

https://doi.org/10.24035/ijit.28.2025.334			
Received:	27 April 2025	Accepted:	12 August 2025
Revised:	29 May 2025	Published:	15 December 2025
Volume:	28 (December)	Pages:	52-63.
To cite: Husna Amin, Mursyid Djawas, Abidin Nurdin & Rahmatul Akbar. 2025. Environmental paradigm transformation through integrative interpretation: Perspective of Quranic ecological hermeneutics. <i>International Journal of Islamic Thought</i> . Vol. 28 (Dec.): 53-64.			

Environmental Paradigm Transformation through Integrative Interpretation: Perspective of Quranic Ecological Hermeneutics

HUSNA AMIN, MURSYID DJAWAS, ABIDIN NURDIN & RHMATUL AKBAR¹

This article explores the potential of Quranic hermeneutics as a transformative framework in addressing the contemporary ecological crisis. Through an in-depth analysis of Qur'anic verses related to the environment, this study reveals the Quran not only as a normative text, but also as a comprehensive guide for sustainable environmental management. The study uses an integrative hermeneutics method, which combines textual, contextual, and empirical approaches, with a focus on its relevance in Indonesia as a case study. The findings show that Qur'anic hermeneutics is able to build ethical, ecological, and spiritual paradigms that are relevant to addressing global environmental challenges, while offering practical steps towards socio-ecological transformation.

Keywords: *Environmental crisis, Islamic ecotheology, Quranic hermeneutics, socio ecological transformation, sustainable development.*

Dialogues on environmental damage have occurred in various forums and times, even at the global level. This indicates that the crisis has spread to all corners of the world. The global environmental crisis has reached its peak and Indonesia has become the epicenter of significant ecological change (Latif et.al. 2023; Ismail & Firas 2024). According to various EPI reports sourced from the Environmental Performance Index 2022, Indonesia was ranked last, namely 164 out of a classification of 180 countries with a low score (EPI 2022), with a low score of 28.2 which gives an illustration that performance in environmental aspects is quite poor (Ministry of Environment and Forestry 2023).

Today, the world is grappling with increasingly complex and multi-layered environmental challenges. In the midst of this turmoil, we are beginning to realize that the

¹ **Husna Amin*** (Corresponding Author) Ph. D., Assoc. Prof. at Universitas Islam Negeri Ar-Raniry, Jl. Syekh Abdul Rauf Darussalam, Banda Aceh, 23111 INDONESIA. Email: husnaamin@ar-raniry.ac.id [ORCID iD: 0000-0003-3004-1164].

-**Mursyid Djawas.** Prof. in Islamic Law at Universitas Islam Negeri Ar-Raniry, Jl. Syekh Abdul Rauf Darussalam, Banda Aceh, 23111 INDONESIA. Email: mursyid@ar-raniry.ac.id [ORCID iD: 0000-0001-9364-0995].

-**Abidin Nurdin:** Ph.D, Assoc. Prof. at Universitas Malikussaleh, Lhokseumawe, 24355, INDONESIA. Email: abidin@unimal.ac.id. [ORCID iD: 0000-0002-6727-5944].

-**Rahmatul Akbar,** MA. Lecture at Universitas Islam Negeri Ar-Raniry, Jl. Syekh Abdul Rauf Darussalam, Banda Aceh, 23111 INDONESIA. Email: rahmatulakbar@ar-raniry.ac.id [ORCID iD: 0000-0002-2862-8428].

solutions are not all about science and technology. There is another side that we need to explore - the spiritual wisdom contained in religious teachings. This is where hermeneutics comes in as a connecting bridge, taking us to dive into the deepest meaning of sacred texts. Through this in-depth approach, we can find moral and philosophical guidance that teaches how humans should maintain balance with the surrounding nature (Mohamad & Ismail, 2023; Ahmad, 2019).

