the tangible profits from waqf forests should be delivered partly for the waqf management managed by *nazir*, and the rest is dedicated to the waqf beneficiaries (*mauquf'alaibi*). The tangible profits for the waqf beneficiaries can be given in the form of several activities in the field of da'wah, education, health, social, economy, and ecology.

As stated by Shaikh et al. (2017), flexibility in the regulations of waqf allows it to serve beneficiaries immediately or through monetary institutions and to serve a vast vary of social services. The recipients of the waqf forest can utilize the forest form several activities in the field of da'wah, education, health, social, economy, and ecology. The examples of the

programs can refer to the Zakat Village Index (ZVI) developed by BAZNAS (2017) and the concept of Sustainable Forest Management (SFM) established by FAO (2019a).

According to ZVI, the indicators of the da'wah benefits are namely, 1) providing religious facilities and infrastructure, 2) increasing religious understanding from the community, 3) increasing religious activity and community participation. For the education benefits, the indicators are, 1) increasing the level of education and literacy, and 2) providing educational facilities and infrastructure. For the health benefits, the symbols are, 1) expanding the health quality of the community, 2) providing health services, and 3) encouraging community to have health insurance (BAZNAS, 2017).

In terms of Sustainable Forest Management, there are several benefits that the beneficiaries can get from the waqf forest, namely economic, social, and ecological benefits. For the economic/financial benefits, the examples are by harvesting a non-wood forest product (NWFPs) and the marketing of forest environmental services (FAO, 2019b). For the social benefits, mainly for the needy, wooded area and tree assets furnish not only food and gasoline for cooking and heating but also medicine, haven, and feature as security nets in crises or emergencies. Employment and income generated via the harvesting, processing, and promotion of woodland items and environmental services also essential in many rural areas (FAO, 2019c). For the ecology benefits, forests can assist in climate-change mitigation and adaptation, biodiversity, even soil and water conservation (FAO, 2019a).

Intangible benefits felt from the forest can encourage visitors to come and participate in protecting the forest. For example, a study in Munich said that there are several reasons someone visits the forest in the city and the village. For example, dog walking (animal-walking), fresh air, experience, escape from everyday life, health, good time with family and friends, cooling, sport, happiness, and tranquility (Meyer et al., 2019). Forests also contribute to disease prevention. A study by Garg (2019) stated that a 1% increase in the primary forest could reduce the 10% chance of malaria outbreak in Indonesia.

### ***Tangible Benefits for Waqf Forest Development***

A waqf should be productive. Nowadays, productive waqf projects are needed to improve prosperity. A productive waqf means that the waqf assets are managed to produce profits; it will be distributed to the *mauquf'alaihi* in the form of charity and alms. It is comparable to create productive business sectors to ensure that the benefits of the waqf assets can be used and developed optimally (Huda et al., 2017).

Thaker & Thaker (2015) give an example of Waqaf An-Nur Corporation Berhad, one of the corporates who manages waqf assets and shares its benefits. Their profit from the waqf assets (CSR from Johor Corporation) is delivered into some parts. 70% of the profits are for re-investment activities by Jcorp, 25% for *fisabilillah* (health services, programs at the masjid, construction of masjid, social development, human capital development, theater Imam Bukhari, and Orang Asli), and the last 5% is for State Islamic Religious Council of Johor.



In the waqf forests, some tangible benefits need to be returned to the *nazir*. This benefit will be used by *nazir* for the development of the waqf forest. For example, if agroforestry is developed in the waqf forest, a portion of the profits from the sale of non-timber forest products will go to *nazir*. These funds can be used to pay workers or buy new land to be represented and developed as the next waqf forest.

### ***BWI (Indonesian Waqf Board)***

BWI is an independent institution that has a big responsibility in advancing and developing waqf in Indonesia, which has been regulated in the law. BWI was also responsible for intensive coaching and training for *nazir* (Ali et al., 2018). Some tasks and authorities of BWI are coaching the *nazir* in maintaining and developing waqf, maintaining and developing national waqf assets, and giving agreement or permission for the change of use or status of waqf assets. BWI also responsible for discharging and changing the *nazir*, providing an arrangement for exchanging waqf assets, and offering suggestions and consideration to the government about policymaking in the field of waqf (Iswanto, 2016).

### **Other Related Stakeholders**

Apart from the main stakeholders, some other related stakeholders need to be considered in the development of the waqf forest. They are DSN-MUI (as sharia-compliant), some ministries (as regulators), academicians, landscape architects, and community.

