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MORALITY BEFORE KNOWLEDGE

Implementing hifz al-bi'ah in central bank environmental policies

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ABSTRACT

Background: Climate change has become increasingly relevant to financial-system stability because physical and transition risks can affect asset quality, repayment capacity, and the allocation of financial resources. Within Islamic economics, *hifz al-bi'ah* provides an ethical perspective on environmental preservation as a dimension of *maqashid al-shariah*. This study examines how *hifz al-bi'ah* can conceptually inform environmental and macroprudential policies in Indonesia. **Methods:** A qualitative literature-based approach was employed to analyze 46 sources, comprising 40 scholarly articles published between 2020 and 2025, three regulatory or official policy documents, and three primary Islamic sources. The analysis involved source screening, thematic coding, comparative synthesis, and conceptual mapping of *hifz al-bi'ah*, sustainable finance, and central-bank policy instruments. **Findings:** The analysis indicates that selected Bank Indonesia instruments, including environmentally oriented LTV/FTV and down-payment policies, the Macroprudential Inclusive Financing Ratio, and the Macroprudential Liquidity Incentive Policy, can be conceptually interpreted as mechanisms that provide financial incentives consistent with environmental preservation. However, these instruments were not originally formulated explicitly on the basis of *hifz al-bi'ah* or *maqashid al-shariah*. Further policy development may incorporate environmental-risk assessment, financed-emissions disclosure, and green-taxonomy coordination, subject to statutory mandates and empirical evaluation. **Conclusion:** *Hifz al-bi'ah* offers a normative framework for connecting Islamic environmental ethics with sustainable central banking and macroprudential policy. The findings support conceptual alignment rather than a claim that Bank Indonesia has formally adopted *maqashid al-shariah* as a policy foundation. **Novelty/Originality of this article:** This study develops a conceptual mapping between *hifz al-bi'ah*, sustainable finance, and Indonesian central-bank instruments, providing an Islamic normative perspective for understanding the environmental dimension of macroprudential policy without conflating normative principles with formal policy mandates.

KEYWORDS: central banking; green finance; *hifz al-bi'ah;* macroprudential policy; *maqashid al-shariah*; sustainable finance.

1. Introduction

Climate change is no longer only an environmental issue; it is also a financial-stability issue. Physical risks from floods, droughts, fires, and other climate-related events can reduce productivity and impair borrowers' repayment capacity, while transition risks can arise from policy changes, technological shifts, and changing demand during the transition to a low-carbon economy. These channels can affect asset quality, credit allocation, and financial-system resilience. Research on central-bank climate policy consequently

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emphasizes the relevance of financial-stability mandates, macroprudential instruments, data, supervision, and transition policies (D'Orazio & Popoyan, 2022; Juhro et al., 2025).

In Indonesia, Bank Indonesia has incorporated environmental considerations into several macroprudential instruments. Its official green-finance framework identifies environmentally oriented Loan-to-Value (LTV) and Financing-to-Value (FTV) ratios and down-payment policies, the macroprudential inclusive financing ratio/*Rasio Pembiayaan Inklusif Makroprudensial* (RPIM), and the Macroprudential Liquidity Incentive Policy/*Kebijakan Insentif Likuiditas Makroprudensial* (KLM) as channels for supporting green and sustainable financing. The current KLM framework is governed by *Peraturan Bank Indonesia* (PBI) No. 9 of 2025, which replaced PBI No. 11 of 2023. These instruments demonstrate that environmental considerations can be embedded in financial incentives while remaining connected to the central bank's macroprudential mandate (Bank Indonesia, n.d., 2025).

From an Islamic economics perspective, environmental preservation can be examined through *hifz al-bi'ah*. Recent Islamic scholarship develops *hifz al-bi'ah* as an ecological dimension of *maqashid al-shariah* and links environmental preservation with broader public welfare, intergenerational interests, and the avoidance of ecological harm (Khuluq & Asmuni, 2025; Rois et al., 2024). Other studies connect *hifz al-bi'ah* with circular-economy principles, justice, moderation, and ecological balance (Priyatno et al., 2026). However, the literature does not establish a single universally accepted formulation of *hifz al-bi'ah* as an independent maqashid category. This study therefore uses *hifz al-bi'ah* as a normative ecological lens for interpreting policy rather than asserting a new universally accepted pillar of *maqashid al-shariah*.

The literature on green banking and sustainable finance has developed rapidly, but three streams remain insufficiently integrated. The first examines *hifz al-bi'ah* primarily as an ethical or legal principle. The second evaluates green banking, green finance, and sustainability performance at the banking-institution level. The third examines central-bank responses to climate risk, generally from financial-stability and macroprudential perspectives (Hermala et al., 2024; Kumar et al., 2024; Matos Rosa, 2025) What remains less explicit is how an Islamic ethical principle can be systematically mapped onto specific central-bank instruments while distinguishing existing policy from normative recommendations.

