

Green waqf implementation strategy as an acceleration of green project funding: A case study of Rongkop Gunungkidul special region of Yogyakarta

Marlita Wulansari

Universitas Negeri Yogyakarta, Indonesia

Email: marlitawulansari25@gmail.com

Anisa Rahmawati

Universitas Negeri Yogyakarta, Indonesia

Email: anisarahmawati578@gmail.com

Corresponding author, *anisarahmawati578@gmail.com*

Abstract

Rongkop is a karst area that is prone to drought and difficult to access water. This causes a negative multiplier effect to various aspects, such as social, economic, and ecological. Several efforts have been planned but are constrained by the availability of funds. Therefore, there is a green waqf that focuses on financing environmentally friendly projects. The purpose of this study is to analyze the implementation strategy of green waqf as an acceleration of environmentally friendly project funding by modifying the futuristic stages in the Green Waqf Framework book compiled by BWI and other institutions. This study uses a descriptive qualitative approach with data collection techniques through interviews, observations, and literature studies. The data analysis procedure adopts the Miles and Huberman model which starts from collection, reduction, presentation, data as well as conclusion and verification. The findings of the study revealed that Rongkop has a population with most Muslims, but almost the entire community does not know about green waqf. Therefore, the stages are designed starting from the preconditional stage to build awareness of green waqf. Consolidation stage to strengthen the elements and stakeholders involved. Next, the project development stage is through pilot projects and periodic impact measurements. Also, mainstreaming the stage by disseminating the results of the pilot project to various regions and institutions. With the implementation of green waqf, it is hoped that environmental issues and climate change in various regions can be addressed inclusively.

Keywords: Green Project, Green Waqf, Karst, Rongkop District

Introduction

The issue of climate change is becoming an increasingly real global problem and requires an immediate solution. According to data from Climate Transparency (2021), Indonesia is the 9th most vulnerable country to climate change from other G20 countries. This is evidenced by the global average temperature which is getting closer to the safe limit of 1.5°C. In addition, the rise of greenhouse gas emissions (IESR, 2024) and high deforestation rates (GFW, 2024) are increasingly increasing the problem of climate change. In solving these problems, it takes very high costs of up to Rp450 trillion per year. However, the realization of the incoming funds is only IDR 60 trillion. In addition, the issue of deforestation also requires a fairly high cost, especially since the number of deforestation forests in Indonesia reaches 104,590.5 hectares with a new reforestation rate of only around 5.7% (Madani, 2021). Not to mention, some 14 million critical and very critical lands in Indonesia also need immediate handling. Thus, strategic solutions are needed to solve various existing problems.

More specifically, based on observations and interviews that have been conducted in Rongkop District, Gunungkidul Regency, Special Region of Yogyakarta, it was found that this area is dominated by karst hills that are prone to drought and difficult to store water. This causes the majority of residents in the area to have to buy water from other areas at a price of up to IDR 120 thousand/week. Despite various efforts, such as drilling 30 meters deep soil, the source of water remains unfounded. The lack of water in the region also has an impact on low agricultural productivity. Rice fields in the region are dominated by horticultural crops, such as cassava whose selling value is not high. Meanwhile, rice can only be planted during the rainy season. This condition also makes the welfare of the population decrease. Coupled with the lack of jobs, the economic condition in this region is even worse due to systemic and complex problems ranging from environmental issues to social and economic aspects.

In addressing environmental issues, such as those in Rongkop, several programs have been launched, one of which is the Just Energy Transition Partnership (JETP) initiated by the International Partner Group (IPG) (Jazuli, et al., 2024) with a program to raise funds of USD20 to support the energy transition and implement green projects (Wardhana, et al., 2024). However, JETPs tend to be less inclusive because they do not involve the community at large (Karg, et al., 2024). The JETP actually forces developing countries to bear considerable debt (Sweeney, 2024). This is because 97% of the funds provided by developed countries are in the form of debt that must be returned in the future. In addition to JETP, green sukuk is also one of the solutions offered. Despite meeting sharia principles and environmental sustainability, it requires expensive costs and complicated procedures to obtain a “green” label, especially for small projects (Liu and Lai, 2021). This makes green sukuk only an instrument in a financially safe margin, rather than significantly contributing to ecological and community sustainability, thus causing difficulties in mobilizing small-scale funds (World Bank, 2020). Therefore, these two solution offers have not been able to accommodate small-scale problems, such as in Rongkop and similar areas, so a new concept is needed that tends to be participatory and inclusive so that the benefits reach the grassroots community.

