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The Islamic Legal Framework of Sadd al-Zarī'ah and Environmental Policy: Evaluating the Permissibility of Sea Sand Exports in Indonesia

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ABSTRACT

As an archipelagic country rich in marine sand resources, Indonesia faces a critical dilemma between exploiting this potential for economic gain and ensuring the protection of its marine ecosystems. This issue is central to the analysis of Government Regulation No. 26 of 2023 concerning the Management of Sedimentation Products at Sea, which effectively reopens sea sand exports. This study aims to examine the sea sand export policy regulated in Government Regulation No. 26 of 2023 and evaluate its compatibility with the Islamic legal principle of Sadd al-Zarī'ah, which prioritises the prevention of harm. Using a normative juridical method that combines legislative and conceptual approaches, this study analyses primary, secondary, and tertiary legal materials. The findings indicate that the regulation contradicts the principles of ecological justice and constitutional mandates (Articles 33 and 28H of the 1945 Constitution), lacks a solid delegative legal basis, and was formulated with insufficient public participation. From the perspective of Sadd al-Zarī'ah, this policy falls under the third category of *zarī'ah* classified by Ibn Qayyim. This is an action that is permissible (*mubah*) but causes significant harm (*mafsadah*). Given that all the conditions for applying Sadd al-Zarī'ah are met, Government Regulation No. 26 of 2023 is considered worthy of revocation and requires revision into a policy that is fair, environmentally friendly, sustainable, and in accordance with sharia and constitutional values. This study notes by urging policymakers to design regulations that truly balance economic interests with long-term ecological sustainability, integrate meaningful public participation, and adopt a preventive legal approach to prevent further environmental degradation.

Keywords: Environmental Law, Islamic Law, Sadd Al-Zarī'ah, Sea Sand Export

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INTRODUCTION

As the world's largest archipelagic country, as reported in Maritime Resources Coordination (Maritim, 2023), Indonesia's maritime territory covers two-thirds of its total area, with a coastline exceeding 99,000 km. As reported in Ministry of Energy and Mineral Resources (ESDM, 2009). This vast territory holds significant marine resources, including sea sand, a strategic commodity with great economic value, which is mainly used for coastal reclamation and infrastructure projects abroad. However, the exploitation of these resources has profound ecological and social consequences. Evidence shows that uncontrolled sea sand mining causes coastal erosion, damage to marine habitats, a decline in fish catches, and negative impacts on coastal communities (Jauhari & Surono, 2023). Cases recorded in regions such as the Riau Islands, Banten, and East Kalimantan highlight the level of environmental degradation associated with this activity since the early 2000s (Walhi, 2024).

In response to this damage, the Indonesian government initially imposed a ban on sea sand exports in 2003 (Khairunnisa et al., 2025). This moratorium was effectively lifted two decades later with the issuance of Government Regulation No. 26 of 2023 concerning the Management of Sedimentation Products at Sea, which allows exports within the framework of sustainable sedimentation use (Jauhari & Surono, 2023). This policy change sparked significant criticism, with academics arguing that it prioritises short-term economic gains over long-term environmental sustainability and ecological justice (Anggariani et al., 2020; Naranta, 2024). In addition, the regulation faces legal scrutiny. Concerns have been raised regarding its compatibility with higher laws, such as Law No. 32 of 2009 on Environmental Protection and Management and Law No. 27 of 2007 on the Management of Coastal Areas and Small Islands, as well as its compliance with the constitutional mandate for public welfare and a healthy environment (Articles 33(3) and 28H of the 1945 Constitution). Procedural deficiencies, including a lack of meaningful public participation as required by Law No. 12 of 2011, further call into question its legal-formal legitimacy (Ambari, 2023).

The existing academic discourse provides a multidimensional critique of the policy. Studies highlight its incompatibility with the principles of the blue and green economy (Naranta, 2024), its negative impact on the welfare of coastal communities (Jauhari & Surono, 2023), and empirical evidence of ecological damage and social displacement in affected areas (Amalia et al., 2024; Fauzy, 2025; Mukarromah & Mulyawati, 2023). At the regulatory level, prior studies have identified overlapping authorities (Kornelius, 2024; Nugraha, 2024; Sari, 2023; Tinggogoy et al., 2024), implementation gaps, and legal uncertainties arising from conflicts with other regulations such as Government Regulation No. 23 of 2023 (Amri, 2023; Kurnia, 2024).

Although existing literature has conducted critical analyses of the environmental, social, and legal dimensions of sea sand export policies, most of these discussions are still insufficient. Hackney et al. (2020) describe systemic risks, including severe riverbank instability and ecological degradation associated with extractive practices. Similarly, Gavriletea's (2017) analysis of the global environmental costs of sand exploitation highlights how weak regulatory oversight exacerbates ecological damage and threatens long-term sustainability. Yuen et al. (2024) identify the lack of reliable data on sand trade in Southeast Asia as a factor that deepens governance deficits and creates regulatory gaps, while Park et al. (2019) emphasise the urgent need for transparent monitoring and preventive regulatory mechanisms to reduce ecological damage. Additional research highlights biodiversity loss associated with unsustainable extraction (Torres et al., 2017), urges the application of careful governance in natural resource management (Koehnken et al., 2020), and criticises fragmented regulatory frameworks that foster legal uncertainty (Newig & Fritsch, 2009; Pickering, 2013). These findings provide convincing evidence that unregulated sand mining, both in rivers and at sea, poses systemic risks to ecosystems, coastal communities, and governance structures.

In the Indonesian context, this study posits that Government Regulation No. 26 of 2023 not only raises constitutional and legal concerns but also contravenes internationally recognized principles of sustainable resource management and ecological justice. The existing literature reveals a significant gap: the absence of an Islamic legal perspective, particularly through the lens of Sadd al-Zarī'ah. This jurisprudential principle serves as a preventive legal mechanism, prohibiting permissible acts (*mubāḥ*) that are likely to lead to significant harm (al-Zuḥaylī, 1986). While mainstream sustainability studies extensively document the concrete impacts of sand mining, integrating Sadd al-Zarī'ah enriches the discourse by introducing an ethical and philosophical framework grounded in Islamic law. This approach aligns with emerging trends in Islamic environmental scholarship, which evaluates resource policies through foundational concepts like Maqāṣid Sharīa (the higher objectives of Islamic law) and the Islamic ethic of environmental stewardship (Susana et al., 2025; Karimullah, 2024; Zuraib, 2024).