### ***DSN-MUI (National Sharia Council of Indonesian Ulema Council)***

The stakeholder involved in Sharia-compliant of waqf forest in Indonesia is DSN-MUI. The DSN-MUI was founded to accommodate the aspirations of Muslims regarding economic issues and encourage Islamic teachings utilization according to Islamic law in the field of economics and finance (DSN-MUI, 2019). In terms of waqf forest, the role of DSN-MUI is to conduct a fatwa about whether waqf forest is allowed according to the Islamic law, and also conduct a fatwa about cash waqf that used to fund the waqf forest. Shafii et al. (2015) stated that the operations of sharia-compliant institutions are essential to be conducted that a waqf does not contradict sharia in terms of its strategic and operational policies, investment policies, and human resources policies.

### ***Ministry of Religious Affairs, Ministry of Agrarian Affairs and Spatial Planning, and Ministry of Environment and Forestry***

Shafii et al. (2015) stated that aspects of regulations are required to protect the rights of the stakeholders of waqf (donor, trustee, beneficiaries, employees, and the regulator itself). According to the statement, in the context of waqf forest, at least there are three ministries involved in the development of a productive waqf forest. They are the Ministry of Religious Affairs, the Ministry of Agrarian Affairs and Spatial Planning, and the Ministry of Environment and Forestry. Each of them has a different role as a regulator.

Indonesia is a country of law. Therefore, the Ministry of Religious Affairs has an essential role in determining various regulations related to waqf. Based on Ministry Regulation No 33 of 1949 jo. No 8 of 1950, it is stated that one of the duties of the Ministry of Religious Affairs is to investigate, determine, register, and oversee the maintenance of waqf assets (Abdullah, 2014). Waqf forest as a form of waqf must be legally registered with the Ministry of Religious Affairs. This registration was carried out by way of making an act of waqf pledge by the Waqf Pledge Deed Official (PPAIW) in front of two witnesses, conducted at the nearest Religious Affairs Office. After the Waqf Pledge Deed issued, PPAIW will deliver it to the related agencies.

By definition, waqf forest can be categorized as waqf in the form of land, which is designated as forest for environmental sustainability to improve public welfare. It is in line with the function, purpose, and purpose of waqf assets (Setyorini et al., 2020). Therefore, the National Land Agency (BPN), on behalf of the Ministry of Agrarian Affairs and Spatial Planning is crucial for the final legalization process. After the Waqf Pledge Deed from the Religious Affairs Office issued, the nazir should propose a land waqf certificate to the National Land Agency. The Ministry of Environment and Forestry also has an essential role. It is regarding the land status that will be endowed as a waqf forest. The land should not belong to the state, and it should not be located inside the Forest Area.

### ***Academics (Scholars)***

Academics can be involved as well for the development of waqf forest. In 1991, the United Nations Educational Scientific and Cultural Organization (UNESCO) wrote that academics in a higher education level could use their knowledge at the service of society, to create a better world. They should adopt a more dynamic approach, proactive to meet society's needs. For the waqf forest, the role of the academician can be in the form of conducting some researches that may generate some suggestions which can improve the quality of the waqf forest.

### ***Landscape Architect***

A Landscape architect can be involved in the process of planning and designing a waqf forest. A Forest landscape plan should describe the relationship between the design and the existing features, mention the basic and the process of generating the design concept, and every object's visual quality. For example, there should be any different areas on the land-based on its functions, either as a planting area with silvicultural systems, or conservation and recreational areas. Some forests can be developed as a woods area that can be harvested while the others managed as wilderness (Gardenvisit.com, 2019).

### ***Community***

In the developing countries, especially for the rural population, community forest management has been determined as one of the best options in declining deforestation and improving the local people's prosperity at the same time (Santika et al., 2017). Some factors

that influence the community to participate in protecting the forest are physical conditions, availability of resources and farmland, village remoteness, also the awareness of deforestation and the need for food security (Thandar & Yeo-chang, 2019). In line with that, to maintain the contribution of the community in waqf forest management successfully, it is crucial to understand how waqf forest can contribute to the society, especially for their wellbeing and livelihoods, and also for the natural environment.

### **Waqf Forest and Sustainable Development Goals (SDGs)**

As mentioned in the previous part, a productive waqf forest will have both tangible and intangible benefits. Some of the physical benefits will be used for the waqf development. Meanwhile, the rest of the tangible and all of the intangible benefits are dedicated to the *mauquf'alaibi*. In the context of SDGs, Seymour & Busch (2017) stated that forest could support some of the SDGs points, namely SDGs number 1 “no poverty,” 2 “zero hunger,” 3 “good health and wellbeing,” 6 “clean water and sanitation,” 13 “climate action,” and 15 “live on land.”