Seeing the existing problems, the Indonesian Waqf Agency in 2022 initiated a new program called green waqf (green waqf) which plays a role in raising funds for environmentally friendly projects. Green waqf as an instrument of Islamic philanthropy has various advantages when viewed from its characteristics, such as being eternal, long-term, and sustainable (Takwin, 2024). In addition, green waqf was initiated because waqf has a huge potential of up to IDR 2,000 trillion/year (BWI & UNDP, 2022), which is enough to finance environmentally friendly projects. Although the potential is very large, the realization of waqf is only 2% or IDR 2.23 trillion (Sukmana, et al., 2021). This is also due to the low literacy of the community related to waqf. Based on a survey conducted by the Indonesian Waqf Agency in the range of February to April 2020 to evaluate the level of public understanding of waqf as well as measure the performance of waqf socialization in various regions, it shows that the level of public awareness about waqf in Indonesia is only 50.4%, which means that knowledge about waqf is still relatively low (Sukmana, et al., 2021).

Although the potential of waqf is very large, the implementation of waqf, especially green waqf, is still very minimal. This is due to the lack of understanding of the public regarding green waqf, let alone to implement this green waqf appropriately. Thus, an implementation strategy is needed through procedures that are consistent and have the opportunity to be implemented by the community. Therefore, the purpose of this study is to examine more deeply related to the green waqf implementation strategy with a case study in Rongkop District, Gunungkidul Regency, Special Region of Yogyakarta by modifying the green waqf framework released by BWI with the assistance of several other institutions. It is hoped that the implementation strategy with the case in Rongkop can be a reference and policy recommendation in the implementation of green waqf in various other regions, especially areas with similar problem cases.

Method

This study uses a descriptive qualitative approach. This approach was chosen because it allows to describe in depth the dynamics of field conditions and explore data holistically regarding karst phenomena and their

implications to several aspects, such as social and economic (Lim, 2025). Furthermore, data collection techniques are carried out through interviews, observations, and literature studies. Semi-structured interviews are chosen because they allow flexibility in exploring topics (Mashuri, et al., 2022). Furthermore, observations were also carried out to find out the real conditions in Rongkop District. Finally, a literature study was also conducted to examine existing phenomena supported by factual and empirical data (Paul, et al., 2023). The main reference used in this study is the book *Green Waqf Framework* prepared by the Indonesian Waqf Agency (BWI) in collaboration with the United Nations Development Programme (UNDP-Indonesia), the Waqf Center for Indonesian Development and Studies (WaCIDS), and the Green Waqf Organization.

The subjects of this research are the community and stakeholders in Rongkop District, such as those who take care of village funds and community mobilizers, to local heroes in the area. In addition, data was also taken from several official institutions, such as the Indonesian Waqf Agency (BWI) and other related institutions.

The data analysis procedure was carried out with the interactive model of Miles and Huberman (1994) which started from collecting data from various research subjects. Then, data reduction is carried out to compress and retrieve important data and combine intersecting data. Furthermore, data is presented in the form of a description containing explanations, especially the implementation strategy of the green waqf itself. Finally, the drawing of conclusions and verifications that contain synthesis and emphasis from the presentation of existing data.

Results and Discussion

Socio-Ecological Conditions in Rongkop District, DIY

Rongkop is one of the sub-districts in Gunungkidul Regency, Special Region of Yogyakarta. Rongkop is a tropical climate area whose topography is dominated by karst hills (Haripa, 2020). These karst conditions make the rain that falls directly into the aquifer (rock cavities) and gradually form an underground river system (Guo, et al., 2024). This makes access to water at the surface difficult and minimal, so that the soil in Rongkop District tends to be barren, dry, and even less fertile. Even when the dry season arrives, this region is often prone to drought disasters.



Figure 1. Karst Condition in Rongkop District, Gunungkidul

Based on observations in the field, with such karst conditions, the community has difficulty obtaining water. In fact, the available water is usually purchased from other areas that have enough water at a price of up to IDR 120,000 per week. This makes the expenditure to meet water needs quite high, so that people in the region tend to have a lower level of welfare than areas that meet their water needs. Seeing these problems, various efforts have been made. Drilling of soil approximately 30 meters deep was tried to find a source of clean water

underground. However, the source of the water is difficult to find, so the ground drilling project to find water has not found the result point until now. Geographically, the lack of such water sources is due to the fact that underground rivers in karst areas spread erratically and depend on the process of dissolving limestone in the region (Aliouache & Jourde, 2024). With such conditions, it is difficult to dig wells properly to the source of the underground river flow. However, if the excavation is right through the rock cavity connected to the underground river, then the chance of obtaining a large amount of water will be greater.

