

Implementing Caliphate Values in the Qur'an through Zero Waste in an Ecological Tafsir Study

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Abstract

Environmental degradation and waste accumulation represent critical challenges that extend beyond technical or policy failures, reflecting deeper ethical and moral crises in human–nature relations. This study examines how Qur'anic caliphate (*khalīfah*) values can be operationalized through zero waste practices, bridging normative Islamic ethics and contemporary environmental action. Using a qualitative normative–textual approach within an ecological tafsīr framework, Qur'anic verses on stewardship, balance (*mīzān*), moral trust (*amānah*), and prohibitions against excess (*isrāf*) and environmental destruction (*fasād*) were thematically analyzed alongside classical and contemporary exegeses. The findings reveal that zero waste embodies a practical manifestation of Qur'anic ethics, translating *khalīfah*, *mīzān*, and *amānah* into actionable environmental behaviors, including consumption reduction, waste prevention, reuse, recycling, and organic waste management. This operational mapping demonstrates that ecological responsibility is an inherent dimension of Islamic ethical teachings, offering a systematic framework for implementing value-based sustainability practices. The study contributes theoretically by advancing ecological tafsīr from conceptual ethics toward practice-oriented application and highlights the potential of religious principles to transform environmental behavior in contemporary Muslim contexts. Future research should investigate the empirical effectiveness of zero waste practices grounded in Qur'anic ethics and explore comparative eco-theological applications across communities.

Keywords: Qur'anic Ethics, Khalīfah, Zero Waste, Ecological Tafsīr, Sustainable Behavior.

Abstrak

Degradasi lingkungan dan akumulasi limbah merupakan tantangan kritis yang melampaui kegagalan teknis atau kebijakan, mencerminkan krisis etika dan moral yang lebih mendalam dalam hubungan manusia–alam. Penelitian ini mengkaji bagaimana nilai khalīfah dalam Al-Qur'an dapat dioperasionalkan melalui praktik zero waste, menjembatani etika normatif Islam dan tindakan lingkungan kontemporer. Menggunakan pendekatan kualitatif normatif–tekstual dalam kerangka tafsīr ekologis, ayat-ayat Al-Qur'an tentang khalīfah, *mīzān* (keseimbangan), *amānah* (amanah moral), serta larangan terhadap *isrāf* dan *fasād* dianalisis secara tematik bersamaan dengan tafsir klasik dan kontemporer. Temuan menunjukkan bahwa zero waste merupakan manifestasi praktis dari etika Qur'ani, menerjemahkan nilai khalīfah, *mīzān*, dan *amānah* ke dalam perilaku ekologis yang dapat dilakukan, termasuk pengurangan konsumsi, pencegahan limbah, pemanfaatan ulang, daur ulang, dan pengelolaan limbah organik.



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Pemetaan operasional ini menunjukkan bahwa tanggung jawab ekologis adalah dimensi inheren dari ajaran etika Islam, menawarkan kerangka sistematis untuk menerapkan praktik keberlanjutan berbasis nilai. Penelitian ini memberikan kontribusi teoretis dengan mengembangkan tafsir ekologis dari etika konseptual menuju penerapan berbasis praktik dan menekankan potensi prinsip agama untuk mentransformasi perilaku lingkungan dalam konteks masyarakat Muslim kontemporer. Penelitian lanjutan disarankan untuk mengevaluasi efektivitas empiris praktik zero waste berbasis etika Qur'ani dan mengeksplorasi aplikasi ekoteologi komparatif di berbagai komunitas.

Kata kunci: Etika Qur'ani, Khalifah, Zero Waste, Tafsir Ekologis, Perilaku Berkelanjutan.

Introduction

The global environment is currently facing an ecological emergency characterized by accelerating ecosystem degradation, escalating waste accumulation, climate change, and growing ecological imbalance. These conditions demonstrate that environmental crises can no longer be understood merely as technical or policy failures, but rather as manifestations of deeper ethical, moral, and worldview crises in human–nature relations (Muhamad et al., 2020). Despite decades of technological advancement and environmental governance initiatives, ecological destruction continues unabated, underscoring the urgent need for alternative ethical frameworks capable of reshaping human behavior toward long-term sustainability.

