



From Qur'anic Stewardship to Climate Responsibility: Rethinking Human Accountability in Islamic Environmental Ethics

Ruslan¹, Tomy Wijaya²

¹Universitas Islam Negeri Antasari, Banjarmasin, Indonesia

²Beijing University, China

E-mail: ruslan@uin-antasari.ac.id¹

Received 21-12-2025 | Revised 18-01-2026, 22-02-2026, 17-04-2026

| Accepted 05-07-2026

Abstract

Human-caused warming has turned environmental degradation into an immediate question of responsibility rather than a distant question of resource management. Yet appeals to religious stewardship are contested because they can inspire conservation while leaving institutional emissions, social inequality, and the duties of powerful actors unspecified. Islamic environmental ethics has developed rich readings of *khalīfah*, *amānah*, *mīzān*, and the prohibition of *fasād*, but scholarship often moves too quickly from scriptural affirmation to presumed environmental outcomes. Studies of Muslim environmental practices and climate attitudes instead reveal uneven translation, political constraints, and differences between ethical conviction and measurable action. This article asks how Qur'anic stewardship can be reconstructed as an accountable approach to climate responsibility without treating scripture as a technical climate manual. It employs a qualitative, structured documentary analysis of selected Qur'anic passages, an international Islamic climate declaration, Indonesia's climate fatwa and environmental-law context, and peer-reviewed research published principally between 2022 and 2025. Texts are interpreted through a transparent three-stage matrix linking normative concepts, causal mechanisms, and testable institutional obligations. The analysis identifies three findings: stewardship is best understood as constrained trusteeship rather than ownership; moral exhortation becomes credible when translated into differentiated duties, transparent decisions, and evaluation; and justice must mediate the movement from individual restraint to collective mitigation and adaptation. On this basis, the article proposes a five-part Climate Accountability Translation Framework integrating scriptural warrant, context-specific responsibility, institutional commitments, public evidence, and corrective review. The framework is a conceptual result, not a claim of demonstrated emissions reductions. The article concludes that Islamic environmental ethics can contribute more decisively to climate governance when religious legitimacy is joined to scientific evidence, protection of vulnerable groups, and verifiable public practice. Comparative field research should test whether such arrangements change organizational decisions and climate outcomes.

Keywords: Qur'anic stewardship; climate accountability; Islamic environmental ethics; climate justice; eco-theology

Abstrak

Pemanasan global akibat aktivitas manusia telah mengubah kerusakan lingkungan dari persoalan pengelolaan sumber daya menjadi persoalan tanggung jawab yang mendesak. Namun, seruan tentang kepemimpinan manusia atas alam tetap diperdebatkan karena dapat mendorong konservasi tanpa menjelaskan tanggung jawab kelembagaan atas emisi, ketimpangan sosial, dan kewajiban pihak yang memiliki kekuasaan. Etika lingkungan Islam telah mengembangkan pembacaan mengenai khalifah, amanah, mizan, dan larangan fasad, tetapi hubungan antara ajaran tersebut dan hasil ekologis sering diasumsikan terlalu cepat. Penelitian terdahulu justru memperlihatkan perbedaan antara keyakinan etis, praktik lembaga, serta tindakan iklim yang dapat diukur. Artikel ini mengkaji bagaimana gagasan tanggung jawab manusia dalam Al-Qur'an dapat dirumuskan kembali sebagai akuntabilitas iklim tanpa menjadikan kitab suci sebagai pedoman teknis kebijakan iklim. Penelitian menggunakan analisis dokumen kualitatif terstruktur terhadap ayat-ayat Al-Qur'an terpilih, deklarasi iklim Islam, fatwa lingkungan Indonesia, konteks peraturan perundang-undangan, dan kajian ilmiah yang terutama diterbitkan pada 2022–2025. Analisis dilakukan melalui pengaitan konsep normatif, mekanisme tindakan, dan kewajiban kelembagaan yang dapat diperiksa. Hasil kajian menunjukkan bahwa pengelolaan bumi lebih tepat dipahami sebagai amanah yang dibatasi, bukan hak kepemilikan tanpa syarat. Pesan moral memperoleh makna praktis apabila diterjemahkan menjadi pembagian tanggung jawab, keputusan yang terbuka, dan evaluasi; keadilan juga perlu menjadi penghubung antara pengendalian diri dan mitigasi serta adaptasi kolektif. Artikel ini menawarkan Climate Accountability Translation Framework yang meliputi landasan normatif, tanggung jawab kontekstual, komitmen kelembagaan, bukti publik, dan peninjauan korektif. Model tersebut merupakan sumbangan konseptual, bukan bukti penurunan emisi. Penelitian menyimpulkan bahwa etika lingkungan Islam dapat lebih berperan dalam tata kelola iklim apabila legitimasi keagamaan dihubungkan dengan bukti ilmiah, perlindungan kelompok rentan, dan praktik yang dapat diverifikasi. Penelitian lapangan komparatif diperlukan untuk menguji dampaknya.

Kata kunci: kepemimpinan Qur'ani; akuntabilitas iklim; etika lingkungan Islam; keadilan iklim; ekoteologi

Introduction

Climate change has made the moral status of human action impossible to detach from its material consequences. The IPCC¹ concludes that human activities have unequivocally caused global warming, with global surface temperature reaching approximately 1.1°C above the 1850–1900 baseline during 2011–2020. This scientific finding changes the terms of religious environmental debate: the issue is not simply whether nature deserves respect, but who has the

¹ Intergovernmental Panel on Climate Change, Climate Change 2023: Synthesis Report (2023), <https://doi.org/10.59327/IPCC/AR6-9789291691647>.

authority, capacity, and obligation to prevent avoidable harm. Qur'anic ideas of human trusteeship are frequently invoked in this conversation, although their practical meaning remains disputed.²

The ethical urgency is intensified by the uneven geography of climate vulnerability. Those most exposed to heat, floods, and resource scarcity are not necessarily those who have benefited most from carbon-intensive development. A discourse that praises modest lifestyles without examining industrial policy or unequal access to adaptation can therefore reproduce the injustice it seeks to correct. Climate responsibility requires both restraint and an account of power, an insight supported by studies of religious mobilization, political ecology, and Muslim environmental experience.³

International research has moved beyond the question of whether religious traditions possess environmental teachings. Koehrsen⁴ maps Muslim climate engagement, while Koehrsen and Ives⁵ distinguish pioneering, following, passive, and obstructive roles of religious actors. Hearn et al.⁶ find that religion's frequently asserted potential is not always realized in practice. Ives and Baker⁷ identify possibilities for religious participation in urban climate policy. However, these studies leave open how the language of divine trusteeship should be translated into differentiated and assessable responsibilities within specific Muslim institutions.

Indonesia offers a particularly instructive setting because its

² M. Y. Gada, *Islam and Environmental Ethics* (Cambridge: Cambridge University Press, 2024), <https://doi.org/10.1017/9781009308236>; Koehrsen, J., & Ives, C. D., "The multiple roles of religious actors in advancing a sustainable future," *Ambio*, 54, 1318–1333 (2025), <https://doi.org/10.1007/s13280-025-02166-0>.

³ Mazaheri, N., "Faith in science: Religion and climate change attitudes in the Middle East," *Global Environmental Politics*, 24(1), 52–75 (2024), https://doi.org/10.1162/glep_a_00720; Bagir, Z. A., "Beyond instrumentalization: Lived religion, politics, and justice in Indonesian Muslim environmentalisms," *Studia Islamika*, 32(3), 439–466 (2025), <https://doi.org/10.36712/sdi.v32i3.46652>.

