



Regulatory Gaps in Bitcoin Inheritance under Indonesian Civil and Islamic Law

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Abstract

This study examines the legal status of Bitcoin as inheritable property under the Indonesian Civil Code and Islamic law amid increasing digital asset ownership in Indonesia. Despite its growing use, no specific legal framework governs Bitcoin inheritance, creating uncertainty regarding digital wallet access, ownership verification, private key transfer, and the protection of heirs' rights. This research employs a normative legal method using statutory, conceptual, and comparative approaches based on primary, secondary, and tertiary legal materials. The findings indicate that Bitcoin may be classified as inheritable property because it constitutes intangible movable property under the Indonesian Civil Code and satisfies the concepts of *al-māl* and *māl mutaqaawwam* in Islamic law. However, the absence of procedural regulations governing digital asset inheritance continues to undermine legal certainty and effective inheritance administration. This study contributes to the development of Indonesian inheritance law by proposing a normative framework for regulating Bitcoin inheritance and recommending comprehensive legal provisions to ensure legal certainty and stronger protection for heirs in the digital era.

Keywords: Bitcoin Inheritance; Digital Assets; Islamic inheritance law; legal certainty.

Introduction

The rapid development of digital technology has significantly transformed the global financial system through the emergence of crypto assets, particularly Bitcoin (Kumala, 2021). As a blockchain-based digital asset, Bitcoin is no longer viewed solely as a speculative instrument but has increasingly become a medium for wealth storage in modern society (Ningsih et al., 2024). This phenomenon is also evident in Indonesia. According to the Periodic Statistics Report of Digital Financial Asset and Crypto Asset Trading Providers published by Otoritas Jasa Keuangan (Indonesian Financial Service Authority/ OJK), the number of domestic crypto asset consumers increased from 13.71 million users in March 2025 to

21.36 million users in March 2026 (Otoritas Jasa Keuangan (OJK), 2026). This substantial increase indicates that digital assets are becoming an integral part of individual wealth ownership in society. However, the growing ownership of Bitcoin has also generated new legal challenges, particularly when the asset owner passes away. The digital, intangible, and decentralized nature of Bitcoin makes its inheritance mechanism fundamentally different from conventional inheritance objects (Seikku & Sifat, 2026). As a result, existing inheritance law frameworks, both under the Indonesian Civil Code and Islamic law, struggle to accommodate the transfer of digital assets such as Bitcoin. This condition ultimately creates regulatory gaps and legal uncertainty regarding the inheritance of Bitcoin under Indonesian law.

Previous research has extensively discussed the legal status of cryptocurrency within Indonesian civil and Islamic law. Ma'arif et al. (2024) examined the possibility of integrating crypto assets into civil inheritance law by expanding the scope of intangible movable property. Marsanti and Urbaniasi (2025) further argued that crypto assets may be classified as inheritable property based on the concept of intangible objects under the Indonesian Civil Code. From the perspective of Islamic law, Muneeza et al. (2023) discussed the recognition of cryptocurrency as *al-mal* (assets) and its use in Islamic financial obligations, including zakat payments on crypto assets. A similar view was expressed by Ananda Fika & Irsan (2025), who considered cryptocurrency to be eligible as inheritance property based on its ownership structure and economic benefits in accordance with *fiqh* (jurisprudence) principles. Nevertheless, these studies generally remain limited to discussions concerning the legal status and validity of Bitcoin as property. The inheritance mechanism of Bitcoin, particularly within the combined framework of the Indonesian Civil Code and Islamic law, has received relatively limited attention. In practice, the nature of Bitcoin as a decentralized digital asset raises distinct legal issues related to digital wallet access, ownership verification, and the transfer of private keys upon the owner's death.

The novelty of this study lies in its integrated analysis of Bitcoin inheritance from the perspectives of the Indonesian Civil Code and Islamic law while addressing the procedural legal issues that have received limited attention in previous studies. Unlike earlier research, which primarily focuses on recognizing cryptocurrency as inheritable property, this study emphasizes the regulatory gaps concerning digital wallet access, ownership verification, and the transfer of private keys to heirs. Based on these issues, this study examines the legal status of Bitcoin as inheritable property under the Indonesian Civil Code and Islamic law. It further analyzes the legal uncertainty surrounding the transfer of digital assets within the Indonesian legal system and explores the need for a more comprehensive regulatory

framework. Through this analysis, the study contributes to the development of Indonesian inheritance law by offering a normative legal framework that enhances legal certainty and strengthens the protection of heirs in response to the increasing use of digital assets in contemporary society.