In response to this emergency, recent developments in environmental scholarship indicate a significant shift toward integrating religious ethics into contemporary ecological discourse. Within the Islamic intellectual tradition, Qur'anic hermeneutics has increasingly been recognized as a transformative framework through which sacred texts are interpreted in dialogue with modern environmental challenges. Existing studies suggest that Qur'anic interpretation is capable of generating ethical, ecological, and spiritual paradigms that move beyond abstract moral prescriptions and contribute to socio-ecological transformation in concrete contexts 1. This shift reflects a broader reorientation of tafsir from predominantly textual analysis toward contextual engagement with global ecological crises.

A prominent trend within this growing body of scholarship is the renewed attention to the ecological vocabulary embedded in the Qur'an. The Qur'anic text contains extensive references to environmental elements, including the earth (*al-ard*), the universe (*al-'ālamīn*), the sky (*al-samā'*), stars (*al-burūj*), animals (*al-anām*), water (*mā'*), plants (*al-nabāt*), wind (*al-nīh*), the sun (*al-shams*), the moon (*al-qamar*), and mountains (*jabal*). This linguistic richness indicates that the environment is not merely a cosmological backdrop, but an integral

component of the Qur'an's ethical worldview, emphasizing balance, protection of living beings, and ecological sustainability (Munajib, 2023).

Islamic environmental ethics is further grounded in key normative principles such as *mīzān* (balance), *khalīfah* (human stewardship over the earth), and *amānah* (moral trust). The Qur'an and Sunnah consistently prohibit environmental aggression and excessive exploitation, while simultaneously promoting just and sustainable resource management (Elouazzani et al., 2025; Muhamad et al., 2019). However, a critical controversy emerges at this juncture: despite the extensive articulation of Qur'anic environmental ethics in academic literature, environmental degradation—particularly waste accumulation driven by excessive consumption—continues to intensify. This paradox reveals a persistent disjunction between normative ethical formulations and their practical implementation in everyday environmental behavior.

Several studies have attempted to address this gap by integrating Qur'anic values with community-based environmental practices. Educational initiatives, reforestation programs, and organic agriculture inspired by Islamic teachings have been shown to encourage communities to perceive environmental conservation as a form of worship and spiritual responsibility (Yudhiantara & Muhyidin, 2025). Moreover, Islamic ethical principles exhibit strong convergence with contemporary sustainability frameworks, particularly in their emphasis on justice, balance, and long-term environmental protection (Aboukhousa et al., 2025). Environmental health concerns—including hygiene, waste reduction, and climate change mitigation—are also increasingly framed as religious obligations that reinforce ecological responsibility (Mohidem & Hashim, 2023).

Nevertheless, significant research gaps remain. First, much of the existing literature on Qur'anic environmental interpretation remains predominantly normative and conceptual, offering limited insight into how Islamic ethical principles—particularly the concept of *khalīfah*—can be operationalized within specific and measurable contemporary environmental practices. Second, the ecological interpretation of certain Qur'anic verses continues to generate methodological debate, especially regarding the risk of ahistorical or decontextualized readings. Verses such as Qur'an 2:205 and 30:41, for instance, have been critically examined to ensure that their environmental interpretations remain consistent with textual and historical contexts (Eser, 2024). Third, the growing digitalization of Qur'anic interpretation presents both opportunities for broader engagement and challenges related to authority, authenticity, and interpretive standardization (Sati et al., 2025).

Against this backdrop, this study seeks to address the following research question: how can Qur'anic caliphate (khalīfah) values be operationally implemented through the zero waste approach as a solution to contemporary environmental crises? Accordingly, the primary objective of this research is to examine zero waste not merely as an environmental management strategy, but as an implementative ethical model through which Qur'anic principles of stewardship are translated into concrete ecological practice within an ecological tafsir framework.

The early hypothesis advanced in this study is that zero waste represents a practical manifestation of Qur'anic values such as khalīfah, mīzān, and amānah, rather than a purely technical waste-management strategy. By positioning zero waste as an ethical bridge between Islamic normative teachings and modern sustainability practices, this study aims to contribute theoretically to the development of ecological tafsir and practically to the cultivation of value-based environmental behavior grounded in Islamic ethics.

Methodology

This study employs a qualitative approach with a normative–textual analytical design integrated within an ecological tafsir framework. This approach is selected to enable a systematic exploration of how Qur'anic caliphate (khalīfah) values can be operationally implemented in contemporary environmental practices, specifically through the zero waste approach. Rather than limiting the analysis to textual interpretation, the study emphasizes the translation of normative Qur'anic ethics into an implementative ethical framework applicable to real-world environmental behavior.

