

THE NEED FOR A STRATEGIC FRAMEWORK FOR SUSTAINABLE WAQF DEVELOPMENT IN ADDRESSING THE CLIMATE CRISIS

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ABSTRACT

Malaysia faces challenges in balancing economic growth with environmental protection, and waqf holds strong potential for long-term, community-based climate action. However, the potential of waqf to contribute to environmental initiatives, ranging from green technologies and renewable energy to wildlife and marine conservation, sustainable agriculture, reforestation, and waste management, remains largely underexamined in the Malaysian context. Existing green waqf models from other countries, like Indonesia, are not directly applicable due to Malaysia's unique regulatory, institutional, and socio-economic context. Moreover, there is a limited understanding of the awareness, readiness, and capacity of waqf institutions to engage in climate protection. This paper aims to highlight why Malaysia urgently needs innovative and inclusive financing mechanisms to address climate change and support its sustainability agenda. It reviews the existing literature and identifies significant research gaps that justify further exploration. In particular, the study points to the necessity of developing a strategic framework for sustainable waqf development as a means of strengthening national efforts in responding to the climate crisis.

Keywords: Climate Change, Sustainable Development, Green Waqf, Environmental Governance

INTRODUCTION

Malaysia faces the difficult task of pursuing economic growth while protecting the environment. As one of the larger greenhouse gas emitters in the region, the country plays a part in global warming, pollution, and the overuse of natural resources. These problems also threaten economic stability, since studies show that higher poverty levels are often linked with greater carbon emissions (Nabi et al., 2020). Within ASEAN, Malaysia is among the top contributors to carbon dioxide emissions, recording 255 million tonnes in 2019 (Ritchie & Roser, 2020). Rapid industrial growth since the 1980s has also caused serious environmental damage, with negative effects on public health and people's quality of life (Afroz & Rahman, 2017).

LITERATURE REVIEW

An analysis of environmental and climate protection efforts through the lens of waqf reveals several research gaps. Although waqf holds considerable potential for both climate mitigation and adaptation, studies examining its role in climate protection, particularly within the Malaysian context, remain scarce. The integration of waqf into broader sustainability and climate initiatives is still at an early stage. For instance, the Green Waqf Framework introduced in 2022 by the United Nations Development Programme (UNDP) and Badan Wakaf Indonesia (BWI) (Beik et al., 2022) provides useful insights, yet its practical relevance to Malaysia has not been fully explored. More specifically, innovative waqf applications in areas such as the green economy, renewable energy, blue waqf, waste management, forestry, and agriculture are under-researched. Addressing these gaps would strengthen both academic understanding and practical implementation of waqf as a tool for environmental sustainability and climate resilience in Malaysia.

This paper stresses the urgent need for Malaysia to embrace innovative and inclusive financing mechanisms to tackle the challenges of climate change and to advance its sustainability agenda. It reviews the current body of literature and identifies key research gaps that require further study. The discussion particularly highlights the need to develop

a strategic framework for sustainable waqf development as a way to strengthen national efforts in responding to the climate crisis.

RESEARCH METHODOLOGY

This study employed a qualitative research methodology, using document analysis as the primary method to analyse the potential of waqf for environmental protection. Document analysis allows for the systematic examination of written materials to extract meaningful patterns and interpretations (Bowen, 2009). The data analysed included academic journal articles, policy documents, and waqf frameworks. The documents were manually reviewed by the authors, and only those deemed directly relevant to the research objective were retained for analysis. A content analysis technique was then applied to categorise the findings into main themes, each representing a critical justification for environmental waqf. The content analysis enables researchers to systematically organise qualitative data and identify recurring patterns and concepts (Schreier, 2012).

