



Review

# Integrating Environment with Health: An Islamic Perspective

Nur Adibah Mohidem <sup>1,\*</sup> and Zailina Hashim <sup>2</sup>

<sup>1</sup> Public Health Unit, Department of Primary Health Care, Faculty of Medicine and Health Sciences, Universiti Sains Islam Malaysia, Bandar Baru Nilai, Nilai 71800, Negeri Sembilan, Malaysia

<sup>2</sup> Department of Environmental and Occupational Health, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, Serdang 43400, Selangor, Malaysia; drzhashim@gmail.com

\* Correspondence: nuradibahmohidem@usim.edu.my

**Abstract:** With the increasing challenge of addressing environmental health issues, various approaches have been proposed to reduce environmental problems. For Muslims all over the world, the Qur'an, Hadith, and Sunnah are recognised as the authoritative messages for spiritual and behavioural guidance on how humans can react to protect the environment and health. This review aims to integrate the environment with health from the perspective of Islam. An exploration of Qur'anic, Hadith, and Sunnah Muslim scholar views and articles was carried out to identify environmental health issues. Integrating Islamic aspects into environmental health includes: (i) environmental dimensions of natural and social environments; (ii) dimensions of health including disease, wellness, intellectual health, transcendence, and Qalbe Salim; and (iii) principles that can be used to describe people's attitudes towards the environment through unity, balance, and responsibility. Differences between Islamic and Western views on the environment include that taqwa-centric is the highest level of environmental responsibility, with religious duty serving as the key driver of environmental activity. About 89 verses were identified in 42 Qur'anic chapters, with a strong emphasis on the health aspect in relation to the water, biodiversity, corruption of the earth, waste minimisation, and climate change. The Hadith and Sunnah highlight cleanliness as another important value in Islamic ethics, focusing on environmental conservation. Current and future research trends may be able to identify research gaps concerning the Islamic aspect of handling environmental health issues, which can then be implemented into the educational system. These findings imply that Islam could be a powerful source and educational medium for environmental health interventions in large communities, as well as for improving and preserving a healthy environment.

**Keywords:** environment; health; Hadith; Islam; Sunnah; Qur'an



**Citation:** Mohidem, Nur Adibah, and Zailina Hashim. 2023.

Integrating Environment with Health: An Islamic Perspective. *Social Sciences* 12: 321. <https://doi.org/10.3390/socsci12060321>

Academic Editor: Belinda Winder

Received: 16 February 2023

Revised: 4 May 2023

Accepted: 4 May 2023

Published: 30 May 2023



**Copyright:** © 2023 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

## 1. Introduction

The World Health Organization (WHO 2006) defines the environment as “the interwoven complex relationships of physical, chemical, and biological factors that affect human and non-human beings in our behavioural response to those factors”. On the other hand, environmental health is the science and practice of preventing human injury, illness, and promoting well-being by identifying and evaluating environmental sources of hazardous agents as well as limiting exposures. These hazardous physical, chemical, and biological agents in water, air, soil, food, and other environmental settings or media are potentially harmful to human health (NEHA 2013). From the perspective of Islam, the concept of the environment is comprehensive, encompassing air, water, and land as well as their interactions with all living things, including the motivations, emotions, and instincts of human beings (Saputra et al. 2021). Allah created the environment. Its protection and preservation are obligatory, as shown in the verse from the Qur'an. If a man believes that the only reason for protecting the environment is to benefit from it, he may misuse or destroy it (Masoumbeigi et al. 2021). Environmental preservation is a public duty because current and future generations have the right to a protected and preserved environment.

Religion plays a significant part in raising people's awareness of the environment and the need to maintain sustainability and reduce health impacts. Therefore, contemporary environmental issues continue to play a crucial and prominent role in a wide range of religious discourses. Contemporary theologians of various religions have explained their respective faiths' previous attitudes towards the environment and accepted their faiths' responsibilities and complicity in the current environmental crises (Gottlieb 2009). Environmental degradation is a grave offence against the Divine, in addition to posing a planetary threat, economic disaster, and aesthetic blight (Gottlieb 2011). When religions are recognised as strong influences on value systems and beliefs, they influence the decisions, behaviours, and attitudes of individuals and communities towards environmental science and health. This perspective tends to be the reason why reviewing Islamic authoritative texts that correspond to the environment and nature could help in solving the global environmental and health crises.

Islamic education is based on life lessons that can be found in the Qur'an, Hadith, and Sunnah, which include the importance of preserving a healthy environment (Ismail et al. 2021). The goal of Islamic teaching is to encourage the Muslim community and individuals to have good relationships with Allah, other humans, and the universe. When people are capable of maximising their potential, they will continue to be intertwined with the universe. The concept of Rahmatan Lil 'Alamin is an interpretation of Islamic practice for learning more about environmental health. The community is obligated to uphold cleanliness at all times, beginning with maintaining personal hygiene, as well as keeping the home, workplace, and surrounding environment clean. The environment is a responsibility assigned by Allah to every believer (Masoumbeigi et al. 2021). Hence, it is the responsibility of humans to take care of the environment to which they have been entrusted by Allah.

The Qur'an is considered by Muslims as the Divine's word and as the spiritual and behavioural authoritative text for Muslims worldwide. It consists of 114 chapters (surahs) and 6236 verses (ayahs) and is deemed to be the primary essence and final authority of the Islamic way of life. Previous studies have discovered that the Qur'an has the potential to promote cardiovascular health, mental health, maternal and child health, dietary patterns and healthy nutrition, as well as environmental related diseases (Taheri and Bakouei 2019; Masruri et al. 2022; Abdekhoda and Ranjbaran 2022; Mir Hussein Niri 2021). The Hadith and Sunnah, which correspond to the Prophet Muhammad's sayings and deeds, are secondary sources of guidance for Muslims. Many Hadith touch on plants, trees, irrigation, land production, water allocation, irrigation, grains, cattle, hunting, and animal care. The Sunnah also contains a number of important ecological guidelines. Therefore, environmental behaviour with an in-depth understanding of the Qur'an, Hadith, and Sunnah in relation to environmental health and education is needed.

Several studies (Affandi et al. 2022; Abdul Hamid and Abd Matalib 2021; Bsoul et al. 2022) have recently begun to explore various views of Islamic ideology and principles as they relate to environmental behaviour. There is a lack of systematic exploration of the Qur'an, Hadith, and Sunnah as they relate to environmental health. With this mind, these three main sources can educate people on the importance of environmental preservation, because the environment can impact people's health and lifestyle. Hence, the purpose of this review was to explore Islamic principles based on Qur'anic, Hadith, and Sunnah Muslim scholar views and previous research on environmental health.

## 2. Methodology

Sections 5 and 6 of this review are inspired by selected Qur'anic verses, Hadith scriptures, and Sunnah of the Prophet Muhammad. The textual analysis of these three Islamic authoritative messages was carried out manually. For the search and identification of Qur'anic verses, this review referred to the search strategies outlined in previous Qur'anic research (Aboul-Enein 2016, 2018). Verses in the Qur'an were thoroughly reviewed in two formats, electronic ([www.quran.com](http://www.quran.com), accessed on 24 August 2022) and hard copy, to

compare the accuracy of each narrative verse for relevant thematic content. Both formats were evaluated for overarching themes and topics related to concepts, practices, and guidelines related to the environment and health. All verses were in the English language and gathered according to several thematic areas, including keywords such as water (including words 'rain' and 'river'), biodiversity (including words 'garden', 'bird', 'tree', 'plant', and 'beings'), earth corruption (including word 'destroy'), waste minimisation (including word 'excess'), climate change (including word 'earth'), and health aspect in relation to the environment (using word 'purify') together with the name of surah, chapter of surah, and number of verse. In all citation of the Qur'an in this review, the first number refers to the surah (chapter) and the second to the ayah (verse)—e.g., 4:22. The Hadith was explored through a context-based keyword search of authenticated Sunnah sources, including Sahih Al-Bukhari, Sahih Muslim, Sunan Abi Dawud, Sunan Ibn Majah, and Riyad as-Salihin, which are all available on [www.sunnah.com](http://www.sunnah.com), accessed on 1 September 2023.

On the other hand, other sections of this review discuss: (i) integrating environmental health with Islam; (ii) differences between Islamic and Western views on environmental responsibility; (iii) current research trends; and (iv) implications for future research, policies, and decision-making, which are supported by Muslim scholars' views and findings from published articles through electronic databases such as Google Scholar, Science Direct, and Web of Science. The review was limited to studies published in full text between 2018 and 2023 (within five years). The words 'environment\*', 'health', 'Qur'an', 'Hadith', and 'Sunnah' were used in the literature search.

This review contributes to the body of knowledge by answering the following research questions:

- (i) How can the environment be integrated with health from an Islamic perspective?
- (ii) How do Islamic and Western views of environmental responsibility differ?
- (iii) Which verses in the Qur'an as well as scriptures in the Hadith and Sunnah mention the environmental aspect?
- (iv) What are the current research trends in the field of environmental health and Islam? To what extent can the integration of environmental health and Islam impact future research, policies, and decision-making?

### 3. Integrating Environmental Health with Islamic Perspective

The term 'environment' refers to all of the things and humans that surround each individual. The two environmental dimensions are the natural and social environments (Tan et al. 2022). The natural environment is described as everything in the universe as God's creation, which includes living and non-living things. The social environment is a group of people who live and interact with one another. Humans may have the same or different cultures, traditions, behaviours, religions, and ways of life. People form relationships with one another in a social environment based on their ideas, needs, and targets, which are guided by values, laws, and roles (Levy et al. 2021). Even though the natural environment is broader than the social environment, they are interconnected in such a way that each has an impact on the other (Scalsky et al. 2022) (Figure 1).

When it comes to the relationship between environmental balance and sustainability and human well-being and safety, there are growing concerns about the lack of health security. There has been a substantial increase in the number of people looking for solutions to environmental and health risks caused by pollutants and mismanagement of natural resources. There are societal concerns and fears derived from a failure to consider security, prosperity, stability, and tranquillity in this relationship (Muharrem and Olcay Kaplan 2019). One of the solutions is to improve the understanding of the impact of environmental issues on health, which relates to people's relationship with Allah.

The five dimensions of health are wellness, disease, intellectual health, transcendence, and Qalbe Salim. Intellectual health enables humans to benefit from any situation in life and eventually achieve Qalbe Salim, which is defined as the attainment of ultimate wellness through transcendence and occurs through obedience to Allah's words. In Qalbe Salim,

humans are at their healthiest and most peaceful (Sadat Hoseini 2019). The dichotomy of wellness and disease in the human life cycle leads to intellectual health, with its dimensions of intellect and wisdom leading to transcendence and Qalbe Salim, that is, ultimate wellness (Figure 2).

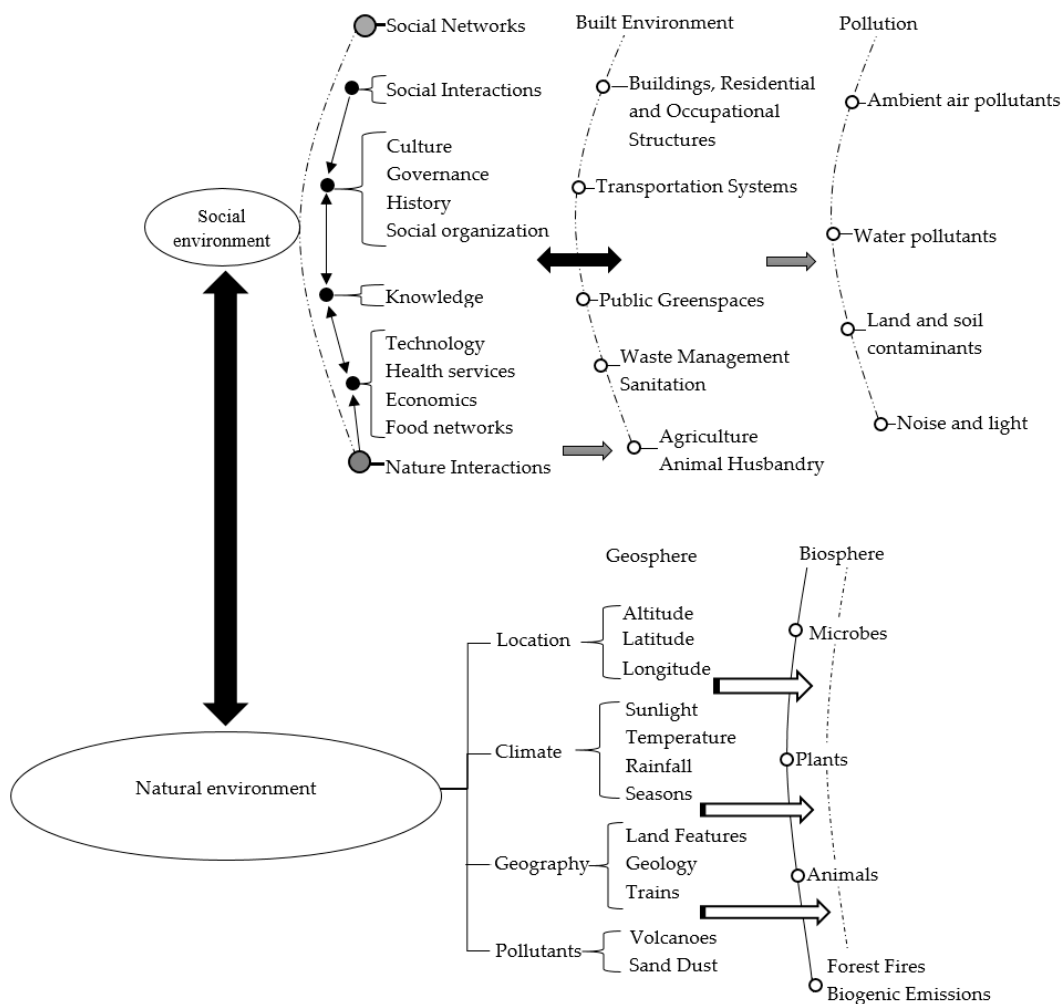


Figure 1. Diagram of the relationship between environmental dimensions.