⁴ Koehrsen, J., "Muslims and climate change: How Islam, Muslim organizations, and religious leaders influence climate change perceptions and mitigation activities," *WIREs Climate Change*, 12(3), e702 (2021), <https://doi.org/10.1002/wcc.702>.

⁵ Koehrsen and Ives, "The Multiple Roles of Religious Actors".

⁶ Hearn, A. X., Huber, F., Koehrsen, J., & Buzzi, A.-L., "The perceived potential of religion in mitigating climate change and how this is being realized in Germany and Switzerland," *Journal of Environmental Studies and Sciences*, 14, 342–357 (2024), <https://doi.org/10.1007/s13412-023-00884-z>.

⁷ Ives, C. D., & Baker, C., "Engaging faith for a sustainable urban future," *Global Sustainability*, 7, e45 (2024), <https://doi.org/10.1017/sus.2024.32>.

Islamic organizations, schools, and religious authorities connect moral teaching with local environmental practice. Research describes religious creativity in environmental movements,⁸ green pesantren initiatives,⁹ and sustainability practices among Muslim farmers.¹⁰ The Indonesian Ulama Council's Fatwa No. 86 of 2023 also names climate control as a religiously relevant problem.¹¹ Nevertheless, recent scholarship warns against assuming that a green religious vocabulary reliably predicts ecological justice or institutional behavior.¹²

The central problem is a translation gap between ethical language and accountable climate action. Three questions guide the article: What duties follow from Qur'anic concepts of stewardship when human activity is scientifically linked to climate harm? Which interpretive and organizational factors obstruct their implementation? How might Islamic environmental ethics specify responsible actors, measurable commitments, and procedures for correction without reducing religion to a management instrument? These questions define accountability as reason-giving and answerability for decisions, not as an assertion that religious texts contain contemporary emissions accounting.

The conceptual argument draws on Qur'anic passages concerning human appointment, trust, balance, cultivation, and corruption, read alongside maqāṣid-oriented ethical reasoning and environmental governance. Qur'an 2:30 and 6:165 are read as assigning morally conditioned human agency, not unfettered dominion; 55:7–9 constrains excess; and 30:41 directs attention to damage associated with human conduct. In Indonesia, the 2009 Environmental Protection and Management Law, as amended,¹³ supplies a positive-law context

⁸ Smith, J. D., Adam, R., & Maarif, S., "How social movements use religious creativity to address environmental crises in Indonesian local communities," *Global Environmental Change*, 84, 102772 (2024), <https://doi.org/10.1016/j.gloenvcha.2023.102772>.

⁹ Maghfiroh, M., Iryani, E., Haerudin, Yani, M. T., Zaini, N., & Mahfud, C., "Promoting green pesantren: Change, challenge and contribution of Nahdlatul Ulama in Indonesia," *Nazhruna: Jurnal Pendidikan Islam*, 7(2), 409–435 (2024), <https://doi.org/10.31538/nzh.v7i2.4668>.

¹⁰ Hasan, A. M. N., Bagir, Z. A., & Akhda, N. T., "Farming as an act of gratitude: Norms and practices of sustainability among organic Muslim farmers in Blora, Central Java," *Jurnal Kawistara*, 15(1), 1–18 (2025), <https://doi.org/10.22146/kawistara.98312>.

¹¹ Harnowo, T., & Habib, F. H., "Islamic law and environment issues: Indonesian Ulama Council's fatwas on climate change," *AHKAM: Jurnal Ilmu Syariah*, 24(1) (2024), <https://doi.org/10.15408/ajis.v24i1.34161>.

¹² Bagir, "Beyond instrumentalization: Lived religion, politics, and justice".

¹³ Republic of Indonesia, Law No. 32 of 2009 Concerning Environmental Protection and Management, as Subsequently Amended (2009), <https://peraturan.bpk.go.id/Details/38771/uu-no-32-tahun-2009>.

distinct from religious guidance. Fatwa and statute may reinforce one another but have different authority, enforcement, and evidentiary standards.

The objective is to produce a defensible normative-analytical framework for evaluating climate claims made by Islamic institutions. Rather than measuring Muslim piety or attributing emissions to scripture, this study traces how theological premises can become obligations concerning energy, land, consumption, adaptation, and climate justice. It also distinguishes what the analyzed texts say from what reported empirical studies show and from what the author proposes as an interpretive extension.

Its contribution is threefold. First, it recasts stewardship as limited trusteeship subject to scrutiny. Second, it links scriptural duties to an explicit chain of actor, decision, evidence, and remedy, moving past declarations of concern. Third, it brings Muslim environmental ethics into dialogue with the empirical literature on organizational action and context-dependent religious influence. The argument is deliberately conditional: Islamic teachings can help orient climate responsibility, but their success cannot be presumed in advance of independently evaluated behavior and outcomes.

Literature Review

A substantial literature identifies religious meaning as one influence on environmental beliefs, motivation, and collective action. Recent research has shifted from cataloguing supportive scriptural references toward studying the varied conditions under which faith communities act. The review by Koehrsen¹⁴, based on Muslim climate debates, and the organizational model offered by Koehrsen and Ives¹⁵ are important because neither treats religious identity as an automatic predictor of mitigation. Broader scholarship describes religious organizations as holders of moral authority, social networks, buildings, financial assets, and political voice.¹⁶ These resources create opportunities, but participation can also remain symbolic or replicate existing inequalities. The most useful analytical distinction is therefore

¹⁴ Koehrsen, "Muslims and climate change: How Islam, Muslim".

¹⁵ Koehrsen and Ives, "The Multiple Roles of Religious Actors".

¹⁶ Ives and Baker, "Engaging Faith for a Sustainable Urban Future"; Hearn, "The perceived potential of religion in mitigating".

between environmental teachings, the mechanisms through which they are mobilized, and the effects that are demonstrably produced.

One line of inquiry concerns factors shaping attitudes and willingness to act. Preston and Shin¹⁷ demonstrate that spirituality and religious fundamentalism may have divergent associations with environmental concern, challenging simplified claims about religiosity. Billet et al.¹⁸ similarly find that ecospiritual interpretations relate to moral concern for nature across several settings. In a Muslim-majority empirical context, Karimi et al.¹⁹ apply the theory of planned behavior to rural women's environmental practices, while Zhang et al.²⁰ study religiosity in relation to recycled packaging. Both indicate that moral identity is mediated by beliefs, social expectations, and perceived behavioral possibilities. These studies establish a caution: an environmentally supportive doctrinal proposition should not be equated with an observed behavioral effect. Individual-level correlates also cannot independently demonstrate institutional emissions reductions.

Further survey research complicates the picture. Mazaheri²¹, analyzing 13,700 respondents in twelve Middle Eastern countries, finds that the relationship between Muslim identity, religiosity, political orientation, and climate concern is not uniform. Sholihin et al.²² use World Values Survey data to examine the balance between environmental protection and economic growth among Muslims in 33 countries, finding positive associations for several dimensions of religiosity. Research involving Muslim households reports that

¹⁷ Preston, J. L., & Shin, F., "Opposing effects of spirituality and religious fundamentalism on environmental attitudes," *Journal of Environmental Psychology*, 80, 101772 (2022), <https://doi.org/10.1016/j.jenvp.2022.101772>.

