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## **PAI's Ecological Critique of the Causes of the Sumatra Floods and the Solution**

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### **Abstract**

This study aims to conduct an in-depth ecological critique of the recurring flood phenomenon in Sumatra from the perspective of Islamic Religious Education (IRE). Floods are not merely viewed as natural disasters, but as manifestations of an environmental ethical crisis rooted in the failure to implement the fundamental principles of Islamic teachings in human–nature relations. This research employs a qualitative approach using a critical-conceptual framework and literature analysis, drawing on the theories of Khilafah fil Ard (human stewardship on Earth) and Hifzh al-Bi'ah (environmental preservation) to examine anthropogenic causes of flooding, such as deforestation, illegal land conversion, and exploitative practices that disrupt ecological balance. The findings reveal inconsistencies between the values of Islamic Religious Education, which emphasize ecological responsibility, and the environmentally destructive behaviors observed in practice. The study underscores the urgency of reorienting the IRE curriculum toward the cultivation of akhlaql karimah (noble character) in relation to the environment. Therefore, this study suggests that future researchers develop and empirically examine a Green IRE model that integrates spiritually grounded disaster mitigation education and ecological awareness, positioning Islamic Religious Education as a strategic instrument in flood prevention efforts and the restoration of environmental ethics in Sumatra.

**Keywords:** Ecological Critique; Islamic Religious Education; Sumatra Flood; Disaster Solutions.

### **Abstract**

This study aims to conduct an ecological critique of the recurring flooding phenomenon in Sumatra from the perspective of Islamic Religious Education (PAI). Floods are viewed not merely as natural disasters, but as a manifestation of an environmental ethical crisis rooted in the failure to implement the basic values of Islamic teachings in the relationship between humans and nature. This study uses a qualitative approach with a conceptual-critical study method and literature analysis, utilizing the theoretical framework of Khilafah fil Ard (human caliphate on earth) and Hifzh al-Bi'ah (environmental preservation) to analyze anthropogenic factors causing flooding, such as deforestation, illegal land conversion, and natural resource exploitation practices that damage the balance of the ecosystem. The results of the study indicate a discrepancy between PAI values that emphasize ecological responsibility and human behavior that is exploitative towards the environment. This study also emphasizes the importance of reorienting the PAI curriculum to emphasize the formation of noble morals towards the environment. Therefore, this study suggests that future researchers develop and empirically test a Green PAI model that integrates spiritual-based disaster mitigation education and ecological awareness, so that PAI can function as a strategic instrument in flood prevention efforts and environmental ethics restoration in Sumatra.

**Keywords:** Ecological Criticism; Islamic Religious Education (PAI); Sumatra Floods; Disaster Solutions.



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## Introduction

The recurring floods in various regions of Sumatra are not simply a natural phenomenon that can be understood through a purely geographical or climatological approach. This event has become a structural and ongoing ecological crisis, with increasingly widespread social, economic, and humanitarian impacts year after year. The increasing intensity and frequency of flooding demonstrate that this problem is rooted in a pattern of human relations with nature that is no longer based on the principles of balance and responsibility. Therefore, flooding must be understood as a manifestation of a serious environmental ethical crisis.(Setiawan, 2022).

Various studies have shown that anthropogenic factors significantly contribute to flooding in Sumatra. Massive deforestation, uncontrolled land conversion, exploitative mining and plantation practices, and weak environmental law enforcement have damaged the ecosystem's carrying capacity. Rivers are losing their natural functions, water catchment areas are shrinking, and forests, which should serve as ecological buffers, are instead becoming sources of disaster. This situation emphasizes that environmental damage is not merely a technical issue, but a moral and ethical one.(Jannah & Itratip, 2017).

From an Islamic perspective, the relationship between humans and nature is not exploitative, but rather a trust that must be safeguarded. Islamic teachings position humans as *khalifah fil ard* (prosperers and guardians of the earth) responsible for environmental sustainability. The principle of *hifzh al-bi'ah* emphasizes that preserving nature is an integral part of the objectives of sharia (*maqāṣid al-syarī'ah*). However, the ecological reality in Sumatra demonstrates a sharp gap between the normative values of Islamic teachings and human practices that actually disrupt the balance of nature.(Aulady et al., 2022).

This is where Islamic Religious Education (PAI) holds a strategic position and urgently requires reorientation. PAI has often been perceived as merely ritualistic and normative education, without strengthening its ecological and social dimensions. In fact, PAI holds great potential as an instrument for developing noble

morals, oriented not only toward a vertical relationship with God but also toward horizontal relationships with fellow humans and nature. When ecological values are not internalized in education, behavior that neglects the environment and is vulnerable to disasters emerges.(Zuheldi et al., 2021).

