

Caliph on Earth: Ecological Responsibility in the Hadith of the Prophet Muhammad SAW (Study of Sanad and Matan)

Ghufron Hamzah

Universitas Wahid Hasyim, Indonesia; ghufronhamzah@unwahas.ac.id

ARTICLE INFO

Keywords:

Caliph;
Islamic ecology;
Prophet's hadith;
environmental conservation;
environmental ethics;
ecological responsibility

Article history:

Received 2024-09-20
Revised 2024-11-23
Accepted 2024-12-31

ABSTRACT

The global ecological crisis demands a strong spiritual perspective to drive a change in human behavior toward the environment. This article examines the concept of caliph (earth manager) in Islam through the analysis of 12 categories of hadith of the Prophet Muhammad SAW that are relevant to ecological issues, including water conservation, protection of flora and fauna, prohibition of waste, environmental cleanliness, and principles of sustainability. Using the method of takhrij hadith and sanad-matan analysis, this study identifies and evaluates the quality of ecological hadiths (sahih and hasan) and their implications for human responsibilities as caliphs. The results of the study show that the Prophet Muhammad SAW has provided comprehensive guidance on environmental management, emphasizing that ecological responsibility is not only a worldly obligation but also worship that will be accounted for in the hereafter. This research confirms that the revitalization of prophetic teachings on ecology can be an alternative solution in dealing with contemporary environmental crises, by integrating spiritual, ethical, and practical dimensions in natural resource management.

This is an open access article under the [CC BY-NC-SA](#) license.



Corresponding Author:

Ghufron Hamzah

Universitas Wahid Hasyim, Indonesia; ghufronhamzah@unwahas.ac.id

1. INTRODUCTION

The global ecological crisis has reached an alarming level and is one of the most pressing issues in contemporary human life. Climate change, overexploitation of natural resources, deforestation, water and air pollution, soil degradation, and biodiversity extinction show that the relationship between humans and nature is in an increasingly unbalanced and fragile state. The *Intergovernmental Panel on Climate Change* (IPCC) report confirms that human activities are the main cause of global warming that has exceeded 1.1°C from pre-industrial levels, with serious consequences for climate stability, food systems, water availability, and the sustainability of global ecosystems (IPCC, 2021). The impact of ecological crises is not only felt at the level of the physical environment, but also triggers social, economic, and humanitarian crises, especially for vulnerable communities. This condition indicates that ecological crises are not solely technical and scientific, but also reflect ethical and spiritual crises in

the way humans perceive, treat, and exploit nature (Nasr Esfahani, Darwish, & Williams, 2022) (Nasr, 1996).

In this context, religion has a strategic role in shaping the moral and ethical awareness of society. Islam, as a religion that has a comprehensive source of teachings and a comprehensive value system, offers a paradigm of human-nature relations based on monotheism. The monotheistic view emphasizes that the entire universe is the creation of Allah SWT and is in one cosmic unity that is interconnected, so that humans cannot position themselves as absolute rulers over nature (Sardar, 2010). One of the fundamental concepts in Islam that is relevant to environmental issues is the concept of *the caliph*, as stated in QS. al-Baqarah [2]: 30 (AL-Quran, 2013), that man was created as a caliph on earth. This concept emphasizes that humans are entrusted to manage, maintain, and protect the earth in accordance with the will of Allah SWT, not to exploit it arbitrarily. Thus, environmental damage can be understood as a form of human failure in carrying out the caliphate's mandate (Shukri, Nasir, & Razak, 2020) (Al-Khalidi, 2021).

The concept of the caliph in Islam cannot be separated from the dimension of moral and spiritual responsibility. Classical and contemporary mufasir interpret the concept of the caliph as a divine mandate that requires humans to uphold justice, maintain balance, and avoid damage on earth. Al-Tabari interprets the caliph as a successive generation to manage the earth according to the law of Allah, while Ibn Kathir emphasizes that man as a caliph must act according to the will of the Creator and will be held accountable for all his deeds (Al-Tabari, 2001) (Ibn Kathir, 1999) (Al-Bukhari, 1987) (Kathir, 2003). In this perspective, the excessive exploitation of nature, environmental pollution, and destruction of ecosystems are contrary to the principles of the caliphate and reflect ethical deviations in modern human life.