A sufficient understanding of themselves, seeking Allah’s assistance, and adhering to Islamic thought based on the Qur’an, Hadith, and Sunnah are necessary for humans to enjoy a healthy environment. These situations counteract the ignorance, egoism, selfishness, and other negative temptations that contribute to both internal and external environmental degradation. These deeds uproot human greed, arrogance, and extravagance. Therefore, Allah commands people to maintain the earth, protect it from harm, refrain from excess, and safeguard justice. People who know that their actions and environmental degradation factors are at odds with nature have their roots in some of the inner and outer dimensions of the human personality. Then, they will consciously value sustained development and environmental preservation. As a result of their behaviours, their own environmental anomalies will decrease (Masoumbeigi et al. 2021).

Environmental factors that have an impact on a person’s health, quality of life, and way of life are under Allah’s authority. A person who has the most treasured Divine blessing, namely intellect and authority, has a heavy duty and must exercise caution not to use it against Allah’s will. A wise person should show honourable behaviour worthy of the best creature’s dignity by gaining the necessary awareness and changing his or her attitude,

that is, by being a protector and lover of environmental health. In Islam, such behaviour is expected of Allah’s obedient and upright servants (Salman and Ahmed 2021).

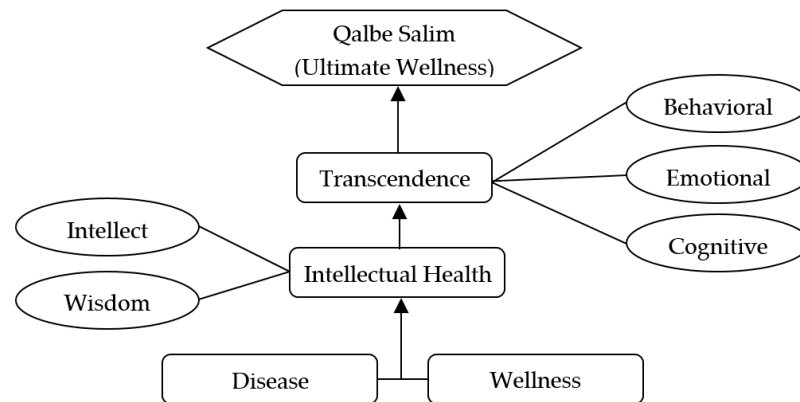


Figure 2. Diagram of the relationship between health dimensions.

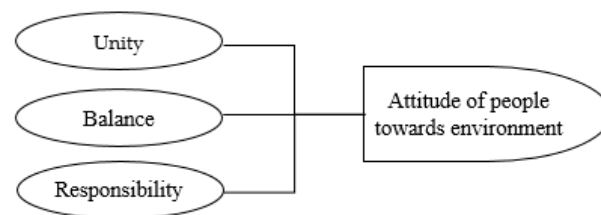
The Qur’an emphasises the importance of purifying ourselves, as well as practising a healthy lifestyle in a clean environment (Figure 3). There are three types of cleanliness in Islam: (i) purification from impurity (i.e., achieving purity or cleanliness by taking a bath ghusl or performing ablution wudu’ in conditions where a bath or ablution is required or desirable under Islamic Law; (ii) cleaning our body, dress, or surroundings of impurity or filth; and (iii) removing dirt from different parts of the body, including cleaning the teeth and nostrils, nail trimming, as well as armpit and pubic hair removal (Abd Rahim et al. 2018).

<p>Surah Al-Baqarah (2:222)  <i>“When they purify themselves, then you may approach them in the manner specified by Allah. Surely Allah loves those who always turn to Him in repentance and those who purify themselves.”</i></p>	<p>Surah al-Muddaththir (74:4)  <i>“Purify your garments.”</i></p>
<p>Surah Al-Ma’idah (5:6)  <i>“And if you are in a state of ‘full’ impurity, then take a full bath. But if you are ill, on a journey, or have relieved yourselves, or have been intimate with your wives and cannot find water, then purify yourselves with clean earth by wiping your faces and hands.”</i></p>	<p>Surah At-Tawbah (9:108)  <i>“Certainly, a mosque founded on righteousness from the first day is more worthy of your prayers. In it are men who love to be purified. And Allah loves those who purify themselves.”</i></p>

Figure 3. Health aspect in relation to the environment, as mentioned in the Qur’an.

Therefore, health and the environment are attributed in such a way that both the social and natural environments affect attainment of Qalbe Salim. The environment can either cause disease or promote a healthy lifestyle. The Qur’an, Hadith, and Sunnah guide human behaviour in terms of environmental conservation and preservation. Three principles made up of unity, balance, and responsibility can be used to describe the attitudes of people towards the environment (Figure 4).

Firstly, there is the principle of unity. The Qur’an demonstrates that nature is a whole, i.e., a complete system in which the parts support each other. The order and regular operation of the entire natural system are disturbed if even one component is affected (Cutter 2021; Kapsar et al. 2022). About 1300 years prior to the emergence of the academic concept of holism, the Qur’an encouraged a comprehensive perspective of the environment (55:7–8). Nature itself is one. Its components are interrelated to create a whole. Mankind has been provided with all of the resources it requires to survive. He/she has no right to mistreat them and must use them wisely (20:53–54) (Perry 2018). The same principle is synthesised in the 164th verse of Surah Al-Baqarah and in the 10th verse of Surah Ar-Rahman. In order to better understand and respect nature, people have to use its gifts wisely while also learning about its components, processes, and roles (Patil et al. 2022).



**Figure 4.** Principles that describe the attitude of people towards the environment.

Secondly, as the principle of balance, the universe is in perfect balance and proportion at both qualitative and quantitative levels (Llibre 2022). As a consequence, man has a responsibility to protect the environment, which is mentioned in the 40th verse of Surah Al-Hadid. Every element of the universe has a specific purpose, for which man is responsible as a wise user and protector of the environment. Failure to fulfil this responsibility will result in an imbalance (Wiryomartono 2022). The environment in which we live is a network of connections that influence each other in such a way that every imbalance experienced by one has a negative impact on all others. This viewpoint has recently been confirmed by science. Despite the fact that the theory of ecological balance is relatively new, having been introduced in the late 20th century by the United Nations (1997), it is mentioned in numerous verses of the Qur'an (Agboola et al. 2022).

Thirdly, there is the principle of responsibility. Man is not the leader of nature and the universe. Man is the gardener of the earth and he is responsible for his behaviour (Wajda 2017). Man must understand his role as a temporary administrator, a beneficiary rather than an owner of this planet. The Qur'an advocates for the preservation of all natural aspects of the environment in the 6th verse of Surah Sad, stating that humans are not superior to any other species (Febriani and Tamam 2020). The Qur'an makes reference to the close connection between human behaviour and environmental conditions in the 7th Surah Al-'Alaq and in the 11th verse of Surah At-Tur. The Qur'an makes it very clear that we should protect the environment and treat it well because we are not its real owners. In addition, the Qur'an forbids the abuse of animals and birds. Man has a responsibility to ensure the welfare of all creations. In other words, the Islamic religion shows a positive attitude toward the environment and natural resources, emphasising development and protection while rejecting all forms of exploitation and destruction (Ramlan 2020). Verse 61 of the Surah Hud discusses preserving and restoring the lands through farming, cultivation, and construction.

Therefore, the right to use natural resources implies humanity's commitment to preserving them in a sustainable manner, ensuring that future generations will also benefit from them, acknowledge their beauty, and use them to design their homes, all of which must be done in a moderate and compassionate manner. The ideology of Islamic environmentalism is based on environmental protection and conservation of nature (Gulzar et al. 2021; Muhamad et al. 2020). Accordingly, the Islamic approach to environmental health should focus on teaching the concept that the natural environment is neutral and good in and of itself. However, man's attitude towards natural resources, as well as irresponsible and careless behaviours and attitudes, may result in an unhealthy environment.

The Islamic view on a country's development recognises economic growth as a way of achieving human happiness and well-being, in which a balance between people's right to prosperity, community rights to social equity and fairness, the environment, and health is maintained (Bsoul et al. 2022). Therefore, organisations put the idea of "green Islam" into practice by promoting eco-theology and increasing Muslim involvement in sustainable living and environmental management.

Religious organisations such as Ummah for Earth and Islamic Relief Worldwide focus on modern Muslim societies that are committed to protecting the environment and vulnerable communities that align with Islamic tradition (Table 1). In addition to their role in distributing religious values, the idea of ummah or community also refers to a

more resilient future. Everyone would receive the benefits of a clean, liveable planet, thus protecting their health from environmental pollution (Chapra 2016; Petersen 2016). When used to establish and promote environmentally sustainable living, the ummah concept offers a powerful and effective connection-building tool for the Muslim community. The ummah's goal should be to promote the root causes of environmental protection, environmental literacy, and problem-solving for urgent issues, including environment-related diseases.

**Table 1.** Environmental-religious organisations under Ummah for Earth.

Name of Organisation	Purpose
Global One	Raise awareness about sustainability as one of Islam's legacies and has released a manual for eco-friendly hajj practices.
IFEES/EcoIslam	Close the gap between Islam's inherent ecological principles and how Muslims actually engage in daily life, with the goal of bringing about positive change within our communities and beyond to protect the earth.
The Center for Islamic Studies Universitas Nasional	Promote the integration of Islamic and scientific thought in academia and support regional, national, and international projects related to Islam and the environment, as well as create bridges between Muslim leaders and communities, environmental scientists, and practitioners.
Hazrat Sultan Bahu Trust	Promote Islamic view that preserving and conserving the environment is an act of worship with a clear duty to protect the nature.
GRASS Malaysia	Emphasise the environmental aspect and enhance environmental awareness based on cultural and religious views.

Islamic Relief Worldwide is a non-profit development and humanitarian organisation dedicated to assisting and empowering the world's weakest and most vulnerable people. Along with GreenFaith and the Islamic Foundation for Ecology and Environmental Sciences, Islamic Relief launched the Islamic Declaration on Climate Change ([The Islamic Foundation for Ecology and Environmental Sciences 2016](#)). It urged Muslim communities to actively participate in local, national, and international climate action. Global Muslim leaders supported the Declaration, which makes the case for environmental protection within the context of the Islamic faith and the role of health.

Islamic faith-based organisations employ a variety of strategies when advocating for the environment, specifically for specified countries. For example, in Indonesia, using the organisational network of pesantrens, schools, and kyais to expand their campaign on eco-theology, these organisations use technologies of power to self-govern. This is reflected in the concept of eco-spiritual governmentality, an initiative that Muhammadiyah and Nahdlatul Ulama have taken through pre-teaching (dakwah). Muhammadiyah organises a variety of volunteer programmes, such as the establishment of Mubaligh Lingkungan, to educate people about eco-theology (environmental preacher). In order to stop illegal logging and deforestation in Central Java, they have called for a jihad, which is an Arabic term for "struggle" ([Dewayanti and Saat 2020](#)). The expression shows a strong desire to put an end to what is thought to be an irresponsible act towards the environmental damage that affects human health.