This study addresses that gap by asking: (1) what environmental and sustainability principles in the literature are associated with *hifz al-bi'ah*; (2) which mechanisms connect those principles with sustainable finance and central-bank policy; and (3) how existing Bank Indonesia macroprudential instruments can be conceptually mapped to those mechanisms? The contribution is a transparent conceptual framework that links normative Islamic environmental ethics to documented central-bank instruments without claiming that the existing instruments were originally designed from a *maqashid al-shariah* framework. This distinction is important because the central bank remains constrained by its statutory mandate, while *hifz al-bi'ah* provides an ethical interpretive layer rather than a substitute for that mandate.

1.1 Maqashid al-shariah and hifz al-bi'ah

Hifz al-bi'ah refers to the preservation and protection of the environment. In the literature reviewed, it is presented as an ecological dimension that reinforces the broader objectives of *maqashid al-shariah*, including the protection of life, wealth, progeny, intellect, and religion. The analytical relevance of this concept lies in the proposition that environmental degradation can undermine several established maqashid simultaneously—for example, through threats to life, livelihoods, intergenerational welfare, and productive assets (Khuluq & Asmuni, 2025; Mallongi et al., 2025).

Further frame ecological conservation in terms of public interest (*maslahah*), emphasizing that economic development should not be pursued through policies that undermine environmental sustainability (Rois et al., 2024). Extend this logic to circular-

economy principles, particularly justice, moderation, ecological balance, and responsible resource use (Priyatno et al., 2026). Accordingly, *hifz al-bi'ah* can be operationalized conceptually through prevention of environmental harm, protection of intergenerational welfare, and preservation of productive resources.

1.2 Green central banking and sustainable finance

Central banks increasingly consider climate-related risks because physical and transition risks may affect financial stability. Show that climate ambitions are commonly pursued through financial-stability mandates (D'Orazio & Popoyan, 2022), while highlights the continuing debate over the extent to which environmental considerations should enter monetary and central-bank frameworks (Matos Rosa, 2025). This distinction is essential: environmental policy is not automatically a conventional central-bank objective, but climate-related financial risks can create a prudential rationale for central-bank action.

In Indonesia, green finance policy operates through macroprudential and financial-system channels. Bank Indonesia states that environmentally oriented LTV/FTV policies, RPIM, and KLM are intended to improve access to green financing and support sustainable financial-system stability. The policy architecture therefore provides an empirical institutional setting in which *hifz al-bi'ah* can be examined as a normative lens.

Empirical studies also show that green-finance outcomes are not uniform. Report a positive relationship between green finance and sustainability performance (Kumar et al., 2024), whereas found no significant effect of green financing on return on assets (ROA) for Indonesian banking during 2016–2020 (Hasanah & Hariyono, 2022). Governance appears to matter: report that climate and Shariah governance quality are associated with financed-emission mitigation (Issa et al., 2025). These differences suggest that policy incentives alone may not be sufficient; implementation capacity, governance, disclosure, and measurement also shape outcomes.

1.3 Theoretical proposition

The conceptual argument developed in this study consists of four linked propositions; *Hifz al-bi'ah* provides a normative principle that treats environmental preservation and avoidance of ecological harm as matters of public welfare. Climate-related physical and transition risks provide a prudential transmission mechanism through which environmental conditions can affect financial stability, asset quality, and resource allocation. Macroprudential instruments can influence financial behavior by changing financing incentives, eligibility, liquidity conditions, or allocation toward priority and sustainable sectors. The integration proposed in this study is interpretive: existing central-bank instruments are mapped to *hifz al-bi'ah*, while additional measures such as environmental-risk assessment and financed-emissions disclosure are presented as conceptual recommendations requiring institutional and empirical validation.

2. Methods

This study uses a qualitative literature-review and conceptual-analysis design. The objective is not to estimate a causal effect but to synthesize theoretical and policy relationships between *hifz al-bi'ah*, sustainable finance, green banking, and central-bank environmental policy. The final corpus contains 46 sources: 40 scholarly journal articles published between 2020 and 2025, three regulatory or official policy documents, and three primary Islamic sources. Sources were considered eligible when they addressed at least one of the following themes: *hifz al-bi'ah*/Islamic environmental ethics, *maqashid al-shariah* and sustainability, green banking or green finance, climate-related financial risk, central-bank or macroprudential policy, or sustainable financial inclusion. Sources outside these thematic domains or outside the defined publication period for scholarly literature

were excluded from the analytical corpus. To improve transparency, the analysis followed four stages: (1) identification of potentially relevant literature and official policy materials; (2) screening against publication-period and thematic criteria; (3) extraction of information on concepts, policy instruments, mechanisms, and reported outcomes; and (4) thematic synthesis and conceptual mapping. The main coding categories were *hifz al-bi'ah*, maqashid objectives, climate-related financial risks, green-finance mechanisms, macroprudential instruments, governance, and sustainability outcomes. Because the original manuscript did not record the database platform and exact search date, these details should be inserted by the authors before submission rather than reconstructed retrospectively. The revised manuscript therefore reports the source-selection criteria and analytical procedure without claiming an unverified database protocol.