A number of previous studies have examined the relationship between Islam and environmental issues from various theological, philosophical, and normative perspectives. Seyyed Hossein Nasr, as one of the pioneers of Islamic ecological studies, emphasized that the modern ecological crisis is rooted in a spiritual crisis due to the desacralization of nature in modern civilization. According to Nasr, nature in the Islamic view is not just a material object, but a sign (verse) of Allah's greatness that has sacred value and must be respected (Nasr, 1996). Othman Llewellyn examines the basics of Islamic environmental law by tracing the Qur'an, hadith, and fiqh as normative sources, and emphasizes that Islam has an adequate legal framework to respond to environmental issues. However, the study emphasizes more on legal-formal aspects and has not examined the quality of hadith critically (Llewellyn, 2003).

Fazlun Khalid then developed the idea of an "ecological caliphate" that emphasizes human responsibility in managing the earth in a fair, sustainable, and justice-oriented manner between generations (Syauqi, Askar, & Ghofur, 2025) (Hanief, 2025) (Akbar, 2023). Khalid criticizes the anthropocentric and exploitative paradigm of modern development, and proposes a theocentric paradigm that places Allah as the true owner of the universe (Al-Khalidi, 2021). Yusuf al-Qaradawi in his study of Islamic ethics also emphasized the prohibition of excessive exploitation of nature and the importance of the principle of balance (*tawāzun*) in human life, including in the use of natural resources (Al-Qaradawi, 2001). Abd al-Majid al-Najjar places environmental preservation as an integral part of *maqāsid al-syarī'ah*, especially in the context of preserving life (*hifz al-nafs*) and the sustainability of human existence (Al-Najjar, 2008).

In addition, Ziauddin Sardar highlighted the importance of *the Islamic worldview* in building an environmentally friendly and equitable development paradigm. According to Sardar, the ecological crisis is a consequence of a modern perspective that separates humans from nature and ignores the ethical dimension in development (Sardar, 2010). Mohammad Hashim Kamali also touched on the role of the sunnah of the Prophet Muhammad SAW in the formation of social and moral ethics, including ethics towards the environment, although the discussion is still general and has not specifically studied ecological hadiths (Izza, Arseta, Kamalia, Ramadhani, & Rif'iyati, 2025) (Kamali, 2010). In Indonesia, Mujiyono Abdillah developed the concept of environmental jurisprudence as an Islamic response to

the ecological crisis, while Nur Arfiyah Febriani explored the ecological dimension in the interpretation of the Qur'an. However, both studies focus more on fiqh and interpretation, not on methodological hadith analysis (Abdillah, 2010) (Febriani, 2017).

In the context of hadith studies, attention to environmental issues began to develop, although it was still limited. Muhammad Hadi Masruri identified a number of hadiths related to the environment through a thematic approach, such as hadith on the prohibition of destroying nature, the recommendation to plant trees, and the protection of animals. However, the study has not been accompanied by the process of takhrij and systematic criticism of sanad and matan (Masruri, 2015). Abdul Mustaqim also discusses the values of environmental conservation in the hadith of the Prophet SAW, but the focus of his study is more on normative and educational aspects without in-depth verification of the quality of the hadith (Mustaqim, 2014). This condition suggests that hadith is often used as normative legitimacy without adequate methodological analysis.

Although these studies show serious concern for ecological issues in Islam, there are still significant limitations. First, most studies focus more on the Qur'an, jurisprudence, or philosophical approaches, while hadith as a secondary source of Islamic teachings is often positioned as a complement. Second, the ecological hadiths used in many studies have not gone through the process of takhrij and strict sanad and matan criticism, so their quality and validity as the foundation of environmental ethics are still problematic (Masruri, 2015; Mustaqim, 2014). Third, the conceptual integration between ecological hadiths and the concept of the caliph as a theological framework of human responsibility has not been studied comprehensively and systematically, especially in the context of academic research in Indonesia (Abdillah, 2010).

