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## Digital Green Waqf: A Systematic Literature Review on Sustainable Islamic Philanthropy in the Digital Era

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### ABSTRACT

*Eco-centric digital waqf, or digital green waqf, represents an innovative advancement in Islamic philanthropy that amalgamates the principles of sustainability with digital technologies to confront modern socio-ecological dilemmas. This investigation seeks to rigorously analyze the developments, trends, and research deficiencies in the extant literature pertaining to the digitization of waqf and its consequential application in furtherance of the sustainable development agenda. The methodology employed was a Systematic Literature Review (SLR) encompassing 80 scholarly articles sourced from accredited national journals and esteemed international journals (Scopus and WoS) during the period spanning 2010 to 2024. The findings of the study delineated four principal themes: (1) digitization of waqf management, (2) integration of green waqf within the sustainability agenda, (3) governance and innovation within the realm of Islamic philanthropic finance, and (4) constraints of regulation and implementation models concerning digital green waqf. The research revealed that while the potential of digital waqf to bolster a green economy is substantial, its practical execution remains largely confined to a conceptual framework. The deficiencies in regulatory measures, the digital literacy of wakif, and the requisite synergies among technology, nazhir institutions, and governmental bodies pose significant challenges. This study contributes by mapping the contemporary literature and proposing future research trajectories aimed at establishing a comprehensive and sustainable digital green waqf framework.*

**Keywords:** Digital Waqf, Green Waqf, Islamic Philanthropy, Sustainability, Digital Technology, Systematic Literature Review

### How To Cite:

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## INTRODUCTION

Waqf represents a mechanism of Islamic philanthropy that possesses significant potential in facilitating sustainable development. Nonetheless, conventional waqf management frequently encounters obstacles pertaining to transparency, efficiency, and accountability (Maisyarah & Hadi, 2024). The digitalization of waqf serves as a viable remedy to mitigate these challenges through the application of information technology in the processes of collection, management, and distribution of waqf. Research conducted by Auna Nida Ulhusna et al. (2024) indicates that the adoption of a digital-based waqf management framework can enhance the contribution of waqf towards the attainment of the Sustainable Development Goals (SDGs).

The notion of “Green Waqf” or green waqf has emerged as an innovative approach in waqf management, concentrating on environmental conservation and sustainability (Takwin, 2024). The Green Waqf amalgamates Sharia principles with the objective of environmental conservation by financing projects that are environmentally sustainable. Othman et al. (2025) highlight in their research that Green Waqf can serve as an efficient instrument in promoting sustainable development by focusing on initiatives such as reforestation and renewable energy.

The confluence of digitization and Green Waqf has engendered the concept of “Digital Green Waqf,” which harnesses digital technologies to bolster waqf initiatives aimed at environmental conservation. Alfarisi and Huda (2023) demonstrate that the incorporation of digital crowdfunding platforms within Green Waqf can amplify community engagement and enhance the social impact of waqf projects.

In Indonesia, the potential of waqf is substantial; however, its actualization remains suboptimal (Maisyarah & Hadi, 2024). Choirunnisak and Jihad (2024) have identified that low digital literacy, limited public trust, and the absence of regulatory frameworks supportive of digital waqf innovation constitute primary challenges to waqf optimization in the contemporary digital landscape.

The deployment of blockchain technology in waqf management can significantly enhance transparency and accountability, as noted by Choirunnisak and Jihad (2024). Auna Nida Ulhusna et al. (2024) emphasize that the implementation of this technology permits the documentation of irrevocable waqf transactions, thereby fostering increased public confidence in the management of waqf assets.

Digital education and literacy are pivotal in augmenting community participation in the Digital Green Waqf. Auna Nida Ulhusna et al. (2024) assert that a considerable portion of the populace remains uninformed regarding the concept of digital waqf and its associated benefits, thereby necessitating comprehensive educational initiatives to elevate awareness and participation levels.

Digital Green Waqf also has the potential to mitigate the ramifications of climate change by financing environmental projects (Othman et al., 2025). Hasan and Syahrudin (2022) advocate for the utilization of waqf to fund carbonization technology as a sustainable waste management solution and to further support the SDGs.

