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The Sustainable Water Management Through Waqf: An Islamic Perspective in Malaysia and ASEAN

*Noor Syahidah Mohamad Akhir[1], Azrul Shahimy Mohd Yusof[2], Syaimak Ismail[3], Asmahani Nayan[4], Ficha Melina[5]
[1]Academy of Contemporary Islamic Studies, Universiti Teknologi MARA, Kedah Branch, Campus Sungai Petani, Merbok, Kedah, Malaysia
[2]Academy of Language Studies, Universiti Teknologi MARA, Kedah Branch, Campus Sungai Petani, Merbok, Kedah, Malaysia
[3]Academy of Contemporary Islamic Studies, Universiti Teknologi MARA, Arau Branch, Campus Arau, Perlis, Malaysia
[4]College of Computing, Informatics and Mathematics, Universiti Teknologi MARA, Shah Alam, Selangor, Malaysia
[5]Islamic Banking Study Program, Faculty of Islamic Studies, Islamic University of Riau (UIR), Pekanbaru, Riau, Indonesia
Email : *noorsyahidah9177@uitm.edu.my, azrulshahimy@uitm.edu.my, syaimak@uitm.edu.my, asmahanin@uitm.edu.my, ficha@gmail.com
Corresponding Author: Noor Syahidah Mohamad Akhir

Abstract: Throughout history, human societies have emerged and flourished around river valleys, which were essential for their survival. However, contemporary challenges like global climate change, conflicts, water pollution, poverty, and difficult geographical conditions have impacted both the availability and quality of water resources. In Malaysia, water-related challenges have become particularly pressing in several states, especially rural ones. The combination of low population density in these areas and the high costs of building sanitized water supply systems has caused delays in water infrastructure projects. Since 2020, the water waqf has emerged as a promising initiative in Malaysia, spearheaded by Yayasan Wakaf Malaysia (YWM) in partnership with the Ministry of Energy Transition and Water Transformation (PETRA). This approach is also gaining traction in ASEAN countries, such as Indonesia, Cambodia, and Brunei. Although the concept of water waqf is not new, there remains limited research, both theoretical and empirical, on this topic. Therefore, this study aims to examine the role of water waqf as an alternative instrument for sustainable water management in Malaysia and selected ASEAN countries. Using a qualitative, library-based methodology, the study conducts a document analysis of primary source materials from YWM. This analysis includes reviewing annual reports, project documentation, and financial distribution records related to water waqf projects by state, up until December 2023. The findings emphasize the significant potential of water waqf development in addressing water resource challenges, ultimately benefiting society by broadening access to clean water as the concept of water waqf becomes more widely understood.

Keywords: *Transformation, Water and sanitation, Water waqf, Sustainability, Quality of life*

1. Introduction

Early human civilizations emerged near river valleys, which served as crucial lifelines supporting multiple sectors and fostering urban development that attracted populations and social groups. From an Islamic standpoint, water holds fundamental significance for the practice of purification (*thoharoh*) in daily religious rituals, making the availability of clean water essential not only for physical needs but also for spiritual observances. Indeed, Islam regards water as a divine trust **(***amanah***)** that must be managed responsibly, aligning human benefit with environmental stewardship.

However, recent global and local transformations have adversely affected both the quantity and quality of water resources. Md. Khalid et al. (2021) emphasized that factors such as global climate change, conflict, water pollution, socioeconomic struggles in impoverished nations, and geographic constraints threaten the sustainability of water supplies. Further, research by Syed Abdullah et al. (2024) identified agricultural runoff, sewage discharge, industrial pollution, soil erosion, and saltwater intrusion as major contributors to water degradation. Additionally, inefficiencies in water distribution and pricing remain persistent challenges, as noted by Sukereman (2017).

In Malaysia, water-related challenges vary across states and regions. Key concerns include river pollution, rising water demand, and over-dependence on surface water sources, as highlighted by Bakar and Rahman (2021). Rivers provide 97% of Malaysia's water supply, while only 3% is sourced from groundwater (Md. Khalid et al., 2021). Despite multiple treatment processes, pollution remains prevalent, aggravated by inadequate enforcement and fragmented water governance. This situation underscores the need for a holistic and sustainable approach that integrates environmental, economic, and spiritual dimensions of water management.

Malaysia's water governance framework has evolved through several national policies and strategic action plans, such as the 15th Strategic Action Plan under the National Water Resources Policy (2012), which seeks to strengthen water resilience against climate change and natural disasters. However, implementation gaps, financial constraints, and public awareness remain major obstacles. These challenges parallel the global call under Sustainable Development Goal (SDG) 6**,** which emphasizes ensuring the availability and sustainable management of clean water and sanitation for all.

Against this backdrop, there is a growing need to explore innovative mechanisms beyond conventional state-funded systems. One emerging Islamic approach is the application of waqf (endowment) as a sustainable financing tool for water access and management. The integration of waqf principles provides not only financial support but also a moral and communal framework that encourages collective responsibility.