Therefore, this study aims to analyse the legality of Indonesia's sea sand export policy under Government Regulation No. 26 of 2023 through the normative framework of Sadd al-Zarī'ah. Employing a normative juridical methodology and conceptual approach, it seeks to evaluate the policy's legal validity while constructing a Sharīa-based ethical evaluation framework. Central to this

inquiry is determining whether the policy yields predominant benefit (*maṣlaḥah*) or is characterised by preventable harm (*mafsadah*). By integrating Islamic legal principles into the discourse on environmental and natural resource law in Indonesia, this study addresses a notable scholarly gap and contributes a morally grounded, intergenerational perspective to public policy evaluation.

METHOD

Research Approach and Data

This study employs a normative juridical method, which systematically examines legal doctrines, principles, and norms to construct coherent legal arguments (Bayles, 2012). As emphasised by Taekema (2018), this type of research requires a clear theoretical and conceptual foundation to guide the selection, interpretation, and critical evaluation of legal materials. Accordingly, the research adopts two complementary analytical approaches. First, a statutory approach is utilised to map and assess the hierarchical consistency of relevant legal instruments, ranging from the 1945 Constitution and pertinent national laws to Government Regulation No. 26 of 2023 concerning the Management of Sedimentation Products at Sea, along with related ministerial regulations. Second, a conceptual approach is applied to explore foundational legal and ethical philosophies, particularly the Islamic jurisprudential principle of Sadd al-Zarī'ah. This principle serves as a normative lens for evaluating policies in terms of their ability to prevent harm (*mafsadah*) and maintain social and environmental welfare.

Data collection was conducted through comprehensive library research and systematic online searches of legal databases and academic repositories, with a focus on sourcing authoritative and peer-reviewed references. The legal materials analysed are categorised into three types:

1) Primary legal sources, including the 1945 Constitution; relevant statutes such as Law No. 13/2022, Law No. 1/2014, and Law No. 32/2014; Government Regulation No. 26/2023; and ministerial regulations, all accessed through the official legal documentation portal[1].
2) Secondary legal sources, comprising scholarly books, peer-reviewed journal articles, and classical and contemporary *fiqh* literature pertaining to Sadd al-Zarī'ah.
3) Tertiary legal sources, such as legal dictionaries and the Indonesian Dictionary (KBBI), used to clarify key terminological and conceptual definitions.

Data Analysis

The analysis was conducted in a structured, deductive, and descriptive manner through three sequential stages.

1) Legal-Constitutional Examination. The legality and normative alignment of Government Regulation No. 26/2023 were assessed against the 1945 Constitution and higher statutory frameworks.
2) Ecological and Governance Evaluation. The regulation was analyzed in light of principles of ecological justice and sustainable governance, informed by contemporary peer-reviewed studies on sand mining and environmental sustainability.
3) Normative Ethical Assessment. The concept of Sadd al-Zarī'ah was applied as a normative filter to evaluate whether the policy adequately prevents potential harm and aligns with the higher objectives (Maqāṣid Sharia) of Islamic law, particularly environmental stewardship and social welfare.

Through this systematic analysis, the study constructs a coherent evaluative framework, enabling robust conclusions regarding the policy's conformity with constitutional mandates, ecological imperatives, and Islamic ethical-legal principles.

RESULTS AND DISCUSSION

Regulatory Intervention and Inherent Controversies

The geography of the Indonesian archipelago, located at the crossroads of the Asian and Australian continents and the Pacific and Indian Oceans, provides a strategic position rich in biological and non-biological natural resources (Listiyono et al., 2022). Among its non-biological assets, marine sedimentation products, consisting of inorganic and organic materials such as sand and mud, have significant economic and ecological value. These deposits are formed through a long geological process of weathering and erosion, then transported and deposited on the seabed by ocean currents. Their accumulation is influenced by three main mechanisms: gravitational re-

[1] Retrieved from https://peraturan.go.id.

sedimentation of slope material, bottom current activity on continental slopes, and pelagic particle deposition (Ambari, 2024). In this sediment matrix, marine sand characterised by fine grains ranging in size from 0.063 mm to 2 mm and originating from rock erosion is of particular concern due to its widespread distribution along Indonesia's coastal areas and seabed. Although sedimentation is a natural process, excessive accumulation can reduce the capacity of coastal environments, disrupt marine ecosystems, and threaten biodiversity (Ulfah, 2025). In addition, the suitability of these materials for construction or reclamation is not universal; varying densities and compositions can pose a risk of structural failure if not managed with technical precision.

In response to the need for orderly management, the Indonesian government issued Government Regulation No. 26 of 2023 concerning the Management of Sedimentation Products in the Sea. This regulatory framework legally regulates the mining, utilisation, and export of sea sand, placing these activities in the context of ecosystem restoration and the economic utilisation of marine resources. However, this policy represents a substantial change, revoking the moratorium on sea sand exports previously established through Ministerial Decree No. 117/MPP/Kep/2/2003 (Khairunnisa & Sarjan, 2025). Despite being framed within a narrative of sustainability, Government Regulation No. 26/2023 has attracted significant scholarly and civil society critique. Central concerns pertain to its formal legality, tangible alignment with constitutional and sectoral legal norms, and the adequacy of its safeguards against environmental degradation and social disruption for coastal communities. Critics argue that the regulation potentially contravenes constitutional mandates, undermines the precautionary principle in natural resource governance, and insufficiently integrates principles of ecological justice.

An Assessment of the Legality of Indonesia's Sea Sand Export Policy

The analysis is structured into four key dimensions: (1) the legal basis and formal validity of the policy, (2) its alignment with constitutional provisions, (3) the impacts on the environment, and (4) the extent and efficacy of public participation in its formulation process.

1. The Legal Basis and Formal Validity of the Policy

The first finding reveals a normative discrepancy between the Government Regulation in question and the provisions of the 1945 Constitution. Articles 33(3) and (4) of the Constitution explicitly mandate that natural resources be managed by the state and used to the greatest benefit of the people's prosperity, guided by the principles of sustainability and justice. In contrast, the sea sand export policy established under this regulation appears more orientated toward short-term economic interests and facilitates the exploitation of coastal resources (Banua, 2025). Consequently, these measures do not adequately reflect the constitutional imperative to protect coastal communities and ensure ecological sustainability.

