

OPTIMIZING BOGOR WAQF FOREST THROUGH COMMUNITY DEVELOPMENT TO IMPROVE WELFARE

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Article history: received 13 June 2024; revised 21 June 2024; accepted 21 July 2024

DOI: <https://doi.org/10.33751/jhss.v8i2.9307>

Abstract. In addition to functioning for ecological conservation, Waqf forest also have the potential to support the community's economy. Many communities in and around forests still depend on forests for their livelihoods and benefits. However, deforestation or forest destruction has decreased the function of the forest. Waqf forests are built as an alternative strategy in overcoming forest deforestation. Optimization of waqf forest need to be carried out in order to improve the function of forests from an economic perspective to achieve community welfare. This research aims to examine the community *development* developed in Bogor waqf forest. The method applied in this research is descriptive qualitative approach with primary data sources from interviews, observation, and documentation. Meanwhile, secondary data sources from articles, books, web and blogs. The results showed that the implementation of community development in the Bogor waqf forest was not optimal due to technical constraints and natural factors. Therefore, alternative programs or activities needed to be developed to further improve the welfare of the community around the Bogor waqf forest.

Keywords: community development; waqf forest; welfare.

I. INTRODUCTION

Well-being or welfare is one of the most important things in human life. Well-being and health are a dynamic impermanent union essential elements for humans [1]. Well-being is also influenced by a supportive place of life. The quality of housing is an important thing that affects well-being [2]. In addition to good quality of housing, health, education, and transportation systems, high incomes, low unemployment, low cost of living, clean environment, few gaps, plenty of leisure time and cultural opportunities are parameters in measuring subjective well-being in society [3]. Prosperity is also influenced by good environmental management and sustainable ecosystem resilience. Well-being relates good environmental management to ecological restoration practices to promote healthy ecosystems [4] Therefore, healthy and sustainable environment or ecosystem management is needed. Thus, health and well-being can be achieved (in accordance with SDGs number 3, good health and welfare) Forests contribute to maintaining a sustainable ecosystem. In addition, forests can also provide the benefits of a place to live that is useful for improving people's welfare. Forests are beneficial for improving the quality of life and improving human welfare [5] One form of greenspace including forests and conservation areas is known as a place that provides many *benefits* for health and well-being [6] People in and around the forest mostly depend on forest products. Many poor and vulnerable people live in or close to forest areas and depend on existing natural resources to support their livelihoods [7] In addition to the economic role, forests also have a potential role in conserving

biodiversity and mitigating climate change due to global warming (in accordance with SDGs goal number 13, climate change action). The potential of forests needs to be safeguarded to achieve economic prosperity that will support sustainable economic development.

Some communities live around forests and derive direct benefits and livelihoods from forests. Forest resources play an important role in supporting the livelihood strategies of forest villagers, especially the poor. [8] Forest-dependent communities refer to indigenous, traditional, people who live in relatively remote forest areas, living in low- and lower-middle-income tropical countries [9] Because there are still many people who still depend on forests for their livelihoods, it is necessary to carry out sustainable socio-economic development in forest areas (in accordance with SDGs number 1 and 2, reducing poverty and hunger). As important as forests are for biodiversity preservation and economic improvement in communities, forest destruction or deforestation is increasing uncontrollably. The expansion of plantation crops is the main driver of deforestation in Indonesia [10]. Deforestation tends to occur in lowland forests due to land use conversion to other sectors such as agricultural land needs, plantations, mining, settlements and transmigration. Indonesia has forests with an area of 120.6 million hectares, this constitutes 63% of Indonesia's land area[11]. But not all are in good condition. Deforestation and forest destruction occur every year due to various factors. The driving factor for deforestation in Indonesia is the expansion of oil palm plantations which contribute 23% to national forest destruction [12]

