KnE Social Sciences
IRCEB
The 6th International Research Conference on Economics and Business
Volume 2024

Research Paper

Blue Waqf Framework for Blue Forest Sustainability: A Conceptual Framework

Vika Annisa Qurrata[1,2]*, Muhammad Hakimi Mohd. Shafiai[3], Suhaili Alma'amun[3], Hairunnizam Wahid[3], Abdul Ghafar Ismail[3], Pudji Purwanti[4]

[1]Department of Economics, Faculty of Economics and Business, Universitas Negeri Malang
[2]Ph.D student Department of Economics, Faculty of Economics and Management, Universiti Kebangsaan Malaysia
[3]Department of Economics, Center for Sustainable & Inclusive Development (SID), Faculty of Economics & Management, Universiti Kebangsaan Malaysia
[4]Department of Fisheries Agribusiness, Faculty of Fisheries and Marine Sciences, Universitas Brawijaya

ORCID
Vika Annisa Qurrata: https://orcid.org/0000-0003-4214-5956

Abstract.
Blue forests are areas that protect the coastline from flooding and erosion. They harbor wildlife and provide a sustainable livelihood for communities. One of the blue forest types is mangrove forest. Indonesia has the most expansive mangrove forest area in Southeast Asia, but nearly 25% has been deforested. Maintaining the sustainability of mangrove forests is one of the sustainable development goals (SDG) 14. Therefore, to achieve this goal, financing is needed to support the needs in maintaining the sustainability of mangrove forests. This paper is a conceptual framework that provides an Islamic social finance-based funding model for the blue forest sector. This program is called Blue Waqf. In order to implement this program, Indonesian Waqf Board and registered nazir are needed as the program's coordinators. In addition, a colossal campaign needs to be conducted. The involvement of the surrounding community as a social adaptor is also vital. Last, waqf management through blue waqf requires protection from takaful/project guarantees. It has to be done to minimize the economy. The impact will be sustainable for the economy, society, and the environment. The profits obtained from blue waqf will be distributed to beneficiaries.

Keywords: Blue Waqf, sustainable, Blue Forest, conceptual framework

Corresponding Author: Vika Annisa Qurrata; email: vika.annisa.fe@um.ac.id

Published 24 January 2024

Publishing services provided by Knowledge E

© Vika Annisa Qurrata et al. This article is distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use and redistribution provided that the original author and source are credited.

Selection and Peer-review under the responsibility of the 4th INCLAR Conference Committee.

OPEN ACCESS

1. Introduction

As an archipelago and maritime country, Indonesia has the potential for high-value marine and coastal resources. One resource that has been underrated is coastal forests. Blue forests are areas that protect the coastline from flooding and erosion. They harbour wildlife and provide a sustainable livelihood for communities. There are five types of blue forests: mangroves, salt marshes, seagrass meadows, rockweed, and kelp forests (Mutmainah, Taqwa, & Indrawan, 2022). Currently, mangrove forests are the most abundant type of blue forest in Indonesia. Indonesia has a mangrove forest area

of 3,364,076 Ha (Kementerian Kelautan dan Perikanan, 2022) which can still be maximised. Mangrove forest ecosystems sustain local economies by supporting fisheries, providing food sources for ecosystems and maintaining coastlines (B.E., R.Suharto, & A.P., 2018). Each hectare of mangrove forest is worth an estimated US$33-57,000 annually. They also remove five times more carbon from the atmosphere than green forests (UN Environment Programme, 2017).

The community can also enhance the economic value of mangrove forests through tourism. The rapid growth of tourism affects tourist arrivals and benefits the local economy. However, the existence of mangrove forests in Indonesia is alarming, as 700,000 ha have been deforested (Indonesian Mangrove and Peat Restoration Agency, 2022). The damage to mangrove areas occurs in forest areas and ponds. In general, the damage is caused by excessive utilisation and does not consider the carrying capacity and sustainability of coastal resources. The causes of mangrove degradation are converting mangrove forests into plantations, ponds, agriculture, salt ponds, settlements, industry, timber utilisation, mining and natural disasters (Ilman, Wibisono, & Suryadiputr, 2011). Mangrove degradation will continue more rapidly if these conditions are uncontrolled.