In substance, Government Regulation No. 26 of 2023 is an exploitable resource within a sedimentation management framework; however, it lacks an integrated approach grounded in precautionary and sustainable development principles. This is evident in the issuance of exploration permits to selected entities without rigorous assessment of their cumulative ecological and social impacts (Asnawi, 2024), thereby contravening the constitutional mandate for equitable and environmentally sound economic governance. Such regulatory oversight not only exacerbates social inequity but also deviates from inclusive resource management principles designed to prioritise public welfare, particularly for coastal communities disproportionately affected by sea sand extraction. Furthermore, the regulation inadequately embodies the sustainable development framework that should underpin marine resource policy. It fails to fully incorporate the precautionary and sustainability principles enshrined in Articles 2 and 22 of Law No. 32 of 2009 on Environmental Protection and Management. A notable indicator of this weak regulatory commitment is the absence of mandatory, rigorous Environmental Impact Analysis (EIA) as a prerequisite for sea sand export approvals, leaving significant environmental and social risks unexamined and unmitigated. Documented cases reveal that sea sand mining has led to severe coastal ecosystem degradation, including habitat loss, erosion of small islands, and diminished fisheries productivity. These ecological disruptions directly undermine the livelihoods of dependent communities. According to Walhi (2024), approximately 35,000 fishing households have lost access to vital marine resources due to ecosystem damage linked to mining activities. Qualitative accounts, such as, a fisherwoman from Bandungharjo Village in Jepara, Central Java, illustrate the enduring socio-economic toll; even after mining ceases, altered seabed structures force fishers to undertake longer, riskier voyages while yields continue to decline (Kiara, 2024).

In the absence of substantive legal and structural reforms, the continued implementation of this policy not only violates constitutional and environmental statutes but also sacrifices fundamental principles of ecological justice and intergenerational equity. A recalibrated regulatory approach, one

that internalises precaution, inclusivity, and sustainability, is therefore imperative to align Indonesia's marine resource governance with both national legal commitments and global sustainability norms.

2. The Alignment with Constitutional Provisions

There is a pronounced lack of meaningful public participation in the formulation of Government Regulation No. 26 of 2023 concerning the Management of Sedimentation in the Sea. This absence contravenes explicit statutory mandates, particularly Article 96 of Law No. 12 of 2011 on the Formation of Legislative Regulations, which guarantees the public the right to provide input during the drafting process through structured consultation forums. In practice, no official documentation indicates the involvement of fishing communities, environmental organisations, or academic experts at any stage of the policy's development or promulgation. This exclusion fundamentally undermines the principles of transparency and accountability that are essential to legitimate lawmaking.

The mandated principle of community participation aligns with the constitutional concept of meaningful involvement, as affirmed in Constitutional Court Decision No. 91/PUU-XVIII/2020. This ruling establishes three core public rights in regulatory formation: the right to be heard, the right to have input considered, and the right to receive explanation. Each of these rights was disregarded during the creation of Government Regulation No. 26 of 2023, as no formal mechanism was instituted to facilitate substantive input from affected groups or the broader public. This participatory deficit reflects an exclusive, technocratic approach to policymaking, wherein governmental and internal stakeholders predominated, while the voices of directly impacted communities, including fishers, coastal residents, and environmental advocates, were marginalised (Walhi, 2024). Such procedural closure not only weakens the policy's democratic legitimacy but also engenders social opposition. Organisations such as Indonesian Environmental Organisation and Greenpeace Indonesia have publicly contested the regulation, arguing that it neglects the constitutional right to a healthy environment and facilitates unregulated resource extraction.

By disregarding participatory and transparent lawmaking principles, the development of Government Regulation No. 26 of 2023 exhibits normative, sociological, and procedural shortcomings. When communities are excluded from legislative processes that directly affect their livelihoods and environments, resultant policies lack public legitimacy and social licence. This case underscores how centralised, opaque regulatory practices are prone to rejection, as they fail to incorporate communal interests or address localised impacts. Consequently, the regulation's drafting process signals a weakened governmental commitment to the democratic and accountable tenets of law formation as enshrined in Indonesian legislation.

3. The Impacts on the Environment

This study reveals profound juridical inconsistencies between Government Regulation No. 26 of 2023 (PP 26/2023) and the higher legal framework, particularly Law No. 32 of 2014 concerning Marine Affairs. Within the principles of legality and the principle of the rule of law (*rechtstaat*), which mandates that all public policies derive from explicit statutory delegation, PP 26/2023 lacks a clear legitimising basis. The regulation cites Article 56 of Law 32/2014 in its considerations. However, this article does not explicitly authorise the formation of a government regulation, thereby contravening the delegation requirement stipulated in Article 8(1) of Law No. 12 of 2011. Consequently, from a legal-formal perspective, PP 26/2023 suffers from a foundational deficit in legitimacy and violates the principle of legality. Beyond formal shortcomings, the regulation's substantive provisions also conflict with the governing legal framework. Law 32/2014 defines marine environmental protection as an integrated effort to conserve resources and prevent pollution or damage. This regulation is flawed because it equates natural marine sedimentation, which is a geological and ecological process, with pollution caused by human activity. In fact, according to the legal definition in Article 1(11), these two things do not fall into the same category. This conceptual misalignment facilitates the policy's primary aim: the exploitation and export of sea sand, an objective fundamentally at odds with the law's conservation-orientated purpose.

The substantive disconnect is further evidenced by PP 26/2023's failure to align with the four core pillars of marine environmental protection under Article 50 of Law 32/2014: conservation, pollution control, disaster management, and damage mitigation. None of these pillars provide a legal basis for treating sedimentation as an exploitable resource. Moreover, Article 5 of the regulation omits any scientific affirmation that sedimentation constitutes environmental damage, revealing an administrative-technical approach devoid of the ecological and scientific rigour mandated by the parent law.

The regulatory dysfunction is compounded by the absence of robust mechanisms for accountability, environmental restoration, and community participation. Empirical data, including reports from Walhi (2024) indicating that over 35,000 fishing families have lost resource access due to habitat destruction, underscore the policy's real-world consequences. These impacts highlight a

disregard not only for legal hierarchy but also for principles of ecological and social justice. Under the principle of *lex superior derogat legi inferiori*, the substantive and formal contradictions between PP 26/2023 and Law 32/2014 critically undermine the regulation's normative legitimacy, warranting comprehensive judicial review.

