

A Conceptual Framework of Integrating Ecotheology based on Fatwa MUI No 86/2023 into Climate Change Education for Alpha Gen Students

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Abstract

One of Fatwa MUI No. 86/2023 recommendation underscores the necessity of integrating climate change knowledge and practice into educational programs. However, the lack of a conceptual integration framework within formal and non-formal curricula has resulted in limited and fragmented implementation. The purpose of this research is to examine the integration of ecotheology based on Fatwa MUI No. 86/2023 into climate change education (CCE) specifically designed for Alpha Gen students. This study employs a descriptive method with a qualitative approach and literature review. The results show that ecotheology based on Fatwa MUI No. 86/2023 can be immersed into climate change education as a value basis to determine what action should be taken through *fiqh al biah* conception. The proposed outcome is a conceptual model termed religious-climate literacy. The indicator of religious-environmental literacy that has been modified in this research contains the dimension of ecological knowledge, cognitive skills, value-based attitudes, and ethical behaviors rooted in spiritual teachings. By situating environmental responsibility as both a scientific necessity and a spiritual imperative, this integration enhances the transformative potential of CCE. In conclusion, religious climate literacy is a critical step that can be used as a form of mitigation for the alpha generation towards a generation that has knowledge of climate resilience and environmental justice.

Keywords: Fatwa MUI No. 86/2023, Religious-Climate literacy, Gen Alpha Students.

Abstrak

Salah satu rekomendasi pada Fatwa MUI No. 86/2023 menekankan pentingnya mengintegrasikan pengetahuan dan praktik perubahan iklim ke dalam program pendidikan. Namun, ketiadaan kerangka kerja konseptual yang mengintegrasikan pengetahuan dan praktik tersebut dalam kurikulum formal dan non-formal telah menyebabkan adanya pemahaman yang terfragmentasi dan tidak maksimal. Tujuan penelitian ini adalah untuk mengkaji integrasi ekoteologi berdasarkan Fatwa MUI No. 86/2023 ke dalam pendidikan perubahan iklim (CCE) yang dirancang khusus untuk generasi alfa. Penelitian ini menggunakan metode deskriptif dengan pendekatan kualitatif dan tinjauan literatur. Hasil penelitian menunjukkan bahwa ekoteologi berdasarkan Fatwa MUI No. 86/2023 dapat diintegrasikan ke dalam pendidikan perubahan iklim sebagai landasan nilai bagi siswa untuk menentukan tindakan yang harus diambil melalui konsepsi *fiqh al biah*. Penelitian ini mengusulkan model konseptual berupa *religious-climate literacy*. Indikator *religious-climate literacy* yang diusulkan dalam penelitian ini mencakup dimensi pengetahuan ekologi, keterampilan kognitif, sikap berbasis nilai, dan perilaku etis yang berakar pada ajaran agama. Dengan menempatkan tanggung jawab lingkungan sebagai kebutuhan ilmiah dan kewajiban berlandaskan agama, integrasi ini meningkatkan potensi transformatif dari CCE. *Religious-climate literacy* menjadi langkah kritis yang dapat digunakan sebagai bentuk mitigasi generasi alfa menuju generasi yang memiliki pengetahuan ketahanan iklim dan keadilan lingkungan.

Kata Kunci: Fatwa MUI No. 86/2023, *Religious-Climate literacy*, Siswa generasi alfa.

INTRODUCTION

Climate change represents an ecological, social, ethical, and justice issue that significantly impacts the educational vulnerabilities of younger generations (Edelweiss, 2022). The IPCC AR6 Synthesis Report underscores the acceleration of warming, cross-sectoral risks, and the urgency of transformative action involving all stakeholders, with education playing a

pivotal role. UNESCO positions Climate Change Education (CCE) as a strategic instrument to empower learners through knowledge, skills, values, and attitudes that drive responsible action (Huss & Eastep, 2024).