Then, to mitigate this, it is possible to create Forest-based tourism. This model effectively conserves forest resources and biodiversity in Bangladesh and can generate income through ecotourism (M., Y., & S, 2010). To strengthen forest-based tourism, community involvement through the Community-Based Conservation (CBC) approach, namely adaptive co-management between local communities, government agencies and NGOs, is a recommendation for developing conservation for mangrove sustainability in Malaysia and Indonesia (Kamariah, Said, & Dasimah, 2014; Purwanti, Fattah, Qurrata, & Narmaditya, 2021). The community could participate through the community-based ecotourism (CBE) model.

The CBE model in Southern Thailand is the main key to developing sustainable tourism that considers local communities' participation and empowerment (Suwanno, Nittiyar, Nuttida, & Aurathai, 2017). Ecotourism activities are important for educating, protecting, and conserving mangrove forests (Friess, 2017). Mangrove forest conservation must involve local communities because they need sustainable mangrove forests to meet their needs and have local wisdom in preserving them (Eddy, M.Rasyid, Iskha, & Andy, 2016). Mangrove forest management being sustainable requires ecotourism and involves the participation of local communities. However, severe damage to mangrove forests caused by land clearing and conversion to coconut plantations requires high costs for restoration. Restoration and campaigning for the mangrove forest educational

tourism program will require high costs and cannot only be funded by the local government (Purwanti, Susilo, & Lestariadi, 2017). Thus, capital and financing are needed to improve the sustainability of mangrove forests (ADB, 2020).

Maintaining the sustainability of mangrove forests is one of Sustainable Development Goals (SDG) 14. The fourteen goals of the SDG relate to marine ecosystems and resources so that the community can maximise the benefits (Mutmainah et al., 2022). Therefore, to achieve this goal, financing is needed to support the needs in maintaining the sustainability of mangrove forests. An Islamic social finance instrument that can provide financing possibilities to reduce the problem of mangrove forest destruction and fulfil SDG goals is Waqf (Bakar, Ahmad, Salleh, & Salleh, 2020; Budiman, 2011). Waqf is not only seen as a religious activity but also as asset management or productive funds that must be sustainable.

This paper is expected to provide an Islamic Social Finance-based funding model for the blue forest sector. This model is called blue waqf, an adaptation of green waqf but applied to the blue forest sector. This model focuses on blue forests, especially mangrove forests, so it can help restore mangrove forests in Indonesia and have a socio-economic impact on the community.

2. Literature Review

2.1. Overview of Waqf for Environment

In the literature of Islamic economics, waqf means keeping the certain property and managing it for certain benefits and prohibiting any use outside the agreed purpose (Kahf, 2003). Waqf is not only in the form of the property but can also take the form of money for good causes. Thus, waqf is an Islamic financial instrument that should provide long-term benefits to its beneficiaries, primarily for the benefit of the community (Osman & Agyemang, 2020). Thus, waqf has focused on socio-economic development over the last twenty years. There are three criteria that waqf must fulfil, namely perpetuity, irrevocability and inalienability (Abbasi, 2012).

The three criteria above prove that waqf is an Islamic social finance instrument that can address the problems of Muslim and non-Muslim communities, including but not limited to education, healthcare, natural disasters and poverty reduction. Concerning environmental issues, waqf can be in the form of land for agriculture and money to restore forests and the environment. Meanwhile, regarding social and economic problems, waqf can reduce the problem of poverty due to the impact of fishermen

with environmental damage. In addition, access to education and health services for community development programs can also be resolved. Thus, waqf that can be used to repair environmental damage is green waqf and blue waqf.