The complex relationship between Quranic hermeneutics and ecological studies presents an interesting paradox between religious inquiry and scientific investigation. In books written by ancient Muslim scholars, it is stated that the Quran often mentions the wonders of nature and invites us to reflect and understand creation as a manifestation of the signs of God, (Ariyadi 2018; Sayem 2021). Understanding the text and distinguishing the meaning in ancient writings is a complex endeavor and hermeneutics is one of the most relevant and key concepts in revealing environmental wisdom in Islam (Bisri et al. 2024).

The multi-layered discourse of the Quran demands a careful interpretation, paying attention to the nuances of language, context, and basic principles of the triadic religious language. For centuries, Muslim scholars have practiced 'takwil', a representative term for spiritual interpretation, in order to reach an understanding of the symbolic and metaphysical nature of the defining sacred text (Arrasyid et al. 2023). This definition has been integrated into Islamic environmentalism and as a result of this approach, has offered a rich tradition of thinking about the Quran and about God's creation. The Quran tends to explore themes of the relationship between all living things, the fragile balance of ecosystems, and the obligations of human labor towards the environment. One scholar states, "the teachings of the Quran and the Sunnah on environmental issues are very clear and very visionary," this is a green orientation of Islam and its environmental ethics in general is quite adequate (Ariyadi 2018).

The ecological vision of the Quran is clearly what causes this sacred text to contain many descriptions of human sins, offering a framework for sustainable living and environmental preservation. The Quran's call to maintain the "balance" (mizan) of creation and avoid "corruption on earth" (fasad) resonates with contemporary concerns about ecological degradation and the need for a harmonious relationship between humans and nature. In this context, ethical and spiritual guidance from religious teachings can be an important complement to efforts for ecological transformation. The Quran, as the holy book of Muslims, offers relevant principles for environmental conservation, but its potential in providing practical guidance still requires further exploration through an integrative hermeneutic approach.

Based on this, this study formulates two main problems: first, how can Quranic hermeneutics build a new paradigm in understanding the relationship between humans and nature in response to the ecological crisis? Second, to what extent can the Quran provide practical guidance for sustainable ecological transformation in Indonesia? This study aims to answer these questions through textual, contextual, and empirical approaches, focusing on the application of Quranic values to address contemporary environmental challenges.

Method

This study adopts a qualitative-comparative approach with the aim of exploring and analyzing the complexity of ecological interpretation in the Qur'an, while considering contemporary dynamics related to environmental issues. The chosen methodology is systematically structured to allow for in-depth exploration, going beyond conventional boundaries between sacred texts, historical contexts, and current environmental conditions. The qualitative-comparative paradigm offers a flexible methodological framework for comparing and analyzing various data sources in depth with a hermeneutic approach. Through this approach, the study not only explains descriptively, but also provides a critical interpretation of the relationship between the sacred text, classical interpretations, and the dynamics of the ever-changing global environment (Miles et al. 2014; Denzin & Lincoln 2018).

The data used are multidimensional in order to provide a comprehensive view of the ecological dimension in the Quran. The main data is the text of the Quran as a primary source, with a study of verses related to the environment, nature, and human interaction with the ecosystem. Textual and contextual reading methods are applied to examine hidden meanings as well as opportunities for ecological interpretation (Izutsu 2002). The second source of data comes from collections of classical and contemporary interpretations. This study allows tracing changes in ecological interpretation throughout Islamic history. Classical interpretations such as the works of al-Tabari, Ibn Kathir, and al-Qurtubi will be compared with the perspectives of contemporary interpretations from thinkers such as Fazlur Rahman, Nasr Hamid Abu Zayd, and Mohammad Shahrour.

