

SHARIA COMPLIANCE IN ACHIEVING GREEN BANKING: THE ROLE OF *HIFZ AL-DIN* AND *HIFZ AL-BI'AH*

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ABSTRACT - This study explores the integration of Islamic principles with environmentally sustainable practices in Islamic banking institutions, focusing specifically on two core elements of *maqasid al-shariah*: preserving faith (*hifz al-din*) and preserving the environment (*hifz al-bi'ah*). The central challenge addressed is the implementation of *hifz al-bi'ah* within Sharia-compliant financial systems. Employing a non-parametric qualitative approach through the Analytic Network Process (ANP), the study analyzes insights from nine informants representing Islamic banking practitioners, academics, and regulators. The findings reveal three key strategic pathways to strengthen Sharia Compliance in green banking: (1) enhancing human resource capacity, (2) optimizing the role of the Sharia Supervisory Board, and (3) fostering environmental awareness through certification mechanisms. The study underscores that Islamic banks implementing environmentally conscious HR practices benefit from reduced carbon footprints, improved financial performance, and higher employee retention, thereby contributing to both spiritual and ecological sustainability.

Keywords: *Hifz al-Bi'ah*, *Hifz al-Din*, Islamic Banking, Sharia Compliance

ABSTRAK - Kepatuhan Syariah dalam Mencapai Green Banking: Peran Hifz Al-Din Dan Hifz Al-Bi'ah. Penelitian ini mengeksplorasi integrasi prinsip-prinsip Islam dengan praktik berkelanjutan pada institusi perbankan syariah, dengan fokus pada dua elemen inti *maqasid al-shariah*, yaitu: memelihara agama (*hifz al-din*) dan memelihara lingkungan (*hifz al-bi'ah*). Tantangan utama terletak pada implementasi *hifz al-bi'ah* dalam sistem keuangan yang sesuai dengan syariah. Dengan pendekatan kualitatif non-parametrik melalui Analytic Network Process (ANP), penelitian ini menganalisis perspektif dari sembilan informan yang mewakili praktisi perbankan Syariah, akademisi, dan regulator. Temuan penelitian menunjukkan ada tiga strategi utama untuk memperkuat kepatuhan syariah dalam pencapaian green banking, yaitu: (1) peningkatan kapasitas sumber daya manusia, (2) optimalisasi peran Dewan Pengawas Syariah, dan (3) peningkatan kesadaran lingkungan melalui mekanisme sertifikasi. Studi ini menegaskan bahwa bank syariah yang menerapkan praktik manajemen SDM yang ramah lingkungan memperoleh manfaat lebih besar, termasuk pengurangan jejak karbon, peningkatan kinerja keuangan, dan retensi karyawan yang lebih tinggi, sehingga berkontribusi pada keberlanjutan spiritual dan ekologis.

Kata Kunci: *Hifz al-Bi'ah*, *Hifz al-Din*, Bank Syariah, Kepatuhan Syariah

INTRODUCTION

In recent years, the intersection of Shariah compliance and environmental sustainability has become a growing area of concern in Islamic banking discourse. Traditionally, the two core pillars of Shariah compliance—*hifẓ al-dīn* (preservation of faith) and *hifẓ al-bi'ah* (preservation of the environment)—have been predominantly interpreted within the confines of spiritual and moral conduct. However, an emerging body of scholarship now underscores the broader implications of these principles, particularly in the realm of environmental stewardship. For instance, *hifẓ al-dīn*, with its prohibition of *gharar* (excessive uncertainty) and *maysir* (gambling), can be extended to encompass the ethical evaluation of environmental risks in financial products. Similarly, *hifẓ al-bi'ah*, traditionally associated with societal welfare, can be interpreted to include environmental sustainability as an ethical imperative (Alatas Alwi, 2023).

The urgency of *hifẓ al-bi'ah* has intensified due to the global climate crisis, which threatens lives, businesses, and economic systems. In response, the international community has embraced “green growth,” an economic development model that aligns environmental preservation with social equity and economic viability (HM Treasury, 2021). Central to this model are investments in green energy and low-carbon technologies, which are essential for mitigating climate change and ensuring a sustainable future (Elahi et al., 2021, 2022; Nawaz et al., 2021). Indeed, analysts estimate that achieving global carbon neutrality by 2050 will require investments of approximately \$125 trillion (Climate Champions, 2021).

Countries across the globe have adopted various strategies to address these challenges. Brazil has promoted industrial biofuels; China has invested in photovoltaic technology; and Morocco is advancing concentrated solar power for export (Desalegn & Tangl, 2022). Effective climate mitigation now demands aggressive decarbonization and innovative financial instruments, including green bonds, green credits, carbon finance, and sustainable finance models (Campiglio, 2016; Fang et al., 2021; Failler et al., 2019; Frydrych, 2021; Giramkar, 2018; Hu et al., 2021; Hyun et al., 2021a, 2021b; Reboredo & Ugolini, 2019a, 2019b). These instruments help spread the costs of environmental adaptation across generations (Monasterolo & Raberto, 2019). The Climate Bonds Initiative (2023) reports that green bond issuance has surpassed \$2 trillion globally, with the United States, China, and France



accounting for nearly 43% of the total. This figure is projected to reach \$5 trillion annually by 2025.

Indonesia, as a developing nation, has committed to the Paris Agreement through its Nationally Determined Contribution (NDC), pledging to reduce greenhouse gas emissions by 29% unconditionally and up to 41% with international support by 2030—an effort requiring an estimated \$322.86 billion (Suroso et al., 2022). Despite innovative financing mechanisms such as green bonds and green sukuk, the country faces a significant funding gap and has struggled to access international climate funds like the Green Climate Fund (GCF), largely due to insufficient technical capacity in proposal development and project execution (Suroso et al., 2022).