4. The extent and efficacy of public participation in its formulation process

There is a fundamental normative inconsistency between Government Regulation No. 26 of 2023 on the Management of Sedimentation Products at Sea and Government Regulation No. 5 of 2021 on the Implementation of Risk-Based Business Licensing. While both regulations govern sea sand extraction, they establish contradictory legal requirements and regulatory approaches, resulting in significant legal uncertainty. This disharmony impedes effective implementation, supervision, and law enforcement, creating a dualistic regulatory environment prone to interpretive confusion among both business actors and enforcement agencies.

Government Regulation No. 5 of 2021 explicitly categorises sea sand dredging as a high-risk activity, mandating a comprehensive Environmental Impact Analysis (EIA) and prohibiting operations in ecologically sensitive zones, such as the outermost small islands and islands under 100 hectares. This aligns with the precautionary principle enshrined in overarching environmental legislation, including Law No. 11 of 2020 concerning Job Creation and Law No. 32 of 2009. In stark contrast, Government Regulation No. 26 of 2023 lacks analogous safeguards. It omits compulsory EIA mandates and area-specific restrictions; indeed, Article 9(2) permits the export of marine sedimentation products without establishing clear environmental control parameters. This regulatory conflict generates operational ambiguity and enforcement dilemmas. In practice, it allows business entities to selectively apply the more lenient provisions, while law enforcement officials struggle to determine the applicable legal basis. The resulting legal vacuum not only complicates oversight but also heightens the risk of environmental degradation and social inequity, disproportionately affecting coastal communities dependent on marine ecosystems. The absence of a formal harmonisation mechanism between these regulations further underscores institutional coordination failures in crafting consistent and environmentally responsive policy.

The progressive legal approach and Radbruch's theory of legal certainty can be used simultaneously to analyse and evaluate natural resource policies that contain potential normative, ecological, and social conflicts. By doing so, the law is not only a state apparatus but also an instrument of ecological and social justice for society. Analysed through the lens of Gustav Radbruch's legal theory, which posits that valid law must embody the elements of legal certainty, justice, and utility (Feteriz, 2017; Radbruch, 2006; Raitio, 2021), Government Regulation No. 26 of 2023 exhibits significant deficiencies. Its lack of synchronisation with Regulation No. 5 of 2021 undermines legal certainty, fostering normative overlap and interpretive ambiguity. Furthermore, its failure to assign clear accountability for environmental harm violates principles of justice, particularly for vulnerable coastal populations. From the perspective of utility, the regulation prioritises short-term economic extraction over long-term ecological sustainability, contradicting established principles of environmental governance emphasised in contemporary sustainability discourse (Rockström et al., 2009; Yuen et al., 2024). This reflects a broader regulatory disorientation; wherein foundational legal principles are subordinated to expedient resource exploitation.

The Principle of Sadd al-Zarī'ah in Islamic Jurisprudence

Within Islamic legal theory, the concept of Sadd al-Zarī'ah constitutes a significant method of *ijtihād* (independent legal reasoning) orientated toward the prevention of harm through the strategic closure of pathways that may lead to moral or societal corruption. Etymologically, "*sadd*" denotes "obstructing", while "*zarī'ah*" refers to a "means". Thus, Sadd al-Zarī'ah can be understood as the jurisprudential practice of prohibiting acts that are ostensibly permissible (*mubāḥ*) when they serve as conduits to potential harm (*mafsadah*) or sharia violations (al-Zuḥaylī, 1986). This preventive approach aligns with the overarching Islamic legal maxim of *jalb al-maṣāliḥ wa dar' al-mafāsid*, attracting benefits and repelling harms, and underscores a proactive commitment to moral and social preservation (Washil & Azzam, 2009).

The classical scholar Ibn Qayyim al-Jawziyyah proposed a systematic typology of Sadd al-Zarī'ah, classifying means based on their potential and level of danger. This framework identifies four distinct levels and provides a robust analytical lens for evaluating contemporary policies, particularly in areas such as environmental governance and resource management, where preventing long-term harm is a top priority.

1) Inevitable Means to Prohibition: This category encompasses acts intrinsically linked to unlawful (*harām*) outcomes. Their prohibition is absolute due to the direct and unequivocal causal relationship with corruption (*mafsadah*). A primary example is the consumption of intoxicants, which directly causes inebriation and its attendant moral and social harms.

2) Permissible Means Exploited for Harmful Ends: This category refers to acts that are fundamentally lawful (*mubāḥ*) but are intentionally manipulated to achieve an illicit objective, thereby warranting prohibition. The key justification is the corrupt intention (*niyyah*), which diverts a licit instrument toward a Sharia-subversive end. An example is making a gift (*hibah*) expressly to evade the obligation of almsgiving (*zakāt*).
3) Neutral Means with High Probabilistic Harm: This includes acts that are not inherently harmful but, within a specific socio-cultural context, carry a strong probability of leading to significant harm, such as public discord (fitnah) or social strife. Restriction in such cases is contextual, predicated on a preponderance of potential harm over benefit. An example is public condemnation of idolatry in a manner likely to incite violence rather than foster reform.
4) Means Where Benefit Predominates over Harm: In instances where an act yields a substantial, legitimate benefit (*maṣlaḥah mu'tabarah*) that demonstrably outweighs its associated risks, the counter-principle of *fath* al-Zarī'ah (opening the means) applies. Here, the action is not merely permitted but may be recommended, reflecting Islamic law's pragmatic capacity to prioritize higher objectives (Ibn al-Qayyim al-Jawziyyah, 1996).

Although Ibn al-Qayyim did not formalise these categories into explicit, enumerated conditions, his analytical treatment throughout his works establishes key operative principles for applying Sadd al-Zarī'ah. These include the assessment of causal proximity, the evaluation of intentionality, the contextual weighing of harms and benefits, and the imperative to prioritise public welfare (*maṣlaḥah 'āmmah*). His approach demonstrates the dynamic and responsive nature of Islamic jurisprudence, which engages not only with textual sources but also with the ethical and practical consequences of human action (Jalili, 2020).