Research Method

This study employs a normative legal research method using three approaches (Rizkia & Fardiansyah, 2023). The statutory approach was applied to examine legal provisions concerning inheritance and digital assets in Indonesia. The conceptual approach was used to analyze the concepts of intangible property, ownership rights, *al-māl* (assets), and *māl mutaqaawwam* (valuable wealth) in Islamic law. In addition, a comparative approach was employed to examine the perspectives of the Indonesian Civil Code and Islamic law on Bitcoin as an inheritance asset.

The research utilized primary, secondary, and tertiary legal materials (Imelda et al., 2024). Primary legal materials consisted of the Indonesian Civil Code, regulations on digital financial assets, and Islamic legal provisions on inheritance. Secondary legal materials included scholarly books, and national and international journals discussing crypto assets, digital inheritance, and contemporary Islamic law. Tertiary legal materials were obtained from official reports and statistical publications, including data on crypto-asset users published by the Otoritas Jasa Keuangan (Indonesian Financial Service Authority/ OJK).

Legal materials were collected through library research by systematically selecting and categorizing relevant literature. The analysis was conducted qualitatively using deductive reasoning and legal interpretation methods (Ludiana et al., 2025). The integration of the Indonesian Civil Code and Islamic law was based on the relevance of both legal systems in Indonesian inheritance practice. The interpretation process was carried out by examining the characteristics of Bitcoin and relating them to the concept of intangible movable property under the Indonesian Civil Code, as well as the concepts of *al-māl* and *māl mutaqaawwam* in Islamic law, to assess the legal status of Bitcoin as inheritance property.

Results and Discussion

Legal Recognition of Bitcoin Ownership in Civil and Islamic Law

The rapid expansion of digital technology has transformed the modern understanding of wealth by introducing new forms of assets that no longer depend on physical existence. One of the most prominent digital assets is Bitcoin, a blockchain-based crypto asset that operates through a decentralized, peer-to-peer system without centralized authority. In general, digital assets are understood as electronic data that possess

economic value, are exclusively controllable, and are transferable to other parties (Fadly & Wantoro, 2019). The development of digital assets is no longer limited to electronic documents or social media accounts; it has expanded to include modern financial instruments such as cryptocurrencies (Tuasikal, 2024). Their primary characteristics include an intangible nature, reliance on technological networks, and decentralized operational structures (Lahay et al., 2025).

Among various digital assets, Bitcoin holds a dominant position because its blockchain mechanism enables transactions to occur directly between users without intermediaries institutions. Through the peer-to-peer system, Bitcoin holders exercise exclusive control over their assets using private keys that grant access to and authorize transfers within the blockchain network (Anggara et al., 2024). In addition, Bitcoin is globally traded, possesses measurable market value, and is widely used as a digital investment instrument in contemporary financial markets (Astutik & Ghozali, 2022). These developments indicate that Bitcoin is no longer viewed merely as a technological innovation but has evolved into a form of digital wealth with tangible economic significance.

From the perspective of Indonesian civil law, the legal status of Bitcoin must be examined through the concept of property law under KUHPPerdata or the Indonesian Civil Code. Article 499 of the Civil Code defines property as every object and every right capable of becoming the object of ownership rights. This provision demonstrates that the concept of property in Indonesian civil law is not only limited to tangible objects but also encompasses rights with economic value and that are capable of lawful ownership (Duwalang & Yustiawan, 2025). Furthermore, Articles 503, 504, and 505 of the Civil Code recognize movable intangible property as a legal object under property law (Kheista et al., 2024).

According to the author, Article 499 of the Civil Code indicates that the legal recognition of an object as property does not primarily depend on its physical existence but rather on its capacity to become the subject of ownership rights. In the context of Bitcoin, these characteristics are reflected in its measurable economic value, exclusive control via private keys, and transferability via blockchain mechanisms. Consequently, the relationship between an individual and Bitcoin should be interpreted not merely as a technological control but also as a legal relationship establishing proprietary rights over digital wealth. Therefore, Bitcoin may be legally classified as *onlichamelijke roerende goederen* (intangible movable property) because it meets the elements of economic value, exclusive control, and transferability recognized in civil property law.