Furthermore, in terms of social and economy, the Rongkop people mostly make a living as farmers. The vegetation that is planted usually requires water, so people in this area tend to plant when the rainy season arrives. To get around the need for water for agriculture, farmers in this region tend to choose to plant rice that is quite resistant to minimal water. However, this type of rice tends to have lower quality than other types of rice (Kristamtini, 2020). Overall, with the existing land conditions like this, some Rongkop people are trying to find other sources of livelihood, one of which is by migrating to Yogyakarta City by becoming laborers and other professions.

Looking at the karst conditions with the dry rock topography, vulnerability to disasters can occur. The potential disasters include landslides (Chang, et al., 2024). Moreover, if the karst is minimally planted with plants with strong roots, the potential for landslides becomes greater. Therefore, it is necessary to reforestation and select plants that are suitable for planting on karst model land like this. Therefore, recommendations for the implementation of agroforestry can find alternatives in mitigating existing disaster risks.

Potential for the Implementation of Green Waqf in Rongkop District, DIY

Rongkop District is an area dominated by Muslim residents. Based on BPS data (2023), the total Muslim population reached 29,053, while other religions such as Protestantism, Catholicism totaled 526 and 113 people, and Confucianism and other religions as many as 1 and 72 people. Based on the interviews conducted, it was revealed that the Rongkop area still has a tradition of mutual cooperation and a fairly high social spirit. Seeing that the majority of Muslims and their population still have a high social spirit, the potential for the implementation of green waqf in this region tends to have considerable potential in providing benefits, especially in financing environmentally friendly projects in this region.

Furthermore, the existence of environmental issues, such as difficult access to water and low agricultural productivity, is something that has the potential for the development of environmentally friendly projects through financing from green waqf. The existence of this green waqf has the potential to carry out a project to dig wells to find water sources from underground rivers. Remembering, karst regions have more underground rivers than surface rivers (Daffaefra, et al., 2023). However, digging this river requires a lot of money, it is very difficult to implement if there is no cost assistance (Amin, et al., 2017). This is also due to the difficulty of detecting the existence of underground rivers due to these different and scattered crack patterns.

If this dug well digging project is successful, people who initially bought water from outside Rongkop will be able to save their expenses because of the access to water that is already available. This will make the allocation of expenses more efficient and can be directed to other urgent needs. In addition, the existence of a water source in Rongkop makes it easier for the community to cultivate their fields and rice fields (Sumarga, et al., 2024). It is easy for the community to plant various crops, even the agroforestry system has the potential to be applied. It will increase the income of the people in the area and improve the welfare of every family there. People also do not need to migrate far because their area already has adequate potential to be developed.

In terms of ecology, the success of environmentally friendly projects through the green waqf scheme will have a strategic impact, especially in preventing disaster risks. With the abundance of plants in karst soil, it will help in reducing erosion and landslide disasters that are prone to occur in areas with this topography. Increased agricultural productivity will also help in expanding vegetation cover and increasing biodiversity in the region. In addition, it can absorb CO₂ carbon emissions which is quite helpful in overcoming climate change which is currently a global issue in various regions and the world. Thus, the implementation of green waqf in areas experiencing environmental issues will have a considerable multiplier effect on various aspects of life (Anwar,

et al., 2025; Hasan & Wigati, 2024; Alfarisi & Huda, 2023), so that green waqf is becoming more urgent and interesting to start and continue to be implemented, even to various other regions in the country.

Green Waqf Implementation Strategy

The potential for the implementation of green waqf is quite large. Therefore, it is very suitable if this green waqf scheme can be applied massively. However, the obstacle faced in the implementation of green waqf is that people are still unfamiliar with this waqf instrument. Most people only know about mosque waqf and the like. Therefore, to implement green waqf-based green projects, it is necessary to carry out step by step in a consistent and planned manner. Therefore, it is necessary to create a green waqf implementation strategy in Rongkop District, Gunungkidul, DIY. The stages in the implementation of green waqf that are prepared use the stages of modifying the green waqf framework as seen in the image below.