Table 1. composition of the analytical corpus

Source	Quantity	%	Analytical role
Peer-reviewed journal articles	40	87%	Theory, empirical findings, and literature synthesis
Regulatory/Official policy document	3	6.5%	Existing central bank policy and regulatory evidence
Primary Islamic Sources	3	6.5%	Normative basis for environmental and maqashid interpretation
Total	46	100%	Conceptual syntesis

The reviewed literature supports a common theme: environmental preservation is linked to public welfare and should not be treated as separate from economic development (Rois et al., 2024) emphasize the need to avoid development pathways that sacrifice ecological sustainability, while position *hifz al-bi'ah* as relevant to climate-change challenges (Khuluq & Asmuni, 2025). Further demonstrate the practical relevance of environmental stewardship to the fair and sustainable management of natural resources (Mallongi et al., 2025).

These studies allow three analytical dimensions to be extracted for policy mapping: (1) prevention of ecological harm; (2) protection of livelihoods, assets, and intergenerational welfare; and (3) responsible allocation of resources toward activities that preserve environmental quality. The dimensions are not presented as new maqashid categories; they are analytical manifestations of *hifz al-bi'ah* within the literature reviewed. At the same time, (Hasanah & Hariyono, 2022) found no significant effect of green financing on ROA for Indonesian banking over 2016–2020. This result should not be interpreted as evidence that green finance lacks environmental value; rather, it indicates that environmental objectives and short-term bank profitability are analytically distinct outcomes. The literature on climate governance similarly indicates that governance quality and sustainability structures can affect financed-emission mitigation (Issa et al., 2025).

3. Results and Discussion

3.1 Implementation of hifz

Environmental preservation must be given top priority in every government development policy. Government efforts to accelerate the pace of development must not conflict with the principles of environmental sustainability. The importance of maintaining environmental sustainability is universal, whether viewed from the perspective of Islamic law, socio-cultural norms, economics, or politics. The paradigm of government policies and development programs has the potential to threaten the sustainability of environmental conservation. Therefore, on the basis of public interest, the government is not permitted to establish policies that conflict with the interests of strengthening ecology, both in the form of long-term and medium-term development plans, especially industrial

downstreaming programs that are projected to encourage national economic progress (Rois et al., 2024).

The concept of *hifz albi'ah* has become very important as a new variable within the scope of these important principles. The concept of *hifz al-bi'ah* was initially developed through environmental jurisprudence, *fiqh al-bi'ah*, and evolved into *hifz al-bi'ah* , an integral part of *mawashid syarih*. *Hifz al-bi'ah* serves as a foundation for the application of *hifz al-din*, *hifz al-nafz, hifz al-nasl, hifz al-mal*, and *hifz al-aql*. At the same time, the aspects of these important principles are expanded. In an effort to reduce or reverse global climate change (Khuluq & Asmuni, 2025). In Surah Al A'raf, verse 56, Al Maidah, verse 32, Al Baqarah, verse 30, and the Hadith of Ibn Majah. Weak environmental education, limited water management infrastructure, and suboptimal government regulations are the main obstacles in maintaining the quality and sustainability of springs. Synergy between the community, scholars, and the government is needed to implement the values of *hifz al-bi'ah* to ensure the availability of fair and sustainable clean water sources for the welfare of the people. Wildfires cause serious ecological losses. Second, the transformation of the concept of *hifz bi'ah* can be used as a normative ethical basis for environmental legal policies (Mallongi et al., 2025). Its contribution presents an ecological religion for strengthening environmental awareness and regulation in Indonesia (Alwi Syahrial, 2024).

3.2 Green banking policy

Practices related to employees, top operational management, and policies substantially influence green finance and a bank's sustainability performance. Conversely, practices related to customers do not significantly influence a bank's sustainability performance. Green finance substantially influences the sustainability performance of banking institutions. Bank policies and managers must fulfill their social responsibilities by engaging employees and customers in cleaner operations to improve the bank's sustainable performance (Kumar et al., 2024). Green banking and sustainability are equally important in responsible banking and are recognized as key drivers of operational success. It is crucial for financial institutions to develop sustainable work spaces that can contribute to operational performance. Green banking policies can indirectly influence bank operational performance, playing a mediating role between green culture and environmental performance. Advocating a comprehensive approach to green banking (Ali et al., 2025).

Green banking or environmentally friendly banking has a significant role in creating a clean and sustainable banking environment by adopting the principles of green banking. Banks can better manage environmental risks, increase environmentally friendly financing portfolios, and implement sustainable business practices. In addition to direct benefits such as reducing credit risk and improving asset quality, green banking also has the potential to increase the value of the company and the bank's reputation in the eyes of the public and investors. Banks in Indonesia need to comply with relevant regulations and continue to promote environmentally friendly practices (Khaer & Anwar, 2022).

The role played by banking corporations is very significant because it has a broad impact on the implementation and efforts to achieve the objectives of the green banking concept. Weak policies in the banking sector and implementing regulations in Indonesia have caused many violations to occur and resulted in environmental damage. Therefore, clear regulations are needed as a legal basis for regulating the implementation of green banking accompanied by monitoring and evaluation mechanisms so that they can provide a broad positive impact on sustainability and environmental conservation (Hatikasari & Ganefi, 2023).