Nevertheless, the basis for recognizing Bitcoin in civil law differs significantly from the approach adopted under Islamic law. Civil law primarily situates digital ownership within the framework of proprietary

rights and legal ownership, meaning that an object may receive legal protection as property as long as it has economic value and is subject to ownership. In contrast, Islamic law evaluates not only the economic value of an asset but also the legitimacy of its use and its conformity with Sharia principles. Therefore, the fundamental distinction between the two legal systems lies in the basis of ownership legitimacy. Civil law emphasizes legal control and economic entitlement, whereas Islamic law emphasizes lawful benefit, permissibility, and the absence of prohibited elements such as *gharar* (uncertainty) and *qimar* (gambling).

Within Islamic legal thought, the recognition of Bitcoin is closely associated with the concepts of *al-māl* and *māl mutaqaawwam*. In Islamic jurisprudence, wealth is not restricted to tangible objects but also includes anything possessing value, utility, and social recognition within *'urf* (customary practice) (Suryaman et al., 2024). Consequently, the emergence of digital technology has expanded the contemporary interpretation of wealth within Islamic legal discourse (Asif, 2025). Bitcoin may satisfy the criteria of *māl* (assets) because it possesses exchange value, can be individually owned, and may be transferred to other parties. Abd Wahab et al. (2023) further explain that crypto assets may be categorized as *māl mutaqaawwam* (valuable wealth) as long as they provide legitimate benefits and are not utilized in activities contrary to Sharia principles.

In addition, developments in Islamic FinTech demonstrate that blockchain technology is increasingly viewed as compatible with the broader objectives of Islamic financial systems (Azizah, 2023). Zaman et al. (2025) explain that blockchain characteristics such as transparency, cryptographic security, and distributed recordkeeping may support secure, trust-based financial transactions in Islamic finance. The study further notes that several scholars from the Maliki, Shafi'i, and Hanbali *mazhab* (schools) recognize cryptocurrencies as fulfilling the criteria of property because they possess value and economic utility. However, differences of opinion regarding their Sharia legitimacy persist (Wahab et al., 2024). At the same time, the study emphasizes that the primary concerns surrounding crypto assets in Islamic law concern regulatory uncertainty, the potential for *gharar* (uncertainty), and the lack of standardized Sharia guidelines governing blockchain-based digital assets.

Based on both legal perspectives, civil law and Islamic law each provide a normative basis for recognizing Bitcoin as an object of ownership, although they rely on different conceptual foundations. Under the Indonesian Civil Code, ownership is primarily determined by the existence of legal control, transferability, and economic value. Bitcoin fulfills these characteristics because it can be possessed, transferred, traded, and has measurable financial value despite its intangible nature. Consequently, Bitcoin may be classified as intangible movable property that forms part of

an individual's patrimony and may become an inheritable asset. In contrast, Islamic law approaches ownership from a broader ethical and legal perspective by emphasizing whether an asset qualifies as *al-māl* and *māl mutaqaawwam*, namely property that possesses lawful economic value and is recognized by Sharia. From this perspective, Bitcoin may be regarded as legitimate property provided that its acquisition, ownership, and utilization comply with Islamic legal principles and avoid elements of *gharar*, *maysir*, and unlawful transactions. Although these two legal systems differ in their theoretical justifications, they converge in recognizing that ownership is no longer confined to tangible objects. The emergence of digital assets has broadened the contemporary concept of property by demonstrating that digital control, supported by exclusive access, cryptographic security, and legally recognized economic value, may constitute a valid proprietary right. This convergence provides a stronger normative foundation for recognizing Bitcoin as inheritable property within Indonesia's evolving legal landscape.

Bitcoin's Status as an Inheritable Asset in Civil Law and Islamic Law

After Bitcoin satisfies the legal criteria as property and is recognized as an object of ownership, the subsequent legal issue concerns whether such ownership may be transferred through inheritance. In both civil and Islamic inheritance law, the estate of a deceased person generally consists of all transferable rights and assets that remain legally attached to the deceased at the time of death. Consequently, once Bitcoin is acknowledged as part of an individual's wealth, the legal discussion extends beyond the recognition of ownership to the continuity of proprietary rights after death and the lawful transfer of those rights to heirs. This issue has become increasingly significant as digital assets continue to grow in economic value and are held by a rising number of individuals as investment instruments.