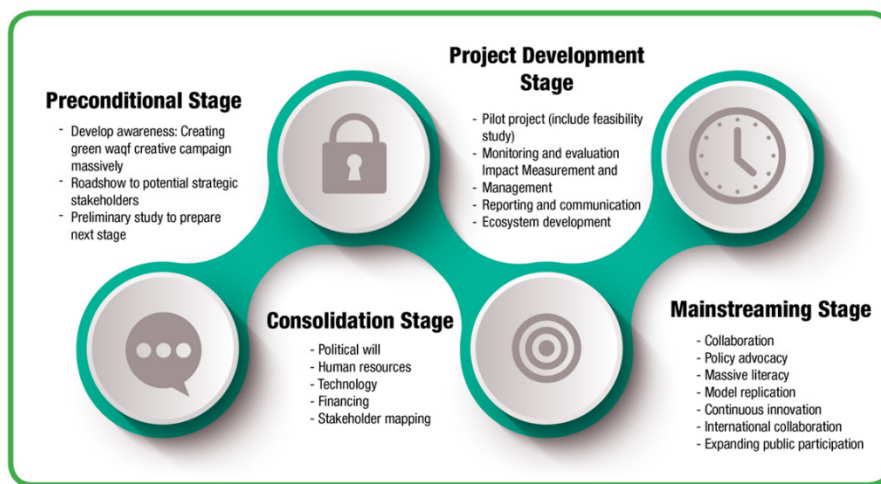


Figure 2. Stages for Green Waqf Initiative

In several stages of implementation in the green waqf framework above, it can be seen that there are 4 stages, including: (1) preconditional stage; (2) consolidation stage; (3) project development stage; and (4) mainstreaming stage. The preconditional stage and mainstreaming stage are optional depending on the level of public awareness about waqf. Furthermore, the existing stages are adjusted again to the conditions of Rongkop District, Gunungkidul Regency, DIY to facilitate the mapping of green waqf implementation strategies in the region. The explanation of each stage after modifying the Green Waqf Framework is as follows.

The first stage is **the Preconditional Stage**, which is aimed at increasing awareness through branding and socialization, both directly and through digital media. At this stage, religious-based green waqf awareness campaigns, such as through mosque da'wah, taklim councils, schools) need to be carried out massively and sustainably. In addition, it is necessary to organize agroforestry socialization to test suitable types of plants on karst land, such as tamanu, teak, avocado, etc., and there is a need for initial mapping to detect the existence of underground rivers as a source of water later. This stage is also important to conduct a preliminary study to map critical land in Rongkop, the community's water needs, and the community's ability to participate in waqf. Furthermore, roadshows to local stakeholders, such as the village government, BWI, religious leaders, NGOs, and the environment also need to be carried out. More details can be seen in the following image.

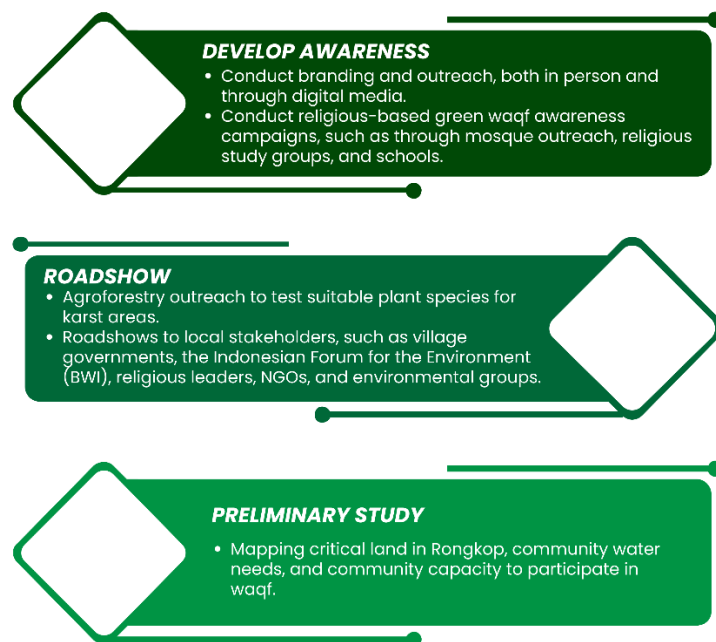


Figure 3. Preconditional Stage Modification of the Green Waqf Framework

The next stage is the **Consolidation Stage**, which focuses on strengthening capacity and partnerships. At this stage, political will, human resource, stakeholder mapping, and financing are strengthened. In political will, a village-level green waqf management group consisting of religious leaders, youth, and local farmers was formed, and local political commitments were also built with the village/district government so that the program could be included in the Village Development Plan. Furthermore, human resource development is carried out through simple agroforestry training, waqf fund management, tree monitoring, and water source search projects. In addition, a stakeholder mapping was prepared consisting of donors (wakif), waqf managers (nazhir), beneficiary communities, and supporting institutions (BWI, environmental NGOs). Finally, initial funding sources are sought through collaboration with BWI, Islamic boarding schools, social organizations, and executive institutions (related ministries/agencies). The following is an overview of **the Consolidation Stage** in the implementation of green waqf in Rongkop District.



