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The Role of Islamic Finance in Addressing Climate Change: A Systematic Literature Review

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Abstract: This study aims to examine the role of Islamic finance in supporting the sustainable climate financing agenda through a library research approach with an integrative literature review method. This study identifies and analyzes relevant literature to gain a comprehensive understanding of the contributions, challenges, and opportunities of Islamic finance in the context of climate change mitigation and adaptation, especially in Indonesia. Data were obtained from various credible academic sources such as Google Scholar, Scopus, DOAJ, and Scispace, with a publication year range of 2015-2024. Inclusion criteria included literature discussing Islamic finance and climate change, including instruments such as green sukuk, zakat and waqf. The results show that Islamic finance has strategic potential in creating an ethical, inclusive and sustainable financing system. The integration of sharia principles with ESG principles and the development of green instruments can strengthen economic and social resilience in the face of climate crisis. This study recommends synergy among stakeholders to accelerate literacy, innovation, and policy collaboration to optimize the role of Islamic finance in climate financing.

Keywords: Islamic Finance, Climate Change, Sustainable Financing, Green Sukuk, ESG, Integrative Literature.

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A. INTRODUCTION

Islamic finance is a financial system that operates in accordance with the principles of Islamic law, which emphasize fairness, transparency, and social responsibility. Key principles in Islamic finance include the prohibition of riba (interest), gharar (uncertainty), and maysir (gambling), and encouraging investment in activities that are halal and beneficial to society. In the context of climate change, Islamic finance can play a role through instruments such as green sukuk, zakat, waqf, and takaful, which support environmentally friendly and sustainable projects. According to Hosen (2023), Islamic finance can contribute to climate change mitigation and adaptation through financing green projects that comply with sharia principles. In addition, Greenpeace (2023) highlights the potential of Islamic finance in supporting the renewable energy transition and climate-resilient infrastructure development.

One of the main instruments in Islamic finance to support green projects is green sukuk. Green sukuk are Islamic securities whose proceeds are used to finance projects that have environmental benefits. In Indonesia, green sukuk have been used to finance renewable energy and green infrastructure projects. According to Hermala et al. (2024), green sukuk in Indonesia have shown great potential in supporting the energy transition and achieving greenhouse gas emission reduction targets. In addition, Hosen (2023) noted that green sukuk can attract investors who are concerned about sustainability and provide a financing alternative that complies with sharia principles.

Islamic social finance, which includes zakat, infaq, sadaqah and waqf, also has an important role to play in climate finance. These instruments can be used to support communities vulnerable to the impacts of climate change, such as through microfinance for climate adaptation projects. According to Greenpeace (2023), Islamic social finance can help increase community resilience to climate disasters and support sustainable development. In addition, Hosen (2023) emphasized the importance of integrating Islamic social finance in climate finance strategies to ensure inclusiveness and social justice.

Despite its great potential, Islamic climate finance faces various challenges, including the lack of clear standards, limited capacity of financial institutions, and lack of awareness among stakeholders. However, these challenges also open up opportunities for innovation and collaboration. According to Utomo et al. (2024), the development of green sukuk and the integration of ESG (Environmental, Social, and Governance) principles in Islamic finance can increase the effectiveness of climate finance. In addition, Hosen (2023) suggested the need for a clear regulatory framework and collaboration between the public and private sectors to maximize the potential of Islamic finance in climate finance.

Islamic finance can contribute to the achievement of the Sustainable Development Goals (SDGs), particularly those related to climate change. Instruments such as green sukuk and Islamic social finance can support projects focused on clean energy, emissions reduction, and climate-resilient infrastructure development. According to Greenpeace (2023), the allocation of just 5% of global Islamic finance assets to renewable energy projects could generate around USD 400 billion for climate action by 2030. In addition, Hosen (2023) emphasized that Islamic finance can strengthen societal resilience to the impacts of climate change and support inclusive sustainable development.

While various studies have addressed the role of Islamic finance in climate finance, there is still a lack of understanding of the integration between Islamic financial instruments and climate change mitigation and adaptation strategies. In addition, there is a need to explore the potential of Islamic finance in local contexts, such as Indonesia, which has unique challenges and opportunities related to climate change. The novelty of this research lies in the systematic literature review approach that integrates global and local perspectives to understand the contribution of Islamic finance in addressing climate change. The objective of this study is to analyze the role of Islamic finance in climate change mitigation and adaptation, as well as identify existing challenges and opportunities, with a focus on the Indonesian context.