¹⁸ Billet, M. I., Baimel, A., Sahakari, S. S., Schaller, M., & Norenzayan, A., "Ecospirituality: The psychology of moral concern for nature," *Journal of Environmental Psychology*, 87, 102001 (2023), <https://doi.org/10.1016/j.jenvp.2023.102001>.

¹⁹ Karimi, S., Liobikienė, G., & Alitavakoli, F., "The effect of religiosity on pro-environmental behavior based on the theory of planned behavior: A cross-sectional study among Iranian rural female facilitators," *Frontiers in Psychology*, 13, 745019 (2022), <https://doi.org/10.3389/fpsyg.2022.745019>.

²⁰ Zhang, Q., Husnain, M., Usman, M., Akhtar, M. W., Ali, S., Khan, M. A., Abbas, Q., Ismail, R., Rehman, T., & Akram, M., "Interplay of eco-friendly factors and Islamic religiosity towards recycled package products: A cross-cultural study," *Frontiers in Psychology*, 13, 840711 (2022), <https://doi.org/10.3389/fpsyg.2022.840711>.

²¹ Mazaheri, "Faith in science: Religion and climate change".

²² Sholihin, M., Sugiyanto, C., & Susanto, A. A., "Environmental protection versus economic growth in the views of Muslims: A large sample of empirical evidence," *International Journal of Energy Sector Management*, 18(6), 1592–1609 (2024), <https://doi.org/10.1108/IJESM-08-2023-0030>.

religiously informed subjective norms operate differently across domestic consumption, purchasing, and transport.²³ Nasir and Yaacob²⁴ point to the stronger explanatory role of social influences in their Malaysian study. Read together, this evidence rejects both a pessimistic view that religion is irrelevant and an optimistic view that piety alone causes sustained climate action.

A second trend investigates translation processes: how interpretation becomes education, collective organization, or local ecological practice. Smith et al.²⁵ synthesize 244 studies on Indonesian environmental movements and report diverse forms of religious creativity. Hasan et al.²⁶ describe emerging ecological activism among young pesantren leaders in East Java, and Maghfiroh et al.²⁷ examine the role of Nahdlatul Ulama in expanding green pesantren practice. Alam et al.²⁸ connect environmental instruction with everyday conduct in Javanese pesantren communities. Hasan et al.²⁹ document ecological norms in organic Muslim farming, showing that environmental commitments also emerge through gratitude and livelihood practice. This work grounds theology in lived religion, while warning against treating a single educational initiative as evidence of system-wide institutional change.

Other process-oriented scholarship concerns jurisprudence and public communication. Harnowo and Habib³⁰ explain how Indonesian religious opinions engage adaptation and mitigation, and the Indonesian

²³ Bülbul, H., "Understanding the influence of religion on pro-environmental behaviors: An investigation in Muslim families using the theory of planned behavior customized with a religiosity-based subjective norm," *Journal of Environmental Planning and Management*. Advance online publication (2024), <https://doi.org/10.1080/09640568.2024.2403772>.

²⁴ Nasir, Z. M., & Yaacob, M., "Social and religious influences on environmentally ethical behavior of Muslim community in Malaysia," *Creative Education*, 13, 3996–4016 (2022), <https://doi.org/10.4236/ce.2022.1312255>.

²⁵ Smith, "How social movements use religious creativity to".

²⁶ Hasan, N., Mardhatillah, M., Abadi, M. M., & Hidayat, A. R., "Environmental activism in Indonesian pesantren: The role of lora in mainstreaming Islamic eco-theology in Tapal Kuda, East Java," *Teosofi: Jurnal Tasawuf dan Pemikiran Islam*, 12(2), 280–306 (2022), <https://doi.org/10.15642/teosofi.2022.12.2.280-306>.

²⁷ Maghfiroh, "Promoting green pesantren: Change, challenge and contribution".

²⁸ Alam, L., Alam, M., Samaalee, A., & Suyatno, S., "Environmental sustainability in Indonesian pesantren: Integrating pious principles and da'wah efforts," *Jurnal Ilmu Dakwah*, 44(2), 311–328 (2024), <https://doi.org/10.21580/jid.v44.2.23607>.

²⁹ Hasan et al., "Farming as an Act of Gratitude".

³⁰ Harnowo, "Islamic law and environment issues: Indonesian Ulama".

Ulama Council³¹ explicitly frames environmentally destructive actions in juridical-moral terms. Murad³² interrogates the reliance on modern imported environmental techniques and asks how neglected Islamic ethical resources might be reactivated. Gada³³ organizes Qur'anic and prophetic considerations into an Islamic environmental-ethics account. The Islamic Declaration on Global Climate Change³⁴ brings scientific claims into a transnational religious appeal. Mustofa et al.³⁵ further examine organizational involvement in climate mitigation and adaptation. These sources show that the normative vocabulary is available. They do not, by themselves, establish that authorities have assigned responsibility for budgets, emissions inventories, land-use decisions, or community participation.

A third trend evaluates effects, including contested social and ecological outcomes. Koehrsen and Ives³⁶ show analytically that religious actors may pioneer, follow, observe, or obstruct sustainability change. The organizational interviews reported by Hearn et al.³⁷ likewise demonstrate the gap between promise and realization. Bagir³⁸ directs attention to power, justice, and the everyday forms of Indonesian Muslim environmentalism, calling for analysis of whose interests environmental programs serve. Chubachi³⁹ examines waste sadaqah ethics, while Yandri et al.⁴⁰ identify waste sadaqah as a community-based environmental practice in Java. Such studies illuminate practical mechanisms, but waste management, conservation, and climate

³¹ Indonesian Ulama Council, Fatwa No. 86 of 2023 Concerning the Law on Controlling Global Climate Change (2023), <https://lplhsda.mui.or.id/fatwa-mui-no-86-2023-hukum-pengendalian-perubahan-iklim-global/>.

³² Murad, M., "The Western orientation of environmentalism in the Islamic world today," *Religion and Development*, 2(1), 41–62 (2023), <https://doi.org/10.30965/27507955-20230015>.

³³ Gada, *Islam and Environmental Ethics*.

³⁴ International Islamic Climate Change Symposium, *Islamic Declaration on Global Climate Change* (United Nations Framework Convention on Climate Change, 2015), <https://unfccc.int/news/islamic-declaration-on-climate-change>.

³⁵ Mustofa, M. L., Zenrif, M. F., & Barizi, A., "Towards Islamic eco-theology: Indonesian Muslim organizations in climate change mitigation and adaptation efforts," *Problemy Ekorozwoju*, 20(2), 21–31 (2025), <https://doi.org/10.35784/preko.7089>.

³⁶ Koehrsen and Ives, "The Multiple Roles of Religious Actors".

³⁷ Hearn, "The perceived potential of religion in mitigating".

³⁸ Bagir, "Beyond instrumentalization: Lived religion, politics, and justice".

³⁹ Chubachi, N., "Devotion through waste: Ethics of waste sadaqah in Indonesia," *Worldviews*, 29(2), 148–169 (2025), <https://doi.org/10.1163/15685357-02902005>.

⁴⁰ Yandri, P., Budi, S., & Putri, I. A. P., "Waste sadaqah: A new community-based waste-management practice in Java, Indonesia," *Sustainability: Science, Practice and Policy*, 19(1) (2023), <https://doi.org/10.1080/15487733.2023.2212510>.

mitigation are not interchangeable outcomes; an environmentally admirable initiative may have unquantified or limited climate effects.