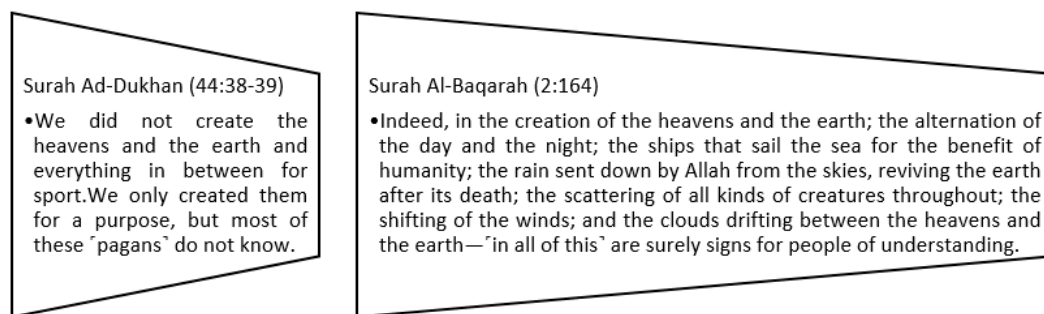
As a solution, non-religious regulatory and non-regulatory organisations can cooperate with Islamic regulatory organisations to apply coercive Muslim principles or Shariah compliance by implementing environmental health values and practices. For instance, the Green Building Index Organization's rating can be used as a standard to classify respective organisations as Shariah-compliant ([Nasir et al. 2021](#)). With this ruling in place, organisations may be under pressure to achieve GBI accreditation as well as Shariah compliance.

#### 4. Differences between Islamic and Western Views on Environmental Responsibility

In Islam, nature was created for people to study the environment in order to discover God and should be used for their benefit. This viewpoint is an extension of the concept

that man has been placed on Earth to serve as God’s representative (Faruqi 2006; Zaidi 1991; Said 1989). The environment can be used to provide food, and its bounty should be distributed equally among communities. All activities that harm mankind and thus destroy the natural balance is prohibited. For example, unnecessarily killing animals or removing vegetation can lead to starvation due to a lack of food. Therefore, Islam holds people responsible for any harm they cause to the planet, so it is important for them to preserve natural resources.

Islam emphasises that environmental protection is the only way to preserve the delicate balance of life and emphasises common interests, in contrast to Western concepts that view it as a reaction to outside factors and the pursuit of particular interests. The main difference between Western and Islamic views is the source of knowledge. The Western view is based on their own ideas and research on the subject, whereas the Islamic view is based on Divine revelation from the Qur’an, Hadith, and Sunnah from the Prophet Muhammad SAW (Nasir et al. 2021). The interaction between man and the environment is accompanied by a powerful desire to please Allah (Aral and López-Sintas 2022). The Qur’anic verses in Figure 5 demonstrate the relationship between nature and man, and this relationship inspires Muslim scholars to explore natural phenomena in order to better understand God (Wersal 1995).



**Figure 5.** Verses in the Qur’an that mention the whole universe.

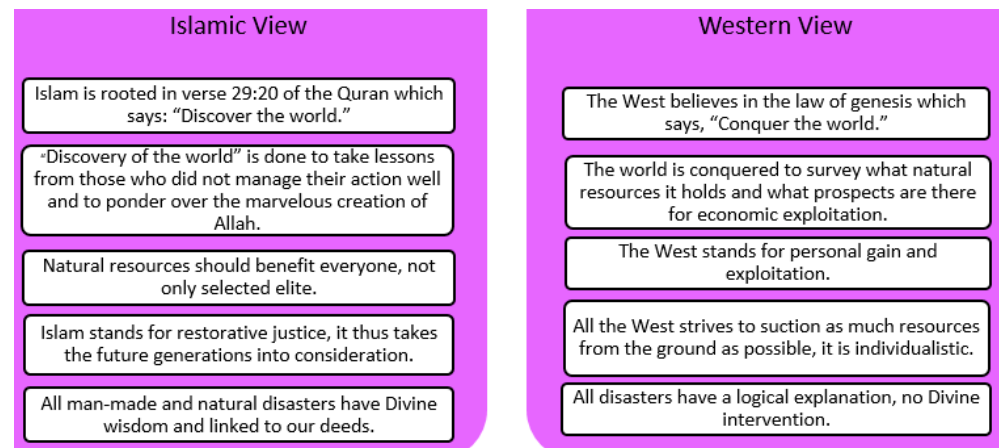
After the Scientific Revolution, the Western view was that no footprints of the Divine could be identified in the environment (Peters 2003). Moreover, any similarities that existed between Western and Islamic views were torn apart by the rise of modern science (Nasr 1996). An analysis of the principles of religion and nature by Seyyed Hossein Nasr (1996) found that there was a significant shift that played a central role in the emergence of modern science from the idea of cosmic order and laws created by God.

This situation was applicable to people and the environment because of the idea of ‘the laws of the environment’, which were discovered by people, associated with mathematical laws, and segregated from ethical and spiritual laws. Although later theologians attempted to ‘christianise’ the seventeenth-century scientific concept of the laws of nature, this new idea also eclipsed the earlier Christian understanding of the topic. Surprisingly, such a situation did not occur in other civilisations with long scientific traditions, such as Chinese, Indian, and Islamic civilisations. As a consequence, this situation had implications for the division between the modern West and other civilisations in terms of understanding the order of nature and its religious significance.

Europe appears to have decided to transform mediaeval science, which had been influenced by Islamic scientific traditions. Plato succeeded Aristotle, and mathematics became the new scientific tool. With contributions from Nicholas Copernicus (1473–1543), Galileo Galilei (1564–1642), and Johannes Kepler (1571–1630), mediaeval science ended with the biological sciences and Charles Darwin’s *The Origins of Life*, which had philosophical implications. According to Koyré (1892–1964), a respected French historian of science (Iqbal 2002), the founders of modern science did not refine or improve what they had inherited, but actually destroyed one world and replaced it with another. They reshaped



the intellectual framework, restated and reformed its concepts, and developed an entirely novel approach to concepts of the human being and the environment. The differences between Islamic and Western views on the relationship between man and the environment are presented in Figure 6.



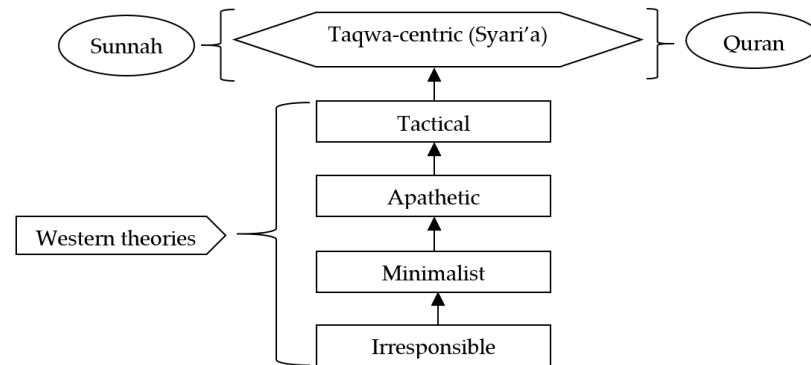
**Figure 6.** Islamic and Western views on the relationship between man and the environment.

Islamic and Western views are also diverse in terms of society's institutions or companies. Hence, companies should protect and preserve the environment, even if doing so will affect their own interests. The Islamic view is superior to the Western view, which reflects that companies should protect the environment as part of protecting their environmental interests. These interests vary in the Western view. For instance, companies protect the environment to attract customers, avoid complaints and fines, or generate wealth (Lin 2020; Prisandani 2022).

In terms of environmental preservation, companies have five levels of environmental responsibility (Salem et al. 2012). The first level is irresponsible, which represents an extreme behaviour of a company. In this case, the company shows no regard for the environment. Issues such as fraud, misrepresenting accounting statements, illegal disposal of toxic waste, and false advertisement illustrate irresponsibility by a company. The second level is minimalist, in which companies try to maximise profit and share value. The company complies with the minimum legal requirements. It may also take part in a few environmental activities. The third level is apathetic, in which companies adhere to the required ethical obligations and operate within the law. Doing what is right and avoiding harm can serve as representations of these obligations. Altruistic and philanthropic endeavours, as well as other social and environmental activities, are rarely carried out by the company. If such a company makes no strategic effort to engage in a corporate social responsibility scheme, it is referred to as apathetic. The fourth level is tactical, in which companies voluntarily fulfil their social responsibilities. This is advantageous both in the short- and long-term basis. When a company's standing is raised, it eventually guarantees long-term profits. The fifth level is taqwa-centric, whereby Islamic values are applied by a company or institution. At this level, companies voluntarily engage in environmental activities, regardless of the financial implications, both positive as well as negative. At this point, religious duty serves as the key driver behind an environmental activity. Profit or company reputation is less significant than this religious obligation. Hence, the Islamic perspective on environmental responsibility is illustrated by this example. It outweighs all other theories (Figure 7).

While traditional corporate legitimacy demonstrates that companies should protect the environment as part of protecting their own interests (a win-win situation), ethical Islamic legitimacy prioritises the environment above other things and highlights public interests over individual interests. There are companies that comply with the five levels of environmental responsibility. For example, the Saudi government has paid SAR 35.5 billion

to the owners of expropriated properties to make possible the expansion and modernisation of Makkah's Grand Mosque, which will better serve over 6 million pilgrims (human beings—the centre of the natural environment) each year (Helfaya et al. 2018). Therefore, people are obligated to protect and preserve the environment, even if doing so jeopardises their specific interests.



**Figure 7.** Environmental responsibility levels.

One of the objectives of corporate social responsibility (CSR) is to improve the well-being of all stakeholders, including employees, shareholders, depositors, customers, society, and future generations. The mission of “business and khalifah” implies the essential need for companies to instil good CSR practices, such as encouraging good environmental practices, occupational safety, philanthropic contributions, and socially beneficial and harmless activities (Umar et al. 2022). Failure to do so is equivalent to disrespecting and offending Allah’s will, with all of the implications in this world and the Hereafter.

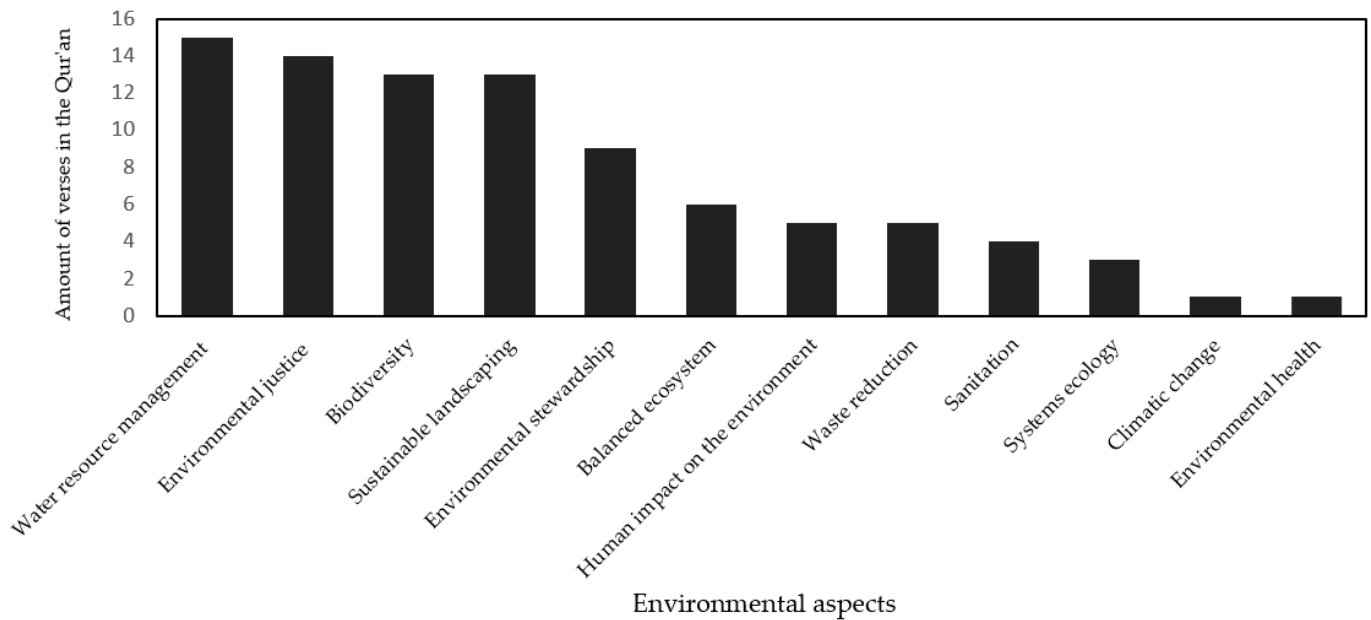
CSR disclosure by Islamic banks is commonly based on eight dimensions, one of which is the environment. For instance, full-fledged local Islamic banks in Malaysia include Bank Islam Malaysia (BIMB), Bank Kerjasama Rakyat Malaysia (BKRM), and Bank Muamalat Malaysia (BMM). The items are as follows: (i) the introduction of a green product glossary/definition of a green product; (ii) investment in a recycling bin project (recycling for nature) and other sustainable development projects; (iii) donations to environmental awareness causes; (iv) financing in any project that may cause environmental damage; (v) investment in sustainable development projects; and (vi) initiatives to mitigate environmental impacts of products and services, and the extent of impact mitigation (Darus et al. 2018).