One promising model is the establishment of waqf-based water wells, which have demonstrated effectiveness in supporting communities in underprivileged nations such as Cambodia, Sudan, Uganda, Ethiopia, and Nigeria. In conflict-affected countries such as Yemen, Syria, and Palestine, these wells serve as critical lifelines. Geographic constraints further complicate water accessibility, as observed in the Middle East and Sub-Saharan Africa (Md. Khalid et al., 2021). In some African regions, communities travel up to 30 minutes to access water, with wealthier households enjoying direct connections while poorer communities remain underserved (Magugudi Makgatho & Elias Musitha, 2024).

Bakar and Rahman (2021) recommend the adoption of waqf water wells due to the unique advantages of underground water sources. Natural filtration through soil, sand, and rock layers results in cleaner water, while groundwater is less affected by inconsistent rainfall, ensuring supply stability even during droughts. In Indonesia, the use of waqf wells has been proposed as a solution for rural areas. Hinsari (2020) examined waqf wells in Dusun Pucung, Kecamatan Janapria, Kabupaten Lombok Tengah, revealing that high demand during drought seasons led to partial commercialization, contradicting Islamic principles that prohibit personal profit from communal waqf assets. Such cases highlight the importance of governance and regulatory mechanisms in maintaining the sanctity and sustainability of waqf resources.

In Malaysia, the adoption of waqf-based water initiatives remains limited but shows increasing potential. Collaborative projects led by Yayasan Wakaf Malaysia (YWM) in partnership with the Ministry of Energy Transition and Water Transformation (PETRA) since 2020 have laid early foundations for waqf-driven water solutions. Therefore, this study aims to analyze the potential of water waqf as an alternative mechanism for sustainable water management and sanitation improvement in Malaysia and selected ASEAN countries. Specifically, it seeks to (i) examine the governance structure and implementation of water waqf projects, (ii) identify challenges and success factors, and (iii) assess its contribution to achieving SDG 6.

By addressing these objectives, this paper contributes to the academic discourse on Islamic-based sustainability, offering practical implications for policymakers, waqf institutions, and local communities. It also seeks to enhance awareness of the socio-economic and environmental value of water waqf as a viable model for collective action toward sustainable water security.

2. Literature Review

The Importance of Water in the Sustainability of Quality of Life

Water is essential for sustaining life and plays a critical role in ensuring a good quality of life. In Islam, water is especially significant because of its centrality to rituals involving cleanliness and worship. In Islamic

jurisprudence (fiqh), discussions about water are prioritised, as purity is fundamental for the validity of several acts of worship, including prayer (salat), fasting (sawm) and pilgrimage (hajj and umrah). Islamic teachings recognize seven types of water suitable for purification: rainwater, snow, dew (originating from the sky), spring water, well water, river water, and seawater (originating from the earth) (Syed Abdullah et al., 2024).

A study by Mokhtar & Abdullah (2012) explored the significance of water as reflected in various verses of the Qur'an. Key findings from their research emphasize the divine blessing of water, its role in creation, and its necessity for sustaining life. Qur'anic verses highlight the importance of water in supporting all living beings and stress humanity's responsibility to safeguard this precious resource.

This research presents data and findings that address the challenges and solutions related to water management. Visual aids such as images, charts, and tables will be incorporated to illustrate the results effectively, ensuring the information is clearly presented. These visuals are described and discussed within the paper to provide a comprehensive understanding of the analyzed data, emphasizing the proposed solutions to the identified problems.

This emphasis on the importance of water underscores the need for sustainable water management practices, as maintaining water purity is not only essential for physical well-being but also for spiritual observance in the Islamic context. The findings contribute to a broader understanding of how religious values can intersect with sustainable practices, advocating for responsible water usage and management to improve overall quality of life.

Table 1: The Uses of Water from the Perspective of the Qur'an

The Uses of Water	Surah/ Chapter of the Quran
As a drink for humans and animals, it also nourishes plants	Al-Nahl (16): 10 Al-Wahibah (56): 17-21
A physical cleansing agent (for the body, clothing, and living space) and a spiritual cleanser (from the disturbances of evil entities)	al-Muddathir(74): 4 Al-Anfal(9): 11
Nourishing the environment, greening the landscape, and balancing the ecosystem	al-Nahl (16): 65 al-Rum (30): 24 al-Hajj (22): 63
The sources of sustenance through economic activities such as agriculture, livestock farming, and fisheries	al-Baqarah (2): 22 al-Jathiyah (45): 12 al-Ma'idah (5): 96
The medium of communication between regions and internationally	al-Luqman (31):31
The development of knowledge	al-Mulk (67): 30

Source: Mokhtar & Abdullah (2012)

The table above highlights the importance of water sustainability for the maintenance of life. Water is not only essential for drinking by humans, animals, and plants, but also serves as a critical element for sanitation, economic development, human interaction, and the advancement of knowledge. In Islam, proper water management is strongly emphasized to ensure that other aspects of life proceed smoothly. The issue of clean water for a sustainable quality of life has garnered both global and local attention. The United Nations has declared the Sustainable Development Goals (SDGs) as a global initiative to eradicate poverty, protect the planet, and improve human life (https://www.undp.org/sustainable-development-goals).