Green waqf is a scheme that can support and is a solution to reduce environmental issues. The green waqf framework is built to provide innovative solutions from Islamic financial instruments to help achieve sustainability goals and reforest mangrove forests (www.bwi.go.id). Meanwhile, blue waqf is a concept of financing through waqf that is focused on maintaining marine ecosystems. In this case, the blue forest is also included in the marine ecosystem (UN Environment Programme, 2017). So that for the restoration and maintenance of mangrove forests, it requires financing in the marine economy that can be obtained from blue waqf. Establishing a blue waqf model maintains not only the sustainability of the marine environment but also builds the socio-economic resilience of the surrounding population (Thaker et al., 2022).

2.2. Waqf for Environment and Its Impact on Sustainability

Islam highly values the preservation of the environment as it is a commandment from God. Therefore, in Islamic teachings, Muslims are commanded by God to participate in protecting the environment and to be wise in managing it. This teaching is found in the Quran QS—Al Baqarah verse 164, which explains the relationship between God and the environment.

> “In the creation of the heavens and the earth, and the difference of night and day, and the ships which run upon the sea with that which is of use to people, and the water which God sends down from the sky, thereby reviving the earth after its death, and dispersing all kinds of beasts therein, and the ordinance of the winds, are signs for people who have sense.” (Quran, 2: 164)

The Quran has 759 verses that explain the importance of ecology and environmental resources (Duh, 2010). The verses in the Quran can be interpreted as a source of views on the environment. Thus, the Quran explains the need for Muslims to protect the environment and prevent destruction because nature is God’s property and a gift from Him. Then it is clear that the entire community can accept and carry out the concept of waqf for environmental restoration, especially mangrove forests.

Waqf, as an Islamic philanthropic institution, has the potential to be the main instrument for environmental conservation. Therefore, waqf for environmental protection has been done several times. For example, Ismail Zuhdu Pasa once donated plant seeds,

timber, and 5,550,000 square metres of forest in 1885 (Foundations, 2014). In addition, the potential of waqf for environmental protection has been written by Akhtar (1996), who explains the vital role of waqf and how this institution can be reactivated so that land resources can be used for replanting, irrigation management and flora and fauna conservation. Moreover, waqf can take the form of land managed to support donated purposes, such as research in agricultural midwifery or public land for parks, or it can take the form of funds that support replanting projects (Bagader, Sabbagh, Al-Glayand, Samarrai, & Llewellyn, 1994).

With its unique characteristics, waqf illustrates how Islam teaches about bequests that are not only for the welfare of society but also to protect the environment. In Indonesia, many activities are carried out by non-profit organisations for environmental protection, especially by waqf institutions. Most activities are planting or replanting trees, building wells and installing clean water sources (Budiman, 2011). Furthermore, forest conservation programmes (Ali & Kassim, 2021) are also carried out, and all of these programmes, although only projects have much support from the public. Nevertheless, the projects helped many people from lack of clean water. In addition, it saved the coastline's environment, so fishermen did not lose their catch due to preserving the marine environment.

Thus, it can be concluded that environmental waqf can not only provide benefits for the preservation and restoration of the environment but also reduce poverty and various other benefits to the community (Budiman, 2011). Moreover, waqf is very much in line with the goals of the SDGs, the blue economy and blue finance, so it can be introduced as blue waqf (Abdullah, 2018; Listiana & Alhabshi, 2020). Therefore, introducing waqf as a solution to current problems is very relevant, especially for Indonesia, which has the most Muslims worldwide and has the highest donation rate globally, based on the CAF report (CAF, 2019; Listiana & Alhabshi, 2020).

3. Research Method

This research uses a conceptual framework to build a blue waqf model for coastal maintenance. We used a qualitative study with content analysis to build the conceptual framework. We conducted an in-depth review of mangrove forest management issues and existing research on blue waqf to build a sustainable mangrove forest management model through blue waqf.