FINDINGS

Environmental Challenges and Waqf Potential

Malaysia faces the ongoing challenge of balancing economic growth with environmental protection. As one of ASEAN's largest greenhouse gas emitters, it recorded 255 million tonnes of CO₂ emissions in 2019 (Ritchie & Roser, 2020). Rapid industrialisation since the 1980s has contributed to significant environmental degradation, threatening public health and quality of life (Afroz & Rahman, 2017). Although Malaysia ranked 68th out of 180 countries in the 2020 Environmental Performance Index, its score dropped from 59.22 in 2018 to 47.9 in 2020 (EPI, 2020), reflecting persistent challenges in air quality and water sanitation. In response, the government has introduced initiatives such as the National Energy Transition Roadmap to support a shift towards a low-carbon economy, in line with the 2030 Agenda for Sustainable Development (United Nations, 2017). These efforts complement Malaysia's Nationally Determined Contribution (NDC) under the Paris Agreement, which commits to reducing economy-wide carbon intensity relative to GDP by 45 percent by 2030 compared to 2005. However, achieving these goals requires new and inclusive financing approaches that mobilise resources for sustainability.

Waqf, historically associated with social welfare, offers promising potential in this area. Experiences from Indonesia show how waqf has been applied to tree planting, well construction, and clean water provision, generating both environmental and social benefits (Qurrata et al., 2024; Wildana & Manzilati, 2021). Yet in Malaysia, research on waqf's role in climate protection remains limited, and its integration into sustainability strategies is underdeveloped. While the Green Waqf Framework introduced by UNDP and Badan Wakaf Indonesia (Beik et al., 2022) provides useful insights, its application in Malaysia is still lacking. Innovative waqf models for renewable energy, forestry, waste management, and blue waqf require further exploration to strengthen climate resilience and sustainability efforts.

Overview of Waqf Development in Malaysia

Globally, waqf assets are estimated to range between USD100 billion and USD1 trillion, presenting considerable potential to help close the annual sustainability funding gap, which stands at approximately USD1.7 trillion (Securities Commission, 2023). In Malaysia, waqf assets are valued at more than RM1.3 trillion. Yet, only 13 percent of the nation's waqf land, about 30,000 hectares, has been developed, underscoring the vast untapped opportunities for socio-economic growth and investment. The total waqf land in Malaysia amounts to 11,091.62 hectares, comprising 6,255.12 hectares of specific waqf and 4,836.50 hectares of general waqf (Daud et al., 2022).

Waqf development in Malaysia is overseen by a range of institutions at both the state and federal levels, each contributing to social and economic advancement. These include the

State Islamic Religious Councils (SIRCs), federal agencies, specialised waqf corporations, regulatory and enabling bodies, university-linked waqf initiatives, as well as private organisations and non-governmental organisations (NGOs). Together, these institutions drive sustainable development through sound waqf management and innovative collaborations. Public participation remains central to this process, ensuring that waqf initiatives are aligned with Malaysia's low-carbon transition and the Sustainable Development Goals (SDGs). By mobilising resources for climate change mitigation and adaptation, this integration not only promotes environmental sustainability but also ensures that waqf assets are utilised in accordance with Islamic principles, fostering a more resilient and sustainable future for the country.

Waqf Framework for Environmental Protection

The potential of waqf in environmental protection is closely linked to Islamic teachings that emphasise stewardship of the earth as a divine duty. The Qur'an highlights the importance of preserving nature, while contemporary Islamic philanthropy shows how charitable funds can be channelled into environmental projects, such as clean water and sanitation in Indonesia (Iskandar, 2023). Literature also suggests that integrating waqf with the SDGs, particularly climate action, can strengthen resilience to environmental challenges (Rusydia et al., 2023).

Recent studies demonstrate how waqf can support the green economy, renewable energy, and conservation efforts. The Green Waqf Framework directs waqf funds towards clean energy projects (Beik et al., 2022), while blue waqf initiatives protect coastal ecosystems like mangroves and seagrass meadows (Qurrata et al., 2024). Forest waqf models and agricultural financing schemes, such as Salam and Muzara'ah crowdfunding, have also been proposed to enhance biodiversity, improve productivity, and reduce rural poverty (Sukarni & Mansyuroh, 2022; Al-Daihani et al., 2024). Similarly, waste management initiatives supported by waqf illustrate how Islamic social finance can advance sustainability and energy security (Hasan & Syahrudin, 2022).