The Islamic Legal Framework of Sadd al-Zarī'ah

1. Ibn al-Qayyim's Implicit Principles and Their Application to Indonesia's Sea Sand Export Policy

Although Ibn al-Qayyim al-Jawziyyah (1996) did not articulate the conditions of Sadd al-Zarī'ah in the systematic manner characteristic of contemporary scholarship, his extensive discussions across various works reveal a coherent set of principles essential to the concept's application. Through analysis of his argumentative patterns and classification of means (*zarā'i'*) that warrant closure, three foundational conditions emerge. First, the potential harm (*mafsadah*) arising from a permissible (*mubāḥ*) act must be both probable and significantly outweigh its benefits. This is evident in Ibn al-Qayyim's third category of *zarā'i'*, where actions that are intrinsically permissible become prohibited if they precipitate greater social, moral, or spiritual detriment. Examples include prayers performed at forbidden times or the adornment of women during 'iddah. In such cases, Ibn al-Qayyim underscores the necessity of a proportional and rigorous assessment of benefit (*maṣlaḥah*) against harm (*mafsadah*). Second, the frequency and intent behind a *mubāḥ* act are critical. Actions that are permissible in isolation may become prohibited if repeated in a manner that indicates misuse or deviates from *Sharī*a objectives. Ibn al-Qayyim illustrates this through exceptions such as the permissibility of wearing silk or long garments for men during wartime, where a specific, greater benefit justifies a temporary departure from a general prohibition. This aspect demonstrates that Sadd al-Zarī'ah operates as a flexible, context-sensitive legal tool rather than a rigid doctrine. Third, Sadd al-Zarī'ah must not contravene definitive scriptural texts (*nuṣūṣ qaṭ'iyyah*). Where the Qur'an or Sunnah explicitly permit or command an act, the principle of Sadd al-Zarī'ah cannot be invoked to prohibit it. Ibn al-Qayyim thus positions Sadd al-Zarī'ah as a conditional, *ijtihādī* instrument subordinate to established revelation. This is exemplified in his recounting of 'Umar ibn al-Khaṭṭāb's reversal of a ruling on dowry after being presented with definitive textual evidence (Jalili, 2020).

Applying this threefold framework to Indonesia's sea sand export policy, as enacted through Government Regulation No. 26 of 2023, reveals a clear alignment with the conditions warranting the application of Sadd al-Zarī'ah. Formally, the regulation authorises the exploitation of marine sedimentation products for export. However, in implementation, it functions primarily as a legal conduit for large-scale resource extraction that inflicts significant and systemic ecological harm and exacerbates social inequity. Under Ibn al-Qayyim's typology, this policy corresponds to the third level of Zarī'ah. This is an act whose original legal status is permissible and which may be undertaken with ostensibly legitimate intent but which in practice yields overwhelmingly detrimental consequences. Despite administrative claims of promoting sedimentation management and blue economic growth, the policy has facilitated severe and often irreversible damage to marine ecosystems, diminished fisheries, and displaced coastal communities, as documented by environmental organisations and affected groups (Walhi, 2024). The resulting harm is systemic, long-term, and disproportionately borne by traditional fishers and vulnerable populations, thereby contravening the Islamic legal imperative to prioritise public welfare (*maṣlaḥah 'āmmah*).

In addition, the structure of this policy governance, characterised by non-transparent licensing processes, inadequate environmental oversight, and limited public participation, creates conditions that encourage corrupt practices and undermine regulatory accountability. The absence of mandatory and rigorous environmental impact assessments signifies a disregard for the principle of precaution enshrined in national law and Islamic environmental ethics. Normatively, this policy contradicts the main objectives of Sharia (Maqāṣid Sharia), particularly environmental preservation (*ḥifẓ al-bī'ah*) and the protection of public welfare.

Therefore, the sea sand export policy not only fails to meet contemporary sustainable governance standards but also fulfils the classical requirements for the application of Sadd al-Zarī'ah as explained by Ibn al-Qayyim al-Jawziyyah (1996). A preventive and ethics-based re-evaluation of these regulations is therefore necessary to align state policy with the principles of Islamic law and a commitment to ecological and intergenerational justice.

2. Reassessing Legalisation: A Sadd al-Zarī'ah Critique of Sea Sand Export Policy and Regulatory Failures

Through the legal lens of Sadd al-Zarī'ah, particularly using the typology outlined by Ibn al-Qayyim, the sea sand export policy implemented under Government Regulation No. 26 of 2023 can be categorised under the third classification of *zarī'ah*. This category includes actions that are fundamentally permissible (*mubāḥ*) but, in practice, cause harm (*mafsadah*) that significantly outweighs their benefits (*maṣlaḥah*). Although formally designed as a mechanism for sustainable sediment management to support the blue economy, empirical evidence shows a pattern of uncontrolled exploitation of marine resources. Therefore, this policy requires a rigorous evaluation of the three core conditions set out in the Sadd al-Zarī'ah framework, as explained by Ibn al-Qayyim.

1) The first condition permits the prohibition of a *mubāḥ* act when it demonstrably generates greater and more tangible harm than potential benefit (Jalili, 2020). In the context of Regulation No. 26/2023, the policy has precipitated systemic ecological degradation. The extraction of sea sand devastates critical coastal habitats including coral reefs, seagrass beds, and mangrove forests, which are essential for oceanic equilibrium and artisanal fisheries. This degradation not only diminishes marine biodiversity and productivity but also accelerates coastal erosion and exacerbates climate vulnerabilities. Compounding this harm is the policy's failure to mandate a stringent Environmental Impact Assessment (AMDAL), thereby contravening the precautionary principle fundamental to sound environmental governance. Significant social *mafsadah* is equally evident. The regulation marginalises coastal communities, particularly traditional fishers, whose fishing grounds are disrupted by dredging activities. Socio-economic disparities are widened as export permits predominantly benefit large corporate entities, while vulnerable populations suffer direct livelihood losses. These disproportionate, long-term social costs starkly contrast with the transient economic gains accrued by the state and private actors. From the perspective of Sadd al-Zarī'ah, such an outcome constitutes a clear pathway to structural injustice, necessitating legal prevention and correction. Furthermore, the policy engenders legal and constitutional harms. Regulation No. 26/2023 violates principles of legality, as it lacks a clear statutory foundation and arguably constitutes an ultra vires enactment inconsistent with the tenets of sound regulation-making under Law No. 12 of 2011. Ambiguous definitions of "sedimentation" and insufficient environmental safeguards have created interpretive loopholes conducive to regulatory abuse, thereby undermining legal certainty and fostering governance risks, including corruption. Within the Sadd al-Zarī'ah framework, ostensibly legitimate mechanisms that precipitate administrative and institutional damage must be restrained.
2) The second condition requires that a *mubāḥ* act not be perpetuated if it carries a high and recurrent potential for damage, unless it yields robust, demonstrable, and overarching benefits (*maṣlaḥah 'āmmah*) that clearly outweigh the associated harms (Jalili, 2020). Regulation No. 26/2023 fails to meet this criterion. Established as a permanent national policy without temporal limits, routine evaluation protocols, or damage-based termination clauses, it institutionalises continuous ecological and social harm. Documented outcomes including sustained marine ecosystem degradation, erosion of fishers' livelihoods, and regulatory conflicts with Government Regulation No. 5 of 2021, indicate that the policy functions as a persistent vehicle for systemic *mafsadah*, rather than a controlled activity with manageable risk. Moreover, the purported benefits of the policy lack substantiation. Government assertions that sea sand exports support a blue economy or address sedimentation are not corroborated by credible empirical evidence or academic scrutiny. No data demonstrate that these activities enhance environmental resilience or promote equitable welfare improvements. Instead, benefits