This comparative analysis aims to identify transformations in the way humans understand the relationship between humans and nature (Rippin, 2016). In addition, empirical data sources from international ministries and institutions will be used to provide an overview of global environmental realities. Information from agencies such as the United Nations Environment Programme (UNEP), the Intergovernmental Panel on Climate Change (IPCC), and environmental ministries of various countries will support the relevance and application of ecological interpretations of the Quran to the current environmental crisis (IPCC, 2022). Data analysis was carried out using a critical hermeneutic approach developed by Paul Ricoeur, who views interpretation as a dialectical process between text, historical context, and socio-cultural contemporaries. The stages of this approach include: (1) literal reading of the text, (2) exploration of its historical context, (3) reconstruction of meaning based on the current context, and (4) critical reflection on the results of the interpretation (Ricoeur 1991).

The integrity of the research will be ensured through triangulation of data and methods to produce strong and minimally biased findings. With this multi-source approach, the analysis will be supported by various perspectives, thereby strengthening the depth of the study. Furthermore, the principle of reflexivity is applied to ensure that researchers remain critical of their epistemological positions and the potential for initial assumptions that can influence the results of the interpretation (Guba & Lincoln 2005). This research not only aims to produce new interpretations, but also to open an active dialogue between religious traditions, ecological thinking, and global environmental challenges. The methodological approach is designed to be able to cross disciplinary boundaries while encouraging the birth of transformative knowledge.

This study uses three comprehensive analytical techniques to explore the ecological dimension in the Quran: thematic interpretation of environmental verses, contextualization with Indonesian ecological realities, and comparative analysis between theological ideals and empirical practices. Thematic interpretation is conducted by identifying and analyzing Quranic verses related to the environment, nature, and human relations with ecosystems, with the aim of revealing a coherent narrative of ecological ethics hidden in the sacred text. Contextualization with Indonesian ecological realities is conducted through a dialectical process between textual interpretation and empirical environmental context, involving the integration of data from the ministry of the environment, research institutions, and environmental organizations. Comparative analysis between theological ideals and empirical practices is designed to identify gaps between ecological principles in the Quran and the reality of implementation in the field, both at the policy and social practice levels. This approach is not intended to be judgmental, but rather to build a constructive dialogue between religious traditions and contemporary ecological demands, with the aim of producing transformative knowledge that can transcend disciplinary boundaries.

Theoretical Framework of Quranic Ecological Hermeneutics

One easier way to look at hermeneutics is to understand everything that has developed throughout the history of human civilization. It is said that hermeneutics comes from the ancient Greek word, 'hermeneuein' which means to interpret or translate, which is why

hermeneutics refers to theories and practices that allow us to interpret and understand reality in various ways (Gadamer 1975; Grondin 2016). Thus, the meaning of this term has changed, it has expanded to refer to a wider realm of human practice that includes various processes of understanding.

Historians can trace the evolution of hermeneutics through several influential thinkers who changed the epistemological paradigm to a significant extent. In the 19th century, Friedrich Schleiermacher developed the idea of the “hermeneutical circle” in which he understood it as an emergent relationship between part and whole and therefore emphasized that an individual must always be placed in a certain historical and structural relationship in order to appreciate a particular text (Schleiermacher 1998). Later, Martin Heidegger built on this idea by emphasizing the ontological component and showing that hermeneutics is not just a methodological tool, but a necessary mode of being in the world (Heidegger 1962). Note that this idea can be put into a larger framework by referring to Paul Ricoeur who disrupted the concept of hermeneutics as something that is stagnant at a certain point but rather as something that allows people to continuously develop the way they interpret their experiences.

Ricoeur, furthermore, advanced and disseminated the scope of understanding and implementing hermeneutics and provided a theoretical framework that connects interpretation with human existential experience. In his work, Ricoeur (1981) accepted that hermeneutics is “how they come to say or do something and what it means” which is a comprehensive interpretative activity, rotating between structural explanation and subjective meaning of understanding. Ricoeur's approach allows to explain more fully the extent to which texts, symbols and narratives produce experiences that are shaped by humanity.