Investor hesitancy in green finance is also shaped by risk-return concerns, especially in emerging markets. Perceived technological and market uncertainties deter private investors, leading to underfunded green projects (Sutherland, 2020). Islamic banks, as key economic players in Indonesia, have shown reluctance in financing environmentally sustainable ventures, citing high-risk profiles and unclear returns. This hesitancy has widened the green finance gap and raised concerns about the role of Islamic financial institutions in supporting environmentally responsible economic transformation.

As part of *maqāsid al-sharī'ah*, *ḥifẓ al-bi'ah* obliges Muslims to protect the natural environment, a responsibility rooted in the Qur'an and Hadith (Acim & Suharti, 2023; Mufid, 2019). In light of the ongoing environmental crisis, this principle is increasingly relevant and demands institutional reflection and action—particularly from Islamic banks. While international agreements like the Paris Accord aim to limit global warming to below 2°C above pre-industrial levels (Chopra & Kakrecha, 2015). Islamic financial institutions have an opportunity to lead through innovative green finance solutions. Yet, empirical research on how Islamic banks operationalize these principles remains sparse.

Scholarly literature has explored themes such as green banking (Desalegn & Tangl, 2022; Ghaemi Asl et al., 2023; Rehman et al., 2021; Yu et al., 2020), Islamic perspectives on climate change (Billah et al., 2024; Julia & Kassim, 2020; Sharmeen et al., 2019), and green financial management (Acquah et al., 2021; Azim et al., 2019; Noor et al., 2023; Syarvina et al., 2023). Syarifuddin (2022) highlights Islamic green finance's potential in managing risks and promoting long-term growth. Moreover, Goswami (2024) notes that the prominence of green banking surged post-COVID-19, accounting for roughly



12.5% of related literature. However, practical insights into the institutionalization of these concepts within Islamic finance remain limited.

Solarin (2019), using the STIRPAT framework, found that Islamic bank financing may reduce emissions, while increases in labor force size could contribute to emission growth. Interestingly, the industrial production index had no significant effect on emissions. Rahman et al. (2024) emphasized that green investment is the most influential driver of green banking operations, alongside policy support and sustainable innovation.

Given this context, the present study aims to examine the challenges, solutions, and strategic approaches adopted by Islamic financial institutions in aligning Shariah compliance with environmental sustainability. It particularly investigates how *ḥifẓ al-dīn* and *ḥifẓ al-bi'ah* are understood and implemented by Islamic banking actors. Ultimately, the research seeks to contribute to the development of a practical framework for Shariah-compliant green banking in Indonesia, rooted in Islamic ethical principles and aligned with contemporary sustainability goals.

LITERATURE REVIEW

Maqāṣid al-sharī'ah: Hifẓ al-Dīn and Hifẓ al-Bi'ah

Within Islamic jurisprudence, *maqāṣid al-sharī'ah*—the higher objectives of Islamic law—serve as a foundational framework guiding ethical and legal judgments. Among these, *ḥifẓ al-dīn* (protection of faith) is considered a primary objective, while *ḥifẓ al-bi'ah* (preservation of the environment) has emerged as an extension of *ḥifẓ al-naḥs* (protection of life), reflecting the growing relevance of environmental ethics in Islamic legal discourse (Masud, 1995). This concept dates back to the seminal work of Abu Hamid al-Ghazali, who articulated five essential safeguards: religion, life, intellect, lineage, and property. Later scholars such as Ibn Taymiyyah and al-Shatibi refined these objectives, incorporating moral and social dimensions (Rane, 2023; Ibrahim, 2022).

Contemporary Islamic legal scholarship has expanded the *maqāṣid* framework to address societal challenges, including environmental degradation. Nasution et al. (2022) explored *ḥifẓ al-dīn* in the context of political behavior, while recent interpretations emphasize the necessity of integrating *ḥifẓ al-bi'ah* as a sixth objective to address modern ecological crises (Zuhdi, 2015). The



Indonesian scholar KH Muhammad Ali Yafi' notably advocated the formal inclusion of environmental preservation as a legal objective, enabling Islamic law to respond more effectively to environmental concerns through structured regulations and legal mechanisms.

From a theological perspective, the Qur'an provides extensive guidance on environmental stewardship. It promotes moderation and prohibits excess, as illustrated in verses such as Surah al-A'rāf (7:31), Surah al-An'ām (6:141), and Surah al-Isrā' (17:27–29), which denounce extravagance and equate wastefulness with the behavior of Satan's followers. This ethical stance affirms the importance of aligning human needs with the sustainability of natural systems. The Qur'an also frequently uses parables involving rain, land fertility, and resurrection (e.g., Surah al-A'rāf 57) to illustrate divine power and to invite reflection on ecological balance as a manifestation of God's mercy and order (Acim & Suharti, 2023).

Islamic metaphysics further reinforces this view. Seyyed Hossein Nasr famously argued that the environmental crisis is a symptom of a broader spiritual crisis: modern humanity's alienation from metaphysical truths and reduction of nature to mere material resource (Nasr, 1997). Nasr's critique positions environmental ethics as central to the Islamic worldview, with the macrocosm (the universe) and microcosm (the self) being deeply interconnected—a concept also echoed in the works of Umar (2014), who highlighted how Qur'anic narratives link natural disasters with collective moral failure.

The stories of past civilizations destroyed by divine punishment—for example, the communities of Prophets Nuh, Shu'aib, Saleh, and Lut—serve as moral and ecological warnings (Qur'an 11:40, 11:94, 26:146–149). These narratives emphasize that ecological destruction can be a consequence of societal corruption and disobedience, further strengthening the theological imperative to maintain environmental integrity (Umar, 2014).