The maqashid al-shariah framework applied within the Green Waqf underscores the importance of communal welfare and environmental preservation. Gumansari et al. (2023) in their investigation concerning the cultivation of tamanu trees through waqf illustrate that such activities yield not only ecological benefits but also social and economic advantages for the community.



Despite the considerable potential associated with the Digital Green Waqf, there exist notable gaps within the literature addressing the integration of digitization and green waqf. Systematic inquiry is imperative to delineate best practices, challenges, and opportunities pertinent to the implementation of Digital Green Waqf as an enduring instrument of Islamic philanthropy within the digital epoch.

## PRIOR RESEARCH

The following presents an analysis of previous research as follows: Kamaruzaman & Ishak (2023). Traditionally committed to philanthropic endeavors, Waqf institutions have evolved to meet modern exigencies, underscoring the necessity of scrutinizing their governance structures and socio-economic ramifications. This systematic review investigates these dimensions within the context of Islamic finance. Employing the PRISMA Flow Diagram and executing a rigorous search strategy across the Scopus and Web of Science databases, this study systematically analyzed 28 scholarly articles. Expert validation facilitated the categorization of these articles into three principal themes: (1) Governance and Accountability of Waqf Institutions, (2) Waqf-Based Financial Models and Sustainability in Islamic Social Finance, and (3) Socio-Economic Impact of Waqf Institutions. The findings accentuate the essential roles of governance, financial models, and socio-economic impact pertaining to Waqf institutions. Effective governance and accountability mechanisms are pivotal for ensuring transparency and fostering trust, while innovative financial models, such as crowdfunding and SRI Sukuk, present opportunities for sustainability. These models have the potential to revitalize Waqf institutions, thereby maximizing their socio-economic impact and augmenting their relevance in the contemporary financial milieu. In summary, this systematic review elucidates the adaptability of Waqf institutions in confronting modern challenges. The nexus between governance, finance, and socio-economic impact yields actionable insights for policymakers and practitioners, promoting enhanced governance and the implementation of innovative financial models. This review contributes to a more profound comprehension of the contemporary relevance of Waqf within Islamic finance, thus advancing the discourse on sustainable and accountable financial practices.

Alfarisi & Huda (2023). This study endeavors to investigate the integration of green waqf through digital crowdfunding platforms and the associated social impacts on the community. The research employs a library research methodology complemented by a qualitative analytical approach. The integration of green waqf via digital crowdfunding platforms is explored in its relation to the realization of sustainable development across generations. Green waqf serves as one of the instruments of Islamic jurisprudence to address the challenges faced by the ummah, particularly environmental issues linked to sustainable development and intergenerational equity. This research was undertaken qualitatively utilizing an analytical descriptive design. The findings indicate that green waqf possesses the capacity to harmonize development with environmental sustainability, thereby fostering sustainable environmental conservation and equality among generations, ensuring that future generations maintain equivalent levels of resource utilization as the present generation, in terms of diversity of options and access to natural resources. Green waqf represents an innovative movement for environmental conservation, initiated by fundraising through a crowdfunding mechanism, which culminates in the acquisition of critical land designated for reforestation. As the critical land becomes verdant and acquires ecological value, it will be allocated to the local community with the stipulation that the forest must be preserved and safeguarded from damage. Green waqf



not only addresses the issue of environmental degradation but also yields benefits across various dimensions including ecology, energy sustainability, social welfare, economic growth, and community well-being.

Ramdani et al. (2024). The progression of waqf is advancing at an accelerated pace. To ensure the continual advancement of waqf in accordance with Sharia, Islamic scholars endeavor to integrate Islamic values (IVs) within the activities and operations of waqf institutions. In order to ascertain the implementation of IVs within waqf institutions, prior research has been conducted to serve as a reference for subsequent investigations; the present study seeks to systematically review the existing literature. This study focuses on the application of IVs in waqf institutions. Utilizing the Preferred Reporting Items for Systematic Review and Meta-analysis for Protocol methodology, a total of 327 articles were collected, which were subsequently analyzed to extract insights from various case studies pertaining to challenges encountered in waqf institutions. This study elucidates the concepts of tawheed, justice, accountability, trust, mutual consultation, consciousness of Allah, enjoining virtue while eschewing vice, as well as the overarching objectives of Shariah within the governance of waqf. The sources employed in the systematic literature review were obtained from a select number of databases. Expanding the range of academic databases utilized would enhance the breadth and diversity of knowledge pertaining to management and strategies within waqf institutions. The identified values offer a comprehensive framework for practitioners, policymakers, and researchers to inform their initiatives in the development and governance of waqf institutions in alignment with Islamic principles. The findings yield profound insights into the current landscape of IVs in waqf institutions as represented in the literature. This paper underscores numerous deficiencies in the existing literature and recommends avenues for future research to further the understanding of IV implementation. This study will assist researchers in recognizing new dimensions for inquiry and contribute meaningfully to the academic discourse.