There are 17 SDGs, with the 6th goal focused on clean water and sanitation. This goal includes eight specific targets: (6.1) ensuring safe and affordable drinking water, (6.2) ending open defecation, (6.3) improving water quality, treating wastewater, and promoting safe reuse, (6.4) increasing water-use efficiency and ensuring freshwater supply, (6.5) implementing Integrated Water Resources Management (IWRM), (6.6) protecting and restoring water-related ecosystems, (6a) expanding water and sanitation support to developing countries, and (6b) supporting local participation in water and sanitation management. The diagram below illustrates SDG 6.

Figure 1: Goal 6 Clean Water and Sanitation

To strengthen the theoretical foundation of this study, a conceptual model is proposed to illustrate how waqf can contribute to achieving SDG 6 (Clean Water and Sanitation). The model integrates three core elements: (1) Islamic moral governance, (2) sustainable resource management, and (3) community empowerment.

In this model, waqf functions as an Islamic social finance instrument that mobilizes endowment funds for the development, maintenance, and equitable distribution of water resources. By pooling charitable resources, waqf projects can finance the construction of wells, water filtration systems, and sanitation infrastructure in underserved areas. These initiatives directly support SDG targets 6.1 (safe drinking water), 6.3 (improved water quality), and 6b (community participation).

Furthermore, the model emphasizes maqasid al-shariah, the higher objectives of Islamic law, which include the protection of life (*hifz al-nafs*) and the preservation of the environment (*hifz al-bi'ah*). Embedding these objectives within water management practices ensures a balance between physical sustainability and spiritual accountability (Ismail, 2022).

Thus, the proposed conceptual framework, termed the "Waqf-SDG6 Synergy Model," demonstrates the pathway linking Islamic philanthropy (waqf) with global sustainable development goals. It highlights how Islamic ethical principles can provide an alternative governance mechanism to complement national policies on water sustainability (Hasan et al., 2021).

One of Malaysia's primary objectives involves transforming the water sector. As reported in the "Water Transformation 2040 Final Report" (2022), it was revealed that progress on target 6.5, which addresses integrated water resource management, has remained limited. Similarly, target 6.4, focusing on alleviating water scarcity and securing a stable freshwater supply, and target 6b, aimed at enhancing local community participation in water and sanitation management, continue to require substantial advancement. Consequently, this article underscores the importance of exploring an alternative approach through the implementation of waqf water initiatives. This method emphasizes collaboration between local communities and relevant authorities in managing water resources. The findings are anticipated to support governmental efforts in advancing the Water Transformation agenda set for 2024.

Water, Sanitation, Management and Legislation In Malaysia

The Malaysian government places considerable emphasis on water and sanitation management and regulatory measures. The system encompasses various essential elements, such as legislation, technical guidelines, oversight by governmental agencies, and strategic policies. Water sanitation management and legislation in Malaysia represent a coordinated endeavor involving stakeholders from the government, private sector, and community. From a legal standpoint, water and sanitation laws are vital to safeguard public health, protect the environment, and ensure the sustainable use of water resources. Three key laws governing water resources in Malaysia include the Environmental Quality Act 1974, the Water Services Industry Act 2006, and the Local Government Act 1976.

The Environmental Quality Act 1974 was specifically enacted to address environmental pollution in Malaysia, covering water, air, and land pollution. In terms of water and sanitation, the act primarily regulates the discharge of hazardous waste into water bodies, such as rivers, lakes, and seas, to prevent contamination. Stringent guidelines are outlined for industrial waste disposal into these sources, with penalties such as factory closures and legal action imposed on violators. Under this act, it is mandated that industries submit an Environmental Impact Assessment (EIA) report for any development projects that might potentially harm the environment (Department of Environment Malaysia, 1974).

The Water Services Industry Act 2006 governs the provision of water services and sanitation, including clean water supply and sewage treatment. The act ensures the delivery of high-quality, safe, and uninterrupted water services to Malaysian consumers. Regulations pertaining to the water services industry, which encompass water supply and wastewater treatment, are established to maintain public health standards. Furthermore, the act authorizes the National Water Services Commission (SPAN) to oversee and enforce these regulations, ensuring that water supply and sanitation services are safe and reliable (National Water Services Commission, 2006).