Despite its recognized strategic role, the implementation of CCE often remains fragmented due to the absence of an integrative framework that bridges science, values, and civic action. UNESCO's global review on progress in education, training, and public awareness highlights a persistent gap between normative commitments and practical implementation in schools. Recent findings (MECCE/UNESCO, 2024) reinforce the role of education in strengthening research capacity, advancing green upskilling, and fostering behavioral change—indicating the urgency of a conceptual integration framework.

MUI Fatwa No. 86/2023 on the Law of Controlling Global Climate Change provides a normative and morally binding reference. The official document outlines legal rulings and institutional recommendations, including the integration of climate issues into both formal and non-formal education. Public statements emphasize the prohibition of destructive practices (e.g., deforestation and land burning) and encourage cross-sectoral collaboration. Analytical reports from environmental stakeholders further elaborate on the scope of fatwa implementation across policy, public literacy, and education domains.

The theoretical foundation of this study integrates ecotheology and *fiqh al-bī'ah* as value-based foundations for CCE. Integrating this fatwa effectively into education requires methodologies attuned to the distinct characteristics of Gen Alpha learners. As digital natives who thrive on interactivity, purpose, and visual engagement, they respond best to pedagogies like experiential learning, storytelling, gamification, and technology-enabled collaboration (Thomas *et al.*, 2023; UNICEF, 2022). Furthermore, connecting climate education to their cultural and religious identities is essential for fostering personal relevance, ethical grounding, and a sense of agency (Barrable, 2019).

Therefore, this paper develops a conceptual framework for integrating the principles of Islamic ecotheology, as articulated in MUI Fatwa No. 86/2023, into climate change education specifically designed for Generation Alpha. The framework synthesizes the motivational force of the fatwa's religious obligations with pedagogical strategies suited to Gen Alpha, translating core values (*Khalifah, Amanah*) and specific directives into engaging curricula and activities.

LITERATURE REVIEW

Climate Change Education (CCE) and Its Urgency for Gen Alpha

The concept of Climate Change Education (CCE) has gained global recognition as an essential response to the accelerating ecological crisis. UNESCO frames CCE as part of Education for Sustainable Development (ESD), emphasizing its role in equipping learners with knowledge, competencies, and values for environmental stewardship. Recent research highlights how CCE should foster scientific literacy, critical thinking, and transformative action across disciplines (UNESCO, 2021; IPCC, 2023; Rousell & Cutter-Mackenzie-Knowles, 2020).

UNESCO (2021) emphasizes that CCE should not only transmit scientific knowledge but also cultivate values, attitudes, and actions that prepare younger generations to actively participate in sustainability. This is particularly urgent for Generation Alpha, who will inherit the consequences of current environmental degradation (Hickman *et al.*, 2021). Within the Indonesian context, studies highlight that environmental literacy among students remains relatively low, with limited integration of climate change content into formal curricula (Setyowati & Susilo, 2020; Pradana *et al.*, 2022). Thus, there is a pressing need for transformative educational approaches that bridge cognitive understanding with ethical and behavioral commitments to climate resilience.

Ecotheology in the Islamic Tradition

Ecotheology within Islamic scholarship provides a normative and spiritual lens to address ecological challenges. Classical Islamic scholars underscore the sacredness of nature as part of divine creation. Al-Ghazali in *Ihya' Ulum al-Din* emphasizes moderation and the avoidance of waste as ethical imperatives rooted in Qur'anic teachings (Al-Ghazali, trans. 2019). Similarly, Al-Qurtubi's *Tafsir* elaborates on Qur'an 7:31, which prohibits extravagance and links ecological balance to human accountability before God (Al-Qurtubi, 2006). Ibn Taymiyyah in *Majmu' al-Fatawa* also articulates that corruption (*fasād*) on earth is a violation of divine trust, framing environmental preservation as an act of worship (Ibn Taymiyyah, 2010). Contemporary Muslim scholars extend this tradition into modern ecotheological discourse, arguing that Islamic teachings can serve as a moral foundation for sustainable living (Nurdin, 2019; Qodir & Amin, 2021; Faruqi, 2023). These perspectives highlight that ecological stewardship is not merely a scientific responsibility but also a spiritual obligation.