Sharia Compliance and Environmental Ethics

The Qur'an frames environmental responsibility as a divine trust (*amānah*) entrusted to humankind in its role as *khalīfah* (vicegerent) on earth. This is explicitly mentioned in Surah al-Aḥzāb (33:72) and Surah al-An'ām (6:165), which underscore the magnitude of this responsibility and caution against its neglect. The Qur'anic concept of *al-Iḥsān* (excellence or doing good) further



obligates Muslims to act with kindness and integrity toward all creation, as part of worship and moral conduct. Surah al-Qaṣaṣ (28:77) advises believers to “do good as Allah has done good to you” and to avoid corruption, encapsulating the Islamic ethic of balance between worldly responsibility and spiritual pursuit (Nursabna et al., 2023).

Empirical research supports these theological imperatives. Studies have shown that human actions—such as pollution, deforestation, and overconsumption—directly contribute to biodiversity loss and climate change (Acim & Suharti, 2023; Muniri, 2017). Conversely, the adoption of sustainable practices has been linked to improved public health, food security, and environmental resilience. These findings align with Qur’anic teachings that emphasize the interconnectedness of all life and the necessity of responsible resource use (Qur’an 30:41, 2:205, 7:56).

Islamic environmental ethics, encapsulated in *ḥifẓ al-bi’ah*, offer a comprehensive framework for environmental protection, combining spiritual, moral, and legal dimensions. This principle calls for the integration of Islamic values into practical sustainability efforts, particularly in institutional contexts such as Islamic banking (Kamri et al., 2014).

The Indonesian Context of Legal and Religious Convergence

In Indonesia, environmental preservation is both a legal and religious mandate. Law No. 32 of 2009 concerning Environmental Protection and Management asserts that a clean and healthy environment is a fundamental human right. It acknowledges that environmental degradation results from both natural phenomena and human actions, the latter of which are frequently addressed through Islamic ethical teachings.

Islamic teachings in Indonesia have emphasized *fiqh al-bi’ah* (Islamic environmental jurisprudence) to foster greater ecological awareness. This approach recognizes the interdependence of humans and nature and encourages the adoption of sustainable behaviors rooted in both faith and scientific understanding (Santos, 2023). By incorporating Islamic principles into environmental governance, communities can enhance collective efforts to address climate change and ecological degradation.



Qur'anic Foundations for Environmental Stewardship

The Qur'anic verses relevant to environmental stewardship cover themes such as divine mercy, ecological balance, and moral responsibility. Table 1 below summarizes the themes drawn from specific verses, highlighting the interconnected roles of religious consciousness and ecological responsibility.

Table 1. Themes of *Hifẓ al-Dīn* and *Hifẓ al-Bi'ah* in the Qur'an

Qur'anic Verse	Religious Themes (<i>Hifẓ al-Dīn</i>)	Environmental Themes (<i>Hifẓ al-Bi'ah</i>)
Al-A'rāf 57	Divine order and resurrection metaphor	Rain as mercy, revival of barren land, ecological renewal
Al-Qaṣaṣ 77	Balance between spiritual and worldly life	Prohibition of corruption; call for environmental responsibility
Al-Anbiyā' 107	Prophet Muhammad as mercy to all creation	Ethical treatment of all beings; universal preservation message
Al-Baqarah 205	Denouncement of those who spread mischief	Condemnation of ecological harm and imbalance
Ar-Rūm 41	Moral consequences of human actions	Human-caused degradation; divine warnings and repentance
Al-Baqarah 164	Reflection on signs of God's greatness	Natural phenomena as signs of divine power and wisdom
Al-Aḥzāb 72	Human acceptance of divine trust (<i>amānah</i>)	Ecological responsibility as part of the sacred trust
Al-An'ām 165	Divine tests through status and power	Stewardship, resource management, divine justice

(Source: Adapted from Acim & Suharti, processed, 2023)

This corpus of scriptural evidence supports the theological and ethical basis for environmental responsibility in Islam. It also affirms the importance of aligning financial practices—particularly within Islamic banking—with these values, thereby embedding sustainability within a framework of Sharia compliance.

Theoretical Framework

This study is grounded in the theory of *maqāṣid al-sharī'ah* (the higher objectives of Islamic law), which serves as a holistic framework to assess the ethical, legal, and societal dimensions of Islamic financial practices. The *maqāṣid* framework has historically guided the formulation of Islamic rulings by identifying the overarching goals of Sharī'ah: the protection of religion (*hifẓ al-dīn*), life (*hifẓ al-naḥs*), intellect (*hifẓ al-'aql*), lineage (*hifẓ al-nasl*), and property (*hifẓ al-māl*) (al-Ghazālī, as cited in Masud, 1995). Contemporary scholars have extended this framework to include *hifẓ al-bi'ah* (protection of



the environment) as a necessary objective in response to the global environmental crisis (Zuhdi, 2015; Ali Yafi', as cited in Acim & Suharti, 2023).

The incorporation of *ḥifẓ al-bi'ah* into the *maqāṣid* framework provides a normative basis for Islamic environmental ethics. It emphasizes that preserving the natural world is not only a moral obligation but also a legal and spiritual duty. This understanding aligns with the Qur'anic worldview, in which humans are appointed as *khalīfah* (vicegerents) on earth (Qur'an 6:165) and are entrusted with the *amānah* (trust) to care for creation (Qur'an 33:72). Hence, the misuse of environmental resources constitutes a breach of divine trust and undermines both religious and ecological integrity (Nasr, 1997).