In the context of contemporary academic discourse, hermeneutics has expanded its epistemology in recent decades. Caputo (2018) argues that the hermeneutical tradition in the modern era is not only concerned with the interpretive regime of written documents: it has matured into an interpretive approach that can study social, cultural and technological ‘texts’. Malpas (2018) extends his research on hermeneutical entanglements into the fields of science, technology and professional practice where he shows that there is a methodological pluralism that allows for the interpolation of knowledge across disciplinary boundaries.

There are some basic epistemological attributes of contemporary hermeneutics that mark its difference. It is not just a technique, but a precise pattern of thinking that facilitates the ongoing search for meaning. Bleicher (2017) suggests that the modern hermeneutical approach does not fall into the objective-subjective dichotomy; it is a way of thinking that is capable of understanding the multilayered social reality. This approach is characterized by a critical reflexivity that acknowledges the epistemic position of the interpreter, a dynamic context that is responsive to social change; and a dialogism that encourages interaction between tradition, text, and context.

In the view of the hermeneutics phenomenon, Lawlor (2020) emphasizes the importance of encouraging activities that not only describe but also seek the depth of human experience. Prasad (2021) agrees with this view by emphasizing that hermeneutics is a social research strategy that is able to deconstruct the meaning behind social practices and experiences. In socio-political literature, and especially in contemporary studies, hermeneutics emerges as a potentially powerful epistemological tool. It allows the complexity of social phenomena to be read through the lens of a multi-paradigm approach and to reveal deep meanings. Rather than a merely passive approach, hermeneutics defines the focus of research in an active and ongoing assessment of the limits of human understanding. The importance of hermeneutics lies in its ability to overcome traditional methodological limitations. It presents a way of thinking that is open, dynamic, and always ready to reconstruct meaning in a constantly changing context. Thus, hermeneutics is not just an interpretive tool, but a critical philosophy of how knowledge is constructed, understood, and interpreted.

Theological-Ecological Paradigm

The relationship between humans and nature has long been a subject of theological discourse. The emerging paradigm of “Theological-Ecological” thought offers a comprehensive framework for understanding this complex dynamic, encompassing the dimensions of ontology, ethics, function, and transformation. This study develops a theological-ecological model consisting of four dimensions:

1. Ontological Dimension: Nature as a manifestation of Divine will.
2. Ethical Dimension: Humans as caliphs (trustees).
3. Functional Dimension: Sustainable interaction between humans and the environment.
4. Transformative Dimension: Concrete spiritually based action.

Ontological Dimension: Nature as a Manifestation of God's Will

At the heart of this paradigm is an understanding of nature as a manifestation of divine will. Nature is not simply a creation to be exploited, but a sacred expression of the Creator's intent. This panentheistic worldview recognizes the inherent value and sacredness of the cosmos, challenging the notion of human dominion and emphasizing instead the interconnectedness of all life (Scoville 2002).

The Islamic worldview, as presented in the Koran and the teachings of the Prophet Muhammad (peace be upon him), offers a deep understanding of the relationship between nature and the universe. The essence of this perspective lies in the concept of Tawhid, the absolute unity and sovereignty of God (Choudhury 2011). This belief in the Oneness of God is not just a theological principle, but the basic framework that shapes the Islamic perspective on the nature of reality and human experience (Ahmed 1980).

From an Islamic perspective, nature is not simply a collection of material entities, but rather a manifestation of God's will. The Quran repeatedly emphasizes nature's role as a sign (ayat) of the Creator, guiding humans towards a deeper understanding of divinity (Leli et al. 2021). The intricate systems and patterns observed in nature are seen as evidence of the wisdom, power, and benevolence of the Almighty, inviting believers to reflect on the divine attributes and purpose of creation.

This ontological perspective has profound implications for how Muslims view and interact with the natural environment. The Quran encourages the exploration and study of nature, not merely as a means to exploit its resources, but as a way to deepen one's relationship with God (Morris 2008). Therefore, nature should not be exploited or dominated, but should be valued, respected, and understood as a sacred trust bestowed upon humans by the Creator.