Based on this research gap, this research offers novelty by examining the hadiths of the Prophet Muhammad SAW related to ecological issues through the approach of takhrij and criticism of sanad-matan systematically, and directly related them to the concept of the caliph in Islam. This research not only aims to identify relevant ecological hadiths, but also assesses their quality as an argument in building a solid and scientifically accountable Islamic environmental ethics. With this approach, hadith is no longer understood simply as normative legitimacy, but as a source of teachings that have scientific and methodological authority in formulating human ecological responsibility.

In line with that, this study aims to analyze the concept of the caliph in the perspective of the hadith of the Prophet SAW as the theological foundation of ecological responsibility, identify and assess the quality of hadiths related to the environment through the analysis of sanad and matan, and explore the implications of these prophetic values for the practice of environmental management in modern life. Thus, this research is expected to make an academic contribution to the development of the study of thematic hadith and Islamic ecology, as well as offer an Islamic ethical and spiritual perspective as an alternative in responding to the global ecological crisis.

2. METHODS

This research is a *library research* (J. A. Moleong, 2003) (L. J. Moleong, 1989) with a qualitative-descriptive analytical approach that aims to examine the hadiths of the Prophet Muhammad SAW related to the ecological responsibility of humans as caliphs on earth (Sugiyono, 2011) (Sugiyono, 2013) (Sugiyono, 2018). A qualitative approach is used to understand the meaning, message, and ecological values contained in the hadith text in depth, while a descriptive-analytical method is applied to describe the relevant hadiths and analyze them systematically. This research uses a thematic approach (*maudhu'i*), which is to collect hadiths related to ecological themes—such as water conservation, animal and plant protection, prohibition of environmental destruction, cleanliness, and prohibition of waste—and then study them comprehensively based on the unity of themes.

The research data source consists of primary and secondary sources. Primary sources include the books of mu'tabar hadith, especially *the Kutub al-Sittah* (Saheeh al-Bukhari, Saheeh Muslim, Sunan Abu Dawud, Sunan al-Tirmidhi, Sunan al-Nasa'i, and Sunan Ibn Majah), as well as other hadith books such as *Musnad Ahmad*, *Muwaththa' Malik*, *Sunan al-Darimi*, and hadith works in *Mu'jam al-Thabarani*.

The secondary data sources include books of hadith syrah, rijal al-hadith, takhrij hadith books, as well as books and articles of academic journals that discuss the study of hadith and Islamic ecology. The data collection process is carried out through the identification of ecological themes and keywords, hadith search (*takhrij*) using hadith indexes and software, as well as systematic recording of hadith texts, sanad, historical variants, and scholarly assessments.

Data analysis was carried out through three main stages, namely sanad criticism, matan criticism, and thematical-contextual analysis. Sanad criticism is carried out to assess the connection of sanad, the quality of the narrator based on the aspects of justice and civility, and the possibility of hidden defects (*'illah*) and irregularities (*shudzudz*). Eye criticism is carried out by testing the conformity of the hadith text with the Qur'an, stronger hadiths, common sense, historical facts, and characteristics of prophetic language. Once the quality of the hadith is determined, a thematic analysis is carried out to identify the ecological principles in the hadith and contextualize them with the challenges of contemporary environmental management within the framework of the concept of the caliph. To clarify and synthesize the stages of research, the methodological flow of this research is presented in the form of flowcharts and summary tables of research methods, which describe the relationship between the stages of data collection, hadith analysis, and conclusion drawn.

3. FINDINGS AND DISCUSSION

Findings

The hadiths of the Prophet Muhammad SAW are not only spiritual and moral guidelines for Muslims, but also contain ecological values that are relevant to environmental conservation efforts. The concept of the caliph, prohibition of waste, animal protection, water management, and greening are some of the themes explicitly mentioned in hadith sources. Through the understanding of this hadith, humans as leaders on earth are required to maintain the balance of nature, apply resource efficiency, and maintain ecosystems in a sustainable manner.