In the context of Islamic banking, this study adopts a dual-objective theoretical model combining *ḥifẓ al-dīn* and *ḥifẓ al-bi'ah* to assess Sharia compliance not only from a spiritual and financial standpoint but also from an environmental perspective. The inclusion of these two *maqāṣid* dimensions provides a multi-layered ethical evaluation framework that goes beyond legal compliance to include sustainability and ecological justice.

This study also draws from institutional theory, which examines how organizational behavior is shaped by cultural, legal, and normative pressures. Islamic banks operate within a dual framework of religious norms and regulatory expectations, and the pursuit of green banking requires alignment with both. Institutional theory is particularly relevant in explaining how Islamic financial institutions respond to global environmental challenges and local Sharia-based mandates by modifying internal policies, enhancing governance structures (e.g., Sharia Supervisory Boards), and investing in environmentally responsible human resource practices (Rahman et al., 2024; Hyun et al., 2021a).

In operationalizing this framework, the study adopts a non-parametric qualitative methodology using the Analytic Network Process (ANP). This decision-support tool allows for a nuanced analysis of interrelated variables—such as ethics, regulation, institutional readiness, and stakeholder perspectives—within a complex system. The ANP method is suitable for capturing the interdependencies among *maqāṣid* objectives and identifying strategic priorities for integrating Sharia compliance with sustainable banking practices. Taken together, the theoretical framework of this study integrates: *maqāṣid al-sharī'ah* theory, focusing on *ḥifẓ al-dīn* and *ḥifẓ al-bi'ah*; Qur'anic environmental ethics as the theological foundation; institutional theory to



contextualize organizational behavior, and decision theory via ANP to identify practical strategic priorities.

METHODOLOGY

Research Design

This study adopts a qualitative research design using a non-parametric and non-Bayesian decision-making approach based on the Analytic Network Process (ANP) framework. The ANP methodology, developed as an extension of the Analytic Hierarchy Process (AHP), enables the prioritization of complex interrelated factors by capturing feedback and dependencies within decision structures. Unlike linear models, ANP is particularly suitable for analyzing multifaceted issues where variables influence one another dynamically. In this research, ANP is employed to identify and prioritize strategic responses to challenges in implementing green banking within Islamic banking institutions, specifically by examining the relationships among *hifz al-dīn*, *hifz al-bi'ah*, and human resource (HR) development strategies (Harianto et al., 2024).

Data Collection

Data were collected through a combination of semi-structured interviews and structured questionnaires, designed to support pairwise comparisons of key factors. This approach allowed for the collection of both qualitative insights and quantitative prioritization data. The interviews provided contextual depth, while the pairwise comparison questionnaires formed the basis for constructing the ANP model.

A total of nine expert informants participated in the study, selected purposively to represent three key stakeholder groups in the Islamic banking sector: academics, regulators, and practitioners. This triangulated sampling strategy ensured diverse perspectives relevant to Sharia compliance and environmental sustainability. Academic participants were chosen based on their expertise in Islamic economics and finance, and included faculty from various State Islamic Universities (*Universitas Islam Negeri-UIN*), including UIN Syekh Ali Hasan Ahmad Addary Padangsidempuan, UIN Sumatera Utara (UINSU), and Tazkia Islamic Institute Bogor. Regulatory informants were drawn from the Sharia Supervisory Board (*Dewan Pengawas Syariah-DPS*), the Financial Services Authority (*Otoritas Jasa Keuangan-OJK*), and the Ministry of Environment and Forestry (*Kementerian Lingkungan Hidup dan Kehutanan-KLHK*).



Practitioners included senior banking professionals such as regional heads and branch managers from Islamic Rural Banks (*Bank Pembiayaan Rakyat Syariah-BPRS*), Islamic banking association (*Asbisindo*) Aceh and North Sumatra Branches, Bank Syariah Indonesia, and Bank Sumut Syariah.

Data Analysis

The ANP analysis followed a structured three-stage process. In the first stage, preliminary data collection involved initial interviews and questionnaires to gather expert opinions and identify key variables. Respondents provided both verbal justifications and quantitative assessments using a 1–9 numerical scale, reflecting the relative importance of each element in a pairwise comparison.