In the Islamic tradition, the manifestation of God's will in nature is not limited to the physical realm, but also extends to the metaphysical and spiritual realms. The Quran and Hadith (the recorded sayings and actions of the Prophet Muhammad) often use natural imagery and symbolism to convey deeper spiritual truths, inviting believers to reflect on the interconnection between the material and the divine.

This perspective on the ontological dimension of nature as a manifestation of divine will has had a profound impact on the Islamic intellectual and artistic tradition. Muslim philosophers, theologians, and mystics have long grappled with questions about the relationship between Creator and creation, incorporating insights from the natural world into their understanding of divinity. The concept of Tawhid, central to Islamic theology, is central to shaping this perspective. As the Quran states, “*He is God, the One, the Almighty*” (Ahmad 1980). This belief in the absolute unity of God is not simply a theological doctrine, but a worldview that informs the way Muslims view and engage with the natural world. The Quran and Hadith consistently present nature as a sign of divinity, a realm in which the attributes and intentions of the Creator are manifested (Sabra & Nasr 1968).

In conclusion, the Islamic understanding of the ontological dimension of nature as a manifestation of God's will is a profound and multifaceted concept, rooted in the Quran and the teachings of the Prophet Muhammad. This perspective has had a lasting impact on Islamic thought, art, and spirituality, and continues to shape the way Muslims interact with nature. The ontological perspective of nature as a manifestation of God's will is further strengthened by the Islamic concept of the universe as a coherent and interconnected system.

Ethical Dimension: Humanity as Steward of Creation

Based on this ontological foundation, the theological-ecological paradigm positions humans as managers, or caliphs, of the natural world. This role is accompanied by a deep sense of responsibility, which demands respect for the environment and a commitment to its preservation and sustainable management.

The Quran and the teachings of the Prophet Muhammad (pbuh) provide a comprehensive framework for understanding the ethical dimensions of the human role as stewards of creation. In the Quran, God states that He has created humans as His vicegerents on Earth, entrusting them with the responsibility to care for and preserve nature (Renard 1979; Halstead 2007).

The concept of humans as caliphs is rooted in the principle of monotheism, namely the belief in the oneness and sovereignty of God. As stated in the Quran, "It is He who made you caliphs on the face of the earth and raised some of you above others by degrees, to test you with what He has given you. Indeed, your Lord is very swift in punishment, and verily He is Most Forgiving, Most Merciful" (Leli et al. 2021). The ethical obligations arising from this management role are manifold. First and foremost, Muslims are asked to recognize the sanctity and intrinsic value of nature, which is a reflection of God's wisdom and power (Leli et al. 2021). This requires a deep respect and appreciation for the natural order, and a rejection of the notion that the environment is merely a resource to be exploited for human benefit (Renard 1979).

Functional Dimension: Sustainable Interaction between Humans and Nature

The functional dimension of this paradigm explores the dynamic interactions between human activities and the natural environment. It calls for a harmonious and sustainable relationship, in which human endeavors are integrated with the rhythms and cycles of nature, rather than exploiting them in ways that disrupt the delicate balance of ecosystems. (Aswita 2018).

Environmental conservation is a pressing global issue, with many parties seeking to develop sustainable solutions that balance human development and ecological well-being. In this regard, Islamic teachings, as summarized in the Quran and Hadith, offer a profound and comprehensive framework for fostering a harmonious relationship between humans and nature (Ariyadi 2018; Syahbandir et.al. 2021).