The sectoral evidence further exposes differences among ethical domains. Blankinship et al.⁴¹ review Qur'anic resources for water conservation, whereas Jameel⁴² discusses the contested acceptability of alternative proteins in Muslim food systems. Musari⁴³ offers a proposed model connecting green sukuk and cash-waqf-linked sukuk for climate-related financing. OU-SALAH et al.⁴⁴ explore religious interpretations of environmental change in a Moroccan Muslim community, showing why local understandings matter for adaptation. These contributions reveal varied sites where responsibility might be exercised, from water use to investment decisions. Yet even when interventions appeal to Islamic values, effectiveness depends upon technology, accessible alternatives, financing, local knowledge, and monitoring rather than moral narrative alone.

Two weaknesses remain across these strands. Normative readings sometimes move directly from a verse to a prescribed modern policy without explaining intermediate reasoning, alternative interpretations, or constraints on implementation. Conversely, behavioral research may measure concern, stated intention, or local practices while ignoring the unequal climate responsibility of institutions, high-emission actors, and decision-makers. A further risk is celebratory framing: faith-based environmental programs may be presented as successful without baselines, counterfactuals, public data, or attention to unintended distributional effects.⁴⁵ The failure is not a deficiency of scripture but a

⁴¹ Blankinship, L. A., Gillaspie, S., Obaideen, K., & Aboul-Enein, B. H., "... And we have made from water every living thing": Water conservation and the Holy Qur'an," *Environmental Conservation*, 51(2), 79–84 (2024), <https://doi.org/10.1017/S037689292300036X>.

⁴² Jameel, S., "Climate change, food systems and the Islamic perspective on alternative proteins," *Trends in Food Science & Technology*, 138, 480–490 (2023), <https://doi.org/10.1016/j.tifs.2023.06.028>.

⁴³ Musari, K., "Integrating green sukuk and cash waqf linked sukuk, the blended Islamic finance of fiscal instrument in Indonesia: A proposed model for fighting climate change," *International Journal of Islamic Khazanah*, 12(2) (2022), <https://doi.org/10.15575/ijik.v12i2.17750>.

⁴⁴ OU-SALAH, L., Verschraegen, G., & Van Praag, L., "Rain has to do with God's will": Religion and perceptions of environmental change in a Muslim community in the Souss-Massa region of Morocco," *Social Compass*, 71(1) (2024), <https://doi.org/10.1177/00377686241239615>.

⁴⁵ Bagir, "Beyond instrumentalization: Lived religion, politics, and justice"; Hearn, "The perceived potential of religion in mitigating".

problem in analytical design and accountable institutional practice.

This study responds by treating climate accountability as the missing middle level between Qur’anic normativity and empirical outcomes. A moral norm becomes a relevant institutional obligation only after interpreters specify the harm addressed, the actor with capacity to act, the feasible alternative, and evidence by which an affected community can assess performance. That move also places justice in the center rather than as an optional ethical flourish. The proposed framework builds on but differs from an ecological exegesis, a fatwa commentary, and an attitude survey: it articulates an accountable pathway that can subsequently be subjected to empirical testing. It is not a new legal ruling, nor an assertion that all Islamic institutions share one position.

Method

This research adopts a qualitative, interpretive documentary design with structured cross-source comparison. It examines how normative concepts are articulated and translated into institutional climate obligations. A documentary approach fits the research question because the principal objects are texts, public commitments, and published analyses rather than personal experience or direct measurement of organizational emissions. The design is systematic in its predeclared units, coding categories, and treatment of counterevidence, but it is not a PRISMA-style exhaustive systematic review. Its purpose is analytical generalization and conceptual explanation, not statistical inference about Muslim populations or verified claims of climate effectiveness.

Table 1. Research design and evidence boundaries

Element	Specification
Design	Qualitative, interpretive documentary analysis; structured comparison, not exhaustive PRISMA review
Primary unit	Accountability claim: norm + responsible actor + climate action + reviewable evidence
Primary materials	Eight Qur’anic passages; 2015 Islamic declaration; MUI Fatwa 86/2023; Law 32/2009 as amended
Scientific/empirical checks	IPCC 2023 synthesis and peer-reviewed research, mainly 2022–2025
Coding dimensions	Normative warrant; actor/capacity; mechanism; justice; evidence/remedy
Output	Five-part conceptual framework; does not establish field-level mitigation impacts

The primary unit of analysis is an accountability claim: a proposition connecting an Islamic ethical norm to a recognizable actor, a climate-relevant action, and a means of review. The analytical boundary is set at the interface of Islamic religious discourse and climate governance. Textual passages are first read within their broader ethical context, then compared with contemporary policy declarations and reported organizational practices. Figure 1 depicts the relationship between the evidentiary layers. Importantly, a Qur'anic moral term is not coded as a direct modern policy prescription unless an interpretive bridge is argued and its normative status clearly identified.

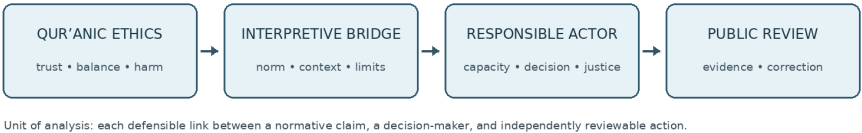


Figure 1. Unit of analysis and cross-source inferential pathway (author's conceptualization).

Primary documents comprise eight purposively selected Qur'anic passages (2:30, 2:205, 6:165, 7:56, 11:61, 30:41, 55:7–9, and 67:15), the Islamic Declaration on Global Climate Change⁴⁶, MUI Fatwa No. 86/2023,⁴⁷ and Indonesia's Law No. 32/2009⁴⁸ in its amended legal context. The IPCC⁴⁹ synthesis is used as an independent scientific benchmark, not as a religious authority. Secondary material comprises traceable peer-reviewed studies, predominantly published during 2022–2025, as well as a limited number of earlier foundational studies and one recent academic monograph. Source selection prioritizes direct relevance, accessible bibliographic metadata, explicit method or normative argument, and triangulation across different approaches.

Collection proceeded through three purposeful streams: Qur'anic lexical and ethical passages concerning human action and ecological order; public texts that translate religious norms into climate-related commitments; and empirical or conceptual scholarship testing the connection between religion and environmental practice. Candidate academic sources were located through targeted publisher and journal

⁴⁶ International Islamic Climate Change Symposium, Islamic Declaration on Global Climate Change.

⁴⁷ Indonesian Ulama Council, Fatwa No. 86/2023.

⁴⁸ Republic of Indonesia, Law No. 32/2009.

⁴⁹ IPCC, Climate Change 2023.

searches on Islamic environmental ethics, khalifah, amānah, climate action, religion and sustainability, and Indonesia. Duplicate records and sources without identifiable authorship or publication details were not used as decisive evidence. Selection was stopped when the themes were adequately represented for conceptual comparison. No interviews, surveys, or new emissions data were collected; accordingly, references to empirical outcomes belong to the cited studies alone.

Analysis used five deductive categories, refined through iterative reading: normative warrant, actor and capacity, mechanism of change, justice and distribution, and evidence or remedy. Each claim was recorded as directly attested text, authorial interpretation, or a proposal advanced in this article. Initial coding identified where scriptural claims offered limits on use, public instruments assigned obligations, and empirical studies documented enabling conditions or obstacles. In the second pass, comparisons explored mismatches between proclaimed moral commitments and accountability features such as baselines, responsibilities, reporting, and participation. The final synthesis developed a five-part translation framework; rival interpretations, including possible paternalism and environmentally indifferent religious practice, were retained rather than screened out.