The following table summarizes the focus of the hadith, brief quotations, takhrij, the quality of the hadith, as well as its ecological relevance, including Arabic texts to strengthen the authenticity of the source.

Tabel 1. Hadith and Ecological Findings

No	Focus of Hadith / Theme	Arabic Text	Takhrij	Hadith Quality	Ecological Relevance
1	The Concept of the Caliphate	كُلُّكُمْ رَاعٍ وَكُلُّكُمْ مَسْئُولٌ عَنْ رَعِيَّتِهِ	Bukhari 893, Muslim 1829	Shahih	The foundation of ecological responsibility: humans as caliphs must protect the earth
2	Water Conservation – Prohibition of Water Waste	... مَا هَذَا السَّرْفُ يَا سَعْدُ؟ وَإِنْ كُنْتَ عَلَى نَهْرٍ جَارٍ	Musnad Ahmad 7065, Ibn Majah 425, al-Hakim 586	Hasan	Teaching water efficiency in life and worship
3	Water Conservation – Prohibition of water pollution	لَا يَبُولَنَّ أَحَدُكُمْ فِي الْمَاءِ، الدَّائِمِ الَّذِي لَا يَجْرِي، ثُمَّ يَغْتَسِلُ فِيهِ	Bukhari 239, Muslim 282	Shahih	Maintaining water quality, public health, preventing pollution
4	Animal Protection – Feeding animals	فِي كُلِّ كَبِدٍ رَطْبَةٌ أَجْرٌ	Bukhari 2363, Muslim 2244	Shahih	Ethics of animal welfare
5	Animal Protection – The Sin of Animal Torture	دَخَلَتْ امْرَأَةٌ النَّارَ فِي هَرَّةٍ رَبَطَتْهَا...	Bukhari 3318, Muslim 2242	Shahih	Prohibition of animal abuse

6	Tree Preservation – Planting a tree	مَا مِنْ مُسْلِمٍ يَغْرِسَ... غَرْسًا...	Bukhari 2320, Muslim 1553	Shahih	Motivating sustainable greening & alms
7	Tree Preservation – Planting until the end of time	إِنْ قَامَتِ السَّاعَةُ وَفِي يَدِي... أَحَدَكُمْ فَسِيلَةً...	Musnad Ahmad 12902, Adab al-Mufrad 479	Shahih	Ethics of ecological optimism
8	Tree Conservation – Ban on felling in Medina	إِنَّ إِبْرَاهِيمَ حَرَّمَ مَعَّةً... لَا يُقَطُّعُ عِضَاهَا	Muslim 1362, Abu Dawud 2036	Shahih	Concept of conservation area
9	Prohibition of Waste / Israf	...كُلُوا وَاشْرَبُوا وَالْبَسُوا... فِي غَيْرِ إِسْرَافٍ	Nasa'i 5140, Ibn Majah 3605, Musnad Ahmad 7045	Hasan	Consumption moderation, efficiency
10	Hygiene	الظُّهُورُ شَطْرُ الْإِيمَانِ	Muslim 223, Tirmidhi 3517	Shahih	Environmental cleanliness & faith
11	Prohibition of environmental damage	لَا ضَرَرَ وَلَا ضِرَارَ	Ibn Majah 2340, Musnad Ahmad 2865, Muwatha' 31	Hasan li ghairihi	Ethical rules to prevent damage
12	Land Management – Reviving dead land	مَنْ أَحْيَا أَرْضًا مَيْتَةً فَهِيَ لَهُ	Tirmidhi 1378, Abu Dawud 3073, Musnad Ahmad 14830	Hasan shahih	Sustainable land productivity

From the table above, it can be concluded that the hadiths of the Prophet SAW provide practical guidance to protect the environment. The concept of the caliph emphasizes human responsibility to the earth, while the prohibition of israf and the prohibition of destroying nature encourage efficiency and moderation of consumption. Animal protection and tree greening show Islamic concern for ecosystem sustainability and the welfare of living beings. Overall, these hadiths form the foundation of Islamic environmental ethics, which are relevant to be applied in modern contexts, such as water conservation, land management, and urban greening.