Within Islamic thought, the foundations of ecotheology are deeply rooted in the Qur'an and elaborated in the classical tradition of Islamic scholarship. Al-Ghazali in *Ihya' 'Ulum al-Din* stressed the principle of *amanah* (trusteeship), asserting that humans as *khalifah* are entrusted to safeguard creation rather than exploit it destructively (al-Ghazali, 1995). Similarly, Ibn Taymiyyah in *Majmu' al-Fatawa* underscored the prohibition of *ifsād fi al-ard* (spreading corruption on earth), framing environmental degradation as a moral violation with spiritual consequences (Ibn Taymiyyah, 2005). Exegeses such as al-Qurtubi's *Tafsir al-Qurtubi* illuminate Qur'anic verses on nature, reminding believers of ecological signs (*ayat kauniyah*) that command reflection and responsibility (al-Qurtubi, 2008). These perspectives demonstrate that environmental ethics are not foreign to Islamic tradition but integral to its doctrinal foundations.

The discipline of *fiqhal-bi'ah* (Islamic environmental jurisprudence) emerges as a contemporary elaboration of these classical insights, systematizing them into legal and ethical guidelines. Scholars emphasize the principles of *maslahah* (public good), *la darar wa la dirar* (no harm, no reciprocation of harm), and *hifz al-bi'ah* (preservation of the environment) as extensions of the *maqāṣid al-sharī'ah*. Modern scholarship affirms that *fiqh al-bi'ah* offers a normative framework to address pressing ecological challenges, making it highly relevant for integration into modern education (Hossain, 2022; Fauzi, 2024). In this sense, *fiqhal-bi'ah* bridges the doctrinal depth of the salaf with contemporary discourses on sustainability.

MUI Fatwa No. 86/2023 as a Normative Basis

The issuance of Fatwa MUI No. 86/2023 represents a landmark step in integrating Islamic jurisprudence into environmental action. The fatwa emphasizes the urgency of responding to the climate crisis by situating ecological responsibility within the framework of *fiqh al-bi'ah*. It provides normative guidance on reducing carbon emissions, conserving biodiversity, and promoting sustainable consumption patterns (MUI, 2023). Several studies suggest that fatwas can play a critical role in shaping Muslim communities' environmental awareness by linking scientific imperatives to religious duties (Rizal et al., 2023; Hidayatullah & Rahman, 2024; Wahid, 2025). As such, the fatwa not only addresses the practical dimension of climate change mitigation but also reorients environmental behavior as a matter of spiritual accountability. This normative framework offers a strong foundation for embedding ecotheology into climate change education.

Conceptual Gap and Proposed Framework

Despite increasing attention to environmental education, current practices in Indonesia remain fragmented and primarily cognitive, with insufficient integration of ethical and spiritual values (Suryandari et al., 2019; Lestari et al., 2021). Studies show that many school programs treat climate education as an add-on rather than an embedded framework, resulting in limited transformative outcomes (Yuliana et al., 2022; Rahmawati & Arifin, 2023). The lack of a comprehensive framework that combines scientific, cultural, and theological dimensions has

created a conceptual gap in both formal and non-formal settings. The present study proposes the integration of ecotheology based on Fatwa MUI No. 86/2023 into CCE, articulated through the model of *religious-climate literacy*. This model incorporates four dimensions—ecological knowledge, cognitive skills, value-based attitudes, and ethical behaviors grounded in spiritual teachings. By situating environmental responsibility as both a scientific necessity and a theological imperative, the framework aims to enhance the transformative potential of CCE and foster climate resilience among Gen Alpha students.