As stated by Ali (2018), one of the ideas of the development of productive waqf forests is to practice a concept of agroforestry, which is integrating between agriculture and forestry programs in the same area. There have been many studies on the advantages of planting with agroforestry methods compared to monocultures. For example, cocoa-coconut agroforestry has been shown to have better environmental performance in every aspect rather than cocoa monoculture (Utomo et al., 2015). Agroforestry systems also have already been proven can increasing the richness of biodiversity, especially in the fragmented landscapes (Haggar et al., 2019).

SDGs allow multifunctional land uses, so applying agroforestry is still in line with SDGs. The concept of agroforestry may help alter climate change (SDG 13); at the same time, it brings positive vibes for food (SDG 2), energy (SDG 7), and water issues (SDG 6). Agroforestry also contributes in increasing human health (SDG 3), and healthy terrestrial ecosystem (SDG 15), and also contribute to economic progress (SDG 1) (van Noordwijk et al., 2018). In line with this, Waldron et al. (2017) stated that on-farm trees could generate enough amount of fuel-wood, so it will lower the urge to destroy natural forests. At the same time, it also can save a woman from a smallholder family to walk very distant for searching firewood, produce some farm labor to work with, and it can be another source of income (SDGs 3, 4, and 5). The supply of fuel-wood from the on-farm activities also contributes to providing an alternative source of energy (SDG 7) for rural communities, also enhances biodiversity and ecosystem services (SDG 15), along with the mitigation of climate change (SDG 13).

Another idea of the productive waqf forest development is to make it into ecotourism. As stated in Regional Regulation of West Java Number 10 of 2011 regarding protection and empowerment of forest village community (2011), it is possible to use the forest for other activities such as ecotourism as long as it did not conflict with the primary function of the forest. It should be beneficial for the local community around the forest. Kiper (2013)

describes ecotourism, as “an alternative to tourism, involves visiting natural areas to learn, study, or to carry out environmentally friendly activities, and enable the economic and social development of local communities.”

Ecotourism can establish an enabling environment and developing a community forest. It can encourage business success, resulted in some excellent outcomes, including empowerment of society. Access to forest resources can generate additional sources of income (Katila et al., 2017). Tourism is included in three parts of SDGs, namely Goal 8 on “economic growth and jobs,” Goal 12 on “sustainable production and consumption,” and Goal 14 on “life below water.” But overall, sustainable tourism (including ecotourism) can become one of a significant alternative to achieve all of the 17 SDGs (UNWTO, 2018).

## Conclusion

This paper aims to establish a scheme of productive waqf forests for supporting the achievement of Sustainable Development Goals (SDGs). In the present study, we formulate a productive waqf forest scheme which is involved in some crucial stakeholders, namely *waqif*, *nazir*, *mauquf’alaihi*, and Indonesian Waqf Board (BWI). Some supporting stakeholders are also discussed in the scheme. A productive waqf forest means that some of the tangible benefits of the *waqf* forest should be utilized for the *waqf* development, managed by the *nazir*, and the rest of the benefits, tangible and intangible, are allocated for the *mauquf’alaihi*. The productive *waqf* forest scheme also will support some main points of SDGs, such as reducing poverty and hunger, maintaining climate change, sustaining a healthy life, preserving biodiversity and water supply, also fostering economic growth and sustainable consumption and production.

Two recommendations can be put forward in this research. First, for waqf forest managers, waqf forests should be managed productively, so that waqf forests provide not only intangible benefits (such as ecological benefits) but also tangible benefits (such as economic benefits). The waqf forest management scheme developed in this study can be used as a guide. The development of tangible benefits will encourage communities around waqf forests to preserve waqf forests because these forests are the source of their livelihoods. Agroforestry can be applied to obtain both benefits. The application of agroforestry to waqf forests can be examined in future studies. Second, for the government, although waqf forests continue to grow, the term waqf forests have not been found in regulations in Indonesia. Waqf forests are not yet known in forestry regulations. Rules governing waqf forests are needed to provide a legal basis for the status of waqf forests. It is also essential that waqf forests developed by the community can also be recognized by the state, particularly by the Ministry of Environment and Forestry of the Republic of Indonesia. Studies on this subject can also be developed in further research.

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