Indonesian Islamic banks have implemented green banking through defensive, preventive, and offensive approaches and sustainable banking. In addition, the implementation of the green coin rating performance framework includes carbon emission reduction, green awards, green building indicators, recycling practices, paperless

operations, and green investments contribute to the achievement of the sustainable development goals (SDGs). These findings address the research gap and emphasize the contribution of policies to sustainability and customer engagement (Mei et al., 2025). A specific approach to green finance is highly recommended rather than viewing green finance as a one-size-fits-all solution. Banking institutions should align their green finance initiatives with local regulatory frameworks, strategic objectives, and market demand to realize the benefits of green finance and green banking activities. These initiatives should also consider bank-specific factors. For example, small banks may prioritize reducing their overall operating costs, while large banks may expand their scope to more capital-intensive interventions such as financing large-scale renewable energy projects. Similarly, banks in developed countries are more likely to benefit from mature regulatory frameworks and markets.

Therefore, banks in these countries may benefit from developing green finance instruments such as sustainability-linked loans, green bonds, and so on. Conversely, financial institutions in developing countries may benefit from adapting a phased approach tailored to the market, for example, starting with a simple credit policy or conducting environmentally-related pilot programs targeting key sectors such as agricultural small and medium-sized enterprises (SMEs). Policymakers in developing countries and emerging markets should prioritize the creation of a supportive regulatory environment, offering technical assistance and incentives, and related initiatives, while policy directions in more mature and developed markets could go beyond the creation of supportive green banking practices and focus on improving regulatory frameworks to encourage high-integrity green innovation and foster market discipline.

Ultimately, such local interventions are more likely to yield financial benefits because they are aligned with local market readiness, institutional capabilities, and regulatory frameworks. For Islamic bank management, the implementation of green banking needs to be further enhanced, particularly in providing financing support for environmentally-oriented projects (Muchiri et al., 2025). It should be noted that all Islamic banks in Indonesia must implement all green banking indicators contained in the Green Coin Rating. Islamic bank management must maintain key financial performance indicators at a safe level because investors use financial performance as a basis for assessing the performance of Islamic banking in Indonesia. Islamic commercial banks must also have sound risk management to control various financing risk factors. Furthermore, Islamic bank management needs to manage operational costs effectively because operational efficiency reflects the overall efficiency of the Islamic bank. Additional profitability indicators, in addition to ROA, are needed to measure the profitability of Islamic banks more comprehensively (Ramdani et al., 2023).

The research results show that Islamic banks have begun implementing green banking principles through environmentally friendly financing, energy efficiency, service digitization, and the management of Islamic social funds, including zakat, infaq, sedekah, and waqf (ZISWAF) to empower poor and vulnerable groups. This contribution is evident in green micro, small, and medium enterprises (MSME) financing, resilient village development, entrepreneurship training, and increased financial inclusion. These findings indicate that green banking can be an effective instrument in supporting sustainable community welfare. However, challenges remain, such as limited understanding, regulations, and institutional commitment. Therefore, collaboration between stakeholders is needed to strengthen the role of green banking in achieving inclusive and equitable sustainable development (Desvaria et al., 2025).

Green finance is considered a solution to environmental degradation. Banking plays a crucial role in financing. Bank profitability is a key factor for the public when it comes to financing or funding within the banking sector. Profitability is measured by the banking sector's financial performance ratio. This study employed a quantitative method with pole least square (PLS) analysis. The object of this study was Islamic banking in Indonesia for the 2016-2020 period, which showed that the Green Financing variable had no effect on return on assets (ROA). The implementation of green finance has not had a positive

impact on company profits because the implementation of green financing reporting in Islamic banking only began in 2018. Operating Costs, Operating Income *(Biaya Operasional terhadap Pendapatan Operasional* [BOPO]) and Non-Performing Financing (NPF) affect ROA. Meanwhile, the capital adequacy ratio (CAR) and non-performing loan (NPL) variables have no effect. Banks must maintain a minimum BOPO and NPF ratio to prevent non-performing financing, which can reduce profitability (Hasanah & Hariyono, 2022).

The implementation and disclosure of green banking practices and the calculation of the BOPO ratio in a company can be considered economically efficient if it is able to save production costs so that it can achieve maximum profit. Bank Jabar Banten (BJB) Syariah has implemented several green banking programs, namely the application of environmentally friendly principles through green financing, saving water use, reducing paper use and waste management (Khodijah et al., 2023).

The findings above show a pattern that is not entirely consistent (Ali et al., 2025; Kumar et al., 2024) showing green banking improves the bank's sustainability performance while (Hasanah & Hariyono, 2022) in fact, it was found that green financing has not had an effect on the ROA of Islamic banking in Indonesia for the 2016-2020 period. This difference indicates that the benefits of *hifz al-bi'ah* in green banking practices are only realized when reporting and regulations are mature as mentioned by (Hasanah & Hariyono, 2022). That green financing reporting in Islamic banking only started in 2018. From the perspective of Maqashid Sharia, this means that *Hifz al-bi'ah* is a measure of the bank's financial performance, so that the central bank's support through macroprudential incentives (as BI's green LTV policy) is crucial to accelerate the internalization of these values.