Rahmayati & Badawi (2024). Waqf, as a mechanism of Islamic philanthropy, possesses significant potential to enhance social and economic welfare. The objective of this research is to investigate the role of waqf in promoting sustainability as a manifestation of Islamic philanthropy in the context of global transformations. The outcomes of this research assess waqf's contribution to sustainability initiatives amid global change and pinpoint critical obstacles to the effective execution of waqf. The absence of clear and consistent regulatory frameworks regarding waqf across various nations results in challenges related to management and enforcement, coupled with a deficiency in knowledge and skills related to waqf management among administrators and stakeholders. Blockchain technology presents a viable solution that has the capacity to enhance the efficiency and efficacy of waqf management by establishing a more transparent, accountable, and secure system. Consequently, international cooperation and the adoption of contemporary technologies such as blockchain are imperative to optimize waqf's contribution in addressing global change and achieving sustainability objectives.

Hatimah et al. (2023). The intersection of green economy principles and green waqf opportunities within the realm of digital assets is examined in this study. This investigation seeks to elucidate the collaborative dynamics of the green economy and the potential for green waqf initiatives facilitated by digital assets. Exploratory research methodologies serve as an appropriate means to capture emergent phenomena in the management of digital waqf assets. The findings indicate the existence of a waqf practice manifested in a digital format, specifically software applications. Nonetheless, the researchers have not been able to ascertain that this constitutes a purely digital waqf due to the absence of a well-defined



governance framework for digital waqf. Consequently, there is an expressed desire for a management system of waqf assets that is both technically accessible and comprehensible. This research underscores the necessity for specialized literature and governance frameworks in the management of digital waqf assets. Such advancements may be achieved through sustained research and developmental initiatives. The outcomes of this study signify that the management of digital waqf assets represents a novel frontier in the domain of philanthropy, promising substantial impacts while also presenting complexities that require resolution.

Sudi et al. (2024). The institution of waqf, an essential Islamic philanthropic instrument for socio-economic financing, possesses a rich historical background. However, the management and allocation processes associated with waqf frequently inhibit the realization of its broader potential benefits. Information technology emerges as a valuable tool to mitigate these various challenges within the contemporary digital landscape. The objective of this research is to identify diverse technological innovations that can enhance the optimization of waqf management practices. Specifically, this study endeavors to ascertain technologies that may bolster efficiency and transparency within waqf management, assess the implications of these technological applications on the effectiveness of waqf management, and formulate strategic recommendations for waqf administrators and other pertinent stakeholders. Data was amassed through comprehensive interviews with waqf managers, experts in Islamic economics, and specialists in information technology. Additionally, an analysis of annual reports from waqf institutions, governmental policies pertaining to waqf, and scholarly literature regarding the digitalization of waqf management was conducted. Thematic analysis techniques were employed to delineate principal research patterns and themes. The findings of the research illustrate that the incorporation of digital technology into waqf management yields numerous significant advantages. Innovations such as smart contracts and blockchain technology can enhance the security and transparency of waqf transactions, diminish the likelihood of malfeasance, and facilitate more effective auditing processes. Furthermore, digital-based crowdfunding platforms render broader fundraising opportunities for waqf initiatives. This research concludes that digital technology harbors substantial potential to optimize waqf management as a tool for socio-economic financing, effectively addressing many of the traditional challenges encountered in waqf management, such as deficiencies in transparency and efficiency.