Although there are differences in environmental responsibility between Western and Islamic theories, similarities exist among them. Paganism, for example, the 7th largest religion according to the UK census, would agree with Islamic theories on protecting the earth. Therefore, cooperation of devotees from these two theories would help to educate communities from various religious backgrounds on the importance of protecting the environment. Awareness programmes should be implemented to increase responsibility for environmental conservation and preservation, which will eventually minimise the impact of environmental degradation on health.

## 5. Environment Based on Qur’an

This review identified 42 chapters out of 114 chapters and 89 relevant verses out of a total of 6236 verses (Figure 8) that mentioned environmental aspects, including: (i) 15 verses emphasizing the importance of water resource management; (ii) 14 verses on environmental justice, including earth jurisprudence; (iii) 13 verses on the importance of biodiversity, including plant conservation and conservation biology; (iv) 13 verses on sustainable landscaping, including gardening; (v) 9 verses on environmental stewardship; (vi) 6 verses on the importance of a balanced ecosystem; (vii) 5 verses on the human impact on the environment; (viii) 5 verses on overconsumption, including waste reduction; (ix) 4 verses

on sanitation; (x) 3 verses on the importance of system ecology, including planetary homeostasis and the Gaia hypothesis; and (xi) 1 verse on climatic change. One verse in Surah A-Hijr (15:22) was identified as contradictory to all relevant verses because it mentioned environmental health (Figure 8).



**Figure 8.** Amount of verses identified in the Qur’an related to environmental aspects.

According to Mawil Izzi Dien, an Iraqi Islamic scholar and eminent Islamic ecologist, in debating the theory of the environment in the Qur’an, he explained that the environment refers to the word ma’ayish (stay). This term refers to an environment that is a place to live that contains food and includes animals and plants. These three elements are intertwined and mutually related in life. He also explained that Allah created the environment or the earth for humans to be grateful to Him (Mawil Izzi Dien 2000). This shows that the environment is mainly important to humans, as well as to other creatures. Indirectly, it can sustain human civilisation.

However, there are three important aspects that must be considered in terms of environmental preservation efforts. Firstly, there is the purpose of human creation, as humans play an important role as administrators of prosperous nature. Secondly, it is also necessary to consider the concept of Al-Mizan or balance because every creation of Allah is closely related to balance (Al-Mizan). This balance will create a harmonious and prosperous environment. Nevertheless, these two aspects are also related to destiny by Allah. Therefore, the third aspect is the destiny that determines the role of humans on earth and the balance of nature (Zabidi et al. 2021). It is said that destiny will guide the life of the environment, including the aspect of balance and the role of humans. The Qur’an generates environmental principles, thus creating ecological interpretations of Islam and ethics for Islamic environmentalism (Table 2).

**Table 2.** Important principles for Islamic environmentalism.

Principle	Meaning	Interpretation by Muslim Environmentalists
Tawhid	Oneness of Allah	Unity of creation, such as humans and nature
Mizan	Balance	Harmony of all parts of creation
Khalifa	Humans as God’s vicegerents	Humans as stewards of God’s creation
Maslahah	Public interest	Care for future generations

It is said that water is regarded as a fundamental element of life in Islam. Humans and other living creatures cannot survive without water. The Islamic principles of water can be summed up in two points: (i) ownership of water is not limited to a few people as it is widespread, thus water ownership, particularly of ground water, is forbidden in Islam; and (ii) drinking water for humans or animals takes precedence over other uses. The scarcity of water resources and non-renewable water resources raise the demand for water. Water conservation is the most effective way to avoid scarcity (Liu et al. 2022). These principles relating to water use and management could be an essential factor in water conservation, which are mostly found in Islamic countries such as Saudi Arabia, Kuwait, and Malaysia (Alotaibi and Kassem 2021; Praveena and Themudu 2022; Al-Huwaishel et al. 2022). Furthermore, water is scarce in the North Africa region, especially in Egypt, where the source of freshwater is almost entirely from the Nile River (Aty 2022). The principles could be used to promote and support pro-environmental behaviour for water sustainability (Figure 9).

Surah Al-Anbiya (21:30) "And We created from <b>water</b> every living thing"	Surah An-Nazi'at (79:30–33) "As for the earth, He spread it out as well, bringing forth its <b>water</b> and pastures"	Surah Al-Kahf (18:33) "Each garden yielded `all` its produce, never falling short. And We caused a <b>river</b> to flow between them."	Surah Qaf (50:9) "And We send down blessed <b>rain</b> from the sky, bringing forth gardens and grains for harvest."	Surah Al-Hajj (22:63) "Do you not see that Allah sends down <b>rain</b> from the sky, then the earth becomes green?"
Surah An-Nahl (16:10) "He is the One Who sends down <b>rain</b> from the sky, from which you drink and by which plants grow for your cattle to graze."	Surah As-Sajdah (32:27) "Do they not see how We drive <b>rain</b> to parched land, producing `various` crops from which they and their cattle eat? Will they not then see?"	Surah Taha (20:53–54) "He is the One` Who has laid out the earth for `all of` you, and set in it pathways for you, and sends down <b>rain</b> from the sky, causing various types of plants to grow..."	Surah Al-Mu'minin (23:18) "We send down <b>rain</b> from the sky in perfect measure, causing it to soak into the earth. And We are surely able to take it away."	Surah Fatir (35:27) "Do you not see that Allah sends down <b>rain</b> from the sky with which We bring forth fruits of different colours?"
Surah Az-Zukhruf (43:11) "And `He is the One` Who sends down <b>rain</b> from the sky in perfect measure, with which We give life to a lifeless land."	Surah An-Nahl (16:65) "And Allah sends down <b>rain</b> from the sky, giving life to the earth after its death. Surely in this is a sign for those who listen."	Surah Al-Baqarah (2:22) "He is the One` Who has made the earth a place of settlement for you and the sky a canopy; and sends down <b>rain</b> from the sky, causing fruits to grow as a provision for you."	Surah Az-Zumar (39:21) "Do you not see that Allah sends down <b>rain</b> from the sky—channelling it through streams in the earth"	

Figure 9. Water mentioned in the Qur'an.

The rain cycle that originates from the sea, i.e., sea water vapour that evaporates into the sky, is due to the heat of the sun, and then condensation occurs to form clouds. Water in the sea undergoes continuous evaporation and condensation. Most of the water that condenses in the clouds will not fall to the earth as raindrops because of the air turbulence that connects the clouds in the atmosphere. Rain can only occur if water droplets begin to condense and combine to form large water droplets that become heavy enough to form rain, also known as precipitation (Buchwald et al. 2022). Hence, according to scientists, there are three stages in the process of rain formation: the existence of raw materials in the form of separate clouds, the combination of clouds to form water droplets, and finally, rainfall (Figure 10).

At the beginning of the discovery, scientists hypothesised that the wind in the rain process was only a cloud mover. In the 20th century, with more modern equipment, such as airplanes, satellites, and computers, it was only then that scientists discovered that wind had a significant function in the process of rain formation, combining the water vapour floating in the air with the particles it brings from the sea to finally help the formation of rain clouds. The discovery of this rain process was something that amazed Western researchers. Meanwhile, the process of rain formation has been clearly written in the Qur'an for 1400 years, namely in Surah Ar-Ruum (30:48). Research found that wind in the

process of rain formation was only a cloud mover (Guzzetti et al. 2022; Renato Morbidelli 2022). Meanwhile, in the Al-Qur'an, Surah Al-Hijr (15:220) explains that wind is a carrier of water (clouds). Furthermore, Allah tells about the wind that moves the clouds in Surah Al-Faatir (35:9) (Figure 11).

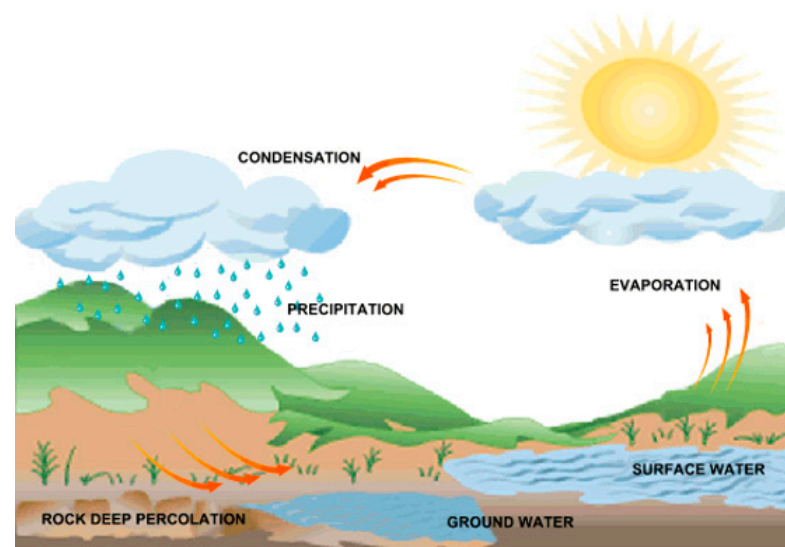


Figure 10. Graphic visualisation of the water cycle.

<p>Surah Ar-Rum (30:48)  <i>"It is Allah Who sends the winds, which then stir up 'vapour, forming' clouds, which He then spreads out in the sky or piles up into masses as He wills, from which you see rain come forth."</i></p>	<p>Surah Al-Hijr (15:22)  <i>"We send fertilizing winds, and bring down rain from the sky for you to drink."</i></p>	<p>Surah Al-Fatir (35:9)  <i>And it is Allah Who sends the winds, which then stir up 'vapour, forming' clouds..."</i></p>
---	--	---

Figure 11. The process of rain formation according to the Qur'an.

The Qur'an emphasises plant conservation and biodiversity, mainly through plant-based foods such as dates, grapes, pomegranates, and figs. The United Nations Educational, Scientific, and Cultural Organization (UNESCO) suggested constructing a botanical garden in Doha, Qatar, with the primary part of this project titled "Qur'anic Botanic Garden" to advertise the knowledge of Qur'anic plants and cultural heritage for scientific, conservation, and aesthetic purposes (Qatar Foundation 2016; United Nations Educational Scientific and Cultural Organization 2009). These religious-based environmental projects could be expanded throughout the majority of Muslim countries to enhance sustainable gardening and plant conservation education (Figure 12).

There is a strong relationship between the increase in sunlight and the formation of seeds and plants because light is a basic element in plant growth (Xu et al. 2021). Seeds and plants require food that consists of earth elements, including sunlight (Reed et al. 2022). Sunlight acts on the chlorophyll produced by plants to produce food that is absorbed into the roots of the plants (Yano et al. 2022). This process is important for the plant's survival and fertilisation. This finding has been suggested by the Qur'an, which also describes seed germination in Surah Al-An'am (6:95) (Figure 13).

The Qur'an promotes environmental justice and earth jurisprudence as religious duties, as well as the need to avoid corruption of the earth. Instead of an anthropocentric concept, the Qur'an promotes a concept of "web of creation" in which humans are only one part of a larger group of beings and the welfare of each person in that community is synergistically dependent on the well-being of other creatures and the earth. This type of eco-theology has an Islamic foundation and concentrates on the connection between religion and the environment (Bratton 2018).