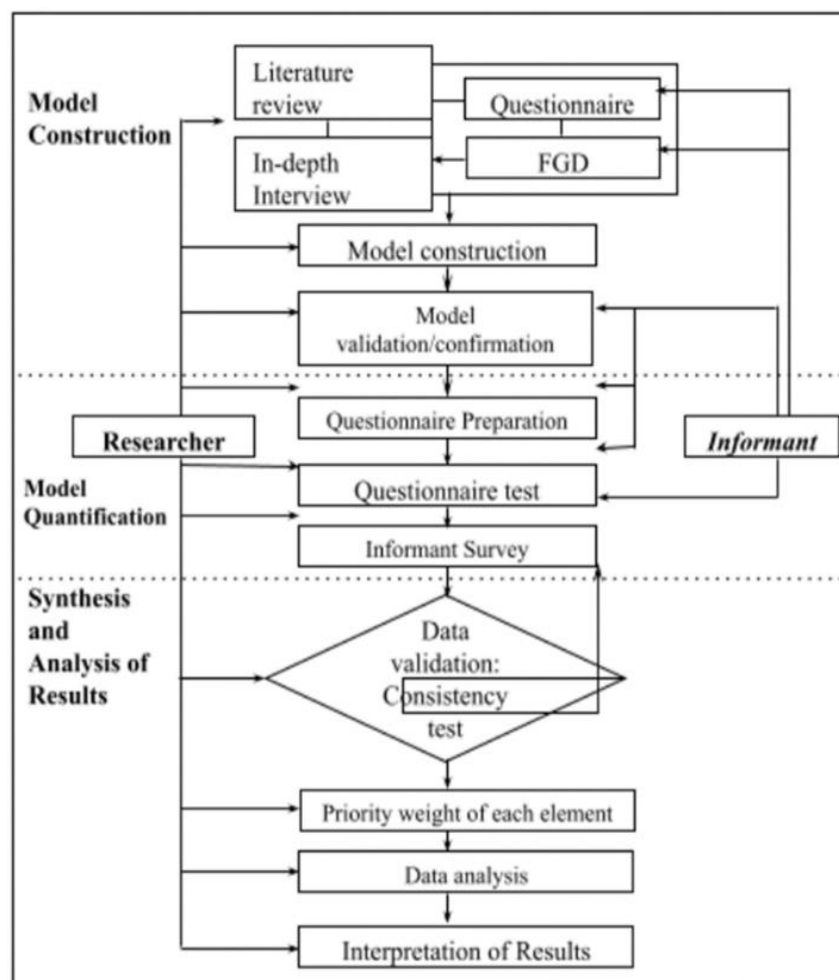


Figure 1. ANP Research Flow

The second stage, model construction, utilized insights from the first stage to develop the ANP network structure. This model integrated multiple nodes and clusters representing the interrelated domains of Islamic principles, institutional roles, HR strategies, and environmental goals. A second, refined questionnaire was then distributed to capture more precise prioritization data within the network.

In the final stage, prioritization and evaluation, the collected data were analyzed using SuperDecisions software to calculate weights and synthesize priority rankings. This step facilitated the identification of the most influential strategies and solutions for enhancing Sharia-compliant green banking. The ANP technique allowed for the inclusion of feedback loops and interdependencies, offering a more holistic view of the decision-making context. Figure 1 illustrates the research workflow and structure of the ANP model employed in the study.

RESULTS AND DISCUSSION

Research Results

This section presents the findings of the Analytic Network Process (ANP) analysis, based on expert input from academics, regulators, and practitioners. The results are categorized into three main clusters: (1) Problem Identification, (2) Solution Prioritization, and (3) Strategic Recommendations. Each cluster reflects the dual objectives of *hifz al-dīn* (protection of faith) and *hifz al-bi'ah* (preservation of the environment), as outlined in the theoretical framework.

Problem Identification

The analysis revealed that challenges in implementing green banking within Islamic financial institutions are rooted in both Sharia governance (*hifz al-dīn*) and environmental ethics (*hifz al-bi'ah*). Table 2 presents the comparative priority values of these two dimensions.

Table 2. Pairwise Comparison of Problem Aspect Groups

Aspect	Priority Value	Rank
Hifz al-Bi'ah	0.53928	1
Hifz al-Dīn	0.46072	2

(Source: Data processed by the Author)



As presented in Table 2, *ḥifẓ al-bi'ah* emerged as the highest-priority concern. Experts emphasized the urgency of addressing environmental degradation by enhancing the implementation of Islamic environmental ethics in banking operations. For a more detailed understanding of the pairwise comparison analysis, refer to Figure 2.

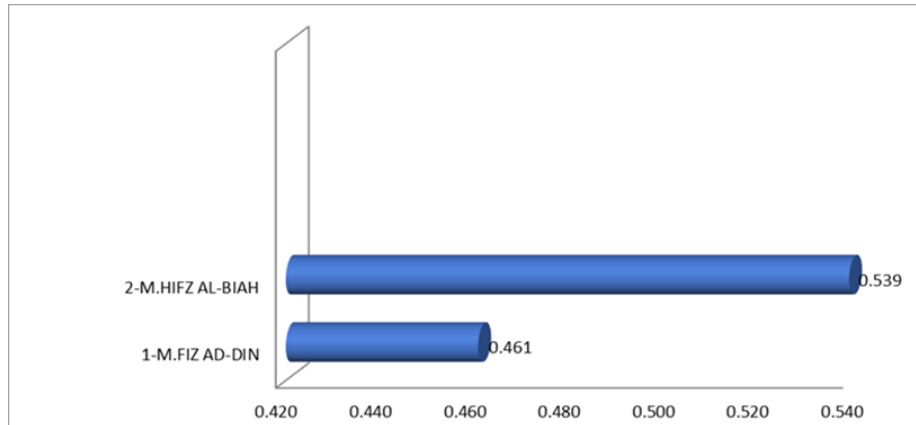


Figure 2. Graphical Comparison of Priority Aspects
(Source: Data processed by the Author)

To better understand the underlying issues, Table 3 presents the pairwise comparison of problem sub-criteria.

Table 3. Pairwise Comparison of Problem Sub-Criteria

Aspect	Sub-Criteria	Priority	Rank
<i>Hifẓ al-Dīn</i>	Lack of Conscience Principle	0.36919	1
	No DSN Fatwa on Green Banking	0.32098	2
	Inadequate Authority of DPS	0.30984	3
<i>Hifẓ al-Bi'ah</i>	Low Human Resource Quality	0.36118	1
	Low Sharia Environmental Competence	0.35220	2
	Lack of Environmental Awareness	0.28661	3

The data indicate that the absence of institutional religious guidance—such as fatwas and supervisory authorities—constrains green banking from a Sharia compliance perspective. At the same time, low-quality human resources and limited understanding of environmental ethics hinder the implementation of *ḥifẓ al-bi'ah*.

Solution Prioritization

In addressing these challenges, experts prioritized potential solutions, again distinguishing between *ḥifẓ al-dīn* and *ḥifẓ al-bi'ah*.