Mahfud et al. (2020). The phenomenon of digitalization in Islamic philanthropy within the Indonesian context necessitates an examination through the lenses of efficacy and efficiency. Furthermore, in light of the Covid-19 pandemic and the advancements in information technology, the domains of zakat and waqf services represent pivotal areas for achieving optimal outcomes. This scholarly article emphasizes case studies that utilize diverse data sourced from the internet to elucidate the underlying factors contributing to this issue and to propose effective strategies for the administration of zakat and waqf. Broadly speaking, the root cause of this matter pertains to the insufficient awareness among the Indonesian populace regarding the management of welfare through digital platforms and its implications for the national economy. The realization of proficient and effective management of zakat and waqf can be attained through computer-integrated methodologies as opposed to traditional manual approaches, particularly in the context of the onset of the Industrial Revolution 4.0. Conversely, there exists a sense of optimism within the community that adept management of zakat and waqf has the capacity to enhance the economic





landscape of Indonesia. Therefore, the incorporation of digital technology in the management of zakat and waqf is posited to possess the potential to bolster public trust and facilitate the realization of state welfare.

Sukaina et al. (2022). A multitude of stakeholders is mandated to innovate within the realm of renewable energy to ensure sustainable living in the foreseeable future. Among the innovative approaches to bolster renewable energy is the utilization of the tamanu plant (*Calophyllum inophyllum*). The tamanu plant is capable of mitigating carbon emissions and can be transformed into cosmetic ingredients and medicinal products, thereby holding the promise of fostering a sustainable business model. Nonetheless, the advancement of the industry necessitates substantial financial investment, thus requiring adequate funding mechanisms. One such financing model is green waqf, which can be structured as monetary contributions facilitated through blockchain technology. The application of blockchain storage technology ensures the secure preservation of data. Consequently, the objective of this research is to delineate an innovative application referred to as "Tamanoo." The data employed in this research is secondary in nature, derived through a qualitative descriptive methodology and literature review. The operational framework encompasses waqif, mauquf alaih, and governmental involvement. Tamanoo functions as a mobile application featuring an integrated system that connects wakif with the tamanu industry. Through the mechanism of crowdfunding, waqf funds can be allocated to finance the sustainable tamanu industry, which includes the sectors of plantation, pharmaceuticals, and biofuels. The procedural steps for the implementation of Tamanoo encompass the design and evaluation of prototypes, fundraising initiatives, outreach efforts directed at industrial stakeholders and wakif activists, as well as the commercialization and practical application of the project. Through the platform of Tamanoo, it will be facilitated for individuals to engage in endowments and contribute directly to economic revitalization and environmental enhancement.

Rohim et al. (2022). The primary objective of this study is to synthesize a multitude of research findings that have been conducted regarding the digitization of waqf management by various waqf nazhir. A qualitative methodology was employed in this investigation, utilizing a meta-synthetic approach encompassing 20 scholarly journal articles that examined the digitalization of waqf socialization and the collection of waqf. The findings of this research indicate that the Indonesian Waqf Board, serving as the driving force behind national waqf management, endeavors to establish a national digital waqf ecosystem through a series of methodological stages. This process begins with the internal digitization of BWI, subsequent digitization of nazhir waqf, and the integration of waqf data. Furthermore, the acceleration of the digital ecosystem's enhancement is facilitated through innovative strategies in digital waqf management. During the socialization phase, waqf is presented to the public utilizing various digital platforms, including websites and social media. This socialization encompasses the fundamental principles of waqf, extending to an invitation for community engagement in waqf. The methodology for waqf collection has also undergone transformation through the adoption of various digital payment applications (e-payments), which provide convenience and flexibility for individuals to contribute to waqf.

Irfany et al. (2023). Climate change and terrestrial ecosystems represent critical components within the framework of sustainable development goals (SDGs). In Indonesia, approximately 14 million hectares of land are classified as critical (The Ministry of Environment and Forestry, 2018), which has catalyzed the establishment of innovative financing mechanisms aimed at the utilization of these critical lands, including the Green Waqf Movement initiated in August 2021. This study seeks to elucidate, identify essential sub-



elements, and analyze the development strategy of Green Waqf in preserving terrestrial ecosystems in Indonesia through the application of the Interpretive Structural Modeling (ISM) methodology. The results reveal that several pivotal factors within the constraint element include the insufficient professionalism of nazhir, the prevailing low levels of public literacy, and the inadequate education and socialization concerning Green Waqf in the context of its development. The primary objective that necessitates attainment is the establishment of legal support for Green Waqf initiatives. This study advocates for the development strategies of Green Waqf to be coordinated among the Indonesian Waqf Board, WaCIDS, nazhir, The Ministry of Environment and Forestry, local government entities, and other pertinent stakeholders to bolster the Green Waqf program. Additionally, fostering positive relationships among wakif, nazhir, and enterprises (including SMEs), as well as the development of various programs focused on green product innovation, are deemed essential.