appear concentrated within extractive sectors and economic elites, while coastal communities endure the brunt of adverse impacts.

3) The third condition stipulates that prohibiting a *mubāḥ* act via Sadd al-Zarī'ah is permissible only when such prohibition does not contravene definitive (*qaṭ'ī*) scriptural texts (Jalili, 2020). In the case of sea sand exports, no explicit Qur'anic or *ḥadīth* injunction mandates or expressly permits such activity. Consequently, the policy falls outside the scope of *qaṭ'ī* rulings and remains amenable to juristic evaluation aimed at harm prevention. Conversely, Islamic scripture emphatically prohibits environmental corruption and social disruption, as underscored in QS Al-A'rāf (7:56): "*Do not spread corruption on earth after it has been set right*." This verse enshrines environmental stewardship as a universal Islamic imperative. Thus, proscribing sea sand exports, whether through revocation or substantive amendment of Regulation No. 26/2023, aligns with, rather than contradicts, Sharīa objectives. It embodies the legal *maxim dar'al-mafāsid muqaddam'alā jalb al-maṣāliḥ*, which is 'preventing harm takes precedence over securing benefit' (Washil & Azzam, 2009). In this instance, the alleged economic benefits are vastly outweighed by demonstrable ecological, social, and legal harms, providing compelling grounds under Islamic jurisprudence for the policy's re-evaluation and reform.

This study contends that, under prevailing conditions, the existing regulatory framework is ineffective in preventing harm (*mafsadah*). The lack of a robust institutional foundation, coupled with limited environmental oversight, inadequate public participation, and fragmented inter-sectoral coordination, collectively transforms legalization from a controlled process into a conduit for ecological degradation and social inequity. Consequently, a policy of legalization premised on ideal assumptions, without corresponding structural preparedness and enforcement capacity, ultimately accelerates resource depletion and exacerbates systemic vulnerabilities.

Through the jurisprudential lens of Sadd al-Zarī'ah (blocking the means to harm), Government Regulation No. 26 of 2023 meets the conditions for prohibiting a normally permissible (*mubāḥ*) act, as outlined by scholars such as Ibn al-Qayyim. Specifically, the regulation:

a) results in harms (*mafsadah*) that demonstrably outweigh any potential benefits (*maṣlaḥah*);
b) lacks accompaniment by substantively legitimate and compelling benefits; and
c) contradicts the fundamental principles (*nūṣūṣ*) of Islamic law, which explicitly prohibit injustice (*ẓulm*) and all forms of corruption or ruin (*fasād*).

Thus, the application of Sadd al-Zarī'ah provides a cogent analytical basis for concluding that the sea sand export policy institutionalized by Government Regulation No. 26 of 2023 constitutes a means (zarī'ah) facilitating significant and systemic harm. Beyond its economic and social shortcomings, the policy fundamentally conflicts with the higher objectives of Islamic law (Maqāṣid Sharīa), particularly the preservation of the environment (*ḥifẓ al-bī'ah*), the upholding of justice (*'adl*), and the safeguarding of public welfare (*maṣlaḥah 'āmmah*). In this light, the revocation or substantive revision of the regulation emerges not merely as a pragmatic policy alternative, but as a moral and Sharīa obligation. Such action constitutes a necessary measure to block the pathways to harm, and to uphold principles of sustainable and equitable governance in accordance with Islamic ethical norms.

CONCLUSION

The sea sand export policy based on Government Regulation No. 26 of 2023 is fundamentally impaired due to significant legal and ethical shortcomings, which collectively undermine its validity and effectiveness. These deficiencies are evident in three interrelated dimensions. First, the regulation suffers from substantial inconsistency, marked by normative conflicts with higher-level legislation such as Government Regulation No. 5 of 2021, thereby creating legal uncertainty and undermining the hierarchical integrity of the national legal system. Second, the regulation lacks a valid foundation for delegation, as it is not grounded in a clear mandate from superior law. This constitutes a fundamental breach of the principle of legitimate delegation, which is essential to regulatory legitimacy. Third, the process of its formation ignored the procedural principles of public participation and transparency, contrary to the democratic norms of inclusive governance and accountable policymaking. Cumulatively, these weaknesses violate the fundamental principles of the rule of law, particularly legal certainty, consistency, and procedural justice, as emphasised in Gustav Radbruch's jurisprudential framework.

From an Islamic legal standpoint, the policy in question contravenes the principle of precaution (*iḥtiyāṭ*) intrinsic to the doctrine of Sadd al-Zarī'ah (blocking the means). While the regulation itself may be classified as a nominally permissible act (*mubāḥ*) within the typology of scholars such as Ibn

al-Qayyim al-Jawziyyah, it functions as a conduit for significant and systemic harm (*mafsadah*). This harm manifests in environmental degradation, detriment to coastal communities, and an erosion of legal integrity. When evaluated through the lens of the higher objectives of Islamic law (Maqāṣid Sharīa), specifically the preservation of life (*ḥifẓ al-nafs*), natural resources (*ḥifẓ al-māl*), social welfare (*maṣlaḥah*), and ecological equilibrium, the policy's documented harms demonstrably outweigh its alleged benefits. Its continued enforcement is therefore ethically and normatively indefensible. Consequently, a substantive revision or outright revocation of this regulation is imperative. It must be replaced by a legal instrument that aligns with constitutional mandates, principles of ecological justice, and the foundational Islamic legal imperative to prevent harm.