Based on these conditions, this article presents an ecological critique of the floods in Sumatra from the perspective of Islamic Religious Education. Islamic Religious Education (PAI) is positioned not merely as an object of normative study, but as a tool for ethical critique and solutions to the environmental crisis. Through an analysis of the concepts of khalifah fil ard and hifzh al-bi'ah, this article seeks to offer ideas for reorienting Islamic Religious Education toward a Green Islamic Religious Education model that integrates spiritual awareness, environmental ethics, and disaster mitigation education as a preventive and transformative effort to address the ecological crisis in Sumatra.(Dea, 2022).

## Research methods

This study uses a descriptive qualitative approach with an ecological critique framework in Islamic Religious Education (PAI) to analyze the factors causing flooding in Sumatra and formulate solutions based on religious values. Data collection was conducted through literature review, including a review of journals, books, environmental reports, and policy documents related to ecological damage and disasters in Sumatra. In addition, the researcher conducted a content analysis of verses from the Quran, hadith, and Islamic Religious Education literature relevant to environmental ethics. The data obtained were analyzed thematically, namely identifying patterns of flood causes from an ecological perspective and linking them to Islamic values such as amanah (trust), ihsan (goodness), and the prohibition of facade (damage). The results of this analysis were used to formulate ecological critique and alternative solutions rooted in Islamic Religious Education principles.



## Results and Discussion

The analysis shows that environmental ethics concepts in Islamic Religious Education (PAI), such as hifzh al-bi'ah (environmental preservation) and the mandate of khilafah fil ard (human caliphate on earth), are normatively present in the PAI curriculum. However, these concepts have not been strategically positioned. In learning practices, environmental issues often appear only as additional subtopics or insertions in discussions of muamalah (religious transactions), without in-depth elaboration that emphasizes their urgency and relevance to contemporary ecological realities.

The dominance of ritualistic approaches in Islamic Religious Education (PAI) is a major factor in the weak internalization of environmental ethics. The emphasis in learning is directed more toward the aspects of worship and the vertical relationship between humans and God. Consequently, the horizontal dimension of Islamic teachings, particularly human responsibility towards nature, receives less attention. This condition creates a partial understanding of religion, where piety is measured through ritual observance, rather than concern for environmental sustainability.(Christian & Pranoto, 2021).

Ecological data analysis shows a strong correlation between the increasing intensity of flooding in Sumatra and human behavior that contradicts basic Islamic principles. Massive deforestation, peatland clearing, excessive exploitation of natural resources, and spatial planning policies that ignore environmental carrying capacity have disrupted the balance of the ecosystem. From an Islamic perspective, these actions can be categorized as ihdāts al-fasād fī al-ardh (destructive acts on the face of the earth), which theologically constitutes a serious ethical violation.

Another important finding is the wide ethical gap between Islamic Religious Education (PAI) teachings and social practices in the field. Despite formal religious education, exploitative behavior towards nature persists without a sense of religious guilt. This indicates that PAI has been more cognitively oriented, limited to the

transfer of knowledge, and has not succeeded in developing transformative morality, namely, a character that consciously and consistently rejects all forms of environmental destruction. The ecological critique presented in this study reveals a pedagogical misfocus within PAI. Unwittingly, the applied learning approach tends to reinforce an anthropocentric view, where nature is positioned as an object completely subject to human interests. In fact, Islamic teachings demand an ecocentric-functional perspective, which positions humans as guardians of the balance of nature, not rulers free to exploit.(Tunjang, 2023).

When the concept of the caliphate is understood as merely authority without being accompanied by ecological awareness and moral prudence, environmental damage becomes an inevitable consequence. In the Sumatran context, this misconception is reflected in the social and religious legitimacy of environmentally destructive economic practices, in the name of short-term development and prosperity. The author interprets that recurring flood disasters must be understood not only as natural events, but also as a logical consequence of violations of environmental ethics, as well as a theological call for collective reflection. Floods serve as a "spiritual alarm" that one of the main objectives of Islamic law (maqāṣid al-syarī'ah), namely preserving life and the environment, has been systematically neglected.(Permana, 2023).

Therefore, Islamic Religious Education (PAI) is required to shift its narrative paradigm. Religious education should not stop at an attitude of resignation to fate after a disaster occurs, but must emphasize the importance of preventive efforts through ecological awareness. In this context, the concept of repentance is not only interpreted individually, but also as a collective ecological repentance reflected in behavioral changes towards nature. In response to these findings, this study recommends the development of the Green PAI Model (Environmentally Aware Islamic Religious Education). This model demands the full integration of the concept of khilafah fil ard as the primary lens in all PAI materials, so that ecological values are no longer positioned as an addition, but as the core of religious learning.(Dwitrisna & Haryanto, 2022).