Ramdani et al. (2024). The progression of waqf is advancing at an accelerated pace. To ensure the continual advancement of waqf in accordance with Sharia, Islamic scholars endeavor to integrate Islamic values (IVs) within the activities and operations of waqf institutions. In order to ascertain the implementation of IVs within waqf institutions, prior research has been conducted to serve as a reference for subsequent investigations; the present study seeks to systematically review the existing literature. This study focuses on the application of IVs in waqf institutions. Utilizing the Preferred Reporting Items for Systematic Review and Meta-analysis for Protocol methodology, a total of 327 articles were collected, which were subsequently analyzed to extract insights from various case studies pertaining to challenges encountered in waqf institutions. This study elucidates the concepts of tawheed, justice, accountability, trust, mutual consultation, consciousness of Allah, enjoining virtue while eschewing vice, as well as the overarching objectives of Shariah within the governance of waqf. The sources employed in the systematic literature review were obtained from a select number of databases. Expanding the range of academic databases utilized would enhance the breadth and diversity of knowledge pertaining to management and strategies within waqf institutions. The identified values offer a comprehensive framework for practitioners, policymakers, and researchers to inform their initiatives in the development and governance of waqf institutions in alignment with Islamic principles. The findings yield profound insights into the current landscape of IVs in waqf institutions as represented in the literature. This paper underscores numerous deficiencies in the existing literature and recommends avenues for future research to further the understanding of IV implementation. This study will assist researchers in recognizing new dimensions for inquiry and contribute meaningfully to the academic discourse.

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contemporary technologies such as blockchain are imperative to optimize waqf's contribution in addressing global change and achieving sustainability objectives.

Based on the preceding scholarly discourse, the following research deficiencies have been discerned: First, the constraints of integrative analyses concerning digitalization and green waqf are evident. A significant proportion of prior investigations have tended to address digital waqf and green waqf in isolation. For instance, the inquiry conducted by Othman et al. (2023) predominantly emphasizes environmental considerations (green waqf), whereas the study by Maisyarah and Hadi (2024) evaluates the digitization of waqf without a thorough integration of environmental sustainability facets. This phenomenon engenders a lacuna in the existing literature that has not thoroughly scrutinized the confluence of digitization and green waqf practices concurrently.

Second, a systematic and comprehensive methodological framework is conspicuously absent. Although the majority of extant studies remain descriptive and case-oriented, there exists a dearth of research employing the Systematic Literature Review (SLR) methodology to delineate trends, methodologies, and salient findings pertinent to sustainable digital waqf. Consequently, less exhaustive literature mappings are available to assist scholars and practitioners in the formulation of technological and environmentally-driven waqf innovations.

Third, there exists a significant deficiency in the analysis of the dimensions of waqf sustainability within a digital milieu. The current corpus of literature has inadequately investigated how digital technologies can bolster the environmental, economic, and social sustainability dimensions inherent in waqf management. This gap hinders a profound comprehension of the prospective contributions of digital green waqf towards the realization of the Sustainable Development Goals (SDGs).

Fourth, there is a paucity of studies addressing governance and trust within the framework of the Green Waqf Digital Platform. The matters of trust and governance in the realm of digital waqf have not been specifically examined concerning green waqf. In fact, the efficacy of digital green waqf is significantly contingent upon community trust and the governance of digital platforms, encompassing accountability, transparency, and the application of blockchain technology.

Fifth, there is a notable regional and contextual disparity in the literature. A considerable number of studies originate from the contexts of the Middle East and South Asia, while research pertaining to the Digital Green Waqf in Indonesia, which harbors the largest Muslim population globally, remains conspicuously limited. This situation engenders geographical gaps in the comprehension of local practices and their potential implications.

Sixth, there is an absence of integrated theoretical models or frameworks within the existing literature. The development of conceptual frameworks or implementation models that cohesively integrate the principles of waqf, sustainability, and digital technologies has been markedly insufficient. Such frameworks are essential to foster the advancement of more intentional policies and practices in contemporary Islamic philanthropy.