Figure 4. Modification of the Consolidation Stage of the Green Waqf Framework

The next stage is the **Project Development Stage**, which focuses on field trials and validation. At this stage, agroforestry pilot projects are carried out, such as planting tamanu, teak, sengon, avocado, etc., as well as digging wells in order to find green waqf-based water sources in critical Rongkop land. In addition, a feasibility study was conducted to see the economic, social, and ecological feasibility of the project to be implemented. It is also necessary to develop a monitoring and evaluation system to make progress reports on the project, the economic benefits obtained, and the environmental impact obtained. A digital transparency system is also necessary for long-term reporting. At this stage, an innovative platform designed to facilitate access to green waqf in a practical and transparent manner called the “G-Waqf” platform has also been introduced. Finally, from the pilot project that has been carried out, then the model validation is submitted to the Indonesian Waqf Agency (BWI) so that it can be a reference for the implementation of green waqf in various regions in the country.

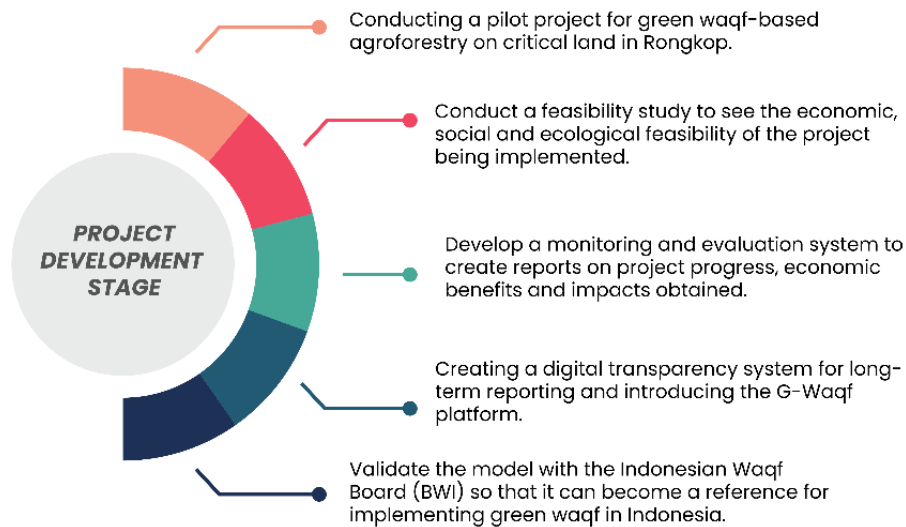


Figure 5. Modification of the Project Development Stage of the Green Waqf Framework

After the Project Development stage is implemented, the next stage is the **Mainstreaming Stage**, which focuses on expanding reach and sustainability. At this stage, the results of the pilot project are disseminated through seminars, leaflets, and social media on a massive scale. In addition, similar programs and other relevant programs are also included in the G-Waqf platform so that waqf-based donations can be accessed digitally by the wider community. This stage is also encouraged by policy advocacy at the district level to make green waqf part of the regional development strategy. After the advocacy was carried out, model replication was developed to other karst areas or relevant areas that experienced other environmental problems. After that, it is necessary to build national and international collaboration so that the reach of green waqf is more massive and inclusive. In addition, it is necessary to pay attention to and maintain sustainable innovations, for example through the development of agroforestry based on simple irrigation technology, the use of IoT (Internet of Things) for tree monitoring, maintaining water sources from dug wells, and digital literacy for the community. For more details, this stage can be seen in the following image.

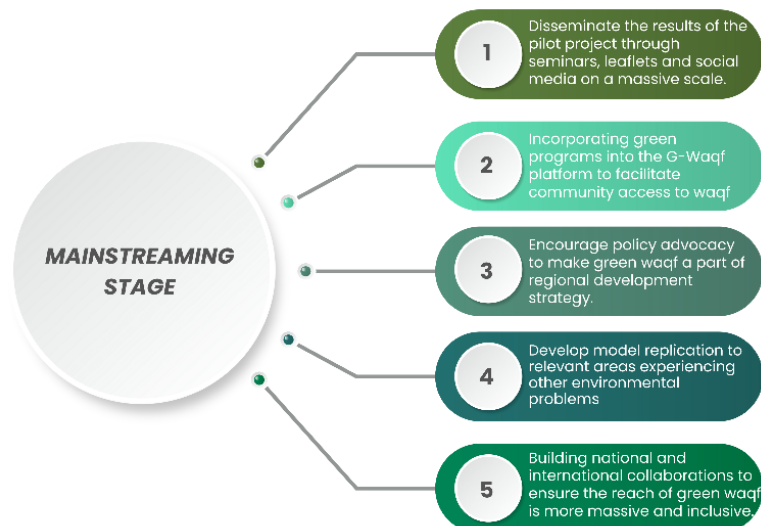


Figure 6. Mainstreaming Stage Modification of the Green Waqf Framework

From these various stages, starting from the Preconditional Stage to the Mainstreaming Stage, it can be seen more clearly and concisely in the following grand design of the implementation strategy model.