The primary units of analysis consist of Qur'anic verses that articulate key environmental-ethical concepts, including khalīfah (human stewardship over the earth), amānah (moral trust), mīzān (balance), as well as prohibitions against fasād (environmental destruction), isrāf, and tabdhīr (excess and wastefulness). These verses are treated as normative ethical units that structure the human–environment relationship. Secondary units of analysis include classical and contemporary Qur'anic exegeses, along with scholarly literature on Islamic environmental ethics and zero waste within sustainability studies.

The research design adopts a thematic tafsir (*tafsīr mawdū 7*) method with an explicit implementation-oriented focus. Qur'anic verses are first collected and categorized thematically according to environmental ethics. Subsequently, these themes are interpreted holistically to identify core ethical principles. Distinct from conventional thematic exegesis, this study advances the analysis to an operational level by mapping Qur'anic ethical principles

onto concrete zero waste practices, including consumption reduction, waste prevention, reuse, recycling, and organic waste management.

Data sources for this study comprise both primary and secondary materials. Primary sources include the Qur'an and authoritative exegetical works, both classical and contemporary, which provide interpretive foundations for environmental verses. Secondary sources consist of peer-reviewed international journal articles, academic books, and scientific publications on sustainability, waste management, and zero waste practices. This combination of sources ensures a balanced integration between Qur'anic normative ethics and contemporary environmental discourse.

Data collection is conducted through systematic textual documentation. Relevant Qur'anic verses are identified using thematic keywords related to stewardship, ecological balance, moral responsibility, and the prohibition of wastefulness. These verses are examined alongside exegetical interpretations and supporting scholarly literature to extract ethical principles applicable to environmental practice. This process results in a structured ethical mapping that serves as the conceptual basis for operationalizing zero waste within a Qur'anic framework.

Data analysis proceeds through three sequential stages. First, an interpretative analysis is conducted to elucidate the ethical meanings embedded in Qur'anic environmental verses based on authoritative exegesis. Second, an analytical-constructive stage translates these ethical meanings into operational ethical categories. Third, a synthetic analysis integrates these categories with zero waste principles to formulate an implementation-oriented framework demonstrating how caliphate values can be enacted through everyday waste management and consumption practices.

Through this methodological design, the study moves beyond establishing normative compatibility between the Qur'an and zero waste. Instead, it systematically formulates a conceptual pathway for implementing caliphate values in contemporary environmental contexts. Consequently, the notion of *implementing caliphate values* is treated not as a metaphorical claim, but as an analytically structured and academically accountable process within an ecological tafsir study.

Results and Discussion

A. Results

1. Qur'anic Concept of Khalifah as an Ecological Stewardship Framework

The Qur'anic concept of *khalifah* constitutes a foundational ethical framework governing the relationship between humanity, God, and the natural environment. The designation of humans as *khalifah* is first articulated in Qur'an 2:30, where God declares His intention to appoint a *khalifah* on earth. The angels' response—questioning the creation of a being capable of causing corruption (*fasād*) and bloodshed—reveals that the notion of *khalifah* is inherently linked to moral risk and ecological vulnerability. Rather than conferring unconditional authority over nature, this verse frames *khalifah* as a responsibility-laden mandate subject to ethical accountability. God's reply, "Indeed, I know what you do not know," affirms that human stewardship is purposeful but contingent upon adherence to divine moral order.

Classical Qur'anic exegesis consistently interprets *khalifah* as a role of stewardship rather than domination. Ibn Kathir (2000) explains *khalifah* as referring to successive generations entrusted with inhabiting, governing, and cultivating the earth, as indicated in Qur'an 6:165. This interpretation emphasizes intergenerational responsibility and continuity of moral obligation. Similarly, Al-Shabuni (1996) defines *khalifah* as God's deputy on earth, tasked with implementing divine laws across generations, beginning with Adam and extending collectively to humanity. This understanding underscores that human authority over the earth is delegated and conditional, not absolute.