Under the Local Government Act 1976, local authorities are empowered to manage both domestic and industrial waste within their jurisdictions. Responsibilities include wastewater management, sewage system upkeep, and enforcement of health and safety regulations. The act grants local governments the authority to establish rules and guidelines for water and sanitation management at the district and urban levels. Additionally, a collaborative framework with other government agencies is established to improve the management of water resources. The act also authorizes local authorities to enforce cleanliness laws, such as regulating waste disposal into public drainage and water bodies (Attorney General's Chambers of Malaysia, 1976).

Development of Water Waqf In Islamic History

Waqf has been a pivotal instrument in the economic development of Islamic societies. Numerous studies have demonstrated its positive impact as a catalyst for local economic growth. The historical development of Islamic civilization shows that waqf has significantly benefited society in education, healthcare, social welfare, and economic development. The term "waqf" originates from the Arabic word "waqafa," meaning to stop or restrain. Imam al-Shafi'i defined waqf as the act of withholding a portion of assets for public benefit (Purwaningsih & Susilowati, 2020). Sabiq (2008) noted that in the Shafi'i school of thought, ownership of waqf property is transferred to Allah SWT, and cannot be sold or gifted.

Various forms of waqf exist, one of which is water waqf. Water waqf has played a vital role in ensuring a continuous water supply for communities, particularly in areas with limited access to clean water (Kahf, 1998). The practice of water waqf dates to the Prophet Muhammad's (PBUH) time. A notable instance occurred in Madinah, where a water crisis led to difficulties for the Muhajirin. They struggled to access clean water, as the Well of Raumah was privately owned by a Jewish man who sold water at high prices. Uthman ibn Affan (RA), one of the Prophet's companions, negotiated to purchase the well for public benefit. Initially, the Jewish owner resisted selling, but eventually, Uthman acquired half of the well, allowing the people of Madinah to draw water for free. Ultimately, Uthman purchased the entire well and donated it as a waqf for public use (Aziz et al., 2022; Ramli & Sulaiman, 2006).

The water waqf was also implemented extensively during the Ottoman Empire (1299–1922). Public fountains

(sabil) were funded by both government waqf institutions and private donations from the wealthy, such as sultans and nobles. The Fountain of Sultan Ahmed III in Istanbul, constructed in 1728, and the fountain at Sinan Pasha Mosque are notable examples of Ottoman water waqf projects (Shaw & Shaw, 1976). Similarly, during the Mamluk period in Egypt (1250–1517), public fountains and water channels were constructed and maintained through waqf institutions. These projects were vital for ensuring public access to clean water and were funded by charitable donations from the elite (Behrens-Abouseif, 1994).

In Andalusia, Islamic rulers from the 8th to the 15th centuries developed advanced water management systems supported by waqf. Innovations such as water channels and wheels were essential for agricultural irrigation, and their maintenance was overseen by waqf institutions. Public fountains, funded by waqf, were established to provide water for both urban and rural areas (Fierro, 1992).

In recent years, the concept of water waqf has been revitalized in Muslim-majority countries to address contemporary water scarcity issues. Countries like Indonesia, Cambodia, and Malaysia have implemented water waqf projects, constructing wells and rainwater harvesting systems to provide clean water, particularly in rural areas. Collaboration between governments and NGOs in Indonesia has facilitated the development of sustainable water solutions (Kahf, 1998). In Malaysia, the integration of waqf into national water management strategies has emphasized sustainability and equitable access. Efforts include rehabilitating traditional water systems and adopting new technologies (Abdul Karim & Murad, 2010).

3. Methodology

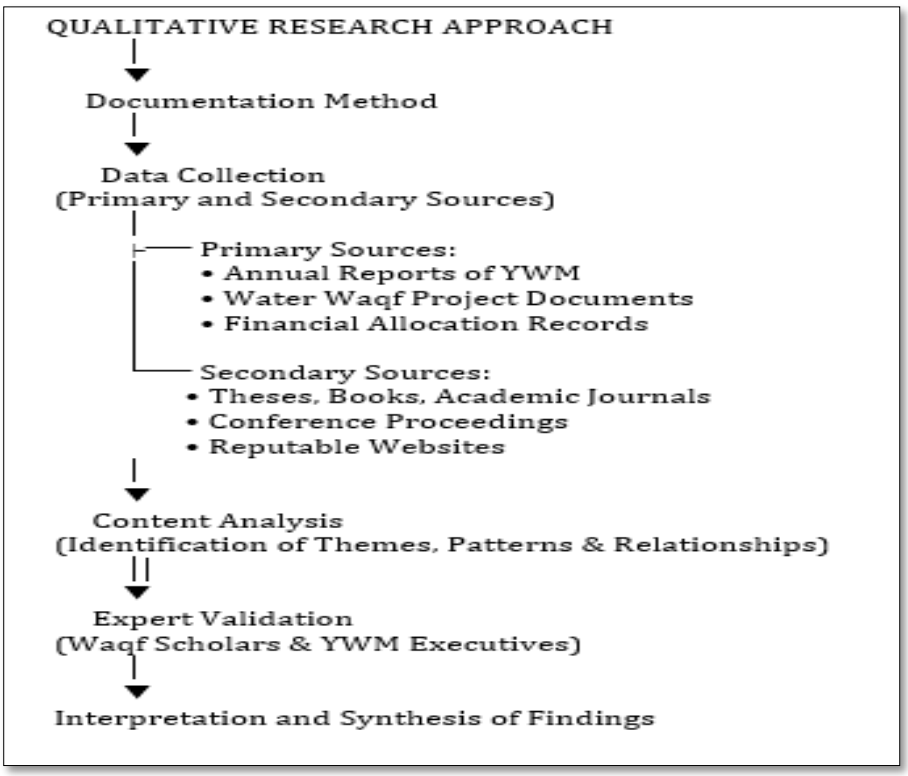
This study adopts a qualitative research approach, utilizing the documentation method to collect and interpret data. This method involves gathering, analyzing, and explaining patterns or themes relevant to the research from primary document sources, as described by Bowen (2009). The analysis focuses on annual reports, project documents, and budget allocation records related to waqf water projects across various states up to December 2023. The primary data comes from Yayasan Wakaf Malaysia (YWM), a key institution overseeing waqf management in the country, with an emphasis on water-related initiatives.