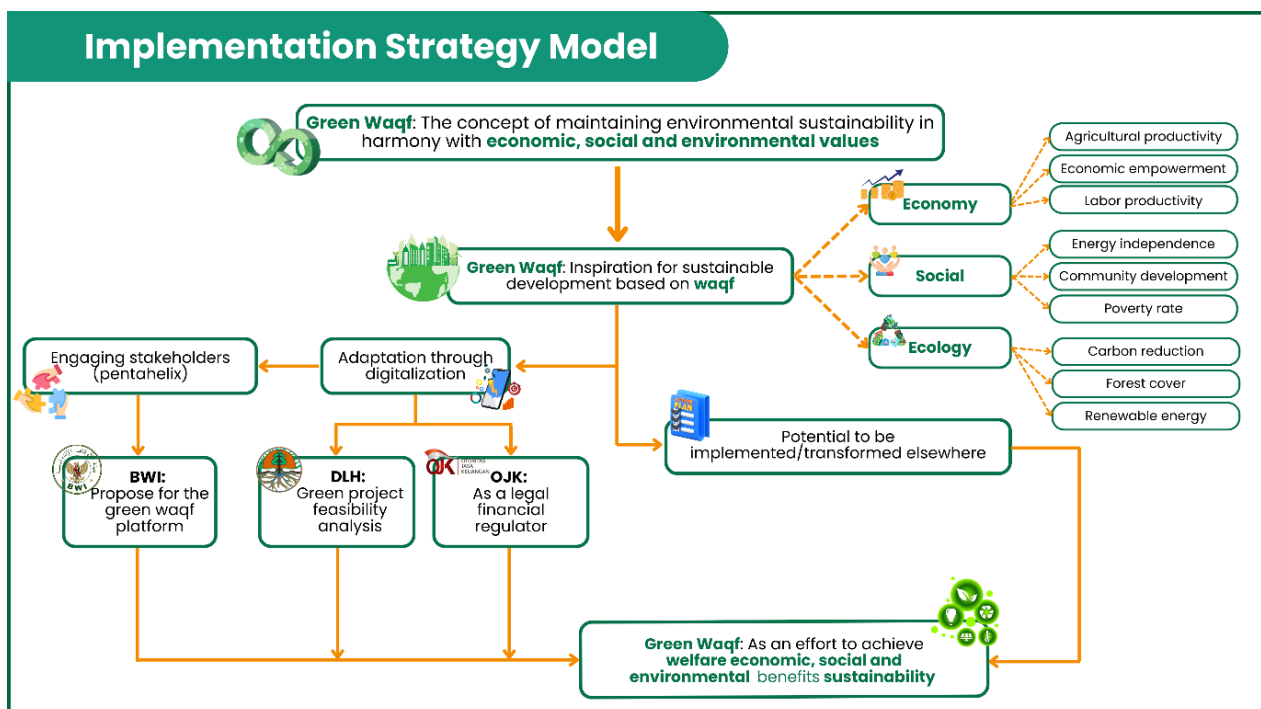


Figure 7. Implementation Strategy Model

In this strategy model, of course, it cannot be done in a short time, but it takes about 5 years with the implementation of each stage consistently, disciplinedly, and massively. The concept of green waqf that emphasizes environmental sustainability and is in line with Asta Cita and the Sustainable Development Goals (SDGs) can provide benefits in several aspects, such as economic, social, and ecological. Thus, there is a need for efforts to maximize and disseminate the implementation of green waqf. This can be done by digitization efforts and collaborating with related stakeholders, such as BWI, DLH, and OJK. Meanwhile, in the aspect

of digitalization, the “G-Waqf” platform was also initiated and recommended which is very useful in making it easier for people from various walks of life to do green waqf with waqf benefits that can be felt by grassroots communities. For an overview of the platform, you can see the following image.