Seventh, there is a deficiency in the evaluation of the efficacy of the Digital Green Waqf initiative. Empirical investigations assessing the societal and environmental impacts of green waqf digital projects remain scant. This highlights the imperative for further research on the effectiveness, efficiency, and sustainability of the models that have been instituted.





Eighth, the literature has yet to thoroughly connect the Digital Green Waqf to the principles of Maqashid al-Shariah. While some studies reference maqashid al-shariah normatively, few have methodologically evaluated whether and how the Digital Green Waqf fulfills all five principal objectives of sharia (hifz al-din, al-nafts, al-'aql, al-mal, al-nasl) within the context of modern philanthropy.

Based on the identified research gap, this scholarly investigation presents the following innovations: First, the integration of the concept of digitalization and green waqf from the perspective of sustainable Islamic philanthropy. This investigation represents the inaugural systematic inquiry that explicitly amalgamates two contemporary paradigms—digital waqf and green waqf—within a structured analytical framework to elucidate the transformation of Islamic philanthropy towards sustainability.

Second, the application of systematic literature review (SLR) methodologies in the domain of digital green waqf studies. While the majority of antecedent research has been predominantly descriptive or case-study oriented, this study employs a structured systematic literature review (SLR) methodology, grounded in the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines, thereby offering a comprehensive, evidence-based mapping of the extant literature.

Third, the formulation of a digital Islamic philanthropy analytical framework predicated on the Sustainable Development Goals (SDGs) and maqashid al-shariah. This research introduces an innovative conceptual framework that synthesizes the tenets of the Sustainable Development Goals (SDGs) with maqashid al-shariah within the context of Islamic digital philanthropy, specifically in the implementation of technology-driven green waqf practices.

Fourth, the accentuation of trust and digital governance aspects (digital trust & governance). This analysis highlights the crucial issue of trust and digital governance in digital green waqf platforms, an area that has been infrequently addressed in prior literature, particularly from the vantage point of sharia management and digital ethics.

Fifth, a contextual emphasis on Indonesia as a pertinent case study. This research addresses a geographical lacuna in the literature by underscoring the potential and obstacles associated with the implementation of digital green waqf in Indonesia, the nation with the largest Muslim population, which presents significant opportunities for technological integration and environmentally sustainable productive waqf.

Sixth, the provision of strategic recommendations for the advancement of green waqf digital ecosystems. The findings of this study yield not only theoretical contributions but also practical and strategic recommendations aimed at fostering a more inclusive, participatory, and sustainable green digital waqf ecosystem, which encompasses: the enhancement of sharia digital literacy, platform design considerations, and maqashid-based regulatory frameworks.

## RESEARCH METHODOLOGY

### Types and Approaches of Research

The present investigation employed a qualitative research design utilizing a Systematic Literature Review (SLR) methodology. The SLR approach was chosen to systematically identify, assess, and integrate pertinent research findings concerning the notions, practices, and ramifications of Digital Green Waqf within the context of sustainable Islamic philanthropy. This methodological framework facilitates the



researchers in delivering a thorough, unbiased, and methodically organized overview of the extant literature.

### **SLR protocol**

The research protocol is meticulously organized in accordance with the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines, which encompass four principal stages: Identification: This phase involves the extraction of articles from recognized indexed databases. Screening: This step entails the evaluation of articles based on their titles and abstracts. Eligibility: In this phase, the alignment of the article's content with the research theme is assessed. Inclusion: Articles deemed eligible will undergo an extensive analytical process.

### **Data Sources and Databases**

The data sources utilized comprise scientific articles sourced from esteemed national and international journals, acquired through the following platforms: Scopus, Web of Science, DOAJ, Google Scholar, Garuda (Digital Referral Archive) Dimensions, Science Direct, SINTA (pertaining to national journals).

### **Inclusion Criteria**

- ✓ Scholarly articles pertinent to the domains of digital waqf, green waqf, and sustainable Islamic philanthropy.
- ✓ Scholarly articles published within the temporal framework of 2010—2024.
- ✓ Scholarly articles authored in either the English or Indonesian languages.
- ✓ Publications originating from indexed scholarly journals such as Scopus, WoS, SINTA, or DOAJ.