In Malaysia, more than 13,000 hectares of waqf land remain underutilised, representing significant untapped potential (World Bank, 2020). Transforming these assets into hubs for renewable energy, agroforestry, and biodiversity restoration could align traditional Islamic endowments with modern sustainability goals (Zabri, 2024; Ishak et al., 2023). To achieve this, a comprehensive green waqf framework is needed, one that integrates government policy, institutional collaboration, and innovative financing models. Such a framework would help overcome structural barriers, encourage green investments, and ensure that waqf assets contribute effectively to climate mitigation, adaptation, and long-term socio-environmental resilience.

Climate Change and Sustainable Framework by The Malaysian Financial Institutions

In recent years, Malaysia's financial sector has stepped up efforts to address climate-related risks while aligning with the country's NDC and SDGs. Key initiatives include the Climate Change and Principle-based Taxonomy (CCPT), the Task Force on Climate-related Financial Disclosures (TCFD) Application Guide, and the Sustainable and Responsible Investment (SRI) Taxonomy introduced by Bank Negara Malaysia (BNM) and the Securities Commission. These frameworks provide consistent methods for classifying activities, integrating climate risks into governance and disclosure, and ensuring sustainable investments align with environmental, social, and governance (ESG) objectives (BNM, 2021; BNM, 2024a).

Looking ahead, the Joint Committee on Climate Change (JC3), comprising BNM, the SC, Bursa Malaysia, and industry stakeholders, plans to establish a Climate Finance Innovation Lab to promote decarbonisation through innovative financial solutions. Led by Bank Pembangunan Malaysia Berhad, the Lab will support pilot projects based on CCPT,

TCFD, and the SRI Taxonomy, while also introducing Transition Finance Guidance. These initiatives are expected to increase the availability of credible green financing opportunities and strengthen collaboration across the financial sector (BNM, 2024b).

The frameworks introduced by Malaysia's financial regulators offer valuable foundations for integrating climate finance with Islamic social finance. Given the unique nature of waqf as a perpetual endowment, a tailored sustainable waqf framework is needed to pool resources for long-term projects in renewable energy, conservation, and climate adaptation. However, little is known about the readiness of waqf institutions in this area. This study addresses that gap by examining their awareness, preparedness, and potential role, and by proposing a framework that aligns environmental objectives with Shariah principles to advance Malaysia's climate agenda.

Despite Malaysia's progress in renewable energy and climate policy, research on the role of waqf in addressing climate change remains limited. While productive waqf has been applied in education and socio-economic development, its potential for climate mitigation and adaptation is underexplored (Rusdiyana et al., 2023). Existing studies linking waqf and environmental sustainability are few (Ningsih & Irfany, 2022), and the integration of waqf into national climate strategies, such as the NETR, is minimal. In addition, little is known about the awareness, perceptions, and readiness of waqf institutions to engage with environmental initiatives, which hinders the design of effective strategies for sustainable waqf practices.

Although green waqf frameworks have been proposed abroad, particularly in Indonesia, their applicability in Malaysia is limited due to regulatory and institutional differences. Malaysia's financial frameworks, including the CCPT, TCFD Application Guide, and the SRI Taxonomy, strengthen climate-resilient financing but do not account for waqf's unique characteristics, such as its non-commercial orientation, perpetual benefit, and focus on community welfare. These gaps highlight the urgent need for a localised sustainable waqf framework that aligns Islamic social finance with national climate objectives.

Future Research

Future research should focus on developing a comprehensive framework that positions waqf as a viable instrument for climate action in Malaysia. This involves exploring how waqf can complement existing financial mechanisms, such as the CCPT, SRI Taxonomy, and NETR. Studies could examine how waqf's unique features, its perpetual nature, community orientation, and Shariah compliance can be adapted to support renewable energy projects, conservation initiatives, waste management, and climate adaptation programs. Further empirical research is also needed to assess the readiness, awareness, and capacity of waqf institutions to participate in sustainability initiatives. This includes identifying institutional challenges, governance issues, and policy gaps that hinder integration with national climate strategies. Comparative studies with countries such as Indonesia, which have piloted green waqf models, may provide useful insights for Malaysia, while case studies of local projects could help design context-specific strategies. Ultimately, future research should aim to translate theoretical discussions into practical, locally relevant models that strengthen Malaysia's resilience to climate change while advancing its sustainability agenda.