4. Proposed Model

Looking at what we have discussed in the previous section, the author proposes a blue waqf framework. The blue economy is a world problem that society must solve through all parties' cooperation. As the primary stakeholder, the government has a great responsibility to contribute to this framework. Therefore, the government must find indispensable solutions regardless of political views (Guild, 2020). Although, in some countries, political views are challenging in realising blue policies (Moravecz, 2021). So to implement the blue waqf framework, several elements are involved, namely

a. Political power

b. Human resources

c. Technology

d. Stakeholder determination

e. Finance

The blue waqf scheme in this paper focuses on replanting mangroves. Mangroves are plants in marine forests that have direct and indirect benefits. The indirect benefits of mangroves on Cengkrong Beach are river erosion barriers (physical benefits), CO2 absorbers, O2 producers and nutrient providers. The value generated from these four benefits is Rp.567,531,598 per year or Rp.6,523,352 per year per hectare (Fattah, Pudji, & Edi, 2018). Meanwhile, mangroves' direct benefits are providing tourism impacts and preserving coastal resources (Purwanti, Susilo, & Lestariadi, 2017). Therefore, the blue waqf mangrove replanting project can be replicated and scaled up for other parts of Indonesia and other countries. In addition, the coastal environment will benefit from mangrove forests because more biodiversity will develop, provide a nursery for fish and crustaceans, and reduce carbon dioxide.

The recovery of the environment will have a positive social impact because the mangrove forest can also be used as a tourist area managed by the local community. Furthermore, the surrounding community also benefits from productive activities such as mangrove crab fishing and fishing, as well as developing crab farming, clam farming, mangrove tree nurseries and mangrove fruit syrup making, which in the long run have good profit value and can be developed (Purwanti, Susilo, & Indrayani, 2017). In this case, waqf can help sustainable development and collaboration in strategic sectors. Therefore, maximising waqf in strategic sectors can help achieve the goal of sustainable development and prosperity for the community.

In order to realise the Blue Waqf project, it is essential to identify sources of financing that can facilitate the project. Therefore, there is a need to source financing that can

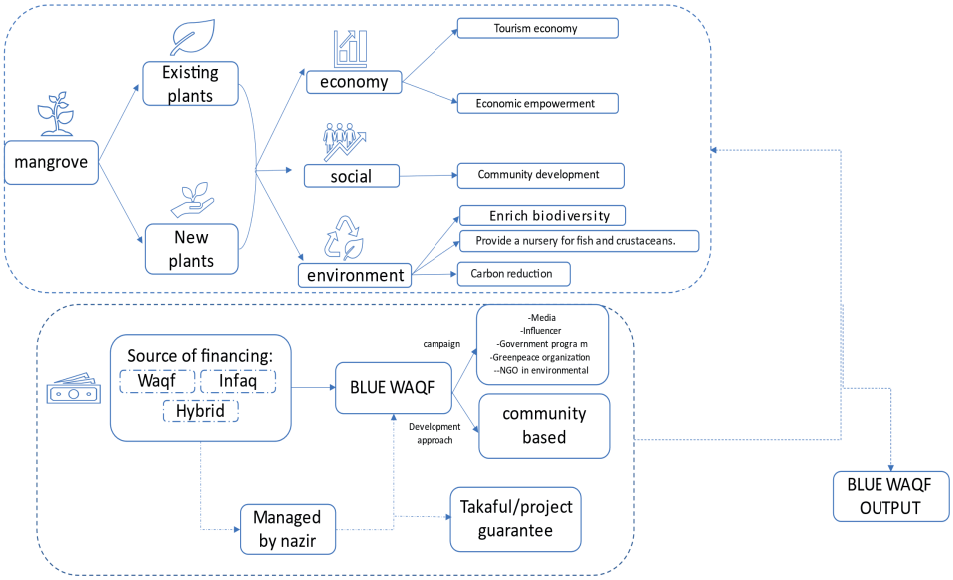

Figure 1: Impact and Ecosystem of Blue Waqf.

be utilised for Blue Waqf from various sources, i.e. waqf, infaq and both. To promote the programme's sustainability, the Blue Waqf Framework needs to be supported in the government's medium and long-term national development plans. A government-owned waqf institution (e.g. Indonesian Waqf Board) will be the coordinator and in charge of Blue Waqf. Nazirs who are registered with state-owned waqf institutions may become co-managers.