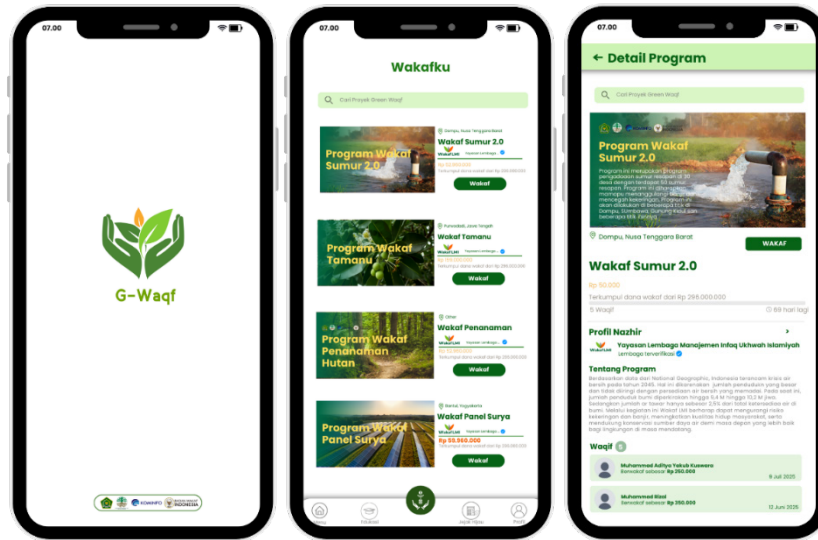


Figure 8. G-Waqf Platform Display

Implications for Sustainable Development

The implementation of green waqf certainly has implications in the form of impacts that can be felt in various aspects, such as social, economic, and ecological. In the social sector, the impacts felt from the implementation of agroforestry-based green waqf in Rongkop District, Gunungkidul Regency, DIY and water source projects, include: (1) increasing agricultural productivity through agroforestry; (2) opening access to alternative waqf-based capital for local communities; (3) creating new jobs in the green sector (greening, agroforestry product management, ecotourism); (4) society no longer relies solely on seasonal rice, but has many choices of sources of income; (5) agroforestry products can enter the regional/national supply chain through waqf-based cooperatives; (6) improving community welfare through easy access to water; (7) water independence through well digging.

Furthermore, in the economic aspect, the impact felt, including: (1) the use of agroforestry products as biomass fuel or alternative energy; (2) strengthening mutual cooperation and community collaboration through green waqf; (3) increased income and reduced living costs (e.g., easier access to water); (4) reduced urbanization to cities because local jobs are starting to open; (5) increasing environmental literacy and waqf through the implementation of green waqf through the G-Waqf platform; (6) strengthening solidarity between residents because they are both beneficiaries of waqf.

In the ecological aspect, the impacts felt from the implementation of green waqf include: (1) agroforestry absorbs CO₂ so that it contributes to climate change mitigation; (2) the reforestation of karst areas expands vegetation cover; (3) tree planting increases groundwater storage in karst areas; (4) agroforestry improves soil quality and prevents erosion; (5) increasing biodiversity through mixed farming systems; (6) support agriculture due to the availability of water from the underground river well project.

Conclusion

Rongkop District, Gunungkidul Regency, Special Region of Yogyakarta is an area dominated by karst hills that are prone to drought and difficult to access water. Various land conservation efforts and water source excavation have not been fully successful. The obstacle faced is the lack of funds available to carry out green projects. Seeing these conditions, the Indonesian Waqf Agency in 2022 launched the green waqf program that

focuses on financing environmentally friendly projects. However, green waqf literacy in the community is still very limited. Based on the observations made, most of the people do not know about green waqf. Therefore, in an effort to implement the green waqf program massively and effectively, several strategic stages are needed adopted from the Green Waqf Framework starting from the preconditional stage to build awareness of the importance of green waqf through education, seminars, roadshows, and others, as well as conducting preliminary studies (preliminary study in Rongkop, Gunungkidul). Furthermore, the consolidation stage is to strengthen various elements and stakeholders in implementing the green program in Rongkop. Then, the project development stage by conducting a pilot project and measuring the impact periodically. Finally, the mainstreaming stage is to disseminate the model of policy recommendations to stakeholders related to the implementation of green waqf. With the consistent implementation of each stage, it is hoped that the implementation of the green waqf program can be carried out inclusively.