B. METHOD

This research uses a Library Research approach with the Integrative Literature Review method, which is an approach that allows researchers to identify, analyze, and synthesize various previous research results to obtain a comprehensive understanding of the role of Islamic finance in climate change mitigation and adaptation. This approach was chosen because it is suitable for exploring topics that are multidisciplinary and still in the conceptual development stage (Snyder, 2019). The aim of this method is to integrate relevant findings from global and local literature in the context of Islamic finance and climate finance strategies, particularly in Indonesia.

Data sources in this study were obtained from various credible academic platforms, such as Google Scholar, Scispace, Directory of Open Access Journals (DOAJ), and Scopus. The inclusion criteria in the literature selection were: (1) articles published between 2015 and 2024; (2) written in Indonesian or English; (3) directly addressing the topic of Islamic finance and climate change, including instruments such as green sukuk, zakat, waqf, and others; and (4) coming from accredited journals or peer-reviewed sources. Meanwhile, the exclusion criteria include: (1) opinion articles without methodological basis; (2) not relevant to the topic focus; and (3) not available in full-text.

The literature search process was conducted systematically using a combination of keywords such as: Islamic finance, green sukuk, climate change adaptation, sharia finance for sustainability, zakat and climate, and Indonesia. The selection procedure began with screening based on title and abstract, followed by a full content assessment to assess suitability to the study objectives. Articles that met the inclusion criteria were then coded and classified based on theme, area of study (global/local), as well as the Islamic finance instruments discussed. The results of this selection were used for thematic analysis to identify the contributions, challenges and opportunities of Islamic finance in climate finance.

The data analysis method in this study used thematic analysis to organize information based on the main themes that emerged from the literature. Validity and reliability were maintained through a process of source triangulation, comparing results from different types of literature and databases to minimize bias. In addition, a critical evaluation of the methodological quality of each article was conducted as a form of internal validation. This approach ensures that the findings presented in this study are systematic, accurate and relevant in addressing the research objectives (Whittemore & Knafl, 2005).

C. RESULTS AND DISCUSSION

1. Contribution of Islamic Financial Instruments to Climate Change Mitigation and Adaptation

Investment in environmentally friendly agricultural practices, such as the use of efficient irrigation systems and organic farming techniques (Syahruni, 2023; Harini et al., 2022). This is important, given that the agriculture sector is one of the most vulnerable to the impacts of climate change, including changes in rainfall patterns and temperature (Perdinan et al., 2019; Aisya, 2019). The Climate Village Program implemented in various regions in Indonesia also demonstrates how Islamic finance approaches can be combined with community participation to support adaptation and mitigation actions. The program integrates local mitigation activities with sharia-based financial support, providing incentives to communities to participate in projects aimed at reducing climate change impacts, such as waste management and environmental conservation (Fekri, 2018; Z.O et al., 2022).

From a legal perspective, there are various regulations that encourage collaboration between the government and the private sector in the development of Islamic finance projects for climate. A clear example is the establishment of regulations that support the implementation of Nationally Determined Contributions (NDC) that focus on achieving sustainable development goals (SDGs) (Wahyudin et al., 2020; (Perdinan, 2020). With strong policy support, Islamic financial instruments can strengthen community resilience by targeting projects that directly impact climate change mitigation and adaptation, building community capacity to cope with the increasingly complex impacts of climate change (Perdinan, 2020; Triastuti, 2022).

Overall, Islamic financial instruments not only provide funds but also create a framework for collaboration between stakeholders, encouraging innovative ways of mitigating and adapting to climate change, while adhering to the principles of ethics and sustainability in investment (Isdianto & Luthfi, 2020; Legionosuko et al., 2019). Thus, this contribution is important for the sustainability of social and environmental ecosystems in the framework towards better climate resilience in Indonesia.

2. Challenges of Islamic Finance Implementation in Climate Finance

The implementation of Islamic finance in financing to address the challenges of climate change has become an important focus of economic policy development in Indonesia. The Islamic financial system, rooted in the principles of justice and social responsibility, is considered as an alternative in promoting green and inclusive financing. Despite the huge potential, serious challenges remain, both in terms of regulation, financial literacy, and practice on the ground. First, to support the development of small and medium enterprises (SMEs), Islamic financial institutions have a significant role to play in providing sharia-compliant financing. With an education and socialization approach, as conducted by Rahmawati et al., education about sharia contracts for SMEs is crucial in building an understanding of the access and benefits of Islamic financing in overcoming capital problems Rahmawati et al. (2024). This success can be seen in the initiative in Pekalongan Regency, which supports green financing policies through Islamic microfinance institutions, demonstrating the relevance of Islamic finance in more sustainable financing (Purwanti & Inayati, 2024).