Trustworthiness rests on visible source identification, attention to genre, interpretive restraint, and deliberate negative-case comparison. Qur'anic passages are cited by chapter and verse; the fatwa, statute, declaration, and scientific report retain their separate types of authority. Published research is not treated as if its findings are universal. A limitations register was maintained during interpretation: selective coverage, dependence on published accounts, possible differences among Qur'anic commentarial traditions, and the absence of independent evaluation of any organization's carbon or adaptation results. The resulting model should therefore be understood as a testable theoretical proposition rather than field-validated intervention.

Results

Stewardship as Bounded Trusteeship: Descriptive Textual Findings

The descriptive analysis yields a coherent but bounded ethical vocabulary. Qur'an 2:30 and 6:165 describe humanity's assigned position and differentiated standing on earth; these verses can support

an ethic of responsibility when read together with limits on human conduct, rather than as a warrant for unqualified extraction. Qur'an 55:7–9 joins the image of balance to the command not to transgress in weighing. Qur'an 30:41 links corruption on land and sea with what human hands have earned; 7:56 prohibits causing corruption after the earth has been set right. The combined reading locates environmental responsibility in accountable human agency. It does not state an emissions pathway, national carbon budget, or technical model of climate attribution.

This finding becomes sharper when interpretive differences are acknowledged. *Khalīfah* is often translated as stewardship or vicegerency, but neither term can carry unlimited claims of property, technological mastery, or institutional legitimacy. *Amānah* supplies the grammar of entrusted responsibility, while *mīzān* signals that human action encounters limits. *Fasād* frames destructive consequences as ethically salient; *iṣlāḥ* points toward repair. Qur'an 11:61 places humans in relation to inhabiting and cultivating the earth, and 67:15 permits activity and provision within divine creation. Taken together, permission to use does not entail permission to damage. This balanced interpretation accords with recent syntheses of Islamic environmental ethics, although the specific move toward climate-accountability procedures is the present article's analytical extension.⁵⁰ The difference between a theological possibility and a policy duty is especially important where interpretation is contested. Modern readers must state why an ecological reading is warranted, acknowledge alternative understandings, and explain how contemporary climate evidence changes the morally relevant circumstances. Studies of Qur'anic water ethics and the daily ecological habits of *pesantren* show how this intermediate reasoning can operate without forcing every verse to function as a scientific prediction.⁵¹

The documentary contrast is concrete. The 2015 Islamic climate declaration appealed to scientific findings, public goals, and monitoring, showing that a transnational Islamic argument can

⁵⁰ Gada, Islam and Environmental Ethics; Murad, "The Western orientation of environmentalism in the".

⁵¹ Blankinship, "... And we have made from water"; Najib, A. A., Rofiq, A., & Fauzi, M. N., "Environmental ethics in *pesantren* tradition: A living Qur'an study on students' ecological awareness," *Al-Mada: Jurnal Agama, Sosial, dan Budaya*, 8(4), 813–831 (2025), <https://doi.org/10.31538/almada.v8i4.9279>.

recognize climatic causation. MUI Fatwa No. 86/2023 more directly names climate control, discourages destructive conduct, and affirms mitigation, adaptation, and just energy transition, as described by the council's own communication and legal analysis.⁵² Indonesia's environmental law meanwhile provides public regulatory obligations that are separate from the fatwa's religious guidance. The three genres therefore occupy different positions: scripture articulates ethical orientation; religious institutional texts formulate contemporary moral claims; positive law establishes public duties through state authority. Their interaction can be constructive, but they must not be collapsed into one source of legal enforceability. The texts therefore provide different kinds of evidence, and their differences generate a substantive finding: no single document completes the entire accountability chain. A fatwa can articulate moral expectations without auditing their fulfillment; a law can specify legal responsibilities without determining spiritual sincerity; and an international declaration can signal solidarity without independently documenting implementation. Linking these genres requires explicit institutional processes, not an assumed continuity between theology and compliance.

From Religious Commitment to Accountability Gaps: Critical Factors

The second finding identifies four obstacles to translating stewardship into accountable climate responsibility: interpretive overreach, individualized duty, organizational ambiguity, and inequitable participation. Interpretive overreach occurs when verses concerning balance or corruption are presented as if they directly specify current energy choices. Such claims invite criticism precisely because scripture is being asked to perform the role of atmospheric science or administrative law. Individualized duty follows when environmental responsibility is reduced to recycling or modest consumption, while decisions about land conversion, energy infrastructure, procurement, and capital allocation remain outside ethical examination. The problem is not that personal restraint lacks value, but that it may displace attention from higher-impact decisions.

Organizational ambiguity emerges when institutions praise

⁵² Indonesian Ulama Council, Fatwa No. 86/2023; Harnowo, "Islamic law and environment issues: Indonesian Ulama".

environmental protection without assigning who should plan, finance, implement, report, and respond to failure. Studies of religious organizations suggest that public endorsement of sustainability does not necessarily generate substantive organizational change. Hearn et al.⁵³ describe an unfulfilled potential among religious bodies, and Koehrsen and Ives⁵⁴ outline circumstances in which religious actors can also follow established trends or hinder change. Evidence from pesantren movements and Muslim environmental activism, by contrast, illustrates concrete local experiments and social creativity.⁵⁵ These studies should be read as examples of mechanisms and constraints, not as proof that their practices yield particular quantities of avoided emissions. The distribution of resources is also decisive. A voluntary campaign with no continuing budget, assigned coordinator, or public record can end when its most active participants leave. Literature on the roles of religious actors and new eco-pesantren experiments indicates a need to distinguish short-term mobilization from durable institutional routines.⁵⁶ Even successful community events should be classified as social engagement unless their material environmental effects are separately assessed.

Inequitable participation is the most consequential obstacle because appeals to universal trusteeship can conceal unequal power. The doctrinal claim that all people are morally accountable does not mean all actors caused equal harm or possess equal capacity to prevent it. Bagir⁵⁷ argues that Indonesian Muslim environmentalism must be examined through lived practice, justice, and political interests. Mazaheri⁵⁸ further shows that climate perceptions differ across religious and political positions, making a unitary image of Muslim environmental opinion implausible. In this setting, accountability

⁵³ Hearn, "The perceived potential of religion in mitigating".

⁵⁴ Koehrsen and Ives, "The Multiple Roles of Religious Actors".

⁵⁵ Hasan et al., "Environmental Activism in Indonesian Pesantren"; Smith, "How social movements use religious creativity to"; Alam, "Environmental sustainability in Indonesian pesantren: Integrating pious".

⁵⁶ Koehrsen, J., Buzzi, A.-L., & Hearn, A., "Are religious organizations becoming green? Faith communities' role in advancing environmental sustainability in Switzerland," *Sustainability Science*. Advance online publication (2025), <https://doi.org/10.1007/s11625-025-01766-9>; Syarif, A. F., & Irawan, B., "Planting values, reaping harmony: Ecological praxis and religious moderation in an Indonesian eco-pesantren," *Refleksi: Jurnal Kajian Agama dan Filsafat*, 24(2) (2025), <https://doi.org/10.15408/refleksi.v24.i2.49798>.

⁵⁷ Bagir, "Beyond instrumentalization: Lived religion, politics, and justice".