The implications of this study are primarily policy and regulatory in nature. This highlights the importance of a future natural resource governance framework that is legally coherent, strong, and developed through an inclusive and transparent process. Most importantly, the framework must institutionalize a preventive and precautionary approach, aligning national constitutional principles with Islamic ethical commitments related to management and justice.

This study is not without limitations. As a normative and conceptual study, it prioritises doctrinal criticism over a broad empirical assessment of the impact of policies in the field. Future research should investigate the practical implementation of participatory and Sharia-based legislative models, as well as further explore the operational integration of Maqāṣid Sharīa and *fiqh al-bī'ah* (environmental law) into Indonesian legal and policy reform. Such empirical research will be key to bridging normative theory with governance practice, enriching both academic discourse and efforts toward equitable and sustainable marine resource management.

References

Al-Zuḥaylī, W. (1986). *Uṣūl al-fiqh al-islāmī (Vol. 2)*. Damascus: Dār al-Fikr.

Amalia, K., Dandi, S., & Wahyuningsih, Y. (2024). Kebijakan lingkungan terhadap permasalahan tambang pasir di Moro Kepulauan Riau yang berdampak pada lingkungan masyarakat Moro. *Journal Polsight*, *1*(2), 139–157. https://doi.org/10.62771/pk.v1i2.21.

Ambari, M. (2024). Beragam dampak buruk dari penambangan sedimentasi laut. *Mongabay*. https://mongabay.co.id/2024/11/29/beragam-dampak-buruk-dari-penambangan-sedimentasi-laut/.

Amri, I. F., Fadhillah, S. A., Minga, B. W., Andriani, K., & Ramdhan, D. S. (2023). Sinkronisasi vertikal PP No. 26/2023 dengan UUD NRI Tahun 1945 legal policy ekspor pasir laut. *UNES Law Review*, *6*(1), 2338–2350. https://doi.org/10.31933/unesrev.v6i1.1009.

Anggariani, D., Sahar, S., & Sayful, M. (2020). Tambang Pasir dan Dampak Sosial Ekonomi Masyarakat di Pesisir Pantai. *SIGn Journal of Social Science*, *1*(1), 15-29. https://doi.org/10.37276/sjss.v1i1.96.

Asnawi, A. (2024). Ekspor pasir laut: Ancam ekosistem dan masyarakat, untuk kepentingan siapa? *Mongabay*. https://mongabay.co.id/2024/10/28/ekspor-pasir-laut-ancam-ekosistem-dan-masyarakat-untuk-kepentingan-siapa/.

Banua, T. R. (2025, February 22). Ekspor pasir laut: Keuntungan jangka pendek atau kerusakan jangka panjang? *Marine and Coastal Policy Research*. https://mcpr.komitmen.org/2025/02/22/ekspor-pasir-laut-keuntungan-jangka-pendek-atau-kerusakan-jangka-panjang/.

Bayles, M. E. (2012). *Principles of law: A normative analysis* (Vol. 5). Springer Science & Business Media.

ESDM. (2009). *Peresmian pengoperasian kapal Geomarin III*. ESDM. https://www.esdm.go.id/id/media-center/arsip-berita/peresmian-pengoperasian-kapal-geomarin-iii.

Fauzy, F., Hafsar, K., & Tetty, T. (2025). The economic impact of sand mining on coastal communities in pantai harapan village, lingga regency. *Aurelia Journal*, *7*(1), 109-116. http://dx.doi.org/10.15578/aj.v7i1.15768

Feteris, E.T. (2017). Peczenik's Theory of Legal Transformations and Legal Justification. In: Fundamentals of Legal Argumentation. *Argumentation Library*, vol 1. Springer, Dordrecht. https://doi.org/10.1007/978-94-024-1129-4_9

Gavriletea, M. D. (2017). Environmental impacts of sand exploitation: Analysis of sand market. *Sustainability, 9*(7), 1118. https://doi.org/10.3390/su9071118.

Hackney, C. R., Darby, S. E., Parsons, D. R., Best, J. L., Aalto, R., Nicholas, A. P., Houseago, R., & Leyland, J. (2020). River bank instability from unsustainable sand mining in the lower Mekong River. *Nature Sustainability, 3*(3), 217–225. https://doi.org/10.1038/s41893-019-0455-3.

Ibn al-Qayyim al-Jawziyyah. (1996). *I'lām al-muwaqqi'īn* (Vol. 5). Beirut, Lebanon: Dār al-Kutub.

Jalili, I. (2020). *Eksistensi Sadd adz-Dzari'ah dalam ushul fiqh: Kajian pemikiran Ibnu Qayyim al-Jauziyyah (w. 751 H/1350 M)*. Klaten: Penerbit Lakeisha.

Jauhari, A., & Surono, A. (2023). Pengaruh kebijakan izin ekspor sedimentasi pasir laut terhadap keadilan ekologis pada kesejahteraan masyarakat pesisir pantai. *National Conference on Law Studies*, *5*(1), 68–86. https://conference.upnvj.ac.id/index.php/ncols/article/view/2681.

Karimullah, S. S. (2024). Humanitarian Ecology in Islamic Law: Balancing Human Needs and Environmental Preservation in Islamic Law. *Asy-Syari'ah*, *26*(2), 113–136. https://doi.org/10.15575/as.v26i2.38177.

Khairunnisa, D., Shatila, A., & Sarjan, M. (2025). Hubungan kebutuhan manusia dan pengelolaan sumber daya alam: Analisis kegiatan ekspor pasir laut di Indonesia. *Lambda: Jurnal Pendidikan MIPA dan Aplikasinya*, *5*(1), 127–132. https://doi.org/10.58218/lambda.v5i1.1209.

Kiara. (2024). Kisah Mak Tri: Merawat Laut, Memberdayakan Perempuan. https://www.kiara.or.id/2024/12/18/kisah-mak-trimerawat-laut-memberdayakan-perempuan/.

Koehnken, L., Rintoul, M. S., Goichot, M., Tickner, D., Loftus, A. C., & Acreman, M. C. (2020). Impacts of riverine sand mining on freshwater ecosystems: A review of the scientific evidence and guidance for sustainable management. *Science of The Total Environment, 755*(Pt 1), 142468. https://doi.org/10.1016/j.scitotenv.2020.142468.