In addition to forest conversion, forest damage can be caused by forest fires, illegal logging or forest exploitation. Land clearing causes an increase in carbon dioxide which is a significant threat to the environment, human health, and economy [13]. Deforestation is the main cause of climate change and global warming, to reduce the impact of carbon dioxide emissions and achieve green energy, innovation is needed, one of which is sustainable forest management [14]. To overcome deforestation and forest degradation that will affect the optimization of forest functions, an alternative strategy for sustainable forest conservation is needed, namely by establishing waqf forests. Waqf forests are forests built and developed on waqf land (Ali & Jannah, 2019) [15] (Ali & Kassim, 2020) [16]. Waqf has tremendous potential to contribute towards sustainable development goals by considering long-term social implications, environmentally friendly projects, and economic development [17]. Bogor waqf forest was built in 2018 and managed by the Bogor Waqf Forest Foundation as a productive, economical, and ecological managed wakif [18]. Waqf is eternal because it cannot be revoked or canceled and used for shaleh charitable purposes [19]. Waqf forests are suitable because under the rules of waqf, they cannot be transferred or converted to other sectors as they are protected by state and religious law [16]. To improve community welfare and community participation in participating in preserving forests, *community development* needs to be carried out. The existence of a synergistic relationship between forest managers and communities around forests will improve welfare for sustainable forest development. Decision-makers should find effective strategies for forest management to improve welfare and reduce poverty [20]. *Community development* is a community-based program that aims to empower the poor by ensuring environmental security and livelihoods [21]. In the implementation of community development, the community will gain knowledge and skills through training and workshops. By being equipped with skills and training, the quality of the environment and community-based productive economic enterprises will increase so that prosperity will be realized. There are five groups in community development in the Bogor waqf forest. Each group has its own focus of activities including beekeeping, carp and tilapia farming, sheep farming, ecotourism and disaster response activities. However, in its implementation, there are still obstacles in each focus of its activities, so other programs or activities are needed that can be developed so as to further improve sustainable welfare for the community around the Bogor waqf forest.

In Indonesia, social welfare is regulated in Law Number 11 of 2009. Social welfare is a condition where the material, spiritual, and social needs of citizens can be met in order to develop themselves and live decently so as to be able to carry out their social functions. The implementation of social welfare is carried out by the government, local governments, and communities in the form of social services which are integrated, directed, and sustainable efforts. Social services are useful to meet the basic needs of citizens which include social rehabilitation, social security, social protection

and social empowerment. The implementation of social welfare is prioritized to citizens who have criteria for social problems and have a life that is not worthy of humanity such as poverty, neglect, remoteness, disability, social disability, behavioral deviations, disaster victims, victims of violence, exploitation and discrimination [22].

Welfare according to Al Ghazali's concept is the achievement of benefit, the preservation of the maqashid sharia objectives. The five points of benefit are by maintaining religion (Hifz al-Din), preserving the soul (Hifz al-Nafs), preserving the Mind (Hifz al-'Aql), nurturing offspring (Hifz al-Nasl) maintaining Property (*Hifz al-Mal*) (Kader, 2021). [23] In Surah An-Nahl verse 97 states that faith is the key to achieving prosperity and happiness. Welfare in Islam is achieved by prioritizing the value of ihsan, which is a noble practice (spiritual) and does not focus on consumption and wealth ([24] Welfare is not only the fulfillment of economic needs but Islamic economic development prioritizes morality and spirituality in building humans from an Islamic perspective [25]. In achieving sustainable consumption and subjective well-being, it is necessary to understand happiness in the Islamic paradigm, namely seeking the pleasure of Allah based on the Qur'an and Hadith [26].

Waqf is a legal act carried out by a person to separate or hand over part of his assets or property to be used forever or for a certain period of time for the benefit of worship or public welfare in accordance with sharia [27]. Waqf in an Islamic context refers to endowment funds given as charity forever that are utilized for socio-economic purposes for disadvantaged communities [28]. Four parties who contribute to waqf are: waqif or party who endows his property, *nadzir* or waqf manager, Mawquf 'alaih or beneficiary, *mawquf* or property or cash as property (Aldeen et al., 2020). [29]

Waqf forest is an alternative strategy in forest conservation in Indonesia. Waqf forest began to be developed in 2012 in Jantho Aceh Besar. The community raised funds to purchase 4.4 hectares of degraded land for reforestation. In 2013 the Bandung district government developed a waqf forest on critical land through the Leuweung Sabilulungan Foundation. Waqf forests were also developed by academics from IPB in 2018 in Cibunian village, Pamijahan, Bogor [30]. Waqf forests are managed productively so that they will provide ecological and economic benefits. Productive waqf forests will also support several SDGs points including eradicating poverty and hunger, combating climate change, ensuring healthy lives and well-being, protecting ecosystems and the availability of clean water. increase economic growth and sustainable production [16]. To ensure the sustainability of waqf forests, legalization needs to be done. Three government institutions involved in the process of legalizing waqf forests are the Ministry of Religious Affairs, the National Land Agency, and the Ministry of Environment and Forestry [30].