<p>Surah Ar-Ra'd (13:3–4)  <i>"And He is the One Who spread out the earth and placed firm mountains and rivers upon it, and created fruits of every kind in pairs. He covers the day with night. Surely in this are signs for those who reflect. And on the earth there are 'different' neighbouring tracts, <b>gardens</b> of grapevines, 'various' crops, palm trees."</i></p>	<p>Surah Al-Baqarah (2:266)  <i>"Would any of you wish to have a <b>garden</b> with palm trees, grapevines, and all kinds of fruits with rivers flowing underneath and as they grow very old with dependent children."</i></p>	<p>Surah Al-An'am (6:99)  <i>"And He is the One Who sends down rain from the sky—causing all kinds of plants to grow—producing green stalks from which We bring forth clustered grain. And from palm <b>trees</b> come clusters of dates hanging within reach. 'There are' also gardens of grapevines, olives, and pomegranates, similar 'in shape' but dissimilar 'in taste'."</i></p>	<p>Surat Al-Furqan (25:8)  <i>"or a treasure had been cast down to him, or he had had a <b>garden</b> from which he may eat!" And the wrongdoers say 'to the believers', "You are only following a bewitched man."</i></p>
<p>Surat Al-Baqarah (2:266)  <i>Would any of you wish to have a garden with palm <b>trees</b>, grapevines, and all kinds of fruits with rivers flowing underneath and as they grow very old with dependent children, a fiery whirlwind hits the garden, burning it all up?</i></p>	<p>Surat Al-Hashr (59:5)  <i>"Whatever palm <b>trees</b> you 'believers' cut down or left standing intact, it was 'all' by Allah's Will, so that He might disgrace the rebellious."</i></p>	<p>Surah Al-Luq'man (31:10)  <i>"He created the heavens without pillars—as you can see—and placed firm mountains upon the earth so it does not shake with you, and scattered throughout it all types of creatures. And We send down rain from the sky, causing every type of fine <b>plant</b> to grow on earth."</i></p>	<p>Surat Al-Hajj (22:18)  <i>"all those in the heavens and all those on the earth, as well as the sun, the moon, the stars, the mountains, the <b>trees</b>, and 'all' living beings, as well as many humans, while many are deserving of punishment."</i></p>
<p>Surah Al-An'am (6:141)  <i>"He is the One Who produces <b>gardens</b>—both cultivated and wild—and palm trees, crops of different flavours, olives, and pomegranates—similar 'in shape', but dissimilar 'in taste'."</i></p>	<p>Surah Al-An'am (6:38)  <i>"All living beings roaming the earth and winged <b>birds</b> soaring in the sky are communities like yourselves."</i></p>	<p>Surah An-Naml (27:60)  <i>"Or 'ask them, 'Who created the heavens and the earth, and sends down rain for you from the sky, by which We cause delightful <b>gardens</b> to grow? You could never cause their trees to grow."</i></p>	<p>Surat Al-Mu'minin (23:19)  <i>"With it We produce for you gardens of palm <b>trees</b> and grapevines, in which there are abundant fruits, and from which you may eat"</i></p>
<p>Surat Al-Hajj (22:23)  <i>"'But' Allah will surely admit those who believe and do good into <b>gardens</b>, under which rivers flow, where they will be adorned with bracelets of gold and pearls, and their clothing will be silk"</i></p>	<p>Surat Al-Isra (17:91)  <i>"or until you have a garden of palm <b>trees</b> and vineyards, and cause rivers to flow abundantly in it".</i></p>	<p>Surah An-Nahl (16:11)  <i>"With it He produces for you 'various' crops, olives, palm <b>trees</b>, grapevines, and every type of fruit. Surely in this is a sign for those who reflect."</i></p>	<p>Surah Al-An'am (6:38)  <i>"All living beings roaming the earth and winged <b>birds</b> soaring in the sky are communities like yourselves."</i></p>
<p>Surat Al-Rahman (55:10)  <i>"He laid out the earth for all <b>beings</b>."</i></p>	<p>Surah At-Tariq (86:12)  <i>"and the earth with its sprouting <b>plants</b>!"</i></p>	<p>Surah Al-Hashr (59:5)  <i>"Whatever palm <b>trees</b> you 'believers' cut down or left standing intact, it was 'all' by Allah's Will."</i></p>	

Figure 12. Biodiversity aspect mentioned in the Qur'an.

Surah Al-An'am (6:95)  
*"Indeed, Allah is the One Who causes **seeds** and fruit stones to sprout. He brings forth the living from the dead and the dead from the living. That is Allah!"*

Figure 13. The process of seed germination according to the Qur'an.

The Qur'an promotes environmental stewardship by emphasising humanity's central role as earth's steward and the successive responsibility for the care of Creation. This concept shows that the Qur'an relates to the environment and is deserving of all Muslims' protection. This ecological mindset implies that a Muslim who is aware of his or her responsibilities to the Divine is directly responsible for the protection of what the Divine has created. Religious teachings have a direct impact on human behaviour, particularly when it comes to environmental ethics (Taqavi et al. 2021). There is a need to emphasise better environmental behaviour in daily life, as Islam teaches environmental responsibility.

People are told to walk humbly (31:19), not to be wasteful or extravagant, not to disrupt nature's balance, and not to change Allah's creation. Therefore, the Qur'an contains comprehensive spiritual and moral guidelines for people and also describes the current situation of our surroundings. As mentioned in the 41th verse in Surah Ar-Rum, what does 'corruption' of 'earth and sea' that 'people's hands have done' mean? The term 'hands' means human activities, which have literally corrupted the 'earth and sea'. Now we 'taste', which means we are facing the 'consequences of our deeds', not to be punished but to become aware of the need to return to Allah.

People should take responsibility to put right what is wrong, i.e., the environmental impact, and return to the natural equilibrium that was created. Otherwise, the corruption that is spreading, which results in pollution, will continue to spread and inevitably cause more harm. If we want to protect the environment and well-being of current and future generations, we must act now to reverse the damage and change our activities as needed. For example, Muslims who live in oil-rich countries promote wasteful lifestyles and environmentally harmful practices. Rather than focusing solely on oil production, countries should prioritise investments in sustainable energy industries. Figure 14 shows a few verses in the Qur’an that emphasise the need to minimise corruption of the earth, land, and sea.

<p>Surah Hud (11:116)  <i>"If only there had been among the 'destroyed' peoples before you, 'O believers,' virtuous individuals who forbade corruption in the land—other than the few We had saved 'from the torment'."</i></p>	<p>Surah Ar-Ra'd (13:25)  <i>"And those who violate Allah's covenant after it has been affirmed, break whatever 'ties' Allah has ordered to be maintained, and spread corruption in the land—it is they who will be condemned and will have the worst abode."</i></p>	<p>Surah Ar-Rum (30:41)  <i>"Corruption has spread on land and sea as a result of what people's hands have done, so that Allah may cause them to taste 'the consequences of' some of their deeds."</i></p>	<p>Surah Al-Qasas (28:83)  <i>That 'eternal' Home in the Hereafter We reserve 'only' for those who seek neither tyranny nor corruption on the earth. The ultimate outcome belongs 'only' to the righteous."</i></p>
<p>Surah Al-Baqarah (2:27)  <i>"Those who violate Allah's covenant after it has been affirmed, break whatever 'ties' Allah has ordered to be maintained, and spread corruption in the land."</i></p>	<p>Surah Al-Baqarah (2:27)  <i>"Those who violate Allah's covenant after it has been affirmed, break whatever 'ties' Allah has ordered to be maintained, and spread corruption in the land."</i></p>	<p>Surah Hud (11:85)  <i>"O my people! Give full measure and weigh with justice. Do not defraud people of their property, nor go about spreading corruption in the land."</i></p>	<p>Surah Al-A'raf (7:85)  <i>"So give just measure and weight, do not defraud people of their property, nor spread corruption in the land after it has been set in order."</i></p>
<p>Surah Al-Baqarah (2:205)  <i>"And when they leave 'you', they strive throughout the land to spread mischief in it and destroy crops and cattle. Allah does not like mischief."</i></p>	<p>Surah Al-Qasas (28:77)  <i>"And be good 'to others' as Allah has been good to you. Do not seek to spread corruption in the land, for Allah certainly does not like the corruptors."</i></p>	<p>Surat Al-A'raf (7:74)  <i>"So remember Allah's favours, and do not go about spreading corruption in the land."</i></p>	<p>Surah Al-Baqarah (2:11)  <i>"When they are told, 'Do not spread corruption in the land,' they reply, 'We are only peace-makers!'"</i></p>
<p>Surah Al-Baqarah (2:11)  <i>When they are told, "Do not spread corruption in the land," they reply, "We are only peace-makers!"</i></p>	<p>Surah Sad (38:28)  <i>"Or should We treat those who believe and do good like those who make mischief throughout the land?"</i></p>	<p>Surah Ash-Shu'ara (26:152)  <i>"Who spread corruption throughout the land, never setting things right."</i></p>	<p>Surah Al-Qasas (28:77)  <i>"Do not seek to spread corruption in the land, for Allah certainly does not like the corruptors"</i></p>
	<p>Surah Al-A'raf (7:56)  <i>"Do not spread corruption in the land after it has been set in order."</i></p>	<p>Ash-Shu'ara (26:152)  <i>"Who spread corruption throughout the land, never setting things right."</i></p>	

Figure 14. Earth corruption aspect mentioned in the Qur’an.

There are a few scientific theories on earth corruption being explored by scientists that align with the Qur’an. For example, the concept of the “closed universe”, i.e., the Big Bang theory, was developed by Alexander Friedmann (1888–1925), a Russian mathematician and astrologer. He claimed that the universe undergoes changes in the form of expansion. Then, due to gravity, the universe could contract or shrink, resulting in an explosion and total destruction of the universe.

In terms of the universe, a black hole is a region in space where the pulling force of gravity is so strong that light is unable to escape. The strong gravity occurs because matter has been pressed into a tiny space. This compression can take place at the end of a star’s life. Some black holes are the result of dying stars. As no light can escape, black holes are invisible. Nevertheless, space telescopes equipped with special instruments can help find black holes. They can observe the behaviour of material and stars that are close to black holes. This Black Hole theory was developed by scientists about the destruction of the earth, which relates to Surah Al-Anbiya’ (21:104) (Figure 15).

Surah Al-anbiya' (21:104)

*On that Day We will roll up the heavens (sky) like a scroll of writings. Just as We produced the first creation, 'so' shall We reproduce it? That is a promise binding on Us. We truly uphold 'Our promises'!*

**Figure 15.** The Black Hole theory according to the Qur'an.

The Qur'an refers to Paradise as "Al-Janna" in Islamic tradition, which literally means "the Garden" (Hussain et al. 2018). Accordingly, Siti et al. (2018) developed the concept of a "green mosque," which makes use of rainwater harvesting. They emphasised that a mosque is not only a place of worship but also a central location for a variety of social programmes. Thus, the overall design of a mosque should be well-thought out and implement rainwater harvesting, an environmentally-friendly design, and an eco-gardening landscape. Environmental justice, environmental stewardship, and sustainable gardening are all attributed to earth jurisprudence and environmental conservation.

The Qur'an also mentions waste minimisation (Figure 16). Reading through each of the Qur'an's citations reveals that the environment as described in the Qur'an is not independent, but rather synergistically interdependent. Waste reduction reduces man's impact on the environment, helping to promote a more balanced ecosystem and maintain planetary homeostasis. Waste reduction reflects the efficient use of natural resources and, thus, the sustainability of the environment from pollution. Furthermore, for instance, excessive disposal of industrial waste into the environment without treatment can harm water and plants as well as soil fertility (Koul et al. 2022).