### **Exclusion Criteria**

- ✓ Articles that are not accessible in their entirety.
- ✓ Scholarly articles presented in the format of opinion pieces, editorials, or those lacking peer review.
- ✓ Redundant articles that are available across multiple databases.
- ✓ Articles that do not provide a quantifiable scientific contribution.

### **Stages of the Systematic Literature Review Procedure**

#### **Identification of Keywords:**

Keywords employed in the search include:

"Digital Waqf", "Green Waqf", "Islamic Philanthropy", "Sustainable Waqf", "Waqf and Technology", "Blockchain Waqf", "Digital Islamic Philanthropy"

Literature Search:

Utilizing Boolean operators: ("digital waqf" OR "green waqf") AND ("sustainability" OR "Islamic philanthropy") AND ("blockchain" OR "technology" OR "platform")

#### **Literature Selection:**



The selection process is predicated upon a meticulous screening of titles, abstracts, and the relevance of topics to the research inquiry.

#### **Data Extraction:**

The data that has been systematically extracted encompasses the following elements: The name of the author alongside the year of publication The specific objectives delineated in the research study The methodological approaches employed The principal findings derived from the research The contextual framework pertinent to the country of study The contributions made to digital practices or sustainable development

#### **Analysis and Synthesis:**

The analysis will employ narrative synthesis and thematic analysis methodologies to categorize the literature according to the following criteria: Approaches to digitization The various dimensions of sustainability, which include economic, social, and environmental factors Governance and regulatory considerations Contributions to the concept of maqashid al-shariah

#### **Methodological Output**

The outcomes generated through this methodological framework will be illustrated in the format of a PRISMA Flow Diagram.

### **RESEARCH FINDINGS AND DISCUSSION**

#### **Research Findings**

The PRISMA flow diagram delineates the process of filtering and selecting articles:

##### **Identification:**

- Records identified through database searches (Scopus, WoS, SINTA, DOAJ, etc.): 512
- Additional records identified through alternative sources (Google Scholar, manual): 78
- Total records: 590

##### **Screening:**

- Records subsequent to the removal of duplicates: 470
- Records evaluated (based on title and abstract): 470
- Records excluded: 315

##### **Eligibility:**

- Full-text articles evaluated for eligibility: 155
- Full-text articles excluded (irrelevant context, non-peer-reviewed, opinion): 75

##### **Included:**

- Studies incorporated into qualitative synthesis (SLR): 80

#### **Distribution of Literature by Year and Source**

Among the 80 articles selected for analysis, a notable escalation in publication frequency was observed during the preceding five-year interval (2020—2024). A substantial proportion of these articles have been disseminated in esteemed academic journals, including the Journal of Islamic Marketing,



Emerald Insight, and SINTA 2. Approximately 60% of the articles originate from internationally recognized journals, while the remainder is sourced from accredited national publications.

### **Main Thematic Classification**

The findings of the review identified four preeminent themes:

1. **Digitalization of the Waqf**  
This theme encompasses the application of advanced technologies such as blockchain, smart contracts, and digital applications to facilitate the efficient, accountable, and transparent management of waqf.
2. **Green Waqf & Sustainability**  
The concept of green waqf is oriented towards achieving sustainability objectives, which include environmental conservation, reforestation, the promotion of renewable energy, and the management of ecosystems.
3. **Integration of Islamic Philanthropy & Digital Economy**  
The literature pertaining to this theme addresses the convergence of maqashid sharia, equitable economic principles, and digitalization, positing these elements as foundational for the economic empowerment of the Ummah.
4. **Financial Governance & Innovation Waqf**  
This theme emphasizes governance based on Islamic values, accountability, and collaboration with digital platforms, all aimed at promoting sustainable practices within the waqf sector.

### **Discussion**

#### ***The Advancement of Digitalization in Waqf Practices***

Extant literature indicates that digitization significantly enhances community engagement in waqf initiatives. The digital platform facilitates the execution of monetary waqf in micro, real-time, and transnational contexts. This innovation possesses the capacity to foster the global inclusion of Islamic philanthropy. Nonetheless, considerable obstacles persist regarding system security, the digital literacy of wakifs, and the regulatory framework governing digital waqf.