Table 4. Pairwise Comparison of Solution Aspect Groups

Aspect	Priority Value	Rank
<i>Hifz al-Bi'ah</i>	0.56302	1
<i>Hifz al-Dīn</i>	0.43698	2

Environmental sustainability remains the top priority in solution development, consistent with the problem rankings. For a more detailed understanding of the pairwise comparison results, refer to Figure 3.

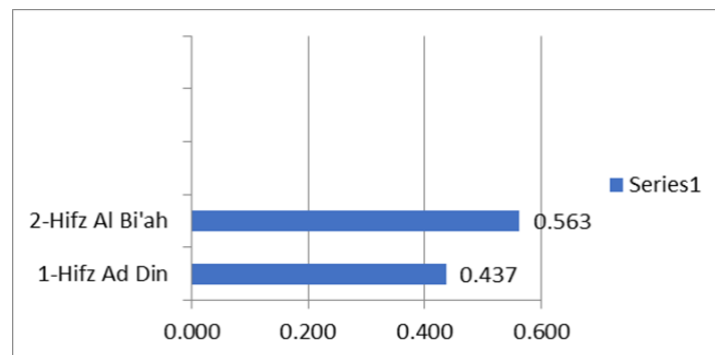


Figure 3. Graphical Comparison of Priority Solutions
(Source: Data processed by the Author)

Table 5 presents the results of the pairwise cluster comparison analysis of the sub-criteria within the solution aspects, identifying two key dimensions: *hifz al-dīn* and *hifz al-bi'ah*. Each dimension comprises sub-criteria that offer a more detailed explanation of the proposed solutions. The table also ranks the priority of these sub-criteria within each aspect.

Table 5. Pairwise Comparison of Solution Sub-Criteria

Aspect	Sub-Criteria	Priority	Rank
<i>Hifz al-Dīn</i>	Issuance of DSN Fatwa	0.36094	1
	Independence of Sharia Supervisory Board	0.32404	2
	Supervision Procedures by DPS	0.31496	3
<i>Hifz al-Bi'ah</i>	Professional Development / Training	0.40045	1
	Environmental Certification	0.37092	2
	Sharia Internship Programs	0.22863	3

For the *hifz al-dīn* dimension, the highest-priority sub-criterion is the availability of DSN fatwas related to green banking, with a priority value of 0.36094. Meanwhile, for the *hifz al-bi'ah* dimension, the top sub-criterion is professional development or training related to the implementation of green banking, with a priority value of 0.40045. Therefore, the most effective



solutions involve issuing clear regulatory guidance (fatwas) on green banking and improving the environmental competence of Islamic banking professionals.

Strategic Recommendations

To operationalize the identified solutions, the ANP model evaluated strategic priorities for enhancing Sharia-compliant green banking. Table 6 presents the results of the pairwise comparison of strategic aspect groups, highlighting the top priorities as identified by expert responses to the survey questionnaire. Among these, the aspect of enhancing human excellence emerged as the highest priority, with an average score of 0.36162. The second-highest priority was the role of the Shariah Supervisory Board, with an average score of 0.33128. Enhancing environmental awareness ranked third, with an average score of 0.30710.

Table 6. Pairwise Comparison of Strategic Priorities

Strategy	Priority Value	Rank
Enhancing Human Excellence	0.36162	1
Strengthening Sharia Supervisory Board Function	0.33128	2
Improving Environmental Understanding	0.30710	3

For a more detailed understanding of the pairwise comparison results, refer to Figure 4.

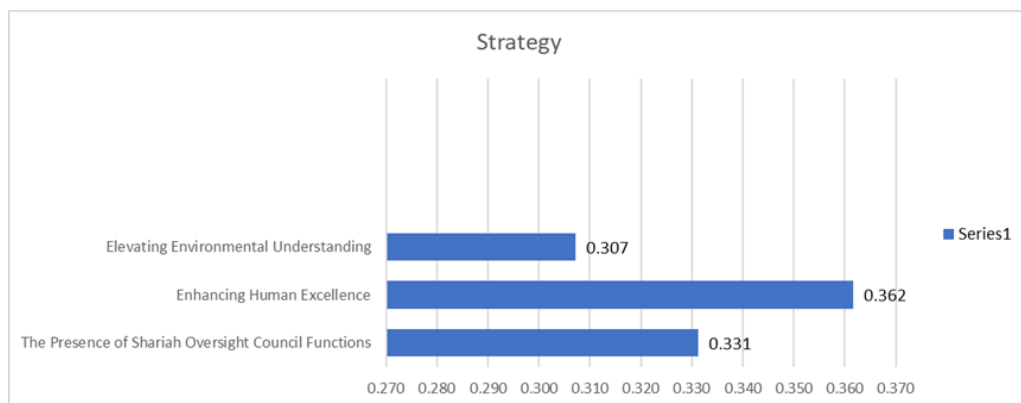


Figure 4. Graphical Comparison of Priority Strategies
(Source: Data processed by the Author)

Therefore, developing competent human capital was identified as the most critical strategy. This includes targeted training programs, knowledge-sharing platforms, and capacity-building to ensure professionals are equipped to align banking operations with Islamic environmental principles.



Synthesis of Findings and Expert Agreement

The study synthesized expert perspectives to derive a cohesive understanding of the main challenges, solutions, and strategies. Based on the three problem aspects identified by key personnel in relation to *ḥifẓ al-dīn* and *ḥifẓ al-bi'ah*—Sharia compliance in achieving green banking—respondents demonstrated a moderate level of agreement, with the reliability conformity coefficient (W) Kendall's coefficient of concordance were 0.16049. The findings indicate that key personnel prioritized the following problems: (1) *ḥifẓ al-bi'ah*, and (2) *ḥifẓ al-dīn*. Regarding the proposed solutions for these aspects, the experts showed a lower level of consensus, with a reliability conformity coefficient of $W = 0.05461$. These solutions specifically address issues related to DSN fatwas, the independence of the Sharia Supervisory Board (DPS), and procedures for supervising green banking practices.