Community development is an effort to empower the community in order to improve welfare. *Community development* is developed to overcome economic problems by optimally empowering local resources so that people have

independence in the economy, ecology and environment [31] In increasing the role of community development, the community can be empowered in the ecotourism sector. Community-based ecotourism can increase social awareness and natural resource conservation practices. Rural community-based tourism is an effective means to promote the development and preservation of natural resources [32] Welfare and health have a relationship with recreation so that tourism activities are useful as a potential measure of community development success [33]

The participation of the community, especially youth, in rural community development is very important in facing significant rural socioeconomic changes. Community development is designed to retain and recruit rural youth for a sustainable future [34] Community development is also needed in a company. With community development will improve the image of the company. Companies that invest in community development are more likely to operate and reduce disruption because they have harmonious relationships with local communities [35] So that there is relevance between community development initiatives and improving company image. In developing and optimizing communities around forests, community development needs to be done. Sustainable forest management aims to protect the ecosystem and improve the community's economy.

II. RESEARCH METHODS

This research employs a descriptive qualitative approach to interpret and portray the phenomena occurring. Qualitative descriptive research is shaped by data, evidence, and logical [36] Data collection is conducted in detail and in depth to describe a phenomenon. Data collection techniques using interviews and direct observation to the field. Research data is not only obtained from the results of interviews but researchers go directly to the field to observe activities and behavior in the field [37]. This research also uses data sources from books, articles, and the web (library research). Data analysis techniques with data reduction, data presentation and conclusion drawing [38].

III. RESULT AND DISCUSSION

Bogor Waqf Forest is one of the waqf forests in Indonesia located in Cibunian Village, Pamijahan District, Bogor Regency which has ecological, economic, and social humanitarian programs [39] Bogor waqf forest has five locations with an area of 1 ha. Bogor waqf forest was developed to reduce the potential for landslides and flash floods that continue to occur and increase the income of residents who remain guided by aspects of forest conservation. To increase the role of communities around forests in forest conservation and economic improvement, community development in waqf forests needs to be developed. Indigenous peoples and local communities are ethnobotanical custodians rich in neglected or underutilized species that

contribute to sustainable land use systems, livelihood diversification, and climate resilience [40]



Figure 1. Bogor Waqf Forest I

In the Bogor waqf forest, there are five community development groups: the Berkah Bersama Farmer group, which focuses on zone 1 (locations 1 and 5), consisting of men who focus on goldfish and tilapia farming and ecotourism with the women of the community around the Bogor waqf forest. The second group is: the Tani Giat Bersama group which focuses its activities in zone 2 (location 2), which consists of fathers with a focus on bee and sheep cultivation activities. The third group is the Citra Berdikari Farmer Group which focuses its activities in zone 3 (locations 3 and 4), the focus of its activities in ecotourism is to make a simple camping ground. The fourth group is the Asri Berseri Joint Business Family (KUB) group which focuses on activities in zone 1 consisting of mothers with a focus on ecotourism activities, namely stall business. The fifth group, the Disaster Response Village Youth Group (Katana) with a focus on disaster prevention, health, and security for local communities, usually focuses on notifications of assistance or activities when there is a natural disaster.

For bee cultivation using stingless bee species (*trigona sp*) originating from Sulawesi. These bees can produce honey, propolis, and bee pollen. Propolis has long been used by humans as a remedy for all diseases including chronic, nutrition-related, and metabolic syndrome diseases [41] Stingless bees play an important role in tropical and subtropical ecosystems as pollinators of diverse plants [42] The community assisted by Zakat Community Development (ZCD) from BAZNAS made *trigona* bee cultivation. In order to breed well *trigona* bees must be provided with a comfortable, shady place, protected from rain and direct sunlight. With bee cultivation, it is expected to produce honey which can later be sold by the community to increase their income. However, in its implementation, there are obstacles in the cultivation of these bees. Bee cultivation, which was originally a flagship program, has not been able to produce honey due to unfavorable climatic conditions. Many bees died even though bee experts were brought in to deal with them. But it has not yet obtained significant results. So that the bee colonies that exist today are more used for educational functions because not everyone knows or knows the stingless bee.



Figure 2. Stingless bee cultivation by the Giat Bersama group

For fish farming, the community in a joint active group assisted by Zakat Community Development (ZCD) from BAZNAS made fish ponds for fish farming. Fish is a source of animal protein and people have a habit of consuming fish for side dishes [43] At first the type of fish that was farmed was carp but now it is replaced with tilapia because it is more survivable with various environmental conditions. Tilapia is known as a fast-growing fish species, relatively easy and able to adapt to various ecological zones [44] The joint blessing fish farming group totaled 11 people. Fish farming is an additional activity because beekeeping has not yet produced honey. Fish farming is a silvofishery activity because it is a combination of forestry and fisheries business. Bogor waqf forest has abundant natural water resources making it suitable for fish farming. For fish farming activities, it is harvested every 3-4 months and the results are sold to collectors and the results can increase the income of the fish farming group. The Berkah Bersama Farmer Group is still trying to improve the products of fish farming by not selling raw fish but processing it first so that it will get a higher price. But this program is still under trial and has not yet been implemented.