⁵⁸ Mazaheri, "Faith in science: Religion and climate change".

requires differentiating duties by control over emissions-intensive decisions, practical resources, foreseeable harm, and vulnerability. Otherwise, ordinary worshippers may carry the symbolic burden of reform while organizations and high-capacity decision-makers face few concrete tests. The problem extends to representation. Climate consultations may amplify established leaders while women, poorer residents, youth, and directly affected households have little influence over priorities. McKim⁵⁹ notes the possibilities and ethical demands of interfaith collaboration, but inclusion cannot be inferred from the presence of a multi-faith platform alone. A defensible claim of just stewardship needs accessible procedures for contesting decisions and documenting whose concerns were addressed or rejected.

Translating Stewardship into Climate Duties: An Accountability Model

The transformative result is a proposed Climate Accountability Translation Framework (CATF). Its first component, normative warrant, asks which Qur'anic principles and interpretive reasoning justify concern with a particular climate harm. The second, differentiated responsibility, asks who controls the relevant decision and how their capacity and contribution to risk differ. The third, institutional commitment, requires a specific action, named decision-maker, feasible schedule, and resource allocation. The fourth, public evidence, requires accessible information adequate to judge whether the commitment was pursued and what was achieved. The fifth, corrective review, requires explanation of shortfalls, participation by affected communities, and revision of policy. The components form a recurring process rather than a claim that scriptural statements themselves measure climate outcomes.

Table 2 illustrates how this framework can move from moral language to assessable practice. For a mosque or school, obligations might include an energy inventory, feasible demand reduction, transparent procurement, and annual reporting of electricity use. For an Islamic financial body, the relevant duty might involve publishing environmental criteria for investments, screening high-risk projects, and explaining exceptions. For a religious authority, the accountability

⁵⁹ McKim, R., "Prospects and possibilities for interfaith environmentalism," *Religious Studies*, 60(1), 147–159 (2024), <https://doi.org/10.1017/S0034412523000069>.

question concerns whether its guidance is followed by training, budgeted programs, partnerships, and a public assessment of limitations. For a public agency, statutory duties and scientific standards remain controlling; the religious frame may motivate cooperation but cannot replace permitting, impact assessment, or independent enforcement. These are examples of operational design, not findings that named institutions have already adopted the measures. For example, a solar installation at a religious school should be assessed against a transparent energy baseline, the projected and actual contribution to demand, maintenance obligations, and financing terms. An announcement about installed capacity does not itself establish long-term energy savings. Likewise, a tree-planting campaign should disclose land tenure, species suitability, survival monitoring, and effects on local users rather than simply counting saplings at the launch. These distinctions help separate observable outputs from durable outcomes.

Table 2. Illustrative applications of the proposed framework (not observed interventions)

Actor / issue	Potential commitment	Reviewable indicator
Mosque or pesantren / energy	Baseline audit and budgeted demand reduction	Annual electricity record; procurement disclosure
Religious finance / investment	Published environmental screening and exceptions	Portfolio criteria; independent review summary
Ulama council / implementation	Training and follow-up to climate guidance	Activities, reach, spending, constraints
Local government / adaptation	Risk-informed and inclusive planning	Vulnerability mapping; consultations; law-compliant reporting

The framework also introduces justice tests before an activity can be classified as responsible climate action. A proposed intervention should disclose who bears its cost, who receives its benefit, whether vulnerable groups helped determine its priorities, and whether environmental harms are merely shifted elsewhere. Adaptation plans need to consider unequal exposure and access to resilience resources, not only infrastructure delivery. Mitigation plans should distinguish reductions in actual energy use or emissions from the visibility of campaigns and declarations. Metrics need not pretend to attribute all changes causally to religion; instead, their function is to permit external scrutiny of decisions. A baseline, outcome measure, and account of confounding factors give stewardship an accountable institutional form without making a theological promise a substitute for scientific measurement. The model also requires a public explanation when a

religious organization's financial or political interests conflict with ecological commitments. Relevant questions include whether an energy or mining investment is disclosed, whether affected residents have independent channels for complaint, and whether decision-makers can revise a project after credible evidence of harm. The framework does not supply a universal numerical threshold for acceptable emissions; such thresholds require location-specific scientific assessment and applicable regulatory standards. It instead establishes the obligation to justify the standard selected.

Discussion

The analysis supports a central proposition: Qur'anic stewardship is ethically strongest when interpreted as responsible agency under limits rather than elevated human entitlement. This reading does not claim that premodern Qur'anic passages anticipated contemporary climate science. Instead, their moral grammar of trust, balance, harm, and repair provides reasons for present actors to take scientifically demonstrated consequences seriously. The distinctive contribution is a missing connection between moral reasons and public answerability. Through the CATF, an environmental declaration is no longer sufficient evidence of responsibility; institutions must identify an actionable duty, show what they did, allow those affected to evaluate the consequences, and explain how failures will be addressed. This distinction is also a safeguard against moral overclaiming. If climate responsibility can be established by citing familiar verses, the same institution could claim success while providing no information about its energy purchases or its exposure to high-risk investments. An answerability approach treats religious reasoning as the beginning of an obligation to explain conduct, not as a certificate that conduct has already been transformed.

The Indonesian setting helps clarify why this translation matters. Fatwa No. 86/2023 signals a recognizable movement from broad concern for the environment toward explicit climate language, including mitigation and adaptation.⁶⁰ Yet fatwas are not equivalent to legislation, and moral recognition cannot stand in for the administrative capacities required for meaningful implementation. Law No. 32/2009, as amended, addresses environmental protection within state jurisdiction, while religious institutions may influence public conduct,

⁶⁰ Harnowo, "Islamic law and environment issues: Indonesian Ulama".

civic expectations, and cooperative initiatives. Analytically, the relationship should be understood as complementary but non-identical sources of responsibility. Confusing them could both exaggerate the formal reach of religious declarations and understate the independent obligation of governments and regulated firms to comply with environmental law. This distinction becomes particularly important where religious organizations partner with local authorities or receive support for environmental programming. Partnerships should specify who makes operational decisions, who maintains records, how grievances are heard, and which regulator retains responsibility for compliance. Islamic motivation may increase willingness to cooperate, but legal responsibility cannot be transferred informally through a public endorsement or an educational event.

The theoretical significance lies in connecting Islamic trusteeship to differentiated agency. Environmental ethics is often expressed in universal language because all persons have duties not to damage shared conditions of life. Climate harm, however, involves highly unequal contributions and uneven abilities to act. An ethically serious application of *amānah* therefore cannot assign an identical burden to a low-income household, a major institutional investor, and a governmental licensing authority. Duties should be proportionate to control, capacity, foreseeable consequence, and protection needs. This differentiated approach avoids a simplistic opposition between anthropocentric and ecocentric interpretations: concern for nonhuman life and concern for vulnerable humans are mutually reinforcing when environmental damage undermines the conditions of both. The argument is consistent with the emerging justice-centered critique of celebratory green religion.⁶¹ Justice also influences what counts as a successful intervention. A measure that lowers resource use but transfers costs to already vulnerable households may satisfy a narrow efficiency indicator while failing a broader ethical test. Conversely, adaptation programs that are developed with exposed residents may protect lives and livelihoods even when their benefits cannot be reduced to a single carbon measure. Such distinctions support plural but explicit indicators.