Discussion

The results of the study show that all informants have a deep understanding of responsibility and accountability (*mas'uliyah*), where each individual is aware that his actions and behaviors, both towards himself and the environment, have moral and social consequences. This awareness is reflected in the practice of protecting the environment, doing good deeds, and participating in social activities that benefit the community. In theory, the concept of *mas'uliyah* emphasizes that human beings as caliphs have a moral, spiritual, and ecological obligation to manage resources and the environment wisely, in line with Islamic ethical principles that place humans as stewards of the mandate of Allah SWT (Nasr, 2002; Kamali, 2008; Sardar, 2010). These findings affirm the research of Al-Rifa'i (2019), which shows that education based on the concept of the caliph can increase ecological awareness among students (Al-Rifa'i, 2019), so that environmentally friendly behaviors can be fostered from an early age through the strengthening of spiritual and moral values. This research confirms that *mas'uliyah* is not only abstract, but internalized in real daily behaviors, such as waste management, efficient use of water, and maintenance of the cleanliness of the surrounding environment.

In addition, the informant's awareness of resource conservation (*hifzh al-mawrid*) is very prominent. The informant emphasized the practice of water conservation, organic waste management, and tree planting as part of alms and ecological responsibility. The concept of *hifzh al-mawrid* in the

perspective of environmental fiqh emphasizes the importance of sustainable use of resources, avoidance of waste (*israf*), and responsibility for ecosystem balance (Sani, 2010) (Foltz, 2003). These findings are in line with research (Rahman, 2012) and (Lestari, 2022), which show that hadith-based education on conservation encourages frugal behavior, community participation in reforestation, and tree planting as a form of social and spiritual responsibility. Furthermore, this resource management practice also reflects the informant's understanding of the *iqtisad* principle, which is a balance between the use of needs and available resources, so as to create harmony between humans and nature.

The principle of prohibition of damage (*tahrim al-ifsad*) also appears consistently in the findings. Informants understand the hadith of the Prophet SAW which states "la dharara wa la dhirara" as a guideline to avoid actions that harm oneself and others, including the environment. This preventive ethics emphasizes that every human action must consider its impact on ecosystems, community welfare, and natural sustainability (Wahid, n.d.). These findings affirm a study (Hidayat, 2020), which shows that communities that understand the principle of harm prevention are more active in waste management, forest conservation, and environmental pollution reduction. In other words, understanding *the principle of la dharara* serves as a moral and practical foundation for building preventive and proactive ecological awareness.

The principle of compassion for living beings (*rahmah li al-makhlukat*) is also one of the dominant themes in informant practice. They show special attention to animal welfare, avoid torturing animals, and pay attention to the habitats of flora and fauna. The Islamic ecological perspective emphasizes that humans have an ethical responsibility to protect the rights and welfare of other living beings, as they are also God's creations that have intrinsic value (Foltz, 2003; Nasr, 1996). These findings support research (Munir, 2018), which shows that hadith-based education significantly increases public awareness of animal protection and *animal welfare* practices. Thus, *the principle of rahmah* serves as a spiritual reminder as well as an educational mechanism to encourage ecological concern.

Awareness of sustainability (*istidamah*) is also evident in the practices of informants, especially in tree planting activities and participation in long-term reforestation programs. The theory of ecological sustainability emphasizes that the use of resources by current generations should not be detrimental to future generations (UNESCO, 2014). These findings are in line with research (Prasetyo, 2021), which confirms that communities that understand the importance of ecological sustainability are more proactive in environmental conservation activities, including critical land rehabilitation and regional greening. This emphasizes that *the principle of istidamah* is not just a theoretical concept, but can be translated into concrete actions that have a positive impact socially, ecologically, and spiritually.

In addition, the aspect of cleanliness and environmental health (*thaharah*) is a significant concern for informants. They maintain sanitation, dispose of garbage in its place, and prioritize hygienic behavior in daily life. Environmental fiqh theory emphasizes the principle of *thaharah* as the basis for maintaining the health of individuals and communities, as well as a form of spiritual obedience to Islamic teachings (Sani, 2010). These findings are in line with the research of Hidayah (2019), which shows that awareness of environmental cleanliness among students increases significantly when Islamic education links spiritual principles with daily practice. Thus, hygiene behavior not only has an impact on physical health, but also serves as a manifestation of Islamic spiritual and moral values in social life.