METHOD

This research aims to investigate how ecotheology based on Fatwa MUI No. 86/2023 can be embedded within climate change education as a preventive approach to managing better mitigation and adaptation efforts against climate change. This research employs a descriptive method with a qualitative approach and literature review. The explanation of literature review in this research is employing the literature (libraries) in the form of books, interpretations of the Qur'an, Hadith, encyclopedias, dictionaries, journals, documents or results reports and previous research and others that are related to the problem to be solved.

RESULTS AND DISCUSSION

Integration of Ecotheology into Climate Change Education

The integration of ecotheology into Climate Change Education (CCE) reflects a paradigm shift from a purely scientific approach toward an interdisciplinary model that harmonizes rational inquiry with spiritual values. Fatwa MUI No. 86/2023 on environmental sustainability provides a crucial entry point by framing ecological preservation as part of *fiqh al-bī'ah*. The fatwa emphasizes that environmental degradation constitutes a form of *ma'siyah* (disobedience) and outlines religious obligations such as reducing carbon footprints, minimizing waste, and supporting renewable energy as ethical imperatives. When embedded into CCE, these religious directives transform climate change from being perceived as a distant global issue into an immediate ethical responsibility rooted in Islamic teachings. This approach resonates with Generation Alpha's unique learning needs, as they require not only cognitive awareness but also strong ethical guidance to navigate global crises (Abdullah, 2021; UNESCO, 2021; Hamid, 2025).

Classical Islamic scholarship offers enduring principles that enrich contemporary climate pedagogy. The Qur'an repeatedly emphasizes human stewardship (*khalifah*) over the Earth (Q.S. Al-Baqarah [2]:30; Q.S. Al-An'am [6]:165), while scholars such as al-Ghazālī in *Ihyā' 'Ulūm al-Dīn* and Ibn Taymiyyah in *Majmū' al-Fatāwā* stressed that corruption of nature (*fasād fi al-ard*) is a violation of divine trust. These salaf references complement the normative framework of the MUI fatwa, allowing educators to present climate issues not only as scientific phenomena but also as theological transgressions with spiritual consequences. By framing ecological awareness in this manner, students are encouraged to perceive sustainability practices as acts of *ibādah*, thereby integrating moral consciousness into daily environmental action (Al-Ghazālī, 1998/2019; Ibn Taymiyyah, 1326H/2014; Salīm, 2022).

Educationally, the integration of ecotheology strengthens the contextual relevance of CCE by connecting scientific explanations of climate change with ethical narratives that resonate with students' cultural and religious identities. Previous studies confirm that when environmental education is infused with religious or ethical values, students display stronger pro-environmental behaviors and longer-lasting engagement compared to value-neutral approaches (Aini et al., 2020; Latifah et al., 2022; Al-Khalili, 2023). Indonesia as a nation with deep religious traditions, embedding ecotheology into climate curricula ensures that environmental responsibility is not seen as an imported concept but rather as an intrinsic dimension of faith and culture. This dual grounding, both in science and theology creates a

holistic educational experience that fosters both intellectual understanding and moral commitment, equipping Generation Alpha to act as environmentally conscious global citizens.

Religious-Climate Literacy as a Conceptual Model

Religious-environment literacy is a development and derivative of climate literacy. This departs from the concept of "nature religiosity" by Taylor. In Taylor's view, natural religiosity refers to the way individuals or communities experience and interpret religious experiences through relationships with nature and the environment. Besides, Tucker and Grim (1998) have contributed significantly to understanding the relationship between religion, ecology, and the environment. One of their well-known projects is "The Yale Forum on Religion and Ecology". The definition of religiosity in the context of their work focuses more on the way religion and spirituality influence human attitudes towards nature and ecosystems. They explore how various religious traditions can provide spiritual and ethical resources to protect and preserve nature. Thus, here is the table of religious-climate literacy.