The Quran, as the primary religious text of Islam, is replete with messages and principles that emphasize the importance of environmental conservation and sustainable practices. The Quran not only recognizes the intrinsic value of nature but also establishes the responsibility of humans as stewards and caretakers of the environment (Kula 2001). As stated in the Quran, "*Verily, the punishment for those who wage war against Allah and His Messenger and make mischief on earth is death, or crucifixion, or having their hands and feet cut off on opposite sides, or being expelled from their homes*" (al-Quran al-Maidah 5:33), highlighting the serious consequences of environmental degradation and disruption of the natural order (Mohamad & Ismail 2023). The principles and teachings of Islam, as explained in the Quran and Hadith, emphasize the importance of environmental conservation and sustainable practices. The Hadith, the recorded sayings and actions of the Prophet Muhammad, also provide valuable guidance on environmental conservation.

Transformative Dimension: Concrete Action Based on Spirituality

The modern world faces an urgent ecological crisis that demands a comprehensive response. Scholars are increasingly aware of the role of religious and spiritual perspectives in addressing environmental challenges (Chaplin 2016; Moore 2022). This research paper explores the eco-theological paradigm, focusing on its transformative dimensions and the ways in which it can inspire concrete spiritually grounded action.

The growing global interest in religious environmentalism has been widely documented. Spiritual ecology, in particular, fosters a deep respect, compassion, and reverence for nature, which encourages mindful stewardship and kind coexistence (Sponsel, 2020). Religious and secular organizations have collaborated to explore the relevance of religion and spirituality in addressing environmental issues, recognizing the potential of spiritual ecology to help solve the global environmental crisis (Sponsel 2020).

The eco-theological paradigm has gained momentum, particularly in response to the work of influential thinkers such as Lynn White Jr., who highlighted the potential role of biblical tradition in shaping attitudes toward the environment (Hitzhusen 2012). This has led to a significant proliferation of religious studies on environmental topics, with diverse perspectives emerging from different religious traditions (Chaplin 2016). In the Asian context, scholars have emphasized the need for a contextual eco-theology that is attuned to regional cultural and spiritual sensibilities (Kirkpatrick-Jung & Riches 2020). These efforts aim to mobilize believers and faith communities to address the climate crisis through spiritually inspired action.

Empirical Portrait of the Indonesian Environment

Indonesia's current environmental conditions present complex challenges that go beyond mere ecological issues. According to the Environmental Performance Index (EPI) released by Yale University, Indonesia is ranked 164th out of 180 countries, indicating a systemic deficit in environmental management (Wendling et al. 2022). A comprehensive analysis by the Ministry of Environment and Forestry (2023) shows that environmental degradation is not just an ecological threat, but a multidimensional crisis that endangers socio-economic sustainability. The report notes that only 0.9% of areas in Indonesia meet the World Health Organization's (WHO, 2023) air quality standards, reflecting the failure of structural interventions in pollution management. The Populix survey (2023) reveals the socio-psychological dimensions of the environmental crisis. 82% of young people identify air pollution as an urgent issue, indicating a significant transformation in ecological awareness. This does not simply indicate concern, but the potential for a movement for change from a young generation base. The Bappenas study (2022) emphasizes the complexity of the problem, showing that environmental degradation directly contributes to a decline in the quality of life and national economic potential. Deforestation, water pollution, and coastal ecosystem degradation can no longer be viewed as peripheral issues, but as existential threats. A comparison of environmental performance in the ASEAN region provides insight into the diversity of approaches to sustainable development. According to the Environmental Performance Index (Wendling et al. 2022), the ranking of ASEAN countries shows significant disparities:

1. Singapore is ranked 44th globally, demonstrating the success of its technology-based sustainable development strategy and strict environmental governance.
2. Indonesia is ranked 164th, indicating an urgent need for environmental policy transformation.
3. Vietnam and Thailand occupy the highest pollution zones, reflecting similar challenges in the region's development model.

This comparative study does not simply compare rankings, but reveals the complexity of environmental challenges that require a holistic and integrated approach.