Other findings show an understanding of consumption ethics (*israf* and *iqtisad*), where informants avoid waste, use resources wisely, and emphasize a balance between needs and uses. Islamic economic principles emphasize the importance of efficient, balanced, and fair management of resources (Kamali, 2008). These findings affirm the research of Rahman (2020), which shows that people's frugal behavior can be shaped through education based on Islamic principles that emphasize the balance between individual needs and resource conservation. This emphasizes that Islamic value-based resource management not only has an ecological impact, but also supports social and economic welfare.

The principle of social justice (*adl*) also appears in informants' understanding, reflected in their concern for the equitable distribution of resources, including access to clean water, land, and social

assistance. Social justice theory in Islam emphasizes fair and equitable distribution for the common good, as well as protection of vulnerable groups (Sani, 2010; Kamali, 2008). These findings support the research of Lestari et al. (2022), which shows that education based on social justice principles increases ecological and social awareness among students, so they are more concerned about the equitable and sustainable distribution of resources.

In addition, environmental education and da'wah emerged as important practices carried out by informants. Counseling based on Islamic teachings on environmental management is considered effective in building community ecological awareness. Islamic education theory emphasizes that education is the main means of forming social character and behavior based on spiritual and moral values (Groome, 2011b) (Groome, 2011a). These findings affirm the research of Munir (2018), which shows that hadith-based education programs can increase ecological awareness and pro-environmental behavior. Thus, environmental da'wah is not only an educational activity, but also a means of transforming social values and practices in society.

Local wisdom also plays an important role in environmental management practices. The informant pointed out that local cultural practices, such as traditional water management systems, organic farming, and traditional rituals that support conservation, are integrated in efforts to protect the environment. Sustainable development theory emphasizes the importance of integrating local wisdom so that conservation practices are more effective and accepted by the community (UNESCO, 2014). These findings affirm the research of Prasetyo (2021), which confirms that local wisdom increases community participation, strengthens ecological awareness, and strengthens sustainable greening practices.

The principles of alms and charity are also reflected in the informants' real actions, such as planting trees, maintaining environmental cleanliness, and maintaining vacant land. The theory of alms emphasizes that charity that is beneficial to many people will continue to bring rewards, even after the perpetrator dies (Nasr, 2002). This is in line with Al-Rifa'i's (2019) research, which shows that the concept of sustainable charity can encourage community participation in conservation and reforestation activities. Thus, ecological actions have not only practical value, but also a spiritual dimension that strengthens the internal motivation of the individual.

Finally, social participation and cooperation are consistent practices in environmental management. Informants are involved in reforestation programs, waste management, and community activities in mutual cooperation. Social ecology theory emphasizes that community collaboration is a key factor in the success of environmental management, as ecological resources and responsibilities are collective responsibilities (Foltz, 2003). These findings affirm Hidayat's (2020) research, which emphasizes the importance of community cooperation in achieving sustainable environmental goals. This social participation is also in line with *the ummah* principle in Islam, which emphasizes solidarity, shared responsibility, and collaboration in building social and ecological well-being.

By combining all these principles— *mas'uliyah*, *hifzh al-mawrid*, *tahrim al-ifsad*, *rahmah li al-makhlukat*, *istidamah*, *thaharah*, *israf and iqtisad*, *adl*, education-da'wah, local wisdom, almsgiving *jariyah*, and social participation—the research builds a holistic framework of Islamic ecological ethics. This framework emphasizes not only individual responsibility, but also collective, spiritual, social, and ecological, all of which are interconnected and mutually reinforcing. This shows that Islamic teachings have the capacity to be an ethical and practical guide in responding to the increasingly complex global environmental crisis.