Moreover, to increase public interest in blue waqf, a colossal campaign involving the media, influencers, and the government through ministries, Greenpeace and environmental non-government organisations needs to be conducted. In addition, the involvement of the surrounding community as a social adaptor is vital because the surrounding community is the link between the preservation of the mangrove ecosystem and the blue waqf manager. However, waqf management through blue waqf requires protection from takaful/project guarantees. It has to be done to minimise the risk of economic losses from mangrove replanting projects. Profits obtained from blue waqf management will be distributed to mauquf alaih.

5. Conclusion

This paper proposes a framework that can solve the problem of diminishing blue forests, especially mangrove forests in coastal areas. This circumstance is ironic because mangroves protect the coastline from flooding and erosion. They provide homes for wildlife

and sustainable livelihoods for communities. In general, the damage is caused by over-utilisation and not considering coastal resources' carrying capacity and sustainability. This condition is not ideal and contradicts the main SDG point 14, which relates to marine ecosystems and resources so that the community can maximally enjoy the benefits. Solving environmental problems certainly requires support from the government and surrounding communities.

Moreover, it takes a lot of money to restore damaged nature. The blue waqf scheme can assist with this considerable funding. Blue waqf is a programme in the form of land, mangrove seedlings or cash to replant mangrove trees and repair damaged mangroves. The success of this programme will provide economic, social and environmental benefits to the community. However, blue waqf will not work without government intervention as a regulator. Therefore, the programme must also be collateralised by takaful to reduce the risk of failure.

However, this paper still has shortcomings; the concept implemented in many countries is green waqf, while blue waqf has never existed. Therefore, this framework is still conceptual. If this concept is to be implemented, there needs to be integration between waqf management, government, non-government organisation environment and community. The integration between all elements will make achieving the goal of blue ocean improvement easier.

ACKNOWLEDGEMENT

I would like to express my deepest gratitude to all of my dissertation committee. It is the pleasure to work during this project.

References

[1] Abbasi MZ. The classical Islamic Law of Waqf: A concise introduction. Arab Law Q. 2012;26(2):121–153.

[2] Abdullah M. Waqf, sustainable development goals (SDGs) and maqasid al-shariah. Int J Soc Econ. 2018;45(1):158–172.

[3] ADB. Renewable energy tariffs and incentives in Indonesia: Review and recommendations. 2020.

[4] Akhtar MR. Towards an Islamic approach for environmental balance. Islam Econ Stud. 1996;3(2):57–77.

[5] Ali KM, Kassim S. Development of Waqf forest in Indonesia: The SWOT- ANP analysis of Bogor Waqf forest program by Bogor Waqf Forest Foundation [Journal of Tropical Forest Management]. Jurnal Manajemen Hutan Tropika. 2021;27(2):89–99.

[6] Turisno BE, Suharto R, Priyono EA. Peran Serta Masyarakat Dan Kewenangan Pemerintah Dalam Konservasi Mangrove Sebagai Upaya Mencegah ROB Dan Banjir Serta Sebagai Tempat Wisata. Masalah-Masalah Hukum. 2018;47(4):479–497.

[7] Bagader AA, El Sabbagh AT, Al-Glayand MA, Samarrai MY, Llewellyn OA. Environmental Protection in Islam. IUCN Environ Policy Law Pap. 1994;:20.

[8] Bakar MA, Ahmad S, Salleh AD, Salleh MF. Waqf and sustainable development goals (SDGs): A critical review from Malaysia Perspective. Journal of Critical Reviews. 2020;7(13):2362–2385.

[9] Budiman MA. The role of Waqf for environmental protection in Indonesia. Aceh Development International Conference. 2011. 880–889.

[10] CAF World Giving Index 2018. 2019.

[11] Duh AA. Religion's role in development, ecology & climate change: An Islamic perspective. The Conference on the Role of Religion in Development-Focus on Ecology and Climate Change. 2010.