In addition, operational challenges in the implementation of Islamic finance, as revealed by Ismail and Kadir, highlight the influence of external factors such as Non Performing Financing (NPF) and profit margins on the performance of Islamic financial institutions. This research shows the importance of risk management to ensure that Islamic financing can actively contribute to economic growth without causing non-performing financing (Ismail & Kadir, 2020). In this context, Rifa'i points out that redistributive Islamic instruments can be a solution to increase financial inclusion (Rifa'i, 2017). However, a key challenge for Islamic financial institutions is financial literacy among businesses. Low literacy levels can hinder their access to financing, as shown by Nuraeni and Widyasari who found that Islamic financial literacy affects the accessibility of Islamic bank financing for SMEs (Nuraeni & Widyasari, 2022). Therefore, strategies to improve literacy and understanding of Islamic financial products need to be implemented more widely.

Furthermore, the role of Islamic financial institutions in supporting the halal industry is also relevant. As stated by Mariyam, Islamic banking contributes to overcoming capital constraints and promoting innovation in the halal industry, thus helping business actors overcome capital constraints (Mariyam, 2024). This shows that Islamic financing focuses not only on financial aspects but also on sustainable social and environmental development. Finally, in dealing with the problem of bad debts, community-based approaches and adaptive practices in the field, such as the joint responsibility system, can be applied to prevent bad debts in Islamic cooperatives (gunawan et al., 2023). This approach not only promotes social responsibility among borrowers, but also encourages transparency and trust in the Islamic financial system. Overall, the challenges in the implementation of Islamic finance in climate finance require collaboration between the government, financial institutions and communities to encourage literacy, accessibility and awareness of the importance of sharia principles in supporting economic sustainability.

3. Strategic Opportunities for the Integration of Islamic Finance and the Sustainable Climate Agenda

The integration of Islamic finance with the sustainable climate agenda offers significant strategic opportunities to promote equitable, inclusive and environmentally sustainable economic growth. Contextually, this integration can utilize ESG (Environment, Social, and Governance) principles that inherently exist in the Islamic financial system to support sustainable development. The application of ESG in Islamic finance not only enhances transparency and accountability but also encourages responsible and environmentally sound investments, as described in studies examining the potential of ESG integration of Islamic finance (Muarif, 2025; Haerunnisa et al., 2023). Another strategic opportunity is the use of innovative financial instruments such as green sukuk and green bonds that can facilitate the financing of environmentally friendly projects. The implementation of the green Islamic banking concept, which aligns the principles of Islamic finance with the net zero emission target, is a strategic step to reduce carbon emissions and support the national climate agenda (Hanum & Anggraeni, 2023). This approach not only provides wider access to capital for green infrastructure development but also supports sustainable economic value creation. Such integration is further supported by the global development of Islamic finance which demonstrates Indonesia's diversified investment portfolio and strategic position in the international market (Muharam, 2023).

In addition, the regulatory framework that supports the application of Islamic economic law also plays an important role in ensuring the consistency and integrity of the integration of Islamic finance with the sustainable climate agenda. In-depth discussion on the role of Islamic economic law in supporting sustainable development emphasizes the need for synergy between national regulations and international commitments related to reducing the impacts of climate change (Fasya, 2021). Regulations that support Islamic financial innovation, especially in the preparation of environmentally friendly financial products, will strengthen the competitiveness of the Islamic financial sector in the era of global transformation towards responsible and sustainable development (Hayati et al., 2020).

Holistically, the integration of Islamic finance and the sustainable climate agenda requires a multidimensional approach that includes the application of ESG principles, the development of green financial instruments, and regulatory and governance adjustments that support Islamic economic growth while maintaining social and environmental balance. The combination of these factors will not only optimize the efficient and responsible use of natural resources but also encourage innovation and financial inclusion that ultimately strengthen national economic resilience in the face of climate change challenges (Muarif, 2025; Haerunnisa et al., 2023; Hanum & Anggraeni, 2023). Therefore, the synergy between Islamic finance and climate agenda is a strategic key in achieving overall sustainable development goals.

D. CONCLUSIONS AND SUGGESTIONS

Islamic finance has strategic potential in supporting Indonesia's sustainable climate finance agenda through financing mechanisms that are not only ethical and fair, but also inclusive and collaborative. With the application of sharia principles, this finance is able to strengthen the integration of social, environmental and economic aspects in the framework of climate change mitigation and adaptation. In addition to contributing to the halal industry sector, Islamic financial instruments can also encourage green financing innovation, overcome business financing constraints, and build a resilient economic ecosystem through community approaches such as the joint responsibility system. Therefore, the synergy between sharia principles and the climate agenda is an important foundation in realizing sustainable development in Indonesia.

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