Figure 3. Carp and tilapia farming by the Berkah Bersama group

For sheep cultivation, it was carried out by the father of the joint enterprising group in zone 2 which amounted to 12 people. The focus of the sheep farming group is fattening sheep which will later be sold for the feast of sacrifice. Sheep farming groups make pens for raising sheep and utilize forest vegetation for animal feed. Sustainable forest management strategies can be developed within the framework of

silvopastoral systems [45] Silvopastoral is a combination of forestry and animal husbandry that aims to increase community income. Agrosilvopastoral contributes to environmental maintenance, increasing the productivity of plantations and livestock so that production and conservation functions can be obtained and welfare can be achieved [46]. For pastoral communities, the availability of climate-related information has an important role in building the capacity of farmers to take adaptation measures to climate change that occurs [47] In the implementation of sheep cultivation, there were obstacles because in June 2022 there was a landslide disaster in the relocation village which was a resident of the joint active group. Residents, including members of active groups, together became scattered lives, some contracted and some fled their relatives' places. Because the group became scattered, finally the sheep that were originally the main target for sacrifice were sold faster and the remaining goats were entrusted to the pen of the community of the blessing group together. So that the benefits that will be obtained will be distributed to the two community groups.



Figure 4. Sheep farming by the Giat Bersama group

For ecotourism business carried out by mothers, namely the stall business serve visitors who come by preparing to eat and drink. For gentlemen, be a tour guide for visitors who want to track or walk around the forest location or become a tour guide to natural hot springs that will be taken one hour away on foot. Ecotourism is an environmentally friendly tourism activity. The purpose of ecotourism is to preserve nature and improve the welfare of the local community. The principles and objectives of sustainable ecotourism are in terms of social, economic, and environmental efficiency so that cooperation with local communities is needed[48]. Community-based ecotourism is proven as a tool for conservation and restoration of local people's livelihoods[49]. In the focus of activities in Bogor waqf forest ecotourism, the community has not been empowered to produce goods/crafts that utilize more forest plants. The community is still focusing on the stall business. There was training on bamboo crafts but it has not been continued. Other programs in utilizing forest products have also not been implemented. For location 4 it is used for simple camping ground and for location 5 has not been widely used because of the steep soil.



Figure 5. The stall business to serve visitors by Asri Berseri's mother's group



Figure 6. Waqf forest camping ground 4

For the disaster response village youth group (Katana) consists of all youth and communities. Community philanthropic organizations in collaboration with local governments are the main implementers of disaster response by managing and responding to disasters effectively [50]. The Bogor waqf forest disaster response group collaborates with the Disaster Response Baznas (BTB) with a focus on helping evacuate victims and providing assistance to residents when affected by disasters. Local residents are given training in dealing with disasters before, during, and after disasters because local villages are landslide-prone villages. Disaster response training for residents is useful to increase knowledge about the speed of responding to disaster events and foster a spirit of volunteerism in the local community.



Figure 7. Disaster response youth group collaborates with Baznas Disaster Response (BTB)

Community development in the Bogor waqf forest is not only aimed at conservation but also to improve the standard of living or welfare of the community around the forest, but in its implementation it has not been optimal because there are still several obstacles both technical and due to natural factors. To optimize existing community development, other programs or activities are needed that can be developed in the Bogor waqf forest in order to increase community income. Based on the results of the interview, the community development that can be developed next is coffee planting under the shade of trees in the forest. Coffee is the most valuable tropical export crop in the world [51] Coffee is one of the strategic commodities to meet domestic export and foreign exchange needs [52] Bogor waqf forest in collaboration with the coffee community will hold training on coffee cultivation starting from planting techniques to export. By collaborating with other parties, coffee plants that have been planted in the Bogor waqf forest will be assisted in their care until harvest. With coffee budidaya managed until it can be exported, it is hoped that it can improve the welfare of community development in the Bogor waqf forest.