Following the problem and solution analysis, key personnel proposed a variety of strategic approaches concerning *ḥifẓ al-dīn* and *ḥifẓ al-bi'ah* within the context of Sharia-compliant green banking. The agreement level on strategic priorities was relatively low, with a reliability conformity coefficient of $W = 0.04598$. These strategies are intended to support the resolution of challenges within the *ḥifẓ al-dīn* and *ḥifẓ al-bi'ah* clusters.

These values suggest moderate alignment among experts, particularly in identifying *ḥifẓ al-bi'ah* as the most urgent issue. While consensus on strategy was less pronounced, all stakeholders acknowledged the need for harmonized efforts that integrate Sharia governance with environmental sustainability goals.

Discussion

The results indicate that among the two *maqāṣid al-sharī'ah* dimensions—*ḥifẓ al-dīn* (preservation of faith) and *ḥifẓ al-bi'ah* (preservation of the environment)—the latter is prioritized in the context of Sharia-compliant green banking. This highlights a growing awareness that environmental ethics are not peripheral, but central, to Islamic finance. *Hifẓ al-bi'ah* in Islamic banking not only aligns with sustainability goals but also reflects a deeper theological responsibility for ecological stewardship. The findings further reveal three priority strategies to support the operationalization of green banking: (1) improving human resources, (2) enhancing the function of the Sharia



Supervisory Board, and (3) increasing environmental awareness through certification and training.

Improving the Quality of Human Resources

The development of human capital is a critical enabler in advancing green banking practices within Islamic financial institutions. Strengthening the quality of human resources contributes not only to institutional competitiveness but also to the integration of sustainability values within operational frameworks. Green Human Resource Management (GHRM) has emerged as a vital practice in organizations aiming to build environmentally sustainable work environments and foster a harmonious, values-driven corporate culture (Arulrajah et al., 2016; Al-Romeedy, 2019). Through the strategic application of HR policies—such as green recruitment, training, performance appraisal, and employee engagement—Islamic banks can promote ecological responsibility and resource efficiency across organizational levels.

In line with the *maqāṣid al-sharī'ah*, the enhancement of human resource capacity reflects the Islamic ethical imperative to cultivate *qawiyyu* (competence) and *amīn* (trustworthiness) in professional roles. Equipping employees with comprehensive knowledge of Sharia principles—particularly those related to *ḥifẓ al-dīn* (faith preservation) and *ḥifẓ al-bi'ah* (environmental preservation)—can significantly increase institutional accountability in addressing environmental impacts. Such understanding empowers bank personnel to adopt policies that support sustainability, including transitioning to paperless systems through digital platforms like internet banking and ATMs. These practices contribute not only to operational efficiency but also to broader environmental goals such as forest conservation.

Moreover, the incorporation of environmental principles into lending policies is essential. As demonstrated by Ratnasari et al. (2021), green banks with strong capital bases and adequate liquidity can manage risk more effectively and capitalize on sustainable investment opportunities, ultimately enhancing their profitability. Financial stability enables these institutions to implement responsible financing practices aligned with both environmental and Islamic ethical standards.

To support this transition, human resource development in Islamic banking should prioritize several key competencies: (1) proficiency in data analysis for strategic decision-making in the digital age; (2) environmental awareness to



promote sustainable operational behavior; (3) knowledge of Sharia-compliant financial instruments, such as green sukuk and eco-friendly Islamic finance products; and (4) technological fluency to enable digital transactions, stakeholder collaboration, and green marketing initiatives. Integrating environmental awareness into professional development programs enhances employees' understanding of their ecological responsibilities and supports the institutionalization of green values within Islamic finance.

Empirical evidence supports the assertion that Islamic banks adopting environmentally conscious HR practices experience significant benefits, including reduced carbon emissions (Rohilla, 2017), lower waste and pollution levels (Tang et al., 2018), cost savings, improved operational efficiency (Dmeiiio et al., 2016), enhanced competitiveness (Sharma, 2016), stronger financial performance (Fayyazi et al., 2015), and higher employee retention (Sheopuri & Sheopuri, 2015). These outcomes collectively strengthen the bank's commitment to both Islamic ethical principles and sustainable development goals (SDGs), minimizing the environmental footprint of the financial sector (Arda et al., 2019).

Improving the Function of the Sharia Supervisory Board

The governance structure of Islamic banking differs fundamentally from that of conventional banking, primarily due to the existence of a Sharia Supervisory Board (SSB), which ensures compliance with Sharia principles in all bank activities (Anisykurlillah et al., 2020). The SSB is an independent body within Islamic financial institutions (AlAbbad et al., 2019) and is tasked with overseeing both the strategic direction and operational activities of the institution (AlShattarat & Atmeh, 2016; Mukhibad & Nurkhin, 2019; Musleh Alsartawi, 2019). Its role is critical in preventing deviations from Sharia law in daily banking operations and, as research indicates, a well-functioning SSB can positively influence the financial performance of Islamic banks (Darwanto & Chariri, 2019).

Moreover, the SSB, particularly the National Sharia Board (DSN), plays a significant role in corporate social responsibility (CSR) disclosure. Ardianto et al. (2024) found that the number of members on the SSB is directly proportional to the level of green banking disclosure; in other words, a larger SSB leads to more comprehensive green banking disclosures. This aligns with stakeholder theory, which suggests that the SSB is crucial for maintaining the reputation



and credibility of Islamic banks. Through its supervisory role, the SSB ensures effective governance of operational performance, which, in turn, influences the level of CSR disclosure. Companies, in this context, are expected to build trust among stakeholders, including individuals, governments, and specific groups, thereby enhancing their legitimacy and enabling them to operate in strict accordance with Sharia principles (Mokoginta et al., 2018). Furthermore, these institutions must comply with both local laws and Sharia regulations to ensure their operations remain legitimate and transparent.