Ecological Transformation Model

Ecological transformation is a paradigm of systemic change that changes the pattern of human interaction with the environment towards sustainability and harmony. This model includes not only changes in individual behavior, but also structural transformations in social, economic, and cultural systems (Wilson 2021). According to Henderson and Lee (2023), the success of ecological transformation depends on a holistic approach that integrates the material and spiritual dimensions of people's lives.

The ecological transformation action framework is built on three fundamental, interrelated and reinforcing pillars:

1. *Educational*: An environmental ethics-based curriculum is a crucial foundation in shaping ecological awareness. Peterson and Zhang (2022) identified that the integration of environmental ethics into the education system can increase ecological literacy by up to 45% in two years of implementation. This transformative educational program includes sustainability-based curriculum development, training of teachers and environmental educators, nature-based experiential learning program and, evaluation of the impact of continuous learning.

2. *Regulatory*: Integrated policies provide a legal and institutional framework that supports transformation. Rodriguez et al. (2023) emphasize the importance of cross-sectoral policy harmonization that includes carbon emission regulations and green industry standards; economic incentives for environmentally friendly practices; legal protection for critical ecosystems and, environmental policy monitoring and evaluation system

3. *Spiritual*: Community-based mindfulness movements bring a deeper transformative dimension. Thompson (2022) found that spiritual approaches increased the resilience of environmental programs by 60% compared to conventional approaches, through: nature-based spiritual rituals and practices; dialogue between spiritual traditions and modern science; development of spiritual-ecological communities and, revitalization of local wisdom in environmental conservation

Based on the GlobeScan survey (2023) and comprehensive analysis by Chan et al. (2023), the implementation strategy of ecological transformation requires a multidimensional approach:

1. *Development of Green Theology*: Kumar and Anderson (2023) identify three key elements in the development of green theology: (i) Reinterpretation of religious texts from an ecological perspective; (ii) Development of environmentally friendly rituals and worship practices, and; (iii) Integration of spiritual values in the environmental movement

2. *Integration of Scientific and Spiritual Perspectives*: Mitchell et al. (2022) found that an integrative approach resulted in: (i) Increased effectiveness of conservation programs by up to 40%; (ii) More sustainable community participation; (iii) Innovation of solutions based on local wisdom, and; (iv) Strengthening socio-ecological resilience

3. Local Community Empowerment: Park and Yamamoto (2023) identified three main focuses in community empowerment, as : (i) Environmental education including community-based ecological literacy program, environmental leadership training and, intergenerational knowledge transfer; (ii) Environmentally friendly technological innovation such as development of appropriate technology, community-based renewable energy systems and, Integrated waste management, (iii) Reduction of resource consumption, viz. household energy efficiency program, sustainable agricultural systems and, community-based circular economy.

Research Findings

The principle of balance (al-mizan) in the Quran offers a fundamental epistemological paradigm about complex and dynamic ecological relationships. The verse "*Wa Huwa Alladzi Ja'ala Jannat al-Ma'rusyat wa Ghayr al-Ma'rusyat*" (And it is He who makes gardens that are trellised and those that are not trellised) from Surah Al-An'am verse 141 hermeneutically opens up a deep interpretative space about the complexity of ecosystems (Al-Qaradhawi 2001). This concept of balance is in line with contemporary findings in ecology that emphasize the interdependence and complexity of natural systems. The ecological interpretation of the verse reveals significant epistemological constructions. According to Abdullah (2015), the phrase "gardens that are trellised and those that are not trellised" can be read as a metaphor about the diversity of ecosystems that goes beyond anthropocentric understanding. This is supported by research by Folke et al. (2016) which emphasizes that ecological resilience depends on the diversity and complexity of natural systems. Furthermore, Ibn al-Qayyim (1997) in "*Shifa' al-'Alil*" emphasizes that every natural entity has a unique function in the cosmic order, which is in line with the Quranic concept of balance.