[12] Eddy SM, Rasyid R, Iskha I, Andy M. Community-based mangrove forests conservation for sustainable fisheries. Jurnal Silvikultur Tropika. 2016;7(3):S42–S47.

[13] Fattah M, Pudji P, Edi S. Nilai Manfaat Tidak Langsung Hutan Mangrove Pantai Cengkrong Kabupaten Trenggalek. Seminar Nasional Perikanan Dan Kelautan Berkelanjutan. 2018;II:172–175.

[14] Foundations DG. The Waqf protecting the environment and forestry. Marvelous Pious Foundations (Waqfs) throughout. History (Lond). 2014;:34.

[15] Friess DA. Ecotourism as a tool for mangrove conservation. Sumatra Journal of Disaster. Geography and Geography Education. 2017;1(1):24–35.

[16] Ilman M, Wibisono I, Suryadiputr I. State of the Art Information on Mangrove Ecosystems in Indonesia. In Wetlands International-Indonesia Programme. Bogor. 2011.

[17] Kahf M. The role of waqf in improving the ummah welfare. International Seminar on Waqf as a Private Legal Body. 2003.

[18] Kamariah A, Said AM, Dasimah O. Community-based conservation in managing mangrove rehabilitation in Perak and Selangor. Procedia Soc Behav Sci. 2014;153:121–131.

[19] Kementerian Kelautan dan Perikanan. Kondisi Mangrove di Indonesia. 2022. Retrieved from kkp.go.id website: https://kkp.go.id/artikel/26393-sepanjang-2020-kkp-tanam-2-9-juta-batang-mangrove-untuk-pulihkan-ekosistem-pesisir

[20] Listiana L, Alhabshi SM. Waqf and legacy of Altruism in Singapore: Challenges and development [Jurnal Ekonomi Dan Bisnis Islam]. JEBIS. 2020;6(1):116–133.

[21] MA, Y F, SA. Forest-Based Tourism in Bangladesh: Status, Problems, And Prospects. TOURISMOS: An International Multidisciplinary Journal of Tourism. 2010;5(1):163–172.

[22] Mutmainah LN, Taqwa KZ, Indrawan IW. Cash Waqf Linked Blue Sukuk (CWLBS) for sustainable marine ecosystem: A conceptual model. 2022. Retrieved from https://www.unep.org/

[23] Osman AZ, Agyemang G. Privileging downward accountability in Waqf management. J Islamic Account Bus Res. 2020;11(3):533–554.

[24] Purwanti P, Fattah M, Qurrata VA, Narmaditya BS. An institutional reinforcement model for the protection of mangroves sustainable ecotourism in Indonesia. Geo J Tour Geosites. 2021;35(2):471–479.

[25] Purwanti P, Susilo E, Indrayani E. Household economic activities of coastal resource uusers' community in Cengkrong Coastal Area, Prigi Bay, Trenggalek District. Russ J Agric Soc-Econ Sci. 2017;2(62).

[26] Purwanti P, Susilo E, Lestariadi RA. Mangrove forest management and mangrove-based business development opportunities in the Gulf of Prigi Trenggalek. International Journal of Social and Local Economic Governance. 2017;3(2).

[27] Suwanno S, Nittiyar T, Nuttida S, Aurathai P. Potential of ecological resources and ecotourism destination management: A case study in Koh-Mak Community, Southern Thailand. PSAKU International Journal of Interdisciplinary Research. 2017;6(2):9–21.

[28] Thaker MA, Amin MF, Thaker HM, Khaliq A, Pitchay AA, Fauziyyah NE, et al. Waqf land and Sukuk framework for waste disposal management–a conceptual study. Labuan E-Journal of Muamalat and Society. 2022;16:1–12.

[29] UN Environment Programme. Mangrove in the Spotlight. 2017. Retrieved from www.unep.org website: https://www.unep.org/news-and-stories/story/mangroves-spotlight