Surah Al-A'raf (7:31) <i>"O Children of Adam! Dress properly whenever you are at worship. Eat and drink, but do not waste. Surely He does not like the wasteful."</i>	Surah Yunus (10:23) <i>"But no sooner than He delivers them than they go about committing excesses on the earth, acting unjustly. Men! The excesses you commit will be of harm only to yourselves..."</i>
Surah Al-An'am (6:141) <i>"Eat of the fruit they bear and pay the dues at harvest, but do not waste. Surely He does not like the wasteful."</i>	Surah Al-A'raf (7:31) <i>"Eat and drink, but do not waste. Surely He does not like the wasteful."</i>

**Figure 16.** Waste minimisation aspect mentioned in the Qur'an.

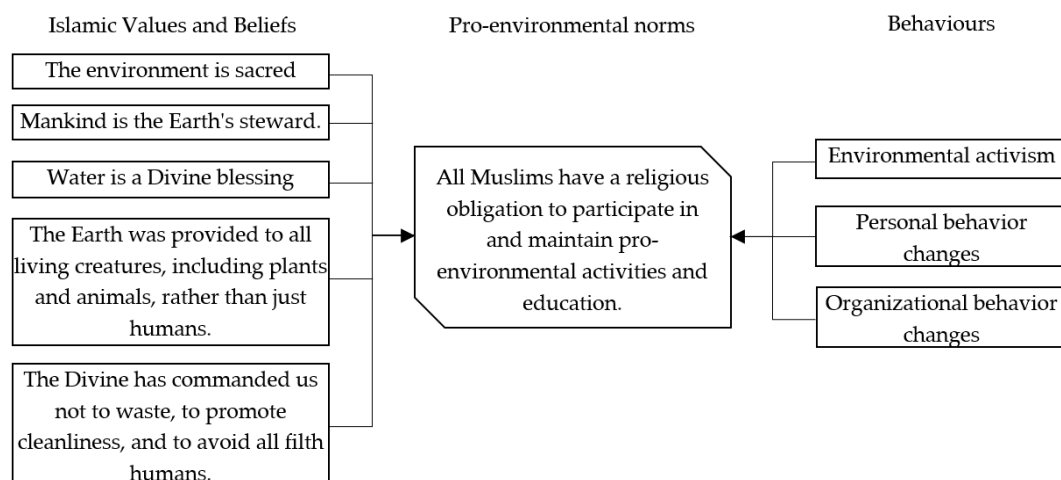
Surah Az-Zalzala (99:1–4) mentions climate change: "When the earth is shaken with a (violent) convulsion, and the earth reveals what burdens her, and man says: What has befallen her?" Scholars among climate-oriented social scientists, pastors, eco-theologians, and religious communities continue to support the association between religion and climate change attitudes and behaviours, as well as the importance of addressing climate change as an area of interfaith collaborative efforts between them (Haluza-Delay 2014). Perspectives towards climate change enable communities and individuals to engage more directly with environmental justice because they integrate their social and spiritual lives. Faith relates to morality and individual goodness, and thus provides great motivation to participate. If a person or group of people understands their role in the world and the actions they undertake through their religion, an environmental justice system implemented within this system has a better chance of having a significant impact on their lives. The Islamic Declaration on Global Climate Change (International Islamic Climate Change Symposium 2015), which was drafted at the Islamic Climate Change Symposium in Istanbul, is one of the most significant contributions to environmental justice (Islamic Foundation for Ecology and Environmental Sciences 2015).

The Islamic Declaration on Global Climate Change by Islamic Relief has a variety of advantages. The first is that the concept of stewardship emphasises personal responsibility, mainly responsibility in the face of a judging Allah. Muslims believe that there will come a day when humans will be judged based on their good and bad deeds, either by reward or punishment (Kulinich 2022). Relating traditional concepts of stewardship and appropriate action to environmental justice gives all Muslims a reason to deal with this issue as part of their efforts to live a moral life. Moreover, rather than beliefs or ideas, this judgement



is based on action. In this context, we can read the Declaration as a Divine call to action (Jenkins et al. 2018). This call to action among individual Muslims around the world is also defined in The Declaration in terms of nations and corporations.

Previous authors proposed the Value–Belief–Norm model as a theoretical framework for encouraging pro-environmental engagement and proactive behaviours (Cao et al. 2022; Park et al. 2022; Tian and Liu 2022). This theoretical model could be applied when combined with a Qur’an-based ethos that is culturally compatible with Muslim populations in increasing Islamic environmental consciousness and facilitating pro-environmental values and beliefs (Figure 17) (Aboul-Enein 2018). Therefore, the Qur’an could serve as a connection between man, the environment, and the Divine, by encouraging environmental attitudes and behaviours among Muslim populations and countries.



**Figure 17.** A Value–Belief–Norm model was used to propose a Qur’an-based environmental ethos.

The natural environment performs according to natural laws, which are firmly perfected by Allah’s divine power (s.w.t.). The Qur’an demonstrates that “everything in the world was made to utilise with a unified purpose and each aspect is critical in maintaining the balance and functioning of the universe” in verses 7–10 of Surah Ar-Rahman. Nature’s balance can be seen in every element, including the physical order of the universe, biology, chemistry, and many other fields. Given the Qur’an narrative’s conceptual and spiritual nature, it may be impossible to accurately place a verse within a single specific topic or category. This is where the contribution of this review comes in, as each Qur’anic citation is segregated according to environmental topic. The environment based on the Sunnah and Hadith is explained in the following section.

## 6. Environment Based on the Hadith and Sunnah

According to Imam Muslim’s authentic collection, the Prophet said: “There are about seventy branches of faith (iman)”. The highest honour is to bear witness that “There is no god but Allah, and Muhammad is the Messenger of Allah”, while the lowest honour is to remove harmful items or garbage from the road. Cleaning trash and health-risking substances from roads and streets ensures that environmental health is preserved, which is a reflection of faith in Islam (Omar et al. 2018).

To demonstrate the necessity of being clean and hygienic, the Prophet said: “cleanliness/purification is the half of faith (iman)” (narrated by Al-Tirmidhi) (Tamam 2020). This means that approximately half of a person’s religious duty is to be clean and maintain a hygienic lifestyle, including the mouth, body, clothes, house, and other aspects of cleanliness. This Hadith emphasises the importance of cleanliness and hygiene in Islam as a quality of environmental conservation that must be considered.

The Prophet prohibited urinating while standing or on static water to prevent health complications from consuming contaminated water and to preserve environmental health.

He said: “None of you should urinate on standing water” (narrated by Al-Bukhari) and “avoid immersing yourself in temporary stagnant water while bathing is mandatory” (narrated by Sahih Muslim). The prohibition of urinating in non-flowing water includes ponds, pools, reservoirs, and sources of drinking water. Additionally, “Do not waste, even if you are performing ablution on the bank of a fast-flowing large river” (narrated by Al-Tirmidhi), as said by the Prophet, emphasises the importance of water.

Additionally, part of Islamic environmental education is to prevent passing a movement on roads, public areas, or under trees that people use as a shelter during hot seasons. “Avoid three curses: passing motion/stole in resources, on the road, or in the shadow of the tree used as a shelter”, as said by the Prophet on one incident. In another situation, the Prophet forbade passing a motion in the shadow of a tree used for shelter and on the river banks. Planting trees is considered an ibadah and form of worship in Islam (Abdillah et al. 2023). One of the Hadiths also highlighted the interconnectedness of nature and the benefits of preserving it. The Prophet said: “If a Muslim cultivates a tree by planting or sowing it, and there is a bird, a man, or an animal eats from it (its produce or vegetables), he will be rewarded for doing a good deed because of it” (narrated by Al-Bukhari & Sahih Muslim). This action is considered a charitable gift (sadaqah) for him (El Omrani et al. 2021).

There has been a surge of interest in proposing relevant approaches to environmental priorities for Muslim countries and communities, despite the fact that Islam forbids environmental destruction and resource waste. During the war, the Prophet Muhammad instructed the Muslims not to cut down any trees. He placed a strong emphasis on protecting the environment and preventing its destruction. There are other narrations reported on the leadership of the Prophet concerning environmental preservation, particularly agriculture, irrigation, land cultivation, and water management, along with the prohibition of deforestation and cruelty to animals. This shows the Prophet’s concern for humans to protect and preserve the environment.

Science relates to faith in Islam. In 2005, through satellite images, scientists from NASA found that the Rubu’ al-Khali area in Saudi Arabia, which was the largest crude oil storage area in the world at one time, was a fertile area with wilderness and river trails in all corners. However, the weather changes that occur today will cause changes in the earth’s contours, resulting in climate changes from hot to cold and vice versa (Hasanean and Labban 2022). This environmental impact aligns with a Hadith by the Prophet. He said: “Arabian Peninsula will return to lush green as it was in the past” (narrated by Abu Hurairah). Therefore, the Hadith exceeded science on climate change as it has been talking about it for the past fourteen centuries. In another Hadith, the Prophet said: “One of the signs of the end of the world (Qiyamah) is when the appearance of Imam Mahdi to be pledge (bai’ah) by Muslim community” (narrated by Ibnu Majah and At-Thabrani). His other message: “When you see him [Imam Mahdi], then pledge your allegiance to him even if you have to crawl over snow” (narrated by Ibnu Majah and At-Thabrani) gives a sign that there will be extreme climate change in the Arabian Peninsula when it snows in a vast desert region.

## 7. Current Trends of Research on Relationship between Environmental Health and Islam

Human health and the environment as a concept was first introduced by the United Nations Development Program in 1994. This programme looked into how religion might play a significant role in solving ecological issues. This outlook also included a contextual analysis that focused on the Islamic Republic of Pakistan. It offered a succinct, logical summary of the nation’s ecological sustainability. It also identified Islamic approaches that deal with natural insurance and human quality improvement (Hussin et al. 2021). In August 2015, the International Islamic Climate Change Symposium published a formal declaration establishing religious moral responsibilities for environmental improvement and protection according to Islamic ethos and principles based on The Islamic Foundation for Ecology and Environmental Sciences. Since then, this programme and symposium have

inspired researchers to investigate preservation of the environment by integrating Islamic behaviours and ethics.

[Ab Rahman et al. \(2018\)](#) provided some insight into Islamic thought on the significance of sustainable development, including interpretations of the Qur'an and Hadith. In order to understand their significance and contribution to the preservation of the environment and human life, the development of human spiritual and physical well-being is discussed. This study discovered that religion plays a significant role in raising human awareness of the environment and its sustainability. The response of Islam to sustainable development is founded on divine instruction. Aqidah (belief in Allah), ibadah (obligation to Allah's commandments), akhlak, and ihsan (perfecting acts of worship) are closely related concepts.

[Solikhudin \(2020\)](#) stated that Islam is an environmentally friendly religion through a critical analysis of environmental politics in the construction of a cement factory in Rembang, Indonesia. The concern of a green government is to safeguard human existence while also preserving the beauty of nature. Islam, as a religion of empathy, undoubtedly demonstrates a sense of justice and humanity to society. In a country that recognises a popularity-based framework and applies the green political hypothesis, three perspectives must be implemented: outstanding justice, democratisation actions, and attempts to achieve environmental carrying capacity. The industrial buildings must be environmentally friendly, in which waste disposal should not harm the ecosystem in the area and must not pollute the neighbourhoods' cleanliness, health, or comfort.

[Shehu \(2020\)](#) studied Islam and the environment in the African context, including a section on how Muslims in Africa perceive natural health issues and interpret Islam's understanding of nature. This study looked at nature's problems and how Islamic qualities suggest reviving efforts to act in an environmentally responsible manner. It offered a summary of recent information on the interaction between Islam and environmental issues.

[La Fua et al. \(2018\)](#) investigated whether the incorporation of Islamic education in school has a direct impact on how students interact with their environment, which in turn enhances values and attitudes that encourage the development of an environmentally conscious character. This study was able to look into the Islamic learning techniques created at Senior High School 4, Kendari, in developing ecologically conscious personalities among its students. For example, utilising the learning system had a direct impact on the relationship between students and climate, which then encouraged students to think about the climate on a regular basis. The natural training techniques included environmental health education socialisation, environment-based school programmes, and intensifying student social awareness.

[Yasin \(2019\)](#) stated that schools must serve as models for creating a comfortable and healthy environment, as well as for developing environmentally conscious and cultured students. At the Adiwiyata Mandiri School, SMAN 1 Kajen, Pekalongan Regency, environmental awareness is being developed through the Adiwiyata Program. The programme aims to ensure that students are responsible for managing and protecting the environment through quality educational governance in order to support sustainable development. The programme integrates learning and action, with practical strategies for altering behaviour. The Adiwiyata School is anticipated to act as a driver for change in the neighbourhood. The programme was implemented in four categories: (i) environmentally friendly school policies; (ii) environment-based school curricula; (iii) management of infrastructure supporting environmentally friendly schools; and (iv) activity-based participatory action. These categories contribute significantly to the development of environmental awareness.

In many contexts, both in holy books and other sources of law, Islam commands its followers to love to clean themselves and places of worship for the benefit of collective health. A previous study ([Saujan 2021](#)) examined whether Muslims in Sri Lanka's Ampara District were aware of environmental protection. About 96.3% acknowledged the link between Islam and environmental protection. In addition, about 94% agreed that environmental protection and physical health were related and they were concerned about preserving the environment. About 33% had the daily habit of keeping their surroundings clean. Despite

having a high level of awareness to protect the environment, which was influenced by their Islamic guidelines, they did not show much interest in practising it. Other findings, such as those by [Ailah and Ridwan \(2019\)](#), demonstrated how the implementation of Al-Tuhuru Shatru Al-Iman with the Garbage Bank approach was an effort to improve worship through environmental health while also reflecting Islamic teaching values.