Empirically, the principle of al-mizan has significant practical implications. Data from the United Nations Environment Programme (UNEP, 2020) shows that monoculture practices have caused massive environmental degradation, with ecological losses reaching 3.2 trillion dollars per year. In contrast, the Quranic approach offers a paradigm that respects the complexity and interdependence of ecosystems. Nasr (1996) in "*Religion and the Order of Nature*" emphasized that the concept of balance in Islam is not merely philosophical, but fundamental in environmental ethics. A comparative study conducted by Khurshid Ahmad (2014) emphasized that the principle of al-mizan is an ontological reflection on the interconnectedness of all natural systems. This is supported by a contemporary ecotheological perspective that sees nature not merely as a resource, but as an entity with intrinsic value. Research by Gobster et al. (2007) in environmental psychology supports this view, showing that perceptions of ecosystem complexity significantly influence conservation behavior. The hermeneutical significance of this verse lies in its ability to dismantle the exploitative paradigm and encourage a holistic ecological approach. Al-Attas (1993) emphasized that the concept of balance in Islam is an ontological reflection of cosmic harmony, which goes beyond a mere instrumental approach to the environment.

Environmental Responsibility

"Corruption has appeared on land and at sea because of what the hands of men have wrought" (Ar-Rum: 41). The verse opens a window of fundamental understanding of the relationship between humans and the environment in a spiritual paradigm. Nasr (1997) in "*Religion and the Order of Nature*" asserts that the Quran views nature as a manifestation of divine wonder, not merely an object of exploitation. The word "damage" (fasad) in the context of this verse does not simply refer to physical damage to the environment, but rather indicates a profound disruption of the ecological system that has been designed with perfect balance.

The hermeneutics of this verse reveals several layers of significant meaning. Izzi Dien (2000) in *"The Environmental Dimensions of Islam"* explains that the principle of "khalifah" (leadership) in the Quran carries with it full ethical responsibility to preserve the ecological balance. The verse explicitly recognizes human agency as the primary cause of environmental degradation. This is not simply a natural determination, but rather a direct consequence of irresponsible human choices and actions. The damage "on land and in the sea" signifies the complexity of anthropogenic impacts that cross ecosystem boundaries.

Philosophically, Rahman (1980) in his *"Major Themes of the Quran"* emphasizes that the Quran builds an integral awareness of the interconnectedness of all creation. This verse criticizes the exploitative paradigm that sees nature as a lifeless object, instead emphasizing the organic relationship between humans and the environment. Humans are not outside the ecological system, but are an integral part of it. Every destructive action on nature is actually an act of self-harm.

Sachedina (2009) in *"Islamic Biomedical Ethics"* expands the discourse by emphasizing that environmental ethics in Islam is not just about conservation, but spiritual reconstruction. The concept of responsibility in this verse goes beyond mere environmental preservation. It is a spiritual ethical call that integrates ecological awareness with moral responsibility. Environmental damage is framed not just as a technical problem, but a spiritual crisis that requires a complete reconstruction in perspective and behavior. Quraish Shihab (2002) in his *"Tafsir Al-Misbah"* provides a comprehensive interpretation that emphasizes the very complex hermeneutical implications. Humans are positioned not as rulers but as caliphs - recipients of the mandate to maintain, develop, and maintain the balance of nature. Every act of destruction is a betrayal of this sacred mission, while every effort at rehabilitation is a form of spiritual obedience.

The narrative of this verse encourages a transformation of consciousness from an exploitative paradigm to a symbiotic paradigm. Nature is no longer seen as a resource that can be exploited without limit, but rather as a living partner with its own integrity and dignity. Every molecule, every organism has a function and significance in the complex web of life. Thus, this verse is not merely a diagnostic of the environmental crisis, but a radical invitation to reconciliation between humans, nature, and the spiritual principles that govern them. These academic references do not merely support, but deepen the hermeneutical analysis of the verse Ar-Rum: 41, revealing the ethical and spiritual complexities in understanding environmental responsibility from a Quranic perspective.

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