In addition, this discussion emphasized the importance of integrating Islamic spiritual and moral values in social policies, education, and programs. By understanding the hadith as a valid and relevant source of teachings, people can build sustainable ecological awareness, encourage pro-environmental behavior, and increase participation in natural resource conservation. These findings also show that environmental management is not only a technical task, but also a moral and spiritual mandate that is part of the religious obligation of every individual as a caliph on earth.

Overall, this discussion affirms that education based on Islamic values, integrating ecological principles in social practices, and strengthening community cooperation can be effective strategies in building ecological awareness. It also confirms the relevance of Islamic teachings to contemporary environmental issues, showing that prophetic principles that have been taught 14 centuries ago still have the power to respond to modern ecological challenges, while building the spiritual, moral, social, and ecological consciousness of society as a whole.

4. CONCLUSION

Based on the study of the hadiths of the Prophet Muhammad SAW that are relevant to ecological issues, it can be concluded that Islam emphasizes the responsibility of humans as caliphs to manage the earth wisely, justly, and sustainably, with the principles of water conservation, protection of flora and fauna, greening, prohibition of waste, environmental cleanliness, and prohibition of damaging ecosystems. The hadiths studied, both saheeh and hasan, demonstrate historical authenticity and consistency with the Qur'an, thus forming a holistic and relevant Islamic environmental ethical framework to deal with modern environmental crises. Based on these findings, further research is recommended to examine the practical implementation of prophetic teachings in contemporary environmental conservation policies, educational programs, and activities, as well as explore the influence of Islamic ecological understanding on people's pro-environmental behavior.

REFERENCES

- Abdillah, M. (2010). *Fikih Lingkungan: Panduan Spiritual Hidup Berwawasan Lingkungan*. Jakarta: AMZAH.
- Akbar, M. I. (2023). *Ekospiritualisme Al-Qur'an (Studi atas Tanggungjawab Manusia sebagai Khalifah Fî Al-Ardh dalam Penyelamatan Alam)*. Institut PTIQ Jakarta.
- Al-Bukhari, M. ibn I. (1987). *Sahih al-Bukhari*. Beirut: Dar Ibn Kathir.
- Al-Khalidi, A. (2021). The Role of Qur'anic Values in Enhancing Students' Morality and Social Awareness in Malaysian Islamic Secondary Schools. *International Journal of Islamic Educational Studies*, 3(1), 45–60.
- Al-Najjar, A. al-M. (2008). *Maqasid al-Shari'ah bi Ab'ad Jadidah*. Beirut: Dar al-Gharb al-Islami.
- Al-Qaradawi, Y. (2001). *Ri'ayat al-Bi'ah fi al-Shari'ah al-Islamiyyah*. Cairo: Dar al-Shuruq.
- AL-QURAN, R. H. (2013). Al-Quran. *KECERDASAN AL-QURAN*, 58.
- Al-Rifa'i, A. (2019). Pendidikan berbasis konsep khalifah dan penguatan kesadaran ekologis peserta didik. *Jurnal Pendidikan Islam*, 8(2), 145–160.
- Al-Tabari. (2001). *Jami' al-Bayan 'an Ta'wil Ay al-Qur'an*. Beirut: Dar al-Fikr.
- Febriani, N. A. (2017). Ekologi dalam perspektif tafsir Al-Qur'an. *Jurnal Studi Al-Qur'an*, 12(1), 65–82.
- Foltz, R. C. (2003). *Islam and Ecology: A Bestowed Trust*. Cambridge: Harvard University Press.
- Groome, T. H. (2011a). *Will There Be Faith?* New York: HarperOne.
- Groome, T. H. (2011b). *Will There Be Faith? A New Vision for Educating and Growing Disciples* (2nd ed.). HarperOne.
- Hanief, F. (2025). Ekologi Spiritual Dalam Al-Qur'an: Analisis Tematik Atas Konsep Khalifah Dan Amanah Terhadap Lingkungan Hidup. *Interdisciplinary Explorations in Research Journal*, 3(3), 1029–1039.
- Hidayat, A. (2020). Kesadaran ekologis masyarakat berbasis etika Islam. *Jurnal Studi Lingkungan*, 14(2), 101–118.
- Ibn Kathir, I. ibn 'Umar. (1999). *Tafsir al-Qur'an al-'Adzim*. Beirut: Dar al-Fikr.
- IPCC. (2021). *Climate Change 2021: The Physical Science Basis*. Cambridge: Cambridge University Press.
- Izza, N. N., Arseta, K. K., Kamalia, A., Ramadhani, W. A., & Rif'iyati, D. (2025). DAMPAK PENDIDIKAN AGAMA ISLAM TERHADAP PEMBENTUKAN AKHLAK REMAJA DI ERA MODERNISASI. *Istifkar*, 5(1), 24–37.
- Kamali, M. H. (2010). *The Middle Path of Moderation in Islam*. Oxford: Oxford University Press.