Al-Tabari (2001) further elaborates that *khalifah* signifies the obligation to administer God's law with justice among all creatures. This ethical dimension is reinforced in Qur'an 38:26, where Prophet David is appointed as *khalifah* with an explicit command to judge justly and to restrain personal desire. Hamka (2015) notes, this verse illustrates that *khalifah* is not merely a political succession but a moral continuation of divine trust. The emphasis on justice and self-restraint implicitly extends to human interactions with the natural world, particularly in preventing exploitative practices driven by unchecked desire.

The evaluative nature of *khalifah* is further emphasized in Qur'an 10:14, which states that humans are made successors on earth "so that We may observe how you act." According to Maraghi (2001), this verse suggests that humanity is accountable not only morally but historically, as earlier rational beings were replaced due to their corruption. This interpretation reinforces the idea that failure to uphold the ethical responsibilities of *khalifah* may result in ecological and civilizational collapse, thereby positioning environmental stewardship as a test of human moral conduct.

Contemporary scholarship increasingly conceptualizes *khalifah* as a universal ethical role rather than a political institution. Modern interpretations emphasize that humans act as God's trustees and managers of the earth, responsible for regulating life in accordance with divine guidance (Ismail & Berghout, 2024). This perspective aligns with scholarly critiques rejecting the use of Qur'an 2:30 as a basis for political caliphate formation, instead framing *khalifah* as a moral and ecological vocation (Djidin & Syamsuddin, 2019).

The concept of *khalifah* is also intrinsically connected to human dignity and ethical responsibility. Drawing on Ibn 'Arabī's metaphysical insights, Hirtenstein (2020) highlights that humans, created with inherent dignity, bear a cosmic responsibility that encompasses justice, ethical conduct, and care for creation. In this light, environmental management becomes an integral expression of human dignity rather than an optional moral concern. Accordingly, Islamic environmental ethics positions humanity as responsible for maintaining ecological balance (*mizān*), preventing environmental degradation (*fasād*), and managing natural resources sustainably (Muhammad et al., 2020; Amin et al., 2025).

The findings indicate that the Qur'anic concept of *khalifah* fundamentally opposes exploitative and unsustainable resource use. Instead, it promotes an ethic of moderation, responsibility, and long-term ecological balance that closely aligns with contemporary sustainability frameworks, including the United Nations Sustainable Development Goals (Blankinship et al., 2025). Moreover, the Qur'an and Sunnah offer a comprehensive ethical-spiritual framework that integrates transcendental values with practical guidance for sustainable development and environmental preservation (Aboul-Enein, 2018).

The analysis demonstrates that *khalifah* functions as a normative Qur'anic principle inherently compatible with resource management practices oriented toward preventing environmental harm. Within contemporary ecological contexts, this stewardship mandate provides a robust ethical foundation for waste prevention, consumption reduction, and the implementation of zero waste practices as concrete expressions of human responsibility as *khalifah* on earth.

2. Ethical Foundations of Zero Waste in the Qur'an: *Mizān*, *Amānah*, and Anti-*Isrāf* Principles

The thematic analysis of Qur'anic environmental ethics reveals that the ethical foundations of zero waste are deeply embedded within key normative principles of the Qur'an, particularly *mizān* (balance), *amānah* (moral trust), and the prohibition of *isrāf* (excess) and *tabdhīr* (wastefulness). These principles collectively construct an ecological ethic that rejects

overconsumption, promotes responsibility across generations, and prioritizes the prevention of environmental harm at its source.

The principle of *mīzān* functions as a central ecological axis in the Qur'anic worldview. It refers to balance, harmony, and proportionality within the cosmos, underscoring the moral obligation to maintain equilibrium in all aspects of life, including environmental management (Akbar et al., 2025). Disruption of this balance is consistently associated with *fasād* (corruption), which leads to ecological degradation and human suffering (Baharuddin & Musa, 2017). From this perspective, excessive production, unsustainable consumption, and unchecked waste generation constitute violations of *mīzān*, as they destabilize ecological systems and undermine environmental resilience. The Qur'anic emphasis on balance therefore establishes a normative foundation for waste prevention and resource moderation, which aligns directly with the core logic of zero waste.