Significant Of Research

By integrating traditional Islamic financial instruments with modern sustainability strategies, future studies on strategic framework for sustainable waqf development in Malaysia will provide valuable insights into creating more effective approaches to environmental management that are consistent with both Islamic principles and global sustainability goals. The studies will also generate evidence-based recommendations for policymakers and practitioners. It will propose the development of a sustainable waqf

framework tailored to Malaysia's context, fostering collaboration between waqf institutions, government agencies, and environmental organisations. In doing so, the study will highlight how waqf can be incorporated into national climate strategies, stimulate investment in waqf-based green projects, and contribute to Malaysia's transition toward a more sustainable and resilient future.

CONCLUSION

This paper highlights the untapped potential of waqf as an innovative financing mechanism to support Malaysia's climate protection and sustainability agenda. While Malaysia has made significant progress in renewable energy, climate policies, and green financing, the integration of waqf into these efforts remains limited. By drawing on Islamic principles of stewardship and social responsibility, waqf can complement existing frameworks and provide long-term, community-focused resources for renewable energy, conservation, agriculture, and waste management. A sustainable waqf framework tailored to Malaysia's institutional and policy context would not only strengthen national climate action but also enhance socio-economic resilience. Such a framework could serve as a model for other Muslim-majority countries seeking to align Islamic social finance with sustainability goals. Ultimately, embedding waqf within climate strategies represents a vital step toward bridging the funding gap, promoting inclusive growth, and ensuring that environmental stewardship remains both a religious duty and a national priority.

REFERENCES

- Afroz, R. & Rahman, A. (2017). Health impact of river water pollution in Malaysia. *International Journal of Advanced and Applied Sciences*, 4(5), 78–85
- Al-Daihani, M., Dirie, K.A., Alam, M.M. & Abdullah, A.S.C. (2024) An Islamic Crowdfunding Model for The Agricultural Sector: A Proposal Based on Salam and Muzārah-Waqf Scheme, *ISRA International Journal of Islamic Finance*, 16(1), 4-23
- Ali Azizan, N., Muhamat, A. A., Syed Alwi, S. F., Ali, H., & Abdullah, A. Q. C. (2022). Revitalising waqf (endowment) lands for agribusiness: Potentials of the anchor company models. *Journal of Agribusiness in Developing and Emerging Economies*, 12(3), 345–370.
- Ali, K.M. & Kassim, S. (2021) 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*. 27(2), 89–99.
- Azizah, M., and Hariyanto, H. (2017) Implementasi Etika Bisnis Islam Terhadap Konsep Green Economics. *Supremasi Hukum: Jurnal Kajian Ilmu Hukum*, 10(2)
- Bank Negara Malaysia (BNM) (2021) Climate Change and Principle-based Taxonomy. <https://www.bnm.gov.my/documents/20124/938039/Climate+Change+and+Principle-based+Taxonomy.pdf>
- Bank Negara Malaysia (BNM) (2024a) Preparing Our Financial Sector for Risks from Climate Change. <https://www.bnm.gov.my/climatechange>
- Bank Negara Malaysia (BNM) (2024b) Joint Statement by BNM and Securities Commission Malaysia from the 13th Joint Committee on Climate Change (JC3) Meeting. <https://www.bnm.gov.my/-/jc3-mtg13>
- Beik, I.S., Listiana, L., Islamiyah, N., Ibrahim, I., Indrawan, I.W., Iqbal, M., Hardiana, M.D., Aprilia, A., Buana, G.K., Nathalia, D., Kirari, J.K. & Tian, X. (2022) Green Waqf Framework, United Nations Development Programme (UNDP) and Badan Wakaf Indonesia (BWI).
- Bowen, G. A. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal*, 9(2), 27–40.
- Daud, M.Z., Hanafi, H. & Abu @ Hussin, M.F. (2022) Literature on the Current Development of Waqf Practices in Malaysia, *Journal Of Shariah Law Research*,