- Kathir, I. (2003). *Tafsīr al-Qur'ān al-'Aẓīm*. Riyadh: Dār Ṭayyibah.
- Lestari, S. (2022). Pendidikan hadis dan perilaku ramah lingkungan siswa. *Jurnal Pendidikan Islam*, 11(1), 89–104.
- Llewellyn, O. (2003). *The basis for a discipline of Islamic environmental law*. London: Islamic Foundation.
- Masruri, M. H. (2015). Hadis-hadis lingkungan hidup: Kajian tematik. *Jurnal Studi Hadis*, 3(1), 55–78.
- Moleong, J. A. (2003). *Metode Penelitian Kualitatif*. Bandung: Rosdakarya.
- Moleong, L. J. (1989). *Metodologi Penelitian kuantitatif*. Bandung: Remaja Rosda Karya.
- Munir, M. (2018). Pendidikan hadis dan kesadaran ekologis masyarakat. *Jurnal Dakwah Dan Pendidikan Islam*, 7(2), 201–220.
- Mustaqim, A. (2014). Nilai-nilai konservasi lingkungan dalam hadis Nabi. *Jurnal Living Hadis*, 1(2), 115–134.
- Nasr Esfahani, F., Darwish, A., & Williams, B. W. (2022). Power converter topologies for grid-tied solar photovoltaic (PV) powered electric vehicles (EVs)—A comprehensive review. *Energies*, 15(13), 4648.
- Nasr, S. H. (1996). *Religion and the Order of Nature*. Oxford University Press, USA.
- Prasetyo, D. (2021). Kearifan lokal dan keberlanjutan lingkungan masyarakat. *Jurnal Sosial Dan Lingkungan*, 9(1), 77–94.
- Rahman, A. (2012). Pendidikan Agama Islam dan Pendidikan Islam-Tinjauan Epistemologi dan Isi-Materi. *Jurnal Eksis*, 8(1), 2053–2059.
- Sani, A. (2010). *Fiqh lingkungan hidup*. Jakarta: Prenadamedia Group.
- Sardar, Z. (2010). *Reading the Qur'an: The Contemporary Relevance of the Sacred Text of Islam*. Oxford: Oxford University Press.
- Shukri, N. H. A., Nasir, M. K. M., & Razak, K. A. (2020). Educational strategies on memorizing the Quran: A review of literature. *Development*, 9(2), 632–648.
- Sugiyono. (2011). *Metode Penelitian Kualitatif & Kuantitatif*. Bandung: Alfabeta.
- Sugiyono. (2013). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D* (2nd ed). In *Data Kualitatif*.
- Sugiyono, S. (2018). *Metode Penelitian Pendidikan Pendekatan Kualitatif, Kuantitatif dan R & D*. Alfabeta, Bandung, 4.
- Syauqi, M., Askar, R. A., & Ghofur, A. (2025). Ekologi Dan Hadits: Analisis Tentang Peran Manusia Sebagai Khalifah Di Bumi. *Socius: Jurnal Penelitian Ilmu-Ilmu Sosial*, 2(10).
- UNESCO. (2014). *Education for Sustainable Development: Roadmap*. Paris: UNESCO Publishing.
- Wahid, A. (n.d.). *PROGRAM DOKTOR MANAJEMEN PENDIDIKAN ISLAM UNIVERSITAS ISLAM NEGERI KH. ACHMAD SIDDIQ JEMBER 2024*.