3.3 Tracking progress in green financial inclusion

Companies with higher environmental sensitivity are more likely to implement sustainable practices to improve operational efficiency and reduce risk (Novák et al., 2025). Environmental, social, and governance (ESG) and environmental factors significantly influence investment sensitivity, with stronger effects observed. Bank financing plays a moderating role in the relationship between bank sustainability and investment sensitivity. Green financing acts as a mediator, reducing investment sensitivity by channeling resources toward sustainable investment initiatives (Rukh et al., 2025).

Short-term results show that total trade in low-carbon technology products has a negative impact on gross domestic product (GDP), indicating that although green trade is currently increasing, it still lacks a stable mechanism capable of generating optimal revenue. Annual CO_2 emissions and a lack of adaptive capacity have a positive impact on GDP in the short term, reflecting the continued strong dependence on emission-intensive industries and limited infrastructure for building resilience. In the long term, none of the green finance indicators show a significant relationship with GDP, possibly due to the large initial investment required in green projects, so that economic returns can only be felt after a relatively long period of time (Pachiyappan et al., 2025). Rather than declining over time, the perceived marginal utility of green bond issuance, as proxied by the alpha of the parent's stock, tends to be increasingly valued by the stock market (Henide, 2025; Joshipura et al., 2025; Zhang et al., 2025).

The government cannot rely solely on the state budget to achieve its emission reduction targets, requiring other financing innovations. Islamic finance, with its unique principles and instruments, can play a crucial role in this effort. This study seeks to investigate the interrelationship between green finance and Islamic finance in the energy transition in Indonesia. A bibliometric study using Vosviewer software and a literature review using the PRISMA concept were conducted to provide a comprehensive overview and identify future research directions based on previous works in the Scopus database on green finance and Islamic financial instruments. This study utilized 42 journal articles from 2014 to 2024. Studies in this group delve deeper into Islamic finance as a viable

alternative for implementing sustainability concepts in the financial sector (Hermala et al., 2024).

This study reveals the crucial role that FinTech plays in emerging markets, alleviating structural challenges to green finance development by increasing access to funds and improving risk management. The study also finds that, while FinTech promotes green finance development across markets, the risks it poses differ significantly between developed and emerging markets. This paper not only verifies the positive impact of FinTech on green finance markets but also provides empirical evidence for global policymakers to formulate differentiated strategies, emphasizing the importance of local regulatory and policy support for the integrated development of FinTech and green finance (Chien et al., 2025).

The findings show that green finance (GFIN) significantly reduces carbon dioxide (CO_2) emissions and ecological footprint (EF), particularly at higher quantiles where environmental pressures are more pronounced, highlighting its role as an important tool in climate mitigation. In contrast, GTI exhibits a counterintuitive positive relationship with environmental degradation, suggesting a rebound effect where technological improvements can inadvertently lead to greater resource consumption. Control variables such as GDP per capita, urbanization (URB), and energy vulnerability (EVI) contribute to environmental improvements, while trade openness (TOP) and financial development (FD) are associated with increased degradation. These results are consistent across environmental indicators and supported by causality analysis using the Dumitrescu-Hurlin Granger test. This study offers robust empirical evidence and passes key reliability tests, contributing to the limited but growing literature on green finance and innovation in developing countries. The study recommends that policymakers in developing countries increase targeted green finance, adopt safeguards against unintended consequences of innovation, and embed environmental considerations in economic and financial systems (Miyan et al., 2025).

including government information disclosure, financial institution initiatives, and promotion of public engagement, to provide a sustainable approach to facilitating the development of green finance (Tung et al., 2025).Banks can set long-term climate change goals while developing clear plans to support the transition away from fossil fuels in the short term through loans and other financial products. They can also integrate environmental, social, and governance (ESG) into the core of their strategies and reporting by incentivizing chief executive officers (CEOs) and staff to implement ESG-related policies. Increased government climate action and research and development support can pave the way for private funding to commercialize and mainstream decarbonization technologies (Tekin, 2025).

Improving regulatory oversight, optimizing incentive policies, and tightening information disclosure requirements effectively reduce financial greenwashing, while improving the legal framework can further strengthen policy implementation. The combined use of policy instruments and legal mechanisms has shown significant effectiveness in suppressing financial greenwashing. Therefore, policymakers should consider using a variety of policy instruments and emphasize coordination with the legal framework (Wu & Zuo, 2025).