The documentation method also accommodates the use of secondary data (Lebar, 2015). In conducting content analysis, both primary and secondary data must align to ensure the findings are relevant and accurate (Talib, 2013). This research incorporates a broad range of sources, including both local and international materials, examining similar waqf water projects implemented in countries like Indonesia, Cambodia, and Thailand. Secondary sources include theses, books, academic journals, conference proceedings, and reputable websites, enriching the study's foundation.

Data analysis was carried out using content analysis, a method that systematically examines the collected information to uncover patterns, themes, and significant messages within the documents (Krippendorff, 2018). This approach provides an objective understanding of the data, allowing for an in-depth interpretation of the content and its implications.

To ensure the credibility of the findings, expert validation was conducted. Specialists in waqf studies, along with executive officers from YWM, reviewed the research findings to confirm their accuracy. This validation process is essential for maintaining the reliability of the study, as experts assess and provide feedback on the quality (Mayring, 2000). The involvement of field specialists ensures that the research outcomes are accurate, meaningful, and relevant, contributing to the broader knowledge base of waqf water initiatives (Yegidis et al., 2018).

Figure 2: Research Process



4. Results and Discussion

Development of Water Waqf in ASEAN

The Association of Southeast Asian Nations (ASEAN) is a regional organization established on 8 August 1967 through the Bangkok Declaration by five founding countries: Indonesia, Malaysia, the Philippines, Singapore, and Thailand. ASEAN currently has ten member countries, including Brunei, Vietnam, Laos, Myanmar, and Cambodia. ASEAN aims to strengthen cooperation in the political, economic, and security fields and promote peace, stability, and prosperity in Southeast Asia. ASEAN also aims to build the ASEAN Community based on three main pillars: the Political-Security Community, the Economic Community, and the Socio-Cultural Community (ASEAN Secretariat, 2022).

In ASEAN countries, the concept of water waqf was introduced as one of the measures to ensure access to clean water for underserved communities. Water waqf is an initiative where waqf funds are used to provide water infrastructure or build clean water supply systems for communities in need. In Indonesia, for example, organizations such as Dompet Dhuafa and Badan Wakaf Indonesia (BWI) are active in water waqf programs, providing access to clean water in rural areas (Dompet Dhuafa, 2022). In Malaysia, the Yayasan Wakaf Malaysia (YWM) also implements similar programs to increase water access for marginalized communities (Yayasan Wakaf Malaysia, 2023). These efforts not only help the local community but also promote the practice of waqf as a social support mechanism in Islam.

Research by Bakar & Rahman (2021) identified significant water-related challenges in Malaysia, such as river pollution, high water demand, and reliance on surface water sources. Contributors to water quality degradation, including agricultural runoff, sewage discharge, and saltwater intrusion, were highlighted by Syed Abdullah et al. (2024). Issues like inefficiency in water distribution have also been documented (Sukereman, 2017).

Alternative water supply solutions, such as harim, have been proposed to ensure sustainable water resources. Harim areas, encompassing wells and rivers, should be preserved from development to maintain their ecological quality. Bakar & Rahman (2021) advocated for water well waqf, emphasizing groundwater's

resilience during dry seasons. Groundwater wells, often found in rural areas, can be established through waqf initiatives to address water crises (Md. Khalid et al., 2021).

Rainwater harvesting has also been identified as a viable alternative, as Malaysia's high rainfall can be effectively utilized. According to Azmi et al. (2023), rainwater harvesting systems, such as backyard or underground storage, have shown promise. These systems collect rainwater, which is stored and treated for use. The estimated cost of such a system is RM2200 per project. While cost-effective, challenges such as water pressure and storage must be managed (Asmuni et al., 2016).