A further insight concerns the nature of knowledge in religious

⁶¹ Bagir, "Beyond instrumentalization: Lived religion, politics, and justice".

climate action. Climate attribution and effectiveness require empirical measurement; normative judgment requires interpretation of obligations, purposes, and limits. Neither knowledge form can replace the other. The Qur'an does not function as a meteorological dataset, just as an emissions inventory cannot determine whether a distribution of burdens is fair. By keeping these evidentiary roles separate, the proposed framework treats scientific and moral reasoning as mutually relevant but methodologically distinct. Religious education may thereby cultivate responsibility without presenting technical conclusions as revealed facts. Conversely, public climate governance may draw on the motivation of religious networks without exempting them from scrutiny. The result is not the instrumental use of faith for a predetermined program, but a dialogue in which institutions must justify their choices publicly. This two-way relationship is visible in sector-specific debates, including Islamic financial proposals and contested food-system transitions.⁶² Normative endorsement does not settle questions of affordability, technical performance, or unintended consequences. Those questions have to be studied directly, while ethical interpretation helps determine what kinds of consequences, trade-offs, and exclusions deserve priority in the evaluation.

The comparative literature explains why such caution is needed. Survey-based work suggests that different dimensions of religiosity can associate with distinct environmental attitudes and behaviors.⁶³ Field studies in Java document situated ecological action and learning rather than a single universal Muslim response.⁶⁴ Studies of religious organizations find that environmental concern can coexist with passivity or trend-following.⁶⁵ This article is aligned with those empirical cautions but moves from describing variation to specifying the accountability conditions under which a climate claim should be evaluated. It also differs from narrowly textual ethics by foregrounding actors, resources, decision rights, and consequences. In particular,

⁶² Musari, "Integrating green sukuk and cash waqf linked"; Jameel, "Climate change, food systems and the Islamic".

⁶³ Preston, "Opposing effects of spirituality and religious fundamentalism"; Mazaheri, "Faith in science: Religion and climate change"; Sholihin, "Environmental protection versus economic growth in the".

⁶⁴ Hasan et al., "Farming as an Act of Gratitude"; Alam, "Environmental sustainability in Indonesian pesantren: Integrating pious".

⁶⁵ Hearn, "The perceived potential of religion in mitigating"; Koehrsen and Ives, "The Multiple Roles of Religious Actors".

literature on religious environmental education records both motivational pathways and the importance of embedded social norms.⁶⁶ These findings help explain why curriculum reform might change behavior in one setting but not another. They also suggest that evaluation should examine leadership continuity, peer expectations, physical infrastructure, and actual decision rights, rather than attributing outcomes solely to the frequency of religious messages.

The practical implications should be understood as hypotheses for implementation, not established success stories. Mosques and pesantren could publish annual resource accounts and link religious lessons to measurable operational commitments; financing institutions could disclose climate screening and distributional safeguards; councils issuing environmental guidance could report implementation and obstacles; policymakers could invite religious groups into consultations without ceding legal standards or excluding minority voices. These steps may improve accountability, but rigorous evaluation remains essential. Mixed-method follow-up studies could compare organizations before and after adopting public commitments, use matched comparison sites where possible, and assess emissions, resource demand, participation, and equity effects. Qualitative interviews should probe dissent, conflicts of interest, and the possibility that high-visibility projects obscure less visible environmental costs. Researchers should also record failed implementation and cases in which religious language supports environmentally costly activities. Negative cases are analytically valuable because they reveal whether a proposed norm has sufficient institutional force when confronted by financial incentives or political pressure. These tests would permit a more credible assessment of the causal role of religious accountability, distinguishing it from broader policy reforms or changes in market prices.

Conclusion

This article argues that Qur'anic stewardship contributes to contemporary climate ethics by establishing human responsibility for the earth and accountability for avoidable environmental harm. The

⁶⁶ Purnama Aksir, R., Madjid, A., Rahmatullah, A. S., Suud, F. M., & Pasandalan, S. N., "Pro environmental behavior in Islamic boarding schools: A systematic literature review on religiosity, ecological awareness, and social norms," *Anfusina: Journal of Psychology*, 8(2) (2025), <https://doi.org/10.24042/ajp.v8i2.30696>.

analysis of Qur'anic passages, contemporary Islamic declarations, and Indonesia's climate fatwa identifies a gap between religious principles and institutional action, particularly in defining responsibilities, allocating resources, demonstrating outcomes, and enabling public scrutiny. To address this gap, the study proposes the Climate Accountability Translation Framework, comprising normative warrant, differentiated responsibility, institutional commitment, public evidence, and corrective review. This framework connects Islamic environmental ethics with institutional sustainability while recognizing that religious guidance, environmental law, and climate science have distinct sources of authority and functions.

In practice, religious institutions and organizations should translate environmental values into measurable commitments, transparent reporting, community consultation, and corrective action, while public authorities remain responsible for implementing environmental law fairly. Future research should empirically examine how these commitments influence mitigation and adaptation outcomes across diverse Muslim communities and institutions. Because this study relies on documentary analysis rather than original empirical data, the proposed framework remains conceptual and requires further validation. Ultimately, Qur'anic stewardship becomes more consequential for climate responsibility when accountability extends beyond professed values to actual decisions, unequal environmental consequences, and demonstrable evidence of change.

Declarations

Funding and competing interests: To be completed and verified by the author(s) before submission. Ethics and data availability: This documentary analysis uses publicly accessible texts and published studies. No human participants were recruited and no new personal data were collected.

References

- Alam, L., Alam, M., Samaalee, A., & Suyatno, S. (2024). Environmental sustainability in Indonesian pesantren: Integrating pious principles and da'wah efforts. *Jurnal Ilmu Dakwah*, 44(2), 311–328. <https://doi.org/10.21580/jid.v44.2.23607>

- Bagir, Z. A. (2025). Beyond instrumentalization: Lived religion, politics, and justice in Indonesian Muslim environmentalisms. *Studia Islamika*, 32(3), 439–466. <https://doi.org/10.36712/sdi.v32i3.46652>
- Billet, M. I., Baimel, A., Sahakari, S. S., Schaller, M., & Norenzayan, A. (2023). Ecospirituality: The psychology of moral concern for nature. *Journal of Environmental Psychology*, 87, 102001. <https://doi.org/10.1016/j.jenvp.2023.102001>
- Blankinship, L. A., Gillaspie, S., Obaideen, K., & Aboul-Enein, B. H. (2024). "... And we have made from water every living thing": Water conservation and the Holy Qur'an. *Environmental Conservation*, 51(2), 79–84. <https://doi.org/10.1017/S037689292300036X>
- Bülbül, H. (2024). Understanding the influence of religion on pro-environmental behaviors: An investigation in Muslim families using the theory of planned behavior customized with a religiosity-based subjective norm. *Journal of Environmental Planning and Management*. Advance online publication. <https://doi.org/10.1080/09640568.2024.2403772>
- Chubachi, N. (2025). Devotion through waste: Ethics of waste sadaqah in Indonesia. *Worldviews*, 29(2), 148–169. <https://doi.org/10.1163/15685357-02902005>
- Gada, M. Y. (2024). *Islam and environmental ethics*. Cambridge University Press. <https://doi.org/10.1017/9781009308236>
- Harnowo, T., & Habib, F. H. (2024). Islamic law and environment issues: Indonesian Ulama Council's fatwas on climate change. *AHKAM: Jurnal Ilmu Syariah*, 24(1). <https://doi.org/10.15408/ajis.v24i1.34161>
- Hasan, A. M. N., Bagir, Z. A., & Akhda, N. T. (2025). Farming as an act of gratitude: Norms and practices of sustainability among organic Muslim farmers in Blora, Central Java. *Jurnal Kawistara*, 15(1), 1–18. <https://doi.org/10.22146/kawistara.98312>
- Hasan, N., Mardhatillah, M., Abadi, M. M., & Hidayat, A. R. (2022). Environmental activism in Indonesian pesantren: The role of lora in mainstreaming Islamic eco-theology in Tapal Kuda, East Java.