The Islamic Primary School in Sumberagung 01, Indonesia, advocates for green campus-based curriculum content, which means integrating environmental aspects into the institution's vision and mission in order to protect the environment and raise awareness of environmental issues. However, only a few lecturers are competent in developing environmental health learning materials and trying to implement them in classrooms. Less than 60% of the students could create environmental illustrations and were able to develop environmental problem-solving skills ([Permatasari et al. 2021](#)).

A crucial fact to emphasise is that Islam prioritises health, self-care, and the environment. This is essential because all of our daily activities will run more smoothly if we are physically, spiritually, and mentally healthy. Similarly, the Muslim community will suffer without a healthy environment. In every religious message, Islam encourages its followers to protect both humans and the environment. Hence, there is no reason to claim that religion and its teachings are only for the purpose of worshipping God; every action is always judged by the value of worship and involvement in the ummah and the environment. The main point is that these studies have demonstrated religious attempts to prioritise the health of the ummah as well as the environment with respect to their locations (Table 3). These studies could be the starting point for future studies in assisting the general public to protect the environment and human health.

**Table 3.** Previous studies that relate environmental health to Islamic aspects.

Research Focuses	References
Create model of Islamic education in Tazkia International Islamic Boarding School (IIBS), which focuses on cleanliness, makes personal hygiene a top priority, and enforces cleanliness guidelines in the campus.	<a href="#">Wargadinata et al. (2019)</a>
Emphasise the importance of sustainable development from an Islamic perspective, including interpretations of the Qur'an and Hadith.	<a href="#">Ab Rahman et al. (2018)</a>
Analyse ecological politics by integration with Islamic aspects in the establishment of Cement Factory in Rembang, Indonesia.	<a href="#">Solikhudin (2020)</a>
Examine how Muslims in Africa interpret Islamic environmental beliefs, including how they interpret environmental issues and how Islamic principles guide deliberate efforts to act in environmentally responsible ways.	<a href="#">Shehu (2020)</a>
Explore the approach to Islamic and environmental education at Senior High School 4 Kendari, Indonesia, to improve students' attitudes toward the environment.	<a href="#">La Fua et al. (2018)</a>
Analyse the Adiwiyata Program's implementation to encourage environmentally friendly behaviour in the Adiwiyata School 1 Kajen High School in the Pekalongan Regency, Indonesia.	<a href="#">Yasin (2019)</a>
Evaluate the level of environmental awareness and linkage between environment and health among Muslims in Ampara District of Sri Lanka.	<a href="#">Saujan (2021)</a>
Analyse how the Waste Bank is used to implement the meaning of the Al-Tuhuru Shatru Al-Iman Hadith in an effort to improve environmental health by reducing the risk of disease from occurring and making better use of waste.	<a href="#">Ailah and Ridwan (2019)</a>
Develop environmental health learning materials such as environmental illustration and problem-solving activities in the classrooms of an Islamic primary school in Sumberagung 01, Indonesia.	<a href="#">Permatasari et al. (2021)</a>

## 8. Implications: Future Research, Policies, and Decision-Making in Relation to Environmental Health and Islam

There are a few implications for future research that can be found throughout this review. The Qur'an's applicability and effectiveness in environmental education and promotion as well as awareness training for environmental health professionals should be the main focus of future research directions. The Qur'an, Hadith, and Sunnah's potential to address environmental health issues could help open our minds to new ideas and help put

the eco-centric environmental ethics of Islam into practice. Continued public awareness activities to introduce people to Qur'anic guidelines on environmental issues should also be carried out by future researchers. Concepts such as Shahadah, Shukr, Sabr, Adl, Tawakkal, and Ma'rifah must be fully understood and applied in a broader context so that people can begin to feel responsible towards their environment.

Previous research mostly focused on exploring environmental ethics with Islamic values rather than investigating scientific findings of environmental components with Islam. Hence, more research is needed to integrate messages from the Quran, Hadith, and Sunnah with science. Collaboration between religious experts and scientists can help to provide evidence that, in some parts, Islamic education is aligned with modern science. For example, researchers can identify diseases caused by environmental pollution and therefore suggest preventive practices to maintain a healthy environment as a reflection of Islamic practice.

Additionally, future studies can identify factors that influence people's behaviours in their environments. Differences in gender, age, socioeconomic status, and spirituality may have an impact on environmental behaviour. The impact of Islamic environmental behaviour on other elements, including financial performance (market value, return on investment, and return on equity) and marketing performance (shares of mind, heart, and market), would also be valuable to explore.

The Document on Human Fraternity for World Peace and Living Together signed by Pope Francis could be used as a basis for the interreligious dialogue that Islam actively promotes on environmental sustainability. The dialogue enhances the understanding and widespread promotion of a culture of tolerance, acceptance of others, and peaceful coexistence, which would contribute to reducing environmental problems. The need for spiritual guidance has never been greater. We need to double our efforts to spread the message of good neighbourliness based on our common humanity, a message shared by all faith traditions. All faith systems and traditions recognise that they share a common goal. They believe that they must love and support one another in order to live in harmony and peace in an environmentally sustainable world. Promoting interreligious and intercultural dialogues could improve social stability, respect for biodiversity, and mutual respect to create a conducive environment for peace and mutual understanding in communities. In the future, more interreligious dialogue can be organised based on specific environmental issues such as air pollution, water pollution, climate change, and waste disposal.

As evidenced by the abundance of environment-related topics, the Qur'an, Hadith and Sunnah appear to have concerns about the environment from an all-encompassing and holistic perspective. This provides important evidence to develop policies and improve decision-making in terms of the effect of environmental pollution on health by practising the Islamic concept. For example, faith-based environmental health-promoting interventions and programmes may influence how students in schools act, think, and feel in terms of environmental protection. It has been proven that value-based education and religious convictions motivate students to change their environmentally irresponsible behaviours. The top management of universities needs to advise lecturers on how to improve their environmental health learning tools. Rather than promoting Islamic ethos relating to environmental health in schools and universities, it is also crucial for governments and policymakers to educate the public on the importance of environmental health to Muslim communities at other institutions, such as workplaces, hospitals, public transportation, restaurants, and gardens, in order to encourage practice of these values in daily activities.

Another effort is to maintain consistent collaboration with individuals, communities, Islamic organisations, and institutions from various religious backgrounds who share similar environmental concerns. This can be done in accordance with the Qur'anic principle of mutual cooperation for the promotion of virtue: 'Help you one another in virtue and piety; but do not help one another in sin and transgression, for fear of Allah. Verily, Allah is severe in punishment', which is found in the fifth verse of Surah Al-Baqarah.

Finally, and most importantly, this review contributes new knowledge on the concept of environmental protection to improve public health by linking with Islamic principles. Previous reviews have mostly focused on either environmental science or health separately, whereas this review was able to integrate the environment and health with reference to Islamic principles. With many verses in the Qur'an discussing environmental components such as sanitation, water, biodiversity, earth corruption, waste minimisation, and climate change, it indeed provides signs and solutions to current environmental issues confronting the Muslim ummah and the world in general.

Now that the direction and solution are in place, it is up to us to be compassionate and ensure the success of the honourable task of environmental conservation and preservation in order to protect human health. As it relates to environmental health epistemology, this review provides an Islamic reflection and perspective on the blending of science, theory, social traditions, and religion. It can also serve as a guideline for Muslims, such as public and environmental health personnel, policymakers, educators, researchers, and eco-theologians, to give serious consideration to environmental consciousness, which is supported by authoritative Islamic resources.

## 9. Conclusions

The Western view on educating people about their environment is not new, as Islam has emphasised the need to protect and preserve the environment since the dawn of time. Al-Qur'an, Hadith, and Sunnah of the Prophet Muhammad are the core elements of Islamic education for lifelong learning, so it is expected that Muslims will be able to adapt their paradigms to fit these three sources of education. These sources advocate important environmental topics, including sanitation, water, biodiversity, earth corruption, waste minimisation, and climate change. They also encourage healthy lifestyles and positive changes in people's attitudes and behaviours. Efforts to preserve, utilise, and protect nature and the living environment are part of worshiping Allah (s.w.t.); thus, the believer is rewarded in this world and the hereafter. Islam also emphasises the urgency of maintaining a balance of physical and spiritual health. Therefore, this review could encourage pro-environmental advocacy among Muslims and provide a background for embedding health education into both religion and culture.

**Author Contributions:** Conceptualization, N.A.M. and Z.H.; methodology, N.A.M.; formal analysis, N.A.M.; investigation, N.A.M.; resources, N.A.M.; data curation, N.A.M.; writing—original draft preparation, N.A.M.; writing—review and editing, N.A.M. and Z.H.; visualization, N.A.M. All authors have read and agreed to the published version of the manuscript.

**Funding:** The APC was funded by Universiti Sains Islam Malaysia.

**Institutional Review Board Statement:** Not applicable.

**Informed Consent Statement:** Not applicable.

**Data Availability Statement:** Data sharing not applicable.

**Conflicts of Interest:** The authors declare no conflict of interest.

## References

- Ab Rahman, Asyraf Hj, Syahrin Said, Hailan Salamun, and Hamdan Aziz. 2018. Sustainable Development from Islamic Perspective. *International Journal of Civil Engineering and Technology* 9: 985–92.
- Abd Rahim, Syuhaida Idha, Siti Khurshiah Mohd Mansor, Mohd Asmadi Yakob, and Noraini Ismail. 2018. Food safety, sanitation and personal hygiene in food handling: An overview from Islamic perspective. *International Journal of Civil Engineering and Technology (IJCIET)* 9: 1524–30.
- Abdekhoda, Mohammadhiwa, and Fatemeh Ranjbaran. 2022. The Holy Qur'an and Treatment of Mental and Physical Diseases. *Pastoral Psychology* 71: 423–35. [\[CrossRef\]](#)
- Abdillah, Kafil, Oscar Efendy, and Nonon Saribanon. 2023. Perspective Chapter: Integration of Science and Islamic Teachings by the PPI-Unas to Fight Environmental Degradation. In *Higher Education-Reflections from the Field*. London: IntechOpen.