Closely related to *mīzān* is the principle of *amānah*, which signifies the moral trust entrusted by God to humanity. Within Islamic ethics, *amānah* encompasses responsibility, guardianship, and accountability in governance, leadership, and environmental stewardship (Abu Bakar et al., 2025). Humans, as *khalīfah*, are entrusted with the protection and sustainable management of natural resources to ensure their availability for future generations (Muhammad et al., 2024). This intergenerational dimension of *amānah* transforms environmental responsibility from a utilitarian concern into a moral and spiritual obligation. In the context of waste, failure to reduce, reuse, and responsibly manage resources represents a breach of this trust, as it compromises the ecological inheritance of subsequent generations.

The Qur'anic condemnation of *isrāf* further reinforces this ethical framework. *Isrāf* refers to excess, extravagance, and wasteful behavior, all of which are explicitly denounced in the Qur'an as forms of moral deviation. Anti-*isrāf* ethics promote moderation, restraint, and responsible consumption as integral components of righteous conduct (Abdelgalil, 2024). When examined through an ecological lens, *isrāf* directly correlates with contemporary patterns of overconsumption that drive waste accumulation and environmental degradation. The Qur'anic rejection of *isrāf* thus provides a clear normative basis for zero waste principles that emphasize reduction at the point of consumption rather than post-consumption waste treatment.

These principles—*mīzān*, *amānah*, and anti-*isrāf*—are not isolated moral injunctions but are embedded within a broader Qur'anic ethical-spiritual framework that integrates human dignity, justice, and ecological responsibility. Drawing on Ibn 'Arabī's perspective,

human beings possess inherent dignity that carries ethical obligations toward all creation (Hirtenstein, 2020). Accordingly, environmental stewardship is not merely a technical task but an expression of moral integrity and spiritual consciousness. Contemporary studies affirm that the role of humans as *khalifah* includes safeguarding ecological balance and preventing environmental harm as a core religious responsibility (Nur et al., 2025; Amin et al., 2025).

The findings further indicate that Qur'anic environmental ethics exhibit strong convergence with modern sustainability paradigms. Islamic teachings that emphasize balance, trust, and moderation align closely with contemporary global frameworks such as the United Nations Sustainable Development Goals, particularly those addressing responsible consumption, climate action, and biodiversity conservation (Blankinship et al., 2025). As noted by Aboul-Enein (2018), the Qur'an and Sunnah provide a comprehensive ethical system that harmonizes spiritual values with practical guidance for sustainable development.

This analysis demonstrates that zero waste is not an external or foreign concept imposed upon Qur'anic ethics. Rather, it represents a practical manifestation of normative values already embedded within the Qur'an—specifically *mīzān*, *amānah*, and the prohibition of *isrāf*. As such, zero waste functions as an ethical extension of Qur'anic principles, translating abstract moral injunctions into concrete practices of waste reduction, responsible consumption, and ecological sustainability.

3. *Fasād* and Waste Accumulation: A Qur'anic Diagnosis of Ecological Destruction

The Qur'anic discourse on *fasād fī al-ard* (corruption on earth) presents environmental destruction as a direct consequence of unrestrained human behavior and ethical failure. This concern appears explicitly in the primordial narrative of human creation, where God declares His intention to appoint a *khalifah* on earth (Qur'an 2:30). The angels' apprehension—that humans would “cause corruption and shed blood”—reveals an early recognition that moral deviation, not mere existence, constitutes the root of terrestrial destruction. This verse situates *fasād* not as an accidental outcome, but as a foreseeable risk inherent in the misuse of human agency.

Classical exegetes consistently interpret *khalifah* as a succession of morally accountable human communities entrusted with inhabiting, governing, and cultivating the earth. Ibn Kathīr explains *khalifah* as peoples who replace one another across generations while exercising authority and responsibility over the earth (Ibn Kathīr, 2000), while al-Shābūnī and Ibn Jarīr emphasize the role of humanity as God's representative in implementing divine justice and ethical order (Al-Shābūnī, 1996; Al-Tabari, 2001). This understanding is

reinforced in later verses such as Qur'an 38:26 and 10:14, where leadership (*khilāfah*) is inseparable from justice, restraint, and accountability for human actions. Accordingly, ecological corruption emerges not from dominion itself, but from deviation from divine guidance.

Within this framework, modern waste accumulation can be interpreted as a contemporary manifestation of *fasād*. Ecological exegetical approaches argue that excessive waste production reflects a structural failure to uphold *mīzān* (cosmic balance) and *amānah* (moral trust). The Qur'an repeatedly condemns disruptions to balance, warning that *fasād* results when equilibrium is violated, leading to harm for both nature and humanity (Baharuddin & Musa, 2017). From this perspective, waste is not merely a technical or managerial problem but a moral indicator of humanity's failure to perform its role as *khaifah*.