This study confirms the positive moderating effect of sustainable growth (SUSTG) on this relationship because the green loan disclosure (GLD) of sustainably managed banks provides assurance on voluntarily disclosed green lending information. The study findings are validated for potential endogeneity issues using a system generalized method of moments (GMM) approach. This study contributes to existing research by emphasizing the value relevance of sustainability practices in the financial services sector and stating their implications for transparency, governance, and societal goals. (Desai & Patel, 2025)the environmental trap emerges when there are no initial green consumers in the economy. A steady state in which all consumers, firms, and banks adopt green strategies emerges when the net benefit to banks from green consumers exceeds the cost differential between green and brown firms. This cost differential is determined by the loans offered to each

type of firm, weighted by their respective interest rates. Thus, if citizens exhibit strong green preferences and monetary policy provides sufficiently preferential interest rates for green investments, the economy will eventually stabilize in a green equilibrium, ensuring environmental sustainability. Numerical simulations support the analytical findings and demonstrate how different values of model parameters can lead to an environmentally responsible economic system that avoids the environmental trap (Accinelli et al., 2025).

3.4 Integrating hifz al-bi'ah into central bank policy instruments

The literature discussed in the previous sub-chapter shows that the performance of green banking, financial inclusion, and climate risk management is increasingly empirically documented, but the study rarely articulates an explicit normative foundation on why the central bank is pursuing such policies beyond the motive of prudence. This sub-chapter fills this gap by mapping Bank Indonesia's existing macroprudential instruments into the five pillars of the *sharia maqashid* with special emphasis on the *hifz al-bi'ah* as the ecological dimension that unites the five.

Bank Indonesia's three macroprudential policies mentioned earlier, such as LTV relaxation for environmentally friendly property and vehicle financing, macroprudential inclusive financing ratio Bank Indonesia Regulation/*Peraturan Bank Indonesia* (PBI No. 23/3/PBI/2022) and macroprudential liquidity incentives through the relaxation of the average reserve requirement (PBI No. 11/2023), were initially designed based on the goals of financial stability and inclusion. However, if read through the lens of *hifz al-bi'ah*, each of these instruments can be reinterpreted as an institutional mechanism to translate ethical-religious values into measurable financial behavior, as summarized in Table 2.

Table 2. conceptual mapping of Bank Indonesia macroprudential instruments and *hifz al-bi'ah*

Existing instrument	Documented mechanism	Relevant maqashid dimension	*Hifz al-bi'ah* link	Sustainability objective	Status in this study
Green LTV/FTV and down-payment provisions	More accommodative financing conditions for environmentally oriented property and vehicles	*Hifz al-bi'ah*; secondary *hifz al-mal*	Reduces financing barriers for lower-emission assets and supports environmentally preferable investment	Green asset adoption and climate-risk mitigation	Existing Bank Indonesia (BI) policy; *hifz al-bi'ah* is the authors' interpretive mapping
RPIM (PBI No. 24/3/PBI/2022)	Requires banks to set and meet inclusive-financing targets; eligible securities include sustainable-finance instruments	*Hifz al-mal* and *hifz al-nasl*; environmental dimension is indirect	Connects inclusive allocation and sustainable-finance instruments with protection of livelihoods and intergenerational welfare	Financial inclusion and sustainable allocation	Existing BI policy; environmental connection is indirect
KLM (current framework: PBI No. 9/2025)	Provides macroprudential liquidity incentives for qualifying priority, inclusive, and sustainable	*Hifz al-bi'ah*; *hifz al-mal* and *hifz al-nasl* as related dimensions	Creates an incentive structure for banks to expand financing to sustainable/green activities	Sustainable intermediation and financial-system resilience	Existing BI policy; *hifz al-bi'ah* is the authors' interpretive mapping

Existing instrument	Documented mechanism	Relevant maqashid dimension	*Hifz al-bi'ah* link	Sustainability objective	Status in this study
	financing				
Environmental-risk assessment, financed-emissions disclosure, and green-taxonomy coordination	Potentially improves measurement, screening, and transparency of environmental effects of financing	*Hifz al-bi'ah*; *hifz al-mal; hifz al-nasl*	Makes environmental stewardship measurable and reduces information gaps/greenwashing risk	Accountability, risk management, and environmental integrity	Conceptual recommendation; not presented as an existing BI requirement

Source: Conceptual synthesis based on the reviewed literature and official Bank Indonesia regulatory and policy documents

The mapping in the table shows that *hifz al-bi'ah* rarely stands alone in central bank policy, it is most often linked to *hifz al-nasl* (intergenerational welfare) or *hifz al-mal* (protection of property) in line with the view that Islamic jurisprudence treats environmental conservation as an instrument for not separate from the wider benefit (Rois et al., 2024). This also explains the inconsistencies that arise in sub-chapter 3.2 of financial performance-based studies such as (Hasanah & Hariyono, 2022) did not find a significant effect of green financing on ROA, while governance-based studies such as (Issa et al., 2025) found that the Sustainability Committee and the Quality of Governance have a positive effect on the financing of emission reductions. Table 2 shows that the two are not contradictory but complementary. Macroprudential instruments create an incentive structure for the internalization of *hifz al-bi'ah*, while institutional governance (sharia supervisory board/SSB quality, sustainability committee) determines whether the incentives actually translate into measurable financial performance.