From 2020 to 2022, Yayasan Wakaf Malaysia (YWM) initiated ten water waqf projects across several Malaysian states, significantly benefiting communities by providing clean water. These initiatives have also served as platforms for da'wah and ongoing rewards for donors. The water waqf initiative, launched in collaboration with the Ministry of Energy Transition and Water Transformation (PETRA), aligns with national strategic plans to ensure water resource resilience (Aziz et al., 2022; National Water Resources Policy Document, 2012). As of the end of 2023, YWM has expanded its efforts, focusing on rural areas where access to clean water remains limited.

Figure 3: Distribution of Water Waqf in Malaysia Until December 2023

Source : Portal Rasmi Yayasan Wakaf Malaysia, https://www.ywm.gov.my/wakaf-air, 13 Mac 2024

The chart above illustrates the distribution of water waqf among the states in Malaysia up to December 2023. The infographic highlights three states with the highest number of water waqf assistance: Kedah (21 projects, RM877,464), followed by Kelantan (16 projects, RM736,081), and Pahang (11 projects, RM571,805). The total amount of waqf funds collected stands at RM4,560,738.61, indicating a high level of awareness among Malaysians regarding charitable contributions and social welfare efforts.

There are two main components of the water waqf fund distribution: the cash waqf received (Taslim) and the waqf benefits fund (Tauzi). The cash waqf received refers to the funds that have been expended and are necessary for maintaining the 'Ayn or the waqf water assets. In contrast, the waqf benefits fund encompasses other expenditures needed to sustain the objectives of establishing a water waqf (Application Form for Waqf Fund for Water Waqf Project Implementation, YWM Portal).

Water waqf is also implemented in several countries within the Nusantara region. For instance, Indonesia implements water waqf even though it is not primarily aimed at economic enhancement, but rather for daily use and religious practices (Nawwaf & Saifulloh, 2023). The issues and trends in Indonesia are similar, with challenges in accessing clean water in certain areas, particularly during dry seasons, due to the depletion of clean water sources (Kaslam & Mubarak, 2021). This situation is concerning, as water shortages are occurring

even in major cities and regions like Pamekasan (Mustajab, 2022). A World Bank study conducted in 2006 found that half of Indonesia's population had lost access to clean water, adversely affecting health and community activities. This led to the spearheading of programs providing clean water assistance managed by the government, companies, and non-profit organizations. Water resources are believed to serve as an object of charity and waqf, as they can significantly aid community livelihoods (Mustajab, 2022). Research by Thajudeen (2018) indicates that waqf has played a crucial role in financing numerous water infrastructure projects that have benefited communities for years.

One prominent waqf organization in Indonesia is Dompet Dhuafa. Dompet Dhuafa is a non-profit entity in Indonesia dedicated to advancing social and humanitarian development through ZISWAF funds (Zakat, Infaq, Shodaqoh, Waqf). According to Indonesia's Law No. 38 of 1999 concerning the management of zakat, Dompet Dhuafa is an institution established by the community to manage zakat. On October 8, 2001, the Minister of Religious Affairs of the Republic of Indonesia issued Decree No. 439 of 2001, which established Dompet Dhuafa Republika as a national zakat management institution sourced from the Dompet Dhuafa website https://ntt.dompetdhuafa.org/sejarah/.

According to Indonesian law, particularly Law No. 41 of 2004 concerning Waqf, water sources have not yet been explicitly stated as one of the waqf objects. The implementation of Law No. 41 of 2004, in Article 19, paragraph 3, mentions that water sources can be designated as waqf objects. However, detailed guidelines for implementation have not yet been specified (https://www.bwi.go.id/wp-content/uploads/2019/09/Undang-undang-No.-41-2004-Tentang-Wakaf.pdf).

This initiative spans several provinces in Indonesia, including Jabodetabek, West Java, Central Java, East Java, Yogyakarta, South Sulawesi, Riau, East Flores, North Sumatra, and East Kalimantan. There are also plans for waqf well development in various locations such as Pulau Buano and Pasir Panjang-Ambon; Kota Waringin Timur in South Kalimantan; Dusun Leboyo in Lamongan; Desa Kasihan in Pacitan; Pondok Pesantren Hasan Munadi in Ponorogo; Dusun Soroyati in Papua; Kampung Wisata Ciomas in Serang; Dusun Polay in Situbondo; Kendari and Konawe Selatan in South Sulawesi (https://donasi.dompetdhuafa.org/wakafsumur/)

In Cambodia, water waqf through wells is also used as an initiative for water sourcing, particularly in rural areas where access to clean water is limited. Organizations involved in well waqf projects in Cambodia include Al Ridzuan Haramain Sdn Bhd, Koperasi Kohannan, Al-Ameen Serve Holdings Sdn Bhd, and Pertubuhan Amal Kebajikan Ar Rasyid. According to Suja (2022), waqf wells not only address water issues but also enhance public health by reducing waterborne diseases. A piped water delivery system is also a popular form of water waqf development, allowing communities to receive a direct water supply to their homes.