For the results of the group that focuses on fish farming activities, there are no obstacles. Fish that are raised can already be harvested and the results sold to increase the income of group members. In addition, the harvest can be used for the mother's stall business to be used as a side dish for visitors who come. By being used as a side dish at the stall, the income of KUB Asri Berseri group mothers also increased. In addition to being used as additional side dishes at stalls, fish farming products can be processed into processed foods to get higher prices. Tilapia is a freshwater fish that has high economic value, tilapia fillets are a commodity of Indonesian export products and tilapia skin can be processed into gelatin with a high selling value [53]. Processed foods that can be made from tilapia farming in Bogor waqf forests such as fish nuggets, fish balls, fish sausages, fish corned beef, and canned fish. Processed food from these fish can be used by visitors who come to the Bogor waqf forest ecotourism area.

For community development activities that focus on sheep cultivation, the cultivated products are sold during the feast of sacrifice. But there is an obstacle, namely the occurrence of landslides that result in pet sheep being sold quickly because it is feared that no one will keep them. Due to the landslide, the sheep farming group became scattered in life, some contracted or lived in their relatives' places. So it is difficult to coordinate. From the results of the interview to further optimize sheep farming activities, cooperation will be carried out with other parties to enlarge the pen and increase the number of sheep so that the benefits to be obtained are also greater. Sheep manure can also be used to make organic fertilizer which if the number of sheep on a large scale the organic fertilizer can be sold to increase income.

For community development consisting of mothers, it focuses on ecotourism activities, namely stall businesses that provide food and drink for visitors who come. Its activities still focus on activities in stalls and have not been empowered to utilize existing forest plants such as bamboo. Bamboo plants have the advantage that they are easy to plant and do

not need special maintenance besides that they are also durable. Bamboo is known as a sustainable resource that can be developed in disaster areas to create higher product value and improve quality of life [54] Bamboo is a versatile resource used in construction, paper production, medicine, textiles and food [55] From the interviews, training for making woven bamboo crafts has been carried out but has not been continued. Community groups can be given training in making bamboo woven crafts. Bamboo woven crafts have practical and aesthetic functions in addition to preserving the environment because they reduce the use of plastic materials. Woven bamboo crafts can be made kitchen furniture for example rice storage places, snub containers, tampah, baskets, placemats etc. In addition can be made bags, hats, lampshades, flower vases etc. By being given skills and training in making woven bamboo crafts, it will increase the income of the mother's group in managing forest products without leaving the aspect of forest conservation.

In addition to utilizing bamboo which is a forest product, the community can be given training and skills to use leaves and flowers in the forest to make ecoprint fabrics. Ecoprint is a technique of giving color to fabrics using natural materials, namely leaves or flowers that have natural colors [56] Ecoprint is one alternative to reduce environmental and ecosystem damage due to textile mill chemical valleys. Ecoprint uses natural dyes by transferring color and shape to fabrics [57] The advantage of ecoprint is that it does not use chemicals so it is environmentally friendly, easy to make, materials are easy to obtain because they come from patten, flowers and plant branches that can be taken in the forest. Plants produce natural dyes from leaves, stems, fruits, root bark, bark, and flowers. The type of fabric used in ecoprint is natural material fabrics namely cotton, silk, wool, linen etc. The pattern and color of the resulting fabric correspond to the leaves and flowers attached to the fabric. The results of ecoprint fabrics can be made clothes, mukena, prayer mats, bags, wallets, or hats. Products from the ecoprint can be displayed to be purchased by ecotourism visitors as souvenirs. Visitors are expected to be interested because the products are patterned with aesthetic leaves and flowers that come from the forest.

IV. CONCLUSIONS

Waqf forests are an alternative solution for ecosystem preservation and improving community welfare. The existence of land use change and forest destruction causes the forest area in Indonesia to decrease every year. With waqf forests, forest sustainability will be guaranteed because waqf forests are protected by religious law and state law so that they cannot be transferred to other sectors. Waqf forests come from wakif who entrust their land to be used as forests and cash waqf collected to buy land that will later be used to create forests. Waqf forests were first located in Aceh, then Bandung and Bogor. Bogor waqf forest is located in Cibunian village, Pamijahan, Bogor. *Community development* was developed in the Bogor waqf forest to improve the welfare of the

community around the Bogor waqf forest. There are five groups, each of which has a focus of activities, namely bee farming, sheep farming, carp and tilapia farming, mother groups of stall business mothers and disaster response youth. In its activities, it still experiences obstacles, both technical and natural factors, so that its implementation is not optimal. For this reason, other alternative programs that can be developed are needed including coffee plant cultivation, processing fish products into processed food, utilizing bamboo to make crafts, and utilizing leaves, flowers and tree bark for making ecoprint fabrics that have high economic value. By optimizing existing community *development*, it will increase community income so that sustainable welfare will be achieved.

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