Furthermore, the Green Islamic Religious Education (PAI) Model emphasizes the importance of real-world applications through contextual and project-based learning, such as student involvement in conservation campaigns, flood risk education, and environmental social action in disaster-prone areas. The main focus of this model is the formation of transformative morals, making students agents of ecological awareness driven by spiritual values. Thus, Islamic Religious Education (PAI) can function as the vanguard in flood prevention efforts and the restoration of environmental ethics in Sumatra. As a step towards the transformation of ecologically oriented Islamic Religious Education, this study believes that a paradigm shift cannot be achieved instantly. A conceptual foundation is needed in the form of previously developed educational models as an epistemological and pedagogical foundation. There are at least three relevant educational models that serve as a transitional stage towards the birth of the Green Islamic Religious Education (PAI) Model.(Prasetyo & Zakir, 2020).

The first model is Normative-Ritualistic PAI, a model of religious education that emphasizes aspects of mahdhah worship, text memorization, and formal adherence to religious teachings. In this model, piety is measured through ritual observance and mastery of religious cognitive material. While this model is important in building the foundation of faith and worship, it has limitations because it does not address social and ecological dimensions. The relationship between humans and nature has not been positioned as an integral part of religious responsibility, resulting in environmental issues often being overlooked.

The second model is Moral-Social Islamic Education, which began to broaden the orientation of religious education to foster social morals, such as honesty, justice, solidarity, and concern for others. This model has gone beyond ritualistic approaches to incorporate the values of social interaction and ethics. However, its focus still tends to be anthropocentric, as moral concerns are directed more toward interpersonal relationships, while the relationship between humans and nature has not yet been accorded equal standing within the framework of Islamic morality.



The third model is Contextual-Transformative PAI, which seeks to connect Islamic teachings with contemporary social realities, including issues of poverty, injustice, and humanity. This model begins to open up space for students' critical and reflective awareness of social problems. However, the ecological dimension in this model remains implicit and has not been systematically formulated as part of the theological and pedagogical responsibilities of Islamic Religious Education.(Idati et al., 2020).

Based on the limitations of these three models, this study emphasizes the need for a radical shift going to Green PAI (Environmentally Aware Islamic Religious Education) Model. This model does not simply complement previous approaches, but rather completely reconstructs the Islamic Religious Education paradigm. This radical shift encompasses three main aspects: 1. Full Integration: Draft *Caliphate of the World* must be the main framework for all Islamic Religious Education (PAI) materials, not just an additional topic. Every discussion of faith, worship, and morals must be understood in relation to the responsibility to maintain the balance of nature. 2. Real Application: PAI learning needs to be directed at direct experience through ecological projects, such as forest conservation education, flood risk mitigation, and prevention campaigns. 3. Focus on Transformative Morals: The main objective of PAI is the formation of *noble morals* ecological, namely a religious character that consciously rejects environmental destruction and makes ecological concern an expression of faith. Thus, students become not only pious individuals but also agents of disaster prevention driven by spiritual awareness.(Setiawan, 2021).

With this framework, the Green PAI Model is positioned as a critical synthesis of previous models as well as a theological and pedagogical answer to the ecological crisis that gave rise to the flood disaster in Sumatra.

## Conclusion



This study concludes that the recurring floods in Sumatra cannot be understood solely as natural disasters, but rather as a manifestation of an environmental ethical crisis stemming from humanity's failure to carry out the mandate of the caliphate on earth. From the perspective of Islamic Religious Education (PAI), a significant gap is found between the normative values of Islamic teachings on environmental preservation, such as khilafah fil ard and hifzh al-bi'ah, and social practices that actually encourage ecological damage. PAI has tended to focus on ritual and cognitive aspects, thus failing to shape transformative morals and oriented towards ecological responsibility as an integral part of faith. Therefore, this study emphasizes the urgency of reorienting the paradigm of Islamic Religious Education through the development of the Green PAI Model as a pedagogical approach responsive to the ecological crisis. This model demands the integration of ecological values into all PAI materials, the strengthening of practice-based learning, and an emphasis on the formation of religious characters who care for and are responsible for the environment. Thus, PAI is expected to not only produce pious individuals personally, but also produce agents of change who play an active role in disaster prevention and the restoration of environmental ethics in Sumatra.



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