Contemporary Islamic scholarship further affirms that the concept of *khaifah* entails environmental stewardship and the prevention of ecological harm. Humans are entrusted with managing natural resources responsibly to ensure sustainability across generations (Nur et al., 2025). The Qur'anic condemnation of exploitation and environmental destruction (*fasād*) directly contradicts practices that normalize overconsumption and unchecked waste (Muhammad et al., 2020). Moreover, Islamic ethical teachings align closely with modern sustainability frameworks, including the United Nations Sustainable Development Goals, particularly in promoting responsible consumption, climate action, and biodiversity conservation (Blankinship et al., 2025).

Therefore, waste accumulation should be understood as a concrete expression of ecological *fasād* rooted in the erosion of Qur'anic ethical values. It signifies a breakdown of humanity's commitment to *amānah*, justice, and balance—core principles that define the moral architecture of *khilāfah*. In this sense, addressing waste is not only an environmental necessity but also an ethical imperative to restore humanity's role as a responsible and accountable steward of the earth.

Waste accumulation represents a tangible form of ecological *fasād* resulting from the failure to implement Qur'anic values of *khilāfah*, *mīzān*, and *amānah* in contemporary human practice.

4. Translating Qur'anic Ethics into Zero Waste Practices

This section operationalizes Qur'anic ethical principles by mapping them systematically onto concrete zero waste practices, demonstrating how Islamic environmental ethics function not only at the normative level but also as practical guidance for sustainable

behavior. Central to this mapping is the concept of *khalifah*, which frames humanity as God's trustee and manager on earth. Classical and contemporary interpretations consistently emphasize that *khilāfah* entails responsibility, ethical governance, and sustainable management rather than unrestricted exploitation (Ibn Kathīr, 2000; Amin et al., 2025; Nur et al., 2025). In operational terms, this responsibility translates into consumption reduction and heightened personal accountability, where individuals consciously limit excessive consumption and recognize their role in preventing environmental degradation.

The Qur'anic principle of *mīzān* (balance) is further operationalized through waste prevention and circular resource use. *Mīzān* represents the divinely ordained equilibrium governing the universe, including ecological systems (Akbar et al., 2025). Disrupting this balance (*fasād*) leads to material and moral harm (Baharuddin & Musa, 2017). Within a zero waste framework, waste prevention becomes the primary ethical response to imbalance, shifting attention from end-of-pipe waste management to structural interventions such as reuse, recycling, and circular production models. These practices reflect a Qur'anic logic that prioritizes harmony and proportionality in resource use, directly opposing linear consumption patterns that generate excessive waste.

The principle of *amānah* (trust) provides the ethical foundation for responsible waste management and long-term sustainability. As a divinely mandated trust, *amānah* obligates humans to protect and manage natural resources responsibly for the benefit of both present and future generations (Abu Bakar et al., 2025; Muhammad et al., 2024). In practical terms, this responsibility is reflected in the management of organic waste, recycling initiatives, and sustainable waste infrastructures that reduce environmental burdens over time. The emphasis on intergenerational accountability aligns Qur'anic ethics with contemporary sustainability objectives, reinforcing the moral imperative to prevent ecological harm that would compromise future human dignity and welfare (Hirtenstein, 2020; Blankinship et al., 2025).

Through this operational mapping, the study demonstrates that zero waste practices are not external to Qur'anic ethics but are deeply embedded within its moral architecture. The integration of *khalifah*, *mīzān*, and *amānah* produces an ethical-operational framework in which Islamic values provide both normative legitimacy and practical direction for environmental action. This framework affirms that sustainable waste practices function as concrete expressions of Qur'anic ethical commitments rather than as merely technical or policy-driven interventions.

An ethical-operational framework emerges that systematically links Qur'anic values—*khalifah*, *mizān*, and *amānah*—with zero waste practices, demonstrating that Islamic ethics offer actionable guidance for sustainable resource management and waste reduction.