Research by Aminah & Khairul (2021) indicates that this system has saved time in obtaining water, thereby increasing the daily productivity of residents. The construction of water tanks to store rainwater and clean water has been introduced as an alternative solution. Research by Farah (2023) found that these water tank projects improve water availability during dry seasons and alleviate pressure on natural water sources. Initiatives to introduce water filtration technology through water waqf have also received attention. Several projects have integrated filtration systems with water sources, ensuring cleaner and safer water for use. Field studies by the Mekong Institute (2023) have shown positive health impacts in communities after implementing these systems. The types of water waqf development in Cambodia have successfully addressed water issues, water delivery systems, water storage tanks, and water filtration technology. Research by Mustapa (2022) also indicates a decrease in infectious disease incidents in areas that have received water waqf projects.

In Brunei, water waqf practices and challenges vary based on local contexts, despite being rooted in the Islamic society. Water waqf practices are not formally documented as a system because waqf contributions do not require registration and are entrusted solely to the receiving parties (Mohiddin, 2021). However, the country boasts advanced water management infrastructure overseen by the Brunei Islamic Religious Council (MUIB) and other government bodies, in line with sustainability principles and public welfare. Although there are charitable water-related initiatives, they do not meet the criteria to be recognized as a water waqf under Islamic law (Water Action Hub, 2024). Water supply infrastructure, including dams and reservoirs, plays a crucial role in ensuring water security, with efforts to protect water quality being a priority due to Brunei's reliance on surface water sources.

Conversely, Thailand faces challenges in managing waqf assets due to less comprehensive legislation and traditional practices that require modernization. Water waqf has received less attention compared to land waqf, building waqf, and cash waqf. In Thailand, all religious affairs, including waqf, zakat, and fitrah, are managed collectively by the Chularajmontri, the State Committee for Islamic Affairs, and the Mosque Committee (Saputra, Brilliyandra & Syahpawi, 2024). The focus in Thailand is on improving management and development of land waqf, including those related to water resources, to enhance utility and profitability for communities (Water Action Hub, 2024).

Water Waqf Projects In Malaysia

The concept of civilization development worldwide is often described as being closely linked to the establishment of settlements along river valleys, which gradually transformed into urban centers as human populations concentrated in these areas. Similarly, the development of Malay civilization in the Nusantara region has also flourished near river valleys or areas with water sources. It is customary for inhabitants to reside in areas where access to a water supply is readily available, as it is a fundamental necessity. Historically, wells, river water, and lake water have constituted vital sources for the residents of Malaya in their daily lives (Abdullah, 2017).

The water supply system that utilises piping networks to deliver water to key areas was reported to have been introduced by the British. This system facilitated the distribution of water to residential areas and main roads in certain districts (Malaysia Water Industry Report, 1995). With the passage of time and advancements in technology, the piping system has been enhanced to facilitate the delivery of treated clean water more efficiently. However, many rural areas, particularly those in the interior, continue to face challenges in accessing clean water, likely due to various factors, including the high costs associated with constructing distribution systems relative to the number of users in those areas.

Figure 4: The construction of Waqf Water Wells in several locations in Kedah and Pahang

Source: Personal collection from the researcher's site visits

Currently, there are alternatives provided by the Yayasan Wakaf Malaysia (YWM), which offers a platform for collecting water waqf funds. These funds are then allocated to specific areas based on applications submitted by community representatives.

Figure 5: Construction Works of Waqf Water by Yayasan Waqaf Malaysia

Source: Image Collection of Yayasan Waqaf Malaysia.

The waqf instrument has been recognized by many scholars as having the potential to assist and develop the economic well-being of communities. In light of this awareness, the Yayasan Wakaf Malaysia (YWM), in collaboration with the Ministry of Energy Transition and Water Transformation (PETRA), launched the water waqf initiative on December 17, 2020 (https://www.ywm.gov.my/aktiviti/126). Over the course of three years, YWM has successfully implemented 75 projects across several states in Peninsular Malaysia, Sabah, and Sarawak, generating funds through cash waqf contributions. The following table outlines the water waqf projects that were completed, categorised by year and state in Malaysia.