Unlike conventional assets, however, Bitcoin exists exclusively in digital form and is controlled through cryptographic mechanisms, particularly private keys that provide exclusive access to digital wallets. As a result, the inheritance of Bitcoin involves not only the legal determination of ownership but also practical and procedural challenges related to access, authentication, and the effective transfer of control. These characteristics distinguish Bitcoin from traditional inheritance objects and expose important regulatory gaps within existing inheritance law. Therefore, determining whether Bitcoin constitutes inheritable property requires an integrated legal analysis that considers both substantive ownership rights and the procedural mechanisms necessary to ensure that heirs can lawfully acquire, access, and exercise those rights after the owner's death.

The inheritance dimension of digital assets has become increasingly relevant alongside the rapid growth of crypto-asset transactions in Indonesia (Sjofjan et al., 2026). Statistics released by the Indonesian

Financial Services Authority (OJK) in the Digital Financial Asset Trading Report of March 2026 indicate that the total value of crypto-asset transactions throughout 2025 reached approximately IDR 482.23 trillion. The continued increase in transactions in early 2026 further demonstrates that digital assets are no longer marginal technological instruments but have evolved into an integral part of modern economic activity and wealth accumulation in society. This empirical evidence indicates that Bitcoin possesses measurable economic value and functions as a form of wealth owned and controlled by individuals (Wardhana, 2024).

Under the Indonesian Civil Code, inheritance law recognizes that all transferable proprietary rights of the deceased form part of the inheritance estate. This principle is reflected in the doctrine of *saisine*, whereby the deceased's rights and obligations are automatically transferred to heirs upon death (Suhartono et al., 2022). Since Bitcoin may be classified as movable intangible property, the ownership rights attached to Bitcoin should likewise constitute inheritable property rights transferable to lawful heirs. Accordingly, the digital nature of Bitcoin does not eliminate its legal position as part of the deceased's patrimony. This view is consistent with the concept of proprietary rights that places economic value and transferability as essential characteristics of inheritable property (Maiyori et al., 2024).

According to the author, the recognition of Bitcoin as inheritable property demonstrates that inheritance law does not depend exclusively on an asset's physical existence. The decisive element lies in whether the asset contains transferable economic rights that remain attached to the deceased at the time of death. In this context, Bitcoin fulfills those characteristics because it may be owned, controlled, transferred, and economically valued in a manner comparable to other forms of intangible property. Consequently, the death of the owner should not terminate the legal relationship between the digital asset and the inheritance estate, but rather result in the transfer of those rights to the lawful heirs.

From the perspective of Islamic law, the concept of *tirkah* (legacy left by the deceased) refers to all assets, rights, and economic interests left by a deceased person that remain legally connected to the deceased's estate (Wijaya & Iskandar, 2024). The concept is not limited to tangible property but also includes rights and economic interests that can be transferred to heirs. Within Islamic jurisprudence, the scope of *tirkah* continues to evolve in response to changes in the forms of wealth recognized in society, provided that such assets possess utility, economic value, and do not contradict Sharia principles (Siswantoro et al., 2020). Therefore, digital assets such as Bitcoin may, conceptually, constitute *tirkah*, provided that their ownership and use do not involve prohibited elements under Islamic law. This perspective demonstrates that Islamic inheritance law is

sufficiently flexible to accommodate the emergence of modern forms of wealth, including technology-based digital assets.

In Indonesia, the legal status of crypto assets has also been indirectly reinforced by the recognition of crypto trading activities as part of digital financial assets and tradable commodities. Such recognition demonstrates that crypto assets have entered legitimate economic circulation and possess measurable market value within society. According to the author, this condition further strengthens the argument that Bitcoin may constitute inheritable personal wealth because it already functions as an economically recognized asset in contemporary financial activities.

Nevertheless, the inheritance of Bitcoin presents legal challenges that differ significantly from those for conventional inheritance assets. Traditional inheritance systems were historically developed based on the assumption that inherited property exists in physical form or remains under the control of centralized institutions. By contrast, Bitcoin operates through a decentralized blockchain system in which control over assets depends heavily upon access to private keys. As a result, inheritance disputes involving digital assets no longer concern only the transfer of legal ownership but also issues of digital access, authentication, and control over crypto wallets.