Kornelius, Y. (2024). Urgensi pencabutan perizinan kegiatan tambang pasir laut sebagai upaya pelestarian lingkungan hidup masyarakat pesisir. *Hukum Inovatif: Jurnal Ilmu Hukum Sosial dan Humaniora*, *1*(2), 81–96. https://doi.org/10.62383/humif.v1i2.108.

Kurnia, K. (2024). Juridical Analysis of The Formation of Government Regulation Number 26 of 2023 Concerning Management of Sedimentation Products in the Sea. *Literasi Hukum*, *8*(1), 53–68. https://doi.org/10.31002/lh.v8i1.1501.

Listiyono, Y., Prakoso, L., & Sianturi, D. (2022). Strategi pertahanan laut dalam pengamanan alur laut kepulauan Indonesia untuk mewujudkan keamanan maritim dan mempertahankan kedaulatan Indonesia. *Jurnal Education and Development, 10*(2), 319–324. https://journal.ipts.ac.id/index.php/ED/article/view/3742.

Maritim. (2023). *Menuju Puncak Pengintegrasian Rencana Tata Ruang Darat Dan Laut*. Jakarta: Kementerian Koordinator Bidang Kemaritiman dan Investasi. https://maritim.go.id/uploads/magazine/20240106110809-2024-01-06magazine110800.pdf.

Mukarromah, A., & Mulyawati, T. (2023). Demokrasi Lingkungan Hidup Masyarakat Pulau Kodingareng: Konflik Penambangan Pasir Laut dan Masyarakat Nelayan di Sulawesi Selatan. *International Journal of Demos*, *5*(2), 263-278. https://doi.org/10.37950/ijd.v5i2.430

Naranta, E. H. G. (2024). Pengaruh inkonsistensi kebijakan ekspor pasir laut terhadap pengelolaan sumber daya alam dan keberlanjutan ekologis. *Prosiding Seminar Nasional Program Doktor Ilmu Hukum*, *1*, 304–316. https://proceedings.ums.ac.id/pdih/article/view/4708.

Newig, J., & Fritsch, O. (2009). Environmental governance: Participatory, multi-level – and effective? *Environmental Policy and Governance, 19*(3), 197–214. https://doi.org/10.1002/eet.509.

Nugraha, K. P. (2024). Analisis dampak implementasi Peraturan Pemerintah Nomor 26 Tahun 2023 tentang pengelolaan hasil sedimentasi di laut: Tinjauan terhadap dampak lingkungan hidup. *Quantum Juris: Jurnal Hukum Modern*, *2*, 42–61. https://journalversa.com/s/index.php/jhm/article/view/3032.

Park, W.-J., Kim, T., Roh, S., & Kim, R. (2019). Analysis of Life Cycle Environmental Impact of Recycled

Aggregate. *Applied Sciences*, *9*(5), 1021. https://doi.org/10.3390/app9051021.

Pickering, J. (2013). Ecological reflexivity: Characterising an elusive virtue for governance in the Anthropocene. *Environmental Politics, 22*(3), 443–460. https://doi.org/10.1080/09644016.2013.755387.

Radbruch, G. (2006). *Statutory lawlessness and supra-statutory law (1946)*. Oxford Journal of Legal Studies, 26(1), 1–11. https://doi.org/10.1093/ojls/gqi041.

Raitio, J. (2021). Legal Certainty. In: Sellers, M., Kirste, S. (eds) *Encyclopedia of the Philosophy of Law and Social Philosophy*. Springer, Dordrecht. https://doi.org/10.1007/978-94-007-6730-0_136-2

Rockström, J., Steffen, W., Noone, K. *et al. (2009).* A safe operating space for humanity. *Nature* 461, 472–475. https://doi.org/10.1038/461472a.

Sari, D. L. I. (2023). Kebijakan ekspor pasir laut pasca diundangkan Peraturan Pemerintah Nomor 26 Tahun 2023 berdasarkan perspektif teori sistem hukum. *Jurnal Hukum Samudra Keadilan*, *18*(2), 406–423. https://doi.org/10.33059/jhsk.v18i2.8322.

Susana, L. M., Tripalupi, R. I., Kholil, S., Efendi, N., & Sakinah, G. (2025). Reconstructing Islamic Legal Norms in Environmental Governance: A Maqasid-Based Legal Critique of Indonesia's Resource Policies. *Al-Istinbath: Jurnal Hukum Islam*, *10*(2), 650–670. https://doi.org/10.29240/jhi.v10i2.13038.

Taekema, S. (2018). Theoretical and normative frameworks for legal research: Putting theory into practice. *Law and Method, 2018*(2), 1–17. https://doi.org/10.5553/REM/.000031.

Tinggogoy, A. V., Pinori, J. J., & Pinangkaan, N. (2024). Tinjauan yuridis terhadap pengambilan pasir di pulau kecil ditinjau dari Peraturan Pemerintah Nomor 23 Tahun 2023. *Lex Privatum*, *12*(5), 1–10. https://ejournal.unsrat.ac.id/v3/index.php/lexprivatum/article/view/57073.

Torres, A., Brandt, J., Lear, K., & Liu, J. (2017). A looming tragedy of the sand commons. *Science, 357*(6355), 970–971. https://doi.org/10.1126/science.aao0503.

Ulfah, A. (2025). Sedimen laut jadi pemicu 'area mati', lautan terancam. *RRI*. https://www.rri.co.id/iptek/1475979/sedimen-laut-jadi-pemicu-area-mati-lautan-terancam.

Walhi. (2024). *Masyarakat dan perempuan pesisir bersama WALHI melawan pertambangan dan ekspor pasir laut*. WALHI. https://www.walhi.or.id/masyarakat-dan-perempuan-pesisir-bersama-walhi-melawan-pertambangan-dan-ekspor-pasir-laut.

Washil, F. M., Nashr, & Azzam, A. A. M. (2009). *Al-Madkhal fi al-qawa'id al-fiqhiyyah wa atsaruha fi al-ahkam al-syar'iyyah*. Jakarta: Amzah.

Yuen, K. W., Das, D., Tran, D. D., & Park, E. (2024). Southeast Asia's dynamic sand trade and the need for better data. *The Extractive Industries and Society, 18*, 101452. https://doi.org/10.1016/j.exis.2024.101452.

Zuraib, M. A. G. (2024). Sustainability of Natural Resources in Islamic Jurisprudence. *International Journal of Religion*, *5*(2), 377-382. https://doi.org/10.61707/1hyhyt71.