Table 2: Number of Waqf Water Projects and Waqf Fund Distribution (RM) until December 2023 by State in Malaysia

State	Total Projects	Distribution of Funds (RM)
Kelantan	16	RM736,081
Selangor	4	RM120,653.98
Johor	2	RM 82, 276
Perak	5	RM181,655
Kedah	21	RM877,464
Pahang	11	RM571,805
Negeri Sembilan	3	RM109,865
Sarawak	9	RM611,952
Sabah	4	RM286,109
Total Projects by Year/ Total Overall Distribution (RM)	**75**	RM 3,577,860.98

Source: Document Data from Yayasan Waqaf Malaysia

Table 2 presents the number of waqf water projects and the distribution of waqf funds (in Malaysian Ringgit) as of December 2023 by state in Malaysia. In total, 75 projects have been implemented nationwide, with an accumulated fund amounting to RM3,577,860.98. The state of Kedah recorded the highest number of projects, with 21 projects and a total fund allocation of RM877,464, making it the state that benefited the most from this program. Kelantan ranked second with 16 projects and a total fund of RM736,081, followed by Pahang in third place with 11 projects and a fund allocation of RM571,805.

In contrast, Johor recorded the lowest number of projects and funds, with only two projects and a total fund of RM82,276. Sarawak, despite implementing nine projects, also demonstrated a relatively significant fund allocation of RM611,952, highlighting a strong commitment to the development of waqf water projects in the region.

Overall, the variation in the number of projects and the amount of funds distributed across states reflects the prioritization given to specific states based on their needs and the effectiveness of project implementation. This effort clearly aligns with the primary objective of the waqf water program, which is to provide access to clean water for communities while optimizing waqf resources for the overall benefit of society.

Comparative Analysis of Water Waqf Implementation between Malaysia and ASEAN Countries

A critical analysis of water waqf implementation in Malaysia compared to other ASEAN countries such as Indonesia, Cambodia, and Thailand reveals notable differences in terms of policy, governance, and project effectiveness. Malaysia appears to be more advanced in the areas of institutionalization and policy integration between government agencies and waqf institutions.

Conversely, Indonesia demonstrates significant strengths in community engagement and its extensive network of waqf institutions. Through the Badan Wakaf Indonesia (BWI), a variety of productive waqf programs have been implemented with the support of non-governmental organizations and local communities. However, the main challenge in Indonesia lies in the monitoring process and the transparency of financial reporting, which often vary across regions (Rahman, 2022). This highlights the need for a centralized data management model, similar to that practiced by Yayasan Wakaf Malaysia (YWM).

In Cambodia, the implementation of water waqf primarily focuses on meeting the basic needs of the Muslim minority communities, particularly in the regions of Kampong Cham and Phnom Penh. These initiatives are largely supported by external organizations such as the Yayasan Islam Malaysia (YIM) and several Middle Eastern NGOs (Judijanto et al., 2024). Although the projects have had a positive impact on community welfare, challenges related to human resources and monitoring systems have limited the long-term sustainability of these initiatives.

Meanwhile, in Thailand, water waqf implementation remains at an early stage and faces legal and administrative constraints. Waqf management in Thailand is collectively administered by the Chularajmontri, together with the State Islamic Affairs Committee and Mosque Committees (Saputra, Brilliyandra & Syahpawi, 2024). The current focus remains primarily on land and building waqf development rather than water-related waqf projects.

Overall, this analysis suggests that Malaysia has a distinct advantage in governance structure and policy support, while Indonesia excels in community participation and innovative financing mechanisms. Cambodia and Thailand, on the other hand, display emerging potential but require more structured institutional frameworks to ensure effective and sustainable implementation. To strengthen water waqf practices at the ASEAN level, it is essential to promote regional integration and knowledge exchange through a collaborative platform that incorporates elements of Islamic governance, sustainable development, and water resource sharing. This approach not only contributes to the realization of Sustainable Development Goal (SDG) 6: Clean Water and Sanitation, but also reinforces the role of waqf as a sustainable mechanism for socio-economic development across the region.

5. Conclusion

Water is a fundamental resource essential for human survival and well-being, encompassing economic, social, educational, and religious dimensions. However, global challenges such as climate change, environmental degradation, poverty, and the scarcity of clean water have adversely affected both the quality and accessibility of water resources worldwide. These conditions necessitate innovative and sustainable approaches to water resource management. In this context, water waqf emerges as a faith-based and community-driven mechanism that aligns with the principles of sustainability and social welfare. Its implementation can be adapted according to local needs and circumstances.

From a practical perspective, the study emphasizes that Islamic social finance instruments, particularly waqf, have the potential to play a strategic role in supporting sustainable water management. The findings carry significant implications for policymakers, practitioners, and researchers. Policymakers are encouraged to recognize waqf as an integral component of national water strategies, thereby fostering cross-sectoral collaboration between Islamic institutions, government agencies, and communities.

Future research is recommended to employ empirical methods such as interviews or surveys in Malaysia and other ASEAN countries to achieve a more comprehensive understanding. Such studies could enhance the sustainability and effectiveness of water waqf initiatives, which hold great potential in ensuring water security and promoting sustainable livelihoods. Ultimately, water waqf can serve as a transformative instrument for advancing Sustainable Development Goal 6 (Clean Water and Sanitation) while strengthening holistic human development.

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