3.5 Conceptual framework

Figure 1 summarizes the proposed relationship. *Hifz al-bi'ah* functions as the normative foundation; climate-related financial risks provide the transmission mechanism; existing macroprudential instruments provide observable policy channels; and additional environmental-risk measurement and disclosure are treated as recommendations rather than existing policy requirements.

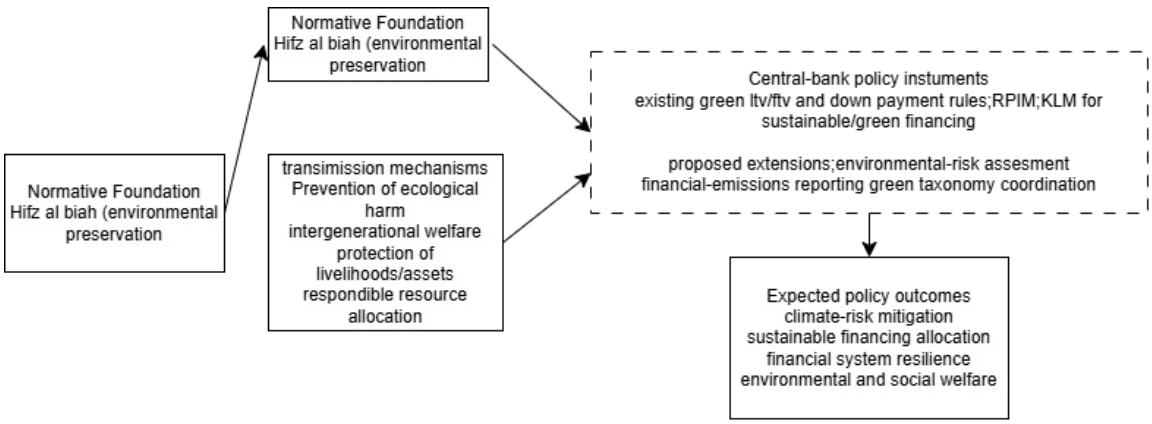


Fig. 1. Conseptual framework linking *hifz al-bi'ah*, sustainable finance, and central-bank environtmental policy

3.6 Critical discussion:Islamic ethocs and conventional central banking objectives

The conceptual integration should not be understood as a replacement of conventional central-bank objectives. Central banks are generally mandated to pursue monetary and/or financial-system stability, and climate action is often justified where climate risks affect those mandates (D'Orazio & Popoyan, 2022). From this perspective, *hifz al-bi'ah* adds a normative dimension to the interpretation of environmental risk rather than creating an independent legal mandate.

There is also a difference in the logic of justification. Conventional macroprudential policy asks whether a climate-related risk can threaten financial stability and whether an instrument can mitigate that risk. *Hifz al-bi'ah* asks whether economic and financial activity preserves ecological conditions and avoids harm to present and future welfare. The two perspectives can overlap, but they are not identical. An environmentally beneficial project may not automatically be a prudential priority, and a prudential instrument may have effects that require separate environmental and distributional assessment.

This distinction is particularly important for Islamic finance. Green-finance initiatives can be consistent with maqashid objectives, but implementation still requires governance, measurement, transparency, and risk management. The literature on financed emissions and Shariah governance supports the importance of institutional mechanisms rather than relying solely on normative commitments (Issa et al., 2025). Thus, the conceptual contribution of this study is the articulation of a bridge between ethical purpose and measurable policy mechanisms.

3.7 Implementation challenges and policy tensions

The conceptual integration of *hifz al-bi'ah* into central-bank policy also raises implementation challenges. First, measurement remains a central issue because *hifz al-bi'ah* is a normative concept whereas central-bank decision-making requires observable indicators. Potential indicators include financed emissions, carbon intensity, exposure to environmentally sensitive sectors, green-financing allocation, and climate-related financial-risk measures. These indicators should be treated as operational proxies rather than direct quantitative measures of *hifz al-bi'ah* itself.

Second, monitoring and disclosure mechanisms are necessary if environmental objectives are to influence financial behavior. Green taxonomy, climate-risk disclosure, sustainability reporting, and financial-emissions measurement can provide information for regulators and financial institutions. However, differences in data quality, reporting standards, and verification capacity may limit comparability and create risks of inconsistent implementation or greenwashing. Therefore, the proposed integration requires credible monitoring arrangements rather than relying solely on normative commitments.

Third, institutional capacity may constrain implementation. Financial institutions require appropriate governance structures, environmental-risk expertise, data systems, and analytical capabilities to translate environmental principles into credit and risk-management decisions. Central banks and other regulators likewise require sufficient supervisory capacity to assess climate-related financial risks without creating disproportionate compliance burdens. This suggests that institutional capability is a necessary enabling condition for translating *hifz al-bi'ah* from an ethical principle into measurable policy practice.