- Teosofi: Jurnal Tasawuf dan Pemikiran Islam, 12(2), 280–306.
<https://doi.org/10.15642/teosofi.2022.12.2.280-306>
- Hearn, A. X., Huber, F., Koehrsen, J., & Buzzi, A.-L. (2024). The perceived potential of religion in mitigating climate change and how this is being realized in Germany and Switzerland. *Journal of Environmental Studies and Sciences*, 14, 342–357.
<https://doi.org/10.1007/s13412-023-00884-z>
- Indonesian Ulama Council. (2023). Fatwa No. 86 of 2023 concerning the law on controlling global climate change [Fatwa in Indonesian].
<https://lplhsda.mui.or.id/fatwa-mui-no-86-2023-hukum-pengendalian-perubahan-iklim-global/>
- Intergovernmental Panel on Climate Change. (2023). Climate change 2023: Synthesis report. <https://doi.org/10.59327/IPCC/AR6-9789291691647>
- International Islamic Climate Change Symposium. (2015). Islamic declaration on global climate change. United Nations Framework Convention on Climate Change. <https://unfccc.int/news/islamic-declaration-on-climate-change>
- Ives, C. D., & Baker, C. (2024). Engaging faith for a sustainable urban future. *Global Sustainability*, 7, e45.
<https://doi.org/10.1017/sus.2024.32>
- Jameel, S. (2023). Climate change, food systems and the Islamic perspective on alternative proteins. *Trends in Food Science & Technology*, 138, 480–490.
<https://doi.org/10.1016/j.tifs.2023.06.028>
- Karimi, S., Liobikienė, G., & Alitavakoli, F. (2022). The effect of religiosity on pro-environmental behavior based on the theory of planned behavior: A cross-sectional study among Iranian rural female facilitators. *Frontiers in Psychology*, 13, 745019.
<https://doi.org/10.3389/fpsyg.2022.745019>
- Koehrsen, J. (2021). Muslims and climate change: How Islam, Muslim organizations, and religious leaders influence climate change perceptions and mitigation activities. *WIREs Climate Change*, 12(3), e702. <https://doi.org/10.1002/wcc.702>

- Koehrsen, J., & Ives, C. D. (2025). The multiple roles of religious actors in advancing a sustainable future. *Ambio*, 54, 1318–1333. <https://doi.org/10.1007/s13280-025-02166-0>
- Koehrsen, J., Buzzi, A.-L., & Hearn, A. (2025). Are religious organizations becoming green? Faith communities' role in advancing environmental sustainability in Switzerland. *Sustainability Science*. Advance online publication. <https://doi.org/10.1007/s11625-025-01766-9>
- Maghfiroh, M., Iryani, E., Haerudin, Yani, M. T., Zaini, N., & Mahfud, C. (2024). Promoting green pesantren: Change, challenge and contribution of Nahdlatul Ulama in Indonesia. *Nazhruna: Jurnal Pendidikan Islam*, 7(2), 409–435. <https://doi.org/10.31538/nzh.v7i2.4668>
- Mazaheri, N. (2024). Faith in science: Religion and climate change attitudes in the Middle East. *Global Environmental Politics*, 24(1), 52–75. https://doi.org/10.1162/glep_a_00720
- McKim, R. (2024). Prospects and possibilities for interfaith environmentalism. *Religious Studies*, 60(1), 147–159. <https://doi.org/10.1017/S0034412523000069>
- Murad, M. (2023). The Western orientation of environmentalism in the Islamic world today. *Religion and Development*, 2(1), 41–62. <https://doi.org/10.30965/27507955-20230015>
- Musari, K. (2022). Integrating green sukuk and cash waqf linked sukuk, the blended Islamic finance of fiscal instrument in Indonesia: A proposed model for fighting climate change. *International Journal of Islamic Khazanah*, 12(2). <https://doi.org/10.15575/ijik.v12i2.17750>
- Mustofa, M. L., Zenrif, M. F., & Barizi, A. (2025). Towards Islamic eco-theology: Indonesian Muslim organizations in climate change mitigation and adaptation efforts. *Problemy Ekorozwoju*, 20(2), 21–31. <https://doi.org/10.35784/preko.7089>
- Najib, A. A., Rofiq, A., & Fauzi, M. N. (2025). Environmental ethics in pesantren tradition: A living Qur'an study on students' ecological awareness. *Al-Mada: Jurnal Agama, Sosial, dan Budaya*, 8(4), 813–831. <https://doi.org/10.31538/almada.v8i4.9279>
- Nasir, Z. M., & Yaacob, M. (2022). Social and religious influences on environmentally ethical behavior of Muslim community in

- Malaysia. *Creative Education*, 13, 3996–4016.
<https://doi.org/10.4236/ce.2022.1312255>
- OU-SALAH, L., Verschraegen, G., & Van Praag, L. (2024). “Rain has to do with God’s will”: Religion and perceptions of environmental change in a Muslim community in the Souss-Massa region of Morocco. *Social Compass*, 71(1).
<https://doi.org/10.1177/00377686241239615>
- Preston, J. L., & Shin, F. (2022). Opposing effects of spirituality and religious fundamentalism on environmental attitudes. *Journal of Environmental Psychology*, 80, 101772.
<https://doi.org/10.1016/j.jenvp.2022.101772>
- Purnama Aksir, R., Madjid, A., Rahmatullah, A. S., Suud, F. M., & Pasandalan, S. N. (2025). Pro environmental behavior in Islamic boarding schools: A systematic literature review on religiosity, ecological awareness, and social norms. *Anfusina: Journal of Psychology*, 8(2). <https://doi.org/10.24042/ajp.v8i2.30696>
- Republic of Indonesia. (2009). Law No. 32 of 2009 concerning environmental protection and management, as subsequently amended. <https://peraturan.bpk.go.id/Details/38771/uu-no-32-tahun-2009>
- Sholihin, M., Sugiyanto, C., & Susanto, A. A. (2024). Environmental protection versus economic growth in the views of Muslims: A large sample of empirical evidence. *International Journal of Energy Sector Management*, 18(6), 1592–1609.
<https://doi.org/10.1108/IJESM-08-2023-0030>
- Smith, J. D., Adam, R., & Maarif, S. (2024). How social movements use religious creativity to address environmental crises in Indonesian local communities. *Global Environmental Change*, 84, 102772. <https://doi.org/10.1016/j.gloenvcha.2023.102772>
- Syarif, A. F., & Irawan, B. (2025). Planting values, reaping harmony: Ecological praxis and religious moderation in an Indonesian eco-pesantren. *Refleksi: Jurnal Kajian Agama dan Filsafat*, 24(2). <https://doi.org/10.15408/refleksi.v24.i2.49798>
- Yandri, P., Budi, S., & Putri, I. A. P. (2023). Waste sadaqah: A new community-based waste-management practice in Java, Indonesia.

Sustainability: Science, Practice and Policy, 19(1).
<https://doi.org/10.1080/15487733.2023.2212510>

Zhang, Q., Husnain, M., Usman, M., Akhtar, M. W., Ali, S., Khan, M. A., Abbas, Q., Ismail, R., Rehman, T., & Akram, M. (2022). Interplay of eco-friendly factors and Islamic religiosity towards recycled package products: A cross-cultural study. *Frontiers in Psychology*, 13, 840711.
<https://doi.org/10.3389/fpsyg.2022.840711>