B. Discussion

The findings of this study indicate that zero waste functions as an implementative model of Qur'anic *khalifah* ethics, bridging normative principles with practical ecological behavior. This is important because traditional *tafsīr* often emphasizes ethical ideals without providing pathways for their operationalization in daily life. The Qur'an QS. Al-Baqarah: 30 and QS. Al-An'ām:165 establishes humans as *khalifah* on Earth, entrusted with stewardship and moral responsibility (Ibn Kathir, 1990; Al-Shabuni, 2000), and the operationalization of these responsibilities through zero waste practices—such as consumption reduction, waste prevention, and resource circulation—demonstrates how ethical mandates can be translated into measurable actions (Nur et al., 2025; Amin et al., 2025). Consequently, *khalifah* is not merely a theological concept but a tangible framework for promoting sustainable behavior grounded in Qur'anic ethics.

This approach also advances ecological *tafsīr* beyond abstract or symbolic interpretations, addressing critiques that previous studies are conceptually detached from practice. The Qur'anic principles of *mizān* (balance), *amānah* (moral trust), and the prohibition of *fasād* (environmental corruption) provide normative guidance, yet they have rarely been operationalized in contemporary sustainability practices (Akbar et al., 2025). By mapping these principles onto zero waste practices, this study generates a practice-oriented *tafsīr* that connects ethical reasoning with concrete ecological action (Muhammad et al., 2020). In doing so, it establishes a systematic framework where Qur'anic ethics are not only interpreted but also enacted, enhancing both the relevance and applicability of Islamic environmental teachings.

Furthermore, the study addresses the persistent gap between normative Islamic environmental ethics and observable human behavior, highlighting that waste accumulation and unsustainable consumption represent contemporary forms of *fasād* resulting from failures to fulfill *khalifah* responsibilities (QS. Al-Baqarah:30; Muhammad et al., 2020). Zero waste operationalizes *mizān*, *amānah*, and anti-*isrāf* principles, integrating moral responsibility into everyday life and transforming ecological care into a form of worship (Abdelgalil, 2024). This finding underscores the social significance of Islamic ethics, demonstrating that religious

guidance can actively shape behavior rather than merely provide moral legitimacy (Hirtenstein, 2020).

Finally, the integration of Qur'anic ethics with zero waste practices carries both theoretical and practical implications for sustainability discourse. Theoretically, it situates Islamic environmental ethics within contemporary frameworks, showing alignment with the United Nations Sustainable Development Goals, including responsible resource management, climate action, and biodiversity conservation (Blankinship et al., 2025). Practically, the ethical-operational framework developed in this study can inform environmental education, policy-making, and community-based ecological initiatives in Muslim societies (Amin et al., 2025; Aboul-Enein, 2018). Although this study is normative-textual and lacks empirical field validation, it provides a foundational pathway for future research to assess the effectiveness of zero waste implementation based on *khaifah* ethics, including explorations of digital tafsīr and comparative eco-theology across religious contexts (Muhammad et al., 2024; Abdelgalil, 2024).

Conclusion

The study demonstrates that zero waste practices serve as a practical manifestation of Qur'anic *khaifah* ethics, integrating principles such as *mizān* (balance), *amānah* (moral trust), and the prohibition of *istāf* into concrete environmental action. By operationalizing these normative values, the research reveals that waste accumulation and unsustainable consumption are contemporary expressions of *fasād*, highlighting the ethical dimension of ecological responsibility in Islam. This insight underscores that ecological stewardship in the Qur'an is not merely symbolic but inherently actionable, providing a clear ethical framework for transforming everyday human behavior into sustainable practices.

From a scientific perspective, this study contributes to the development of ecological tafsīr by moving beyond conceptual interpretation toward implementation-oriented analysis. It establishes a systematic ethical-operational framework that links Qur'anic principles with zero waste practices, offering both theoretical and methodological innovations for the study of Islamic environmental ethics. This approach expands the discourse on sustainability by integrating religious values into contemporary environmental governance, demonstrating that Islamic teachings can serve as a source of practical guidance for ecological responsibility and behavioral transformation.

Despite these contributions, the study is limited by its normative-textual methodology and does not include empirical field validation. Future research could examine the

effectiveness of zero waste implementation based on *khaifah* ethics in specific Muslim communities, assess behavioral outcomes, and explore digital and comparative eco-theological applications. Such studies would not only strengthen the empirical foundation of ecological *tafsir* but also provide actionable insights for policy-making, education, and community-based sustainability initiatives grounded in Qur'anic ethical principles.

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