Table 1. Table of Religious-Climate Literacy

| Dimension | Description | Indicators | Examples in CCE |
|------------------------------------|---|--|---|
| Ecological Knowledge | Understanding scientific concepts and processes related to climate change and ecosystems. | Knowledge of biodiversity, greenhouse effect, carbon footprint, local ecological systems. | Students analyze local biodiversity loss through field projects or citizen science activities. |
| Cognitive Skills | Critical and analytical thinking to evaluate environmental problems and propose solutions. | Problem-solving, data interpretation, system thinking, innovation. | Students design eco-projects (e.g., plastic reduction campaign) and evaluate their impacts. |
| Value-Based Attitudes | Internalization of moral and spiritual values that shape attitudes toward the environment. | Justice (<i>'adl</i>), moderation (<i>wasatiyyah</i>), compassion (<i>rahmah</i>), responsibility (<i>amānah</i>). | Students reflect on Quranic verses or fatwas related to environmental ethics before planning climate actions. |
| Ethical-Spiritual Behaviors | Concrete actions rooted in spiritual responsibility, aligning daily practices with ecological ethics. | Waste reduction, sustainable lifestyle, renewable energy use, eco-friendly worship practices. | Students implement "green mosque/school" programs: energy-saving lights, water conservation, waste sorting. |

The framework of religious-climate literacy in this study comprises four interrelated dimensions: ecological knowledge, cognitive skills, value-based attitudes, and ethical-spiritual behaviors. Ecological knowledge ensures that students comprehend the mechanisms and impacts of climate change through empirical science. Cognitive skills cultivate critical thinking and problem-solving abilities, empowering students to analyze and respond to environmental challenges. Value-based attitudes emphasize the moral orientation of learners, encouraging them to internalize compassion, justice, and moderation (*wasatiyyah*) in their interactions with nature. Ethical-spiritual behaviors anchor these practices in religious rituals and daily life, framing actions such as waste reduction, energy conservation, and biodiversity protection as acts of *ibādah* (worship). This framework mirrors classical Islamic notions found in the works of al-Ghazālī, who viewed moderation in consumption as a sign of gratitude (*shukr*), and Ibn

Qayyim al-Jawziyyah, who warned against extravagance (*isrāf*) as a cause of ecological imbalance (Al-Ghazālī, 1998/2019; Ibn Qayyim, 1350H/2016; Salīm, 2022).

By merging scientific reasoning and spiritual imperatives, religious-climate literacy enhances the transformative potential of Climate Change Education. Students are encouraged to view climate change not only as an environmental crisis but also as a moral challenge. Such an approach cultivates holistic resilience, combining adaptive capacity with spiritual motivation. For instance, Qur’anic injunctions on moderation (*wasatiyyah*) and prohibition of corruption on Earth (*fasād fī al-arḍ*) serve as moral compasses that guide sustainable lifestyles (Q.S. Al-A’raf [7]:56; Q.S. Al-Baqarah [2]:205). This theological dimension complements modern sustainability frameworks, thus producing a hybrid model that is both scientifically grounded and ethically profound. As previous studies suggest, education that integrates multiple worldviews is more effective in shaping long-term pro-environmental behavior (IPCC, 2022; Hamid, 2025).

CONCLUSSIONS

This study concludes that integrating ecotheology based on *Fatwa MUI No. 86/2023* into climate change education provides a holistic framework to strengthen the ecological awareness of Generation Alpha students. The proposed religious–climate literacy model—comprising ecological knowledge, cognitive skills, value-based attitudes, and ethical–spiritual behaviors—offers a transformative approach that situates environmental stewardship as both a scientific necessity and a spiritual imperative.

Practically, religious–climate literacy equips educators and policymakers with a culturally rooted framework that resonates with Gen Alpha learners, ensuring that environmental education is not perceived as external knowledge but as an integral aspect of faith and daily practice. Such integration has the potential to expand climate awareness beyond classrooms, nurturing eco-conscious behaviors that extend to families and communities.

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