Fourth, environmental objectives may create tensions with short-term financial stability or other statutory objectives. A policy that encourages financing toward environmentally preferable activities does not automatically improve financial stability, and an environmental objective may involve adjustment costs, valuation effects, or sectoral reallocation risks. The integration proposed in this study therefore should not be interpreted as requiring environmental objectives to override monetary or financial-

stability mandates. Rather, *hifz al-bi'ah* can provide an ethical lens through which financially material climate risks and long-term ecological consequences are considered alongside existing central-bank objectives.

3.8 Practical implications

For central banks and financial regulators, a clear separation should be maintained between statutory policy objectives and the ethical interpretation of those objectives, while climate risk that is financially material should be addressed through stronger data, risk-assessment, and disclosure mechanisms. For Islamic financial institutions, *hifz al-bi'ah* should be translated into measurable internal indicators, environmental-risk screening, sustainability governance, and transparent reporting rather than being treated only as a general ethical statement. For policymakers, the development of green taxonomies, environmental data, and financial-emissions measurement should be coordinated across relevant authorities, with such measures aligned with existing legal mandates and subjected to appropriate impact evaluation. For researchers, the proposed framework should be tested empirically using bank-level data, policy evaluations, qualitative interviews, or comparative studies across Islamic and conventional financial systems.

This study develops a conceptual link between *hifz al-bi'ah* and central-bank environmental policy by synthesizing literature on Islamic environmental ethics, green banking, sustainable finance, and climate-related financial risk. The review indicates that *hifz al-bi'ah* can be used as a normative ecological lens for understanding the environmental implications of financial allocation, while climate-related financial risks provide a prudential channel through which central banks may act. The analysis maps three documented Bank Indonesia policy channels green LTV/FTV and down payment provisions, RPIM, and KLM to environmental-preservation objectives.

The mapping does not imply that Bank Indonesia formulated these instruments from *maqashid al-shariah*. Rather, the study proposes that *hifz al-bi'ah* provides an additional ethical interpretation of existing instruments, while environmental-risk assessment, financed-emissions disclosure, and green-taxonomy coordination represent areas for further policy development. The distinction between existing policy and conceptual recommendation is central to the contribution.

4. Conclusions

This study demonstrates that Bank Indonesia's macroprudential policy instruments specifically environmentally oriented loan-to-value/financing-to-value (LTV/FTV) ratios, the macroprudential inclusive financing ratio/*Rasio Pembiayaan Inklusif Makroprudensial* (RPIM), and the macroprudential liquidity incentive policy/*Kebijakan Insentif Likuiditas Makroprudensial* (KLM) can be conceptually mapped as financial incentive structures aligned with the Islamic principle of environmental preservation (*hifz al-bi'ah*). Although these instruments were originally formulated to maintain financial-system stability and enhance inclusion without explicitly adopting *maqashid al-shariah* as a statutory mandate, the conceptual mapping confirms that they facilitate ecological protection by reducing financing barriers for low-emission assets and directing capital toward sustainable activities. The core contribution of this article lies in synthesizing three previously disconnected streams of literature: Islamic environmental ethics (*hifz al-bi'ah*), banking-level green finance performance, and central bank macroprudential policies. By establishing a transparent conceptual framework, this research provides a normative interpretive layer that connects Islamic ethical principles to documented central banking tools without conflating normative principles with formal statutory mandates.

The findings yield important practical, regulatory, and institutional implications across multiple levels. For central banks and policymakers, the study emphasizes the necessity of maintaining a clear separation between statutory legal mandates and ethical interpretations, while simultaneously strengthening foundational infrastructure such as

climate-risk assessments, financed-emissions disclosures, and green-taxonomy coordination. For Islamic financial institutions, the principle of *hifz al-bi'ah* must be transformed from a general ethical statement into concrete internal metrics, environmental risk screening protocols, and robust sustainability governance. Building internal institutional capabilities is essential to ensure that macroprudential credit and liquidity incentives effectively translate into measurable sustainability outcomes and tangible climate-risk mitigation.

To extend this inquiry, future research should focus on empirical and methodological validation of the proposed conceptual framework. First, scholars are encouraged to conduct empirical investigations using bank-level data (bank-level data) to measure the concrete impacts of macroprudential liquidity incentives on green financing allocations and financial performance. Second, rigorous policy evaluations alongside in-depth qualitative interviews with central bankers and financial sector practitioners are needed to identify operational and regulatory constraints in implementing sustainable finance policies. Finally, comparative cross-system studies evaluating how Islamic and conventional banking institutions differ in internalizing climate risks will significantly enrich the literature on integrating environmental stewardship into broader financial stability frameworks.

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Author Contribution

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We encourage all authors of articles published in this journal to share their research data. This section provides details regarding where data supporting reported results can be found, including links to publicly archived datasets analyzed or generated during the study. A statement is still required when no new data is created or unavailable due to privacy or ethical restrictions.

Conflicts of Interest

The author declare no conflict of interest.

Declaration of Generative AI Use

The author used Claude AI and ChatGPT to assist in improving the manuscript's structure, language, grammar, clarity, and overall readability to ensure adherence to academic writing standards. All AI-generated suggestions were reviewed and revised by the authors, who retain full responsibility for the accuracy, originality, and integrity of the manuscript.

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