Previous studies have demonstrated that the SSB has a positive impact on CSR reporting within Islamic banks (Mokoginta et al., 2018; Prabowo & Jamal, 2017; Rostiani & Sukanta, 2019). The presence of an SSB provides essential internal oversight, which directly contributes to the improvement of reporting quality. In practice, the SSB coordinates with the board of directors to ensure the accurate disclosure of green banking practices within Islamic financial institutions.

In Indonesia, the SSB's role is further formalized through the fatwa issued by the Indonesian Ulema Council (MUI) and the regulations set forth by the Financial Services Authority (OJK). The National Sharia Council (DSN) is tasked with ensuring compliance with Sharia principles in the implementation of green banking within Islamic banks. Additionally, the SSB is responsible for overseeing the implementation of DSN-MUI fatwas and OJK regulations, ensuring that green banking practices adhere to Sharia standards. As an independent body, the SSB is composed of Sharia experts with knowledge in muamalah and Islamic financial institutions, who are entrusted with supervising the execution of DSN assessments within these institutions. The legal framework in Indonesia, particularly Law No. 40 of 2007 on Limited Liability Companies and Law No. 21 of 2008 on Sharia Banking, mandates the existence of the SSB in Sharia-compliant institutions, emphasizing its importance in shaping strategic policies. The primary responsibility of the SSB is to monitor the daily operations of Islamic banks to ensure continuous adherence to Sharia principles.

Increasing Environmental Awareness through Certification and Training

Environmental awareness and literacy among staff and stakeholders are critical for mainstreaming green banking practices. This includes implementing certification systems, training modules, and evaluation metrics that align



employee behavior with environmental goals (Amini et al., 2018; Dewasiri et al., 2024). Green banking performance is influenced not only by external factors like government regulations but also by internal drivers—such as organizational culture, ethical leadership, and HR commitment to sustainability (Roscoe et al., 2019; Pellegrini et al., 2018).

Environmental training fosters energy efficiency, waste reduction, and responsible resource use. Kumar et al. (2024) found that HR practices—including leadership support, performance evaluations, and operations—significantly impact the sustainability performance of banks. Therefore, building an institutional culture of environmental consciousness is crucial for achieving long-term goals in green finance and sustainable banking. Such efforts align with the Islamic concept of *iḥsān* (excellence), which encompasses doing good in every sphere of life, including ecological behavior. Certification and training thus become tools not just for compliance but for ethical formation in line with Islamic teachings.

Moreover, training serves as a strategic instrument to guide employees in waste management, pollution control, and the responsible use of resources. Rohilla (2017) emphasize that training interventions focused on environmental performance lead to better decision-making and proactive problem-solving in sustainability efforts. For Islamic banks, aligning these training initiatives with Sharia objectives reinforces both ecological consciousness and religious integrity. As organizations face increasing demands for environmental accountability, investing in employee development through certification and continuous education becomes essential for achieving long-term sustainability and Sharia compliance.

The findings reaffirm that the dual goals of *ḥifẓ al-dīn* and *ḥifẓ al-bi'ah* are not mutually exclusive but mutually reinforcing. Green banking practices, when guided by Sharia principles, promote both environmental sustainability and faith-based accountability. The priority given to environmental preservation within the ANP model reflects a broader movement toward Islamic eco-ethics and the operationalization of *maqāṣid al-sharī'ah* in financial governance. Implementing the strategies identified in this study can significantly enhance the effectiveness of Sharia-compliant environmental finance, offering a model for ethical and sustainable Islamic banking in Indonesia and beyond.



CONCLUSION

This study examined the alignment of Islamic legal principles, specifically *ḥifẓ al-dīn* (preservation of faith) and *ḥifẓ al-bi'ah* (preservation of the environment), with the implementation of green banking in Islamic financial institutions. Using the Analytic Network Process (ANP) and expert insights from academics, regulators, and practitioners, the research identified that *ḥifẓ al-bi'ah* is the higher priority in operationalizing Sharia-compliant green banking. The most significant challenges relate to environmental literacy and inadequate Sharia guidance, while the key strategies include improving human resources, strengthening the Sharia Supervisory Board, and increasing environmental awareness through certification and training.

The findings contribute to the evolving discourse on Sharia-compliant finance by integrating sustainability within the *maqāṣid al-sharī'ah* framework. This research provides actionable insights for regulators, policymakers, and Islamic banking institutions by offering a structured roadmap to promote environmentally responsible banking grounded in Islamic ethics. Strengthening human capital, enhancing Sharia governance mechanisms, and institutionalizing environmental education can facilitate more accountable and spiritually aligned financial practices. The research also highlights the importance of collaboration between Islamic authorities and environmental stakeholders to develop unified guidelines and fatwas for green banking.

While the ANP model provides a robust decision-making tool, this study is limited by the small sample size (nine experts) and its geographic focus on Indonesia, which may affect the generalizability of the findings. Furthermore, the study relies on subjective judgments in pairwise comparisons, which, while valuable for capturing expert insight, may introduce bias. Future research should consider comparative studies across multiple Islamic countries, quantitative assessments of green finance performance, and longitudinal analyses of Islamic banks adopting green strategies. Further exploration into the role of digital innovation and green fintech in supporting Islamic environmental finance would also enrich the field.

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