This condition reveals a structural gap in contemporary inheritance law within both civil and Islamic legal systems, particularly in responding to the emergence of decentralized digital assets such as Bitcoin. Although Bitcoin may theoretically qualify as inheritable property because it possesses economic value and can be legally owned, the absence of procedural legal mechanisms governing posthumous access to digital assets creates significant legal uncertainty. Existing inheritance regulations primarily focus on the transfer of tangible property or conventional intangible assets administered through centralized institutions. By contrast, Bitcoin is controlled exclusively through cryptographic private keys, which remain inaccessible unless disclosed by the deceased during their lifetime. Consequently, heirs may possess a legitimate legal entitlement to inherit Bitcoin while being unable to exercise ownership rights due to the absence of access credentials. This situation not only undermines the effective implementation of inheritance law but also creates the potential for substantial economic losses, as digital assets may become permanently inaccessible despite their lawful transfer to heirs. Furthermore, neither the Indonesian Civil Code nor Islamic inheritance law provides specific procedural guidance regarding digital wallet access, ownership verification, or private key succession. Therefore, the principal challenge of Bitcoin inheritance extends beyond recognizing its legal status as inheritable property to ensuring that inheritance law can effectively

accommodate decentralized forms of digital ownership based on cryptographic control and provide legal certainty for heirs in the digital era.

Regulatory Gaps in Digital Asset Inheritance (Bitcoin)

The development of digital assets has generated new legal challenges Indonesia's inheritance law system cannot fully address. Although Bitcoin is increasingly recognized as an asset with economic value and capable of lawful ownership (Murniati et al., 2025), Indonesia still lacks a comprehensive legal framework that specifically regulates the inheritance of digital assets (Wahab et al., 2023). Existing regulations concerning crypto assets primarily focus on trading activities and financial supervision, while issues relating to succession rights, heir access, and proof of ownership after death remain legally uncertain. This condition reflects the existence of a regulatory vacuum in the inheritance of digital assets within Indonesian law.

Within the civil law framework, this regulatory gap emerges because the Indonesian Civil Code was originally designed to govern conventional forms of inheritance. As a consequence, Indonesian positive law does not yet provide specific rules on the standards of proof for Bitcoin ownership, the identification of digital wallets belonging to deceased individuals, or procedures for transferring access to private keys to heirs. Unlike conventional inheritance objects, control over Bitcoin depends entirely upon cryptographic access to private keys. In practice, heirs may formally acquire inheritance rights while simultaneously lacking the ability to access or control the inherited digital assets due to the absence of authorized access credentials.

This situation demonstrates that the principal issue surrounding Bitcoin inheritance extends beyond the mere recognition of Bitcoin as property. The problem instead arises from the conceptual tension between conventional inheritance law and blockchain-based digital ownership systems. In civil law, ownership is generally associated with control, economic value, and legal transferability. Consequently, Bitcoin can be recognized as an object of property law once those elements are fulfilled. By contrast, Islamic law does not determine the validity of property solely based on economic value and individual control; it also considers the asset's Sharia legitimacy. Accordingly, the legal status of Bitcoin in Islamic law remains inseparable from broader debates concerning the permissibility of cryptocurrency transactions, particularly regarding elements of *gharar* (uncertainty), speculation, and potential *qimar* (gambling) within crypto activities (Saputri, 2023).

These conceptual differences indicate that the regulatory conflict surrounding Bitcoin inheritance is not merely a technical legal issue but rather stems from deeper epistemological differences between civil law and

Islamic law in how they define ownership itself. Modern civil law tends to place economic value and individual control at the center of proprietary rights. In contrast, Islamic law additionally requires conformity with moral and Sharia principles in determining the legitimacy of wealth. As a result, the recognition of Bitcoin as inheritable property under Islamic law cannot be established solely based on its economic value.

The absence of specific regulation ultimately creates legal uncertainty regarding the heirs' position. The lack of rules governing digital wills, the transfer of digital access rights, and the obligations of crypto trading platforms toward heirs may render the inheritance process difficult to both prove and enforce (De Aprilia et al., 2025). This condition further illustrates that the national inheritance law system remains insufficiently prepared to respond to forms of digital ownership based on decentralized technological structures. In certain circumstances, Bitcoin may even become an inaccessible asset, namely an asset that remains legally recognized yet can no longer be practically accessed after the owner's death. Such conditions demonstrate that the legal recognition of digital assets has not been accompanied by procedural mechanisms to ensure the continuity of inheritance rights in decentralized digital property.