#### ***Green Waqf Concept as an Instrument for Environmental Philanthropy***

The green waqf paradigm is transitioning from merely constructing mosques or educational institutions to encompassing initiatives related to environmental conservation, financing for renewable energy, and the preservation of ecosystems. However, there remains a paucity of literature that effectively synthesizes the green waqf concept with digital mechanisms and contemporary sharia finance in a holistic manner.

#### ***Insufficiency of Literacy and Regulatory Framework Pertaining to Green Project-Based Digital Waqf***

A limited number of scholarly articles address the regulatory, governance, and public policy dimensions of digitally-oriented green waqf. This deficiency underscores the inadequacy of past research in developing a comprehensive and implementable framework within the policy, legal, and institutional domains.



### ***Prospects for the Integration of Triple Bottom Line in Digital Waqf***

Empirical evidence suggests that the amalgamation of profit, people, and the planet (triple bottom line) remains predominantly in the conceptual phase. A mere fraction of research endeavors has succeeded in crafting a roadmap or model to assess the impact of digitally-driven green waqf on the Sustainable Development Goals (SDGs) or sharia maqashid.

### ***The Disparity Between Theory and Practice***

The majority of existing studies are predominantly conceptual or narrative in nature, with a notable scarcity of rigorous quantitative or qualitative empirical research. Consequently, there remains an imperative for the development of case study-based research, the design of business models, and the creation of practical application prototypes in the digital realization of green waqf.

## **CONCLUSION**

The research delineates that the Digital Green Waqf epitomizes a progressive Islamic philanthropic paradigm that is adapting to the exigencies of the digital epoch while simultaneously addressing the imperative of environmental sustainability. Drawing on the findings from a Systematic Literature Review encompassing 80 meticulously selected articles, it was ascertained that this conceptualization has not been rigorously examined and remains predominantly confined to normative and exploratory domains. A substantial portion of the literature engages with the prospective application of digital technologies (including blockchain, crowdfunding, and smart contracts) in the administration of waqf; however, a holistic integration of the facets of digitalization, environmental sustainability, and the principles of sharia maqashid is conspicuously sparse. The investigation further identified a disjunction between theoretical frameworks and practical implementations, an absence of regulatory frameworks governing digital waqf, a deficiency in standardized governance models, and constraints in the formulation of sustainability indicators pertinent to environmentally-focused digital waqf initiatives. Conversely, the prospects for augmenting the role of green waqf in advancing the Sustainable Development Goals (SDGs), especially within the domains of green energy, ecosystem preservation, and economic empowerment for communities, are prodigious, provided that they are effectively facilitated through public policy and intersectoral collaboration.

Future inquiries must endeavor to formulate conceptual models and empirically validate them utilizing quantitative methodologies or primary data-driven case studies (for instance, through surveys or comprehensive interviews with nazhirs, regulators, and wakifs). Additional research is imperative, concentrating on the architecture of digital waqf governance systems grounded in the principles of good governance, which encompass accountability, transparency, and community engagement. Moreover, it remains essential to devise a framework of indicators capable of assessing the impact of digital waqf on social, environmental, and economic dimensions in alignment with the triple bottom line principle or maqashid sharia. Subsequent investigations may delve into the synergies between green waqf, Islamic decentralized finance (DeFi), and waqf asset tokenization systems to enhance management efficiency and transparency.





This study proffers several policy recommendations: firstly, the Government and the Indonesian Waqaf Agency (BWI) should undertake the formulation of regulations or technical guidelines governing the management of environmentally-oriented digital waqf to ensure legal clarity, safeguard wakif interests, and establish institutions that are responsive to digital transformations. Secondly, collaborative efforts are requisite among regulators, sharia financial authorities, and technological institutions to construct digital infrastructure, establish reliable platforms, and foster digital literacy and awareness of waqf within the populace, particularly among the younger Muslim demographic. Thirdly, the Government could extend fiscal incentives, research collaborations, or matching fund schemes to national entities engaged in the development of green waqf digital initiatives. Multilateral cooperation (involving government, private sector, Islamic philanthropy, and academia) is also crucial to ensure the sustainability and inclusivity of this model. Lastly, the Digital Green Waqf ought to be integrated into the national strategy aimed at achieving the SDG targets, particularly in the realms of clean energy, sustainable urban development, climate action, and poverty alleviation through Islamic social funds.

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