- 7(2), 223–240
- Environmental Performance Index. (2020) Environmental Performance Index 2020. In Yale Center for Environmental Law and Policy. <https://doi.org/10.1002/9781118445112.stat03789.pub2>
- Hasan, N.F. & Syahrudin (2022) Enhancing Green Waqf for Carbonization Technology: Opportunities For Sustainable Development Goals (SDGs) In Indonesia, *el Barka: Journal of Islamic Economic and Business*, 5(2), 235–251
- Ishak, A. H., Kamaruzaman, K. A., & Ismail, C. Z. (2023). Reflecting sustainability in waqf land development projects. *Academy of Entrepreneurship Journal*, 29(4), 1–11.
- World Bank. (2020). *Maximizing social impact through waqf solutions*. Washington, DC: World Bank Group. <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/930461562218730622>
- Iskandar, A. (2023) The Role of Islamic Philanthropy in Green Economy Development: Case In Indonesia, *International Journal of Islamic Economics and Finance Research*, 6(2), 40–55
- Iskandar, A. & Khaerul, A. (2019) Green Economy Indonesia Dalam Perspektif Maqashid Syari'ah Al-Mashrafiyah. *Jurnal Ekonomi, Keuangan, dan Perbankan Syariah*, 3(83)
- Muslimin, J.M., Lubis, S., Rifa, M.N. & Sukardi (2024) Green Economy in Islam: A Policy Study on Carbon Economic Value from the Perspective of Sharia Economic Law, *ICIIS and APCoMS 2024*, June 17-18, Banjarmasin, Indonesia
- Nabi, A. A., Shahid, Z. A., Mubashir, K. A., Ali, A., Iqbal, A., & Zaman, K. (2020) Relationship between population growth, price level, poverty incidence, and carbon emissions in a panel of 98 countries. *Environmental Science and Pollution Research*, 27, 31778–31792.
- Ningsih, S.R. & Irfany, M.I. (2022) Waqf on Environmental Issue: A Systematic Review, *International Journal of Waqf*, 2(1), 1–14
- Qurrata, V.A., Shafiai, M.H.M., Alma'amun, S., Wahid, H., Ismail, A.G. & Purwanti, P. (2024) Blue Waqf Framework for Blue Forest Sustainability: A Conceptual Framework, *The 6th International Research Conference Economics and Business, KnE Social Sciences*, 398–40
- Ritchie, H., & Roser, M. (2020) CO₂ and Greenhouse Gas Emissions - Our World in Data. *Our Worldwide in Data*.
- Rusydia, A.S., Sukmana, R., Laila, N & Bayram, K. (2023) Modeling Integrated Waqf-Sukuk for Climate Action (SDG13), *Business and Sustainability*, 2(2), 1–10
- Schreier, M. (2012). *Qualitative content analysis in practice*. SAGE Publications.
- Securities Commission (2023) Welcome Remarks at the WAQF and Islamic Capital Market Conference, 20 July 2023 <https://www.sc.com.my/resources/speeches/welcome-remarks-at-the-waqf-and-islamic-capital-market-conference>.
- SESRIC (2020a) Agriculture and food security in OIC member countries, The Statistical, Economic and Social Research and Training Centre for Islamic Countries, available at: <https://www.sesric.org/publications-detail.php?id=515>
- Sukarni & Mansyuroh (2022) Forest Waqf: An Alternative Solution for Protecting Environment in Kalimantan, *Islamica: Jurnal Studi Keislaman*, 17(1), 46–67
- United Nations (UN) (2017) Environmental tax reform in Asia and the Pacific. In United Nations ESCAP. https://www.unescap.org/sites/default/files/S2_Environmental-Tax-Reform.pdf
- Wildana, M.D.A. & Manzilati, A. (2021) Waqf and Waste: An Unexplored Potentials, *Advances in Economics, Business and Management Research*, 206, 14–21
- World Bank Group, INCEIF & ISRA. (2019). *Maximizing social impact through waqf solutions*. World Bank Group.
- Zabri, M. Z. M. (2024). Empowering green waqf for an effective climate-resilient Malaysia. In A. H. Mohamad & R. Khurshid (Eds.), *Islamic green finance: Sustainable development and environmental stewardship* (pp. 290–304). Routledge. <https://doi.org/10.4324/9781032672946-22>