Nevertheless, the concept of *tirkah* (legacy left by the deceased) within Islamic law is sufficiently flexible to accommodate the development of modern forms of wealth. Al-Syansyūrī explains that *tirkah* is not only limited to tangible property but also encompasses rights and economic interests that remain attached to the deceased and are transferable to heirs. From this perspective, digital assets may conceptually form part of *tirkah* to the extent that they fulfill the characteristics of transferable rights. This interpretation suggests that Islamic inheritance law theoretically retains the capacity to accommodate modern digital ownership, even though no specific procedural framework currently governs the verification of digital ownership, the transfer of cryptographic access, or the legal protection of heirs in decentralized asset systems (Salsabila & Sholihin, 2025).

The distinction between digital ownership in civil law and the Sharia legitimacy of crypto assets demonstrates that future regulation concerning Bitcoin inheritance cannot rely exclusively on conventional legal approaches. Instead, it requires an integrated legal framework capable of accommodating both technological developments and the normative principles governing inheritance. Under the Indonesian Civil Code, Bitcoin may be recognized as intangible movable property with economic value that can be transferred to heirs. However, from the perspective of Islamic law, inheritance is not determined solely by ownership but also by whether the property fulfills the criteria of *al-māl* and *māl mutaḡawwam*, ensuring that the inherited asset is legally and ethically acceptable. This dual legal perspective highlights the necessity of harmonizing civil and Islamic legal

principles in regulating digital inheritance. Furthermore, procedural issues—including digital wallet access, ownership verification, private key succession, and mechanisms for authenticating digital assets—remain inadequately regulated within the Indonesian legal system. Without comprehensive harmonization between these substantive and procedural dimensions, the legal status of Bitcoin as inheritable property will continue to generate uncertainty, inconsistent judicial interpretation, and potential disputes among heirs. Therefore, future legislation should establish clear legal standards that integrate technological realities with both civil and Islamic legal principles, thereby providing greater legal certainty, protecting heirs' rights, and ensuring that digital asset inheritance is administered fairly, effectively, and in accordance with Indonesia's pluralistic legal system.

Accordingly, establishing a comprehensive legal framework governing digital asset inheritance has become increasingly urgent in Indonesia. The rapid growth of cryptocurrency ownership, particularly Bitcoin, reflects a significant transformation in the nature of wealth and property ownership in the digital era. As digital assets continue to gain economic value and become part of individuals' investment portfolios, disputes concerning their transfer after death are likely to increase. However, the existing inheritance regime under the Indonesian Civil Code and Islamic inheritance law has not yet been supported by procedural regulations capable of addressing the unique characteristics of blockchain-based assets. The absence of clear legal mechanisms governing ownership verification, digital wallet access, private key succession, and asset recovery creates substantial legal uncertainty for heirs and other interested parties. This regulatory gap not only complicates the administration of inheritance but also increases the risk of permanent asset loss, unauthorized access, and prolonged legal disputes. Consequently, conventional inheritance law may gradually lose its effectiveness in responding to the evolving forms of digital ownership unless it is complemented by adaptive legal reforms. Therefore, developing a comprehensive regulatory framework is essential not only to clarify the inheritance status of Bitcoin but also to ensure legal certainty, strengthen the protection of heirs' proprietary rights, and provide an effective legal response to the continuing expansion of blockchain-based technologies and the broader digital economy.

Conclusion

This study concludes that the operations of PLTU Barru are fundamentally inconsistent with the principles of Islamic environmental jurisprudence, particularly *hifz al-bi'ah*, *maslahah*, and the prevention of *mafsadah*, thereby demonstrating that environmental sustainability should be regarded as an integral component of Sharia-based governance rather

than merely a technical or regulatory concern. By integrating empirical environmental evidence with the normative framework of environmental fiqh, this research advances existing scholarship through an interdisciplinary model for assessing industrial environmental responsibility from both ecological and Islamic ethical perspectives. The findings highlight the need to strengthen environmental governance by adopting cleaner technologies, including electrostatic precipitators, advanced wastewater treatment systems, habitat restoration programs, and regular environmental audits within a Sharia-compliant governance framework supported by *ta'awun* (multi-stakeholder collaboration), community participation, and relevant fatwas. These recommendations provide practical guidance for policymakers and power plant operators seeking to balance energy security with ecological accountability in Muslim-majority contexts. Nevertheless, this study is limited to a single coal-fired power plant and primarily relies on qualitative analysis. Future research should expand comparative investigations across different industrial sectors and regions while incorporating quantitative environmental assessments to further validate the application of Islamic environmental fiqh as a comprehensive framework for sustainable industrial development.

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