References

- Alfarisi, M., & Huda, N. (2023). integrasi green waqf melalui platform digital crowdfunding dan dampak sosialnya bagi masyarakat. *JES (Jurnal Ekonomi Syariah)*. <https://doi.org/10.30736/jes.v8i2.623>.
- Aliouache, M., & Jourde, H. (2024). Influence of structural properties and connectivity of initial fracture network on incipient karst genesis. *Journal of Hydrology*. <https://doi.org/10.1016/j.jhydrol.2024.131684>.
- Amin, C., Priyono, P., Jauhari, A., Priyana, Y., Priyono, K., & Cholil, M. (2017). Management of an underground river to overcome water scarcity in the Gunung Sewu Karst Area, Indonesia. , 31, 176-183. <https://doi.org/10.23917/FORGE.V31I1.4502>.
- Anwar, K., Sarasi, V., Ubaidillah, U., Masnu'ah, S., & Wahidah, N. (2025). Optimizing green waqf as a solution to overcome environmental crisis. *Paradigma*. <https://doi.org/10.33558/paradigma.v22i1.10523>.
- BPS. (2023). *Jumlah penduduk menurut kecamatan dan agama yang dianut*. BPS. <https://gunungkidulkab.bps.go.id/id/statistics-table/2/MzIzIzI=/jumlah-penduduk-menurut-kecamatan-dan-agama-yang-dianut.html>
- BWI & UNDP. (2022) *Green waqf framework*.
- Chang, M., Dou, X., Zhu, X., & Y. (2024). Integrated risk assessment of landslide in karst terrains: Advancing landslides management in Beiliu City, China. *Int. J. Appl. Earth Obs. Geoinformation*, 132, 104046. <https://doi.org/10.1016/j.jag.2024.104046>.
- Daffaedra, A., Mawandha, H., Ersavan, F., Setyawan, C., Kesuma, L., & Wijayanti, Y. (2023). Water availability identification of underground river in the Gunung Sewu karst area using inverse model. *IOP Conference Series: Earth and Environmental Science*, 1180. <https://doi.org/10.1088/1755-1315/1180/1/012020>.
- GFW. (2024) *Laporan data hutan Indonesia*, Global Forest Watch. Available at: <https://www.globalforestwatch.org/dashboards/country/IDN/>.
- Guo, Y., Huang, F., Chi, F., Zhang, N., J., Miao, Y., & Chen, F. (2024). Hydrogeological structures of karst features using hydrographs in an underground river basin formed in a peak cluster depression, southwest China. *Journal of Hydrology*. <https://doi.org/10.1016/j.jhydrol.2024.131085>.
- Haripa, R. (2020). Property index and hydrophysical conditions of soils at subsidencess in Ponjong, Rongkop and Semanu subdistricts, Gunungkidul district. *International Journal of Geomate*, 19. <https://doi.org/10.21660/2020.73.icgeo8>.
- Hasan, N., & Wigati, S. (2024). Green waqf model for sustainable waste management: a respond to the economic and environmental development. *Bukhori: Kajian Ekonomi dan Keuangan Islam*. <https://doi.org/10.35912/bukhori.v4i1.3294>.
- IESR (2024) *Indonesia energy transition outlook 2024*. Jakarta Selatan.
- Jazuli, M.R., Roll, K. and Mulugetta, Y. (2024) 'A review of Indonesia's JETP through the dynamics of its policy regime', *Global Policy*, 15(5), pp. 989-1006. Available at: <https://doi.org/10.1111/1758-5899.13452>.

- Karg, A., Gupta, J. and Chen, Y. (2025) 'Just energy transition partnerships: an inclusive climate finance approach?', *Energy Research and Social Science*, 125(January), p. 104103. <https://doi.org/10.1016/j.erss.2025.104103>.
- Kristamtini, K., & Ks, P. (2020). Karakteristik padi beras merah segreng varietas unggul lokal Gunungkidul (charaterization of segreng red rice, the local variety of gunungkidul). , 5, 7. <https://doi.org/10.36626/JIIP.V5I1.299>.
- Lim, W. (2024). What is qualitative research? an overview and guidelines. *Australasian Marketing Journal*, 33, 199 - 229. <https://doi.org/10.1177/14413582241264619>.
- Madani (2021) *Mengupas fakta di balik deforestasi Indonesia 2019-2020*.
- Mashuri, S., Rasak, M., Alhabsyi, F., & Syam, H. (2022). Semi-structured Interview: A methodological reflection on the development of a qualitative research instrument in educational studies.
- Miles, M., & Huberman, A. (1994). Qualitative data analysis: an expanded sourcebook. [https://doi.org/10.1016/s0272-4944\(05\)80231-2](https://doi.org/10.1016/s0272-4944(05)80231-2).
- Paul, J., Khatri, P., & Duggal, H. (2023). Frameworks for developing impactful systematic literature reviews and theory building: What, why and how? *Journal of Decision Systems*, 33, 537 - 550. <https://doi.org/10.1080/12460125.2023.2197700>.
- Sukmana, R., Sholihin, M., Beik, I. S., Lestari, Y. D., Indrawan, I. W., & Ajija, S.R. (2021) *National Waqf Index: A Measurement for Waqf Performance (BWPS No 1/PKTD/BWI/III/202c. 1*.
- Sumarga, E., Willemen, L., Rosleine, D., Fitria, F., Agatha, K., & Sinaga, N. (2024). Water provision benefits from karst ecosystems: An example for Watuputih groundwater basin, North Kendeng Mountain, Indonesia. *Environmental and Sustainability Indicators*. <https://doi.org/10.1016/j.indic.2024.100518>.
- Wardhana, A.R. et al. (2024) 'Breakthrough on Indonesia's Energy Policy: Adaptive Governance Perspective for Just Energy Transition Partnership (JETP)', *Journal of Physics: Conference Series*, 2828(1). Available at: <https://doi.org/10.1088/1742-6596/2828/1/012001>.
- World Bank. (2020) *Pioneering the Green Sukuk: Three Years On*. Kuala Lumpur.