- Abdul Hamid, Ahmad Fauzi, and Mohamad Faizal Abd Matalib. 2021. Islam and the Environment: The Challenge of Developmental Politics in Malaysia with Special Reference to PAS's Rule in Kelantan. In *Discourses, Agency and Identity in Malaysia*. Singapore: Springer, pp. 273–92.
- Aboul-Enein, Basil H. 2016. Contemporary public health perspectives of the Holy Qur'an for the 21st century. *Perspectives in Public Health* 136: 311.
- Aboul-Enein, Basil H. 2018. "The earth is your mosque": Narrative perspectives of environmental health and education in the Holy Qur'an. *Journal of Environmental Studies and Sciences* 8: 22–31. [CrossRef]
- Affandi, Yuyun, Agus Riyadi, Imam Taufiq, Abdurrohman Kasdi, Umma Farida, Abdul Karim, and Abdul Mufid. 2022. Da'wah Qur'aniyah Based on Environmental Conversation: Revitalizing Spiritual Capital Ecotheology, Environmentally Friendly, Gender Responsive. *Pertanika Journal of Social Sciences & Humanities* 30: 159–70.
- Agboola, Phillips O., Festus Victor Bekun, Divine Q. Agozie, and Bright Akwasi Gyamfi. 2022. Environmental sustainability and ecological balance dilemma: Accounting for the role of institutional quality. *Environmental Science and Pollution Research* 29: 74554–68. [CrossRef]
- Ailal, Mustabsyiratul, and Muh Ridwan. 2019. Aktualisasi Makna Al-Tuhuru Shatru Al-Iman Melalui Bank Sampah Dalam Meningkatkan Kesehatan Lingkungan. *Jurnal Ilmiah Mahasiswa Raushan Fikr* 8: 63–82. [CrossRef]
- Al-Huwaishel, Afnan S., Abdirashid Elmi, and Amitabha Mukhopadhyay. 2022. Aquifer storage of treated wastewater for subsequent recovery as an important strategy for sustainable water security in Kuwait. *Water Supply* 22: 2067–81. [CrossRef]
- Alotaibi, Bader Alhafi, and Hazem S. Kassem. 2021. Adoption of sustainable water management practices among farmers in Saudi Arabia. *Sustainability* 13: 11260. [CrossRef]
- Aral, Öykü H., and Jordi López-Sintas. 2022. Is pro-environmentalism a privilege? Country development factors as moderators of socio-psychological drivers of pro-environmental behavior. *Environmental Sociology* 8: 211–27. [CrossRef]
- Aty, Mohamed Abdel. 2022. Managing risks on Egypt water resources security: Climate change and grand Ethiopian renaissance dam (GERD) as challenging aspects. In *Water Security under Climate Change*. Singapore: Springer, pp. 313–30.
- Bratton, Susan Power. 2018. Eco-Dimensionality as a Religious Foundation for Sustainability. *Sustainability* 10: 1021. [CrossRef]
- Bsoul, Labeeb, Amani Omer, Lejla Kucukalic, and Ricardo H. Archbol. 2022. Islam's Perspective on Environmental Sustainability: A Conceptual Analysis. *Social Sciences* 11: 228. [CrossRef]
- Buchwald, Andrea G., Evan Thomas, Kristopher B. Karnauskas, Elise Grover, Karen Kotloff, and Elizabeth J. Carlton. 2022. The Association Between Rainfall, Temperature, and Reported Drinking Water Source: A Multi-Country Analysis. *GeoHealth* 6: e2022GH000605. [CrossRef] [PubMed]
- Cao, Hui, Fan Li, Kai Zhao, Chen Qian, and Tao Xiang. 2022. From value perception to behavioural intention: Study of Chinese smallholders' pro-environmental agricultural practices. *Journal of Environmental Management* 315: 115179. [CrossRef] [PubMed]
- Chapra, M. Umer. 2016. *The Future of Economics: An Islamic Perspective*. London: Kube Publishing Ltd.
- Cutter, Susan L. 2021. The changing nature of hazard and disaster risk in the Anthropocene. *Annals of the American Association of Geographers* 111: 819–27. [CrossRef]
- Darus, Faizah, Haslinda Yusoff, Dayang Milianna Abang Naim, Azlan Amran, and Hasan Fauzi. 2018. Corporate social responsibility practices of Malaysian Islamic banks from the Shariah perspective: A focus on the key dimensions. *Global Journal Al-Thaqafah* 2018: 41–55.
- Dewayanti, Aninda, and Norshahril Saat. 2020. *Islamic Organizations and Environmentalism in Indonesia*. Singapore: ISEAS-Yusof Ishak Institute.
- El Omrani, Omnia, Mohammad Yasir Essar, Lujain Alqodmani, Saad Uakkas, Mohamed Eissa, Jemilah Mahmood, and Renzo R Guinto. 2021. The contribution of Islam to planetary health. *The Lancet Planetary Health* 5: e333–e334. [CrossRef]
- Faruqi, Yasmeen Mahnaz. 2006. Contributions of Islamic scholars to the scientific enterprise. *International Education Journal* 7: 391–99.
- Febriani, Nur Arfiyah, and Badru Tamam. 2020. Society integration for environmental conservation in Qur'anic perspectives. *International Journal of Advanced Science and Technology* 29: 1268–77.
- Gottlieb, Roger S. 2009. *The Oxford Handbook of Religion and Ecology*. New York: Oxford University Press.
- Gottlieb, Roger S. 2011. *A Greener Faith: Religious Environmentalism and Our Planet's Future*. New York: Oxford University Press.
- Gulzar, Aadil, Tajamul Islam, Muhammad Anees Khan, and Shiekh Marifatul Haq. 2021. Environmental ethics towards the sustainable development in Islamic perspective: A Brief Review. *Ethnobotany Research and Applications* 22: 1–10. [CrossRef]
- Guzzetti, Fausto, Stefano Luigi Gariano, Silvia Peruccacci, Maria Teresa Brunetti, and Massimo Melillo. 2022. Rainfall and landslide initiation. In *Rainfall*. Amsterdam: Elsevier, pp. 427–50.
- Haluza-Delay, Randolph. 2014. Religion and climate change: Varieties in view- points and practices. *Wiley Interdisciplinary Reviews: Climate Change* 5: 261–79.
- Hasanean, Hosny M., and Abdulhaleem H. Labban. 2022. Features of climatic temperature over Saudi Arabia: A Review. *Idojaras* 126: 511–43. [CrossRef]
- Helfaya, Akrum, Amr Kotb, and Rasha Hanafi. 2018. Qur'anic ethics for environmental responsibility: Implications for business practice. *Journal of Business Ethics* 150: 1105–28. [CrossRef]
- Hussain, Nur Huzeima Mohd, Khalilah Hassan, and Norizan Mt Akhir. 2018. Contemplating the Islamic Garden and Malay Traditional Landscape from the Qur'an. *Asian Journal of Behavioural Studies* 3: 46–53.

- Hussin, D. A., M. A. A. Samah, A. A. Suhaimi, and M. K. A. Kamarudin. 2021. A study on knowledge, attitude and practice of COVID-19 pandemic among the residents. *International Journal of Health Sciences* 5: 177–88.
- International Islamic Climate Change Symposium. 2015. *Islamic Declaration on Global Climate Change*. Istanbul: International Islamic Climate Change Symposium. Available online: [www.ifees.org.uk/wp-content/uploads/2016/10/climate\\_declarationmMWB.pdf](http://www.ifees.org.uk/wp-content/uploads/2016/10/climate_declarationmMWB.pdf) (accessed on 24 August 2022).
- Iqbal, Muzaffar. 2002. Islam and Modern Science: Questions at the Interface. In *God, Life, and the Cosmos: Christian and Islamic Perspectives*. Edited by Ted Peters, Muzaffar Iqbal and Syed Nomanul Haq. Aldershot: Ashgate.
- Islamic Foundation for Ecology and Environmental Sciences. 2015. Islamic Climate Change Symposium. Available online: [www.ifees.org.uk/declaration/islamic-climate-change-syposium](http://www.ifees.org.uk/declaration/islamic-climate-change-syposium) (accessed on 9 January 2020).
- Ismail, Wail Muin, Mahfouda Rashid Said AlMushaiqri, and Li Haiyan. 2021. Inclusion of islamic peace concepts in school curricula. *Journal of Dharma* 46: 501–16.
- Jenkins, W., E. Berry, and L. B. Kreider. 2018. Religion and Climate Change. *Annual Review of Environment and Resources* 43: 85–108. [CrossRef]
- Kapsar, Kelly, Veronica F. Frans, Lawson W. Brigham, and Jianguo Liu. 2022. The metacoupled Arctic: Human–nature interactions across local to global scales as drivers of sustainability. *Ambio* 51: 2061–78.
- Koul, Bhupendra, Mohammad Yakoob, and Maulin P. Shah. 2022. Agricultural waste management strategies for environmental sustainability. *Environmental Research* 206: 112285. [CrossRef]
- Kulinich, Alena. 2022. Moral Visions in Medieval Muslim Interpretations of Sūra 102 Al-Takāthur: Warnings against Pride, Wealth, or Pleasure? *Religions* 13: 68. [CrossRef]
- La Fua, Jumarddin, Rahma, Ratna Umi Nurlila, and Ismail Suardi Wekke. 2018. Strategy of Islamic education in developing character building of environmental students in Indonesia. In *IOP Conference Series: Earth and Environmental Science*. Tokyo: IOP Publishing, vol. 175, p. 012149.
- Levy, Lynn, Jill Becker-Feigeles, and Lynn Levy. 2021. SWK6100 Human Behavior and the Social Environment (HBSE). Available online: <https://repository.yu.edu/handle/20.500.12202/7840> (accessed on 24 August 2022).
- Lin, Tom C. W. 2020. Executive private misconduct. *The George Washington Law Review* 88: 327.
- Liu, Li-Yin, Christopher B. Brough, and Wei-Ning Wu. 2022. When water conservation matters: Examining how water scarcity experiences create windows of opportunity for effective water-saving policy initiatives. *Environmental Science & Policy* 137: 61–69.
- Llibre, Jaume. 2022. The limit dynamics for the vacuum Einstein equations in a homogeneous universe. *Chaos, Solitons & Fractals* 162: 112490.
- Masoumbeigi, Hossein, Narjes Malek Mohammadi, Hossein Shamsi Gooshki, Abolfazl Khoshi, Mehdi Mesri, Fathollah Najjarzadegan, Ali Esrafil, Majid Kermani, and Norouz Mahmoudi. 2021. An Approach to the anthropological theory of the Qur'an and Hadith and their roles in reducing environmental degradation. *International Journal of Medical Toxicology and Forensic Medicine* 11: 36166. [CrossRef]
- Masruri, Muhammad, Faisal Husen Ismail, Arwansyah Kirin, Abdul Qahhar Ibrahim, and Muhammad Misbah. 2022. Reciting the Qur'an and friendship online as a method of post-covid-19 soul and mental care. *Journal for the Study of Religions and Ideologies* 21: 84–99.
- Mawil Izzi Dien. 2000. *The Environmental Dimensions of Islam*. Cambridge: The Lutterworth Press, p. 24.
- Mir Hussein Niri, Seyyed Ahmad. 2021. Food Health in the View of Islam. *Journal of Nutrition and Food Security* 6: 262–71. [CrossRef]
- Morbidelli, Renato. 2022. *Rainfall: Modeling, Measurement and Applications*. Amsterdam: Elsevier.
- Muhamad, Asmawati, Abdul Halim Syihab, and Abdul Halim Ibrahim. 2020. Preserving human–nature's interaction for sustainability: Qur'an and Sunnah perspective. *Science and Engineering Ethics* 26: 1053–66. [CrossRef]
- Muharrem Inc., and Olcay Kaplan Inc. 2019. *Hydrocarbon Pollution and its Effect on the Environment*. London: BoD—Books on Demand.
- Nasir, Norita Mohd, Mahendhiran Sanggaran Nair, and Pervaiz K. Ahmed. 2021. Institutional isomorphism and environmental sustainability: A new framework from the Shariah perspective. *Environment, Development and Sustainability* 23: 13555–68. [CrossRef]
- Nasr, Seyyed Hossein. 1996. *Religion and the Order of Nature*. New York: Oxford University Press.
- National Environmental Health Association (NEHA). 2013. New perspectives on environmental health: The approval of new definitions. *The Journal of Environmental Health* 6: 72–73.
- Omar, Suhaila Mohd, Ahmed Jalal Khan Chowdhury, and Abdurezak Abdulahi Hash. 2018. Islamic ethics of waste management towards sustainable environmental health. *IJUM Medical Journal Malaysia* 17: 193–97.
- Park, ChangYeon, Sojung Lee, Choong-Ki Lee, and Yvette Reisinger. 2022. Volunteer tourists' environmentally friendly behavior and support for sustainable tourism development using Value-Belief-Norm theory: Moderating role of altruism. *Journal of Destination Marketing & Management* 25: 100712.
- Patil, Satish V., Bhavana V. Mohite, Kiran R. Marathe, Narendra S. Salunkhe, Vishal Marathe, and Vikas S. Patil. 2022. Moringa Tree, Gift of Nature: A Review on Nutritional and Industrial Potential. *Current Pharmacology Reports* 8: 262–80. [CrossRef] [PubMed]
- Permatasari, Y. D., T. N. Hidayati, M. N. Rofiq, M. Sholihah, and K. I. Ratnasari. 2021. The Implementation of Islamic Concepts to Create a Green Environment. In *IOP Conference Series: Earth and Environmental Science*. Bristol: IOP Publishing, vol. 747, p. 012053.
- Perry, Damon L. 2018. *The Global Muslim Brotherhood in Britain: Non-Violent Islamist Extremism and the Battle of Ideas*. London: Routledge.
- Peters, Ted. 2003. *Science, Theology, and Ethics*. Aldershot and Burlington: Ashgate.



- Petersen, Marie Juul. 2016. *For Humanity or for the Umma? Aid and Islam in Transnational Muslim NGOs*. Oxford: Oxford University Press.
- Praveena, Sarva Mangala, and Sri Themudu. 2022. Exploring water conservation awareness level among primary school children from Melaka (Malaysia). *Malaysian Journal of Medicine and Health Sciences* 18: 75–81.
- Prisandani, Ulya Yasmine. 2022. Public companies and sustainability through regulatory reform in Indonesia. *International Journal of Environmental Studies* 80: 32–50. [CrossRef]
- Qatar Foundation. 2016. Qur'anic Botanic Garden. Available online: <http://www.qf.org.qa/explore/heritage-centers/Qur\T1\textquoterightanic-botanic-garden/Qur\T1\textquoterightanic-botanic-garden> (accessed on 22 May 2016).
- Ramlan, Shazny. 2020. Implementing Islamic law to protect the environment: Insights from Singapore, Malaysia, and Indonesia. *Asia Pacific Journal of Environmental Law* 23: 202–30. [CrossRef]
- Reed, Reagan C., Kent J. Bradford, and Imtiaz Khanday. 2022. Seed germination and vigor: Ensuring crop sustainability in a changing climate. *Heredity* 128: 450–59. [CrossRef]
- Sadat Hoseini, Akram Sadat. 2019. A proposed Islamic nursing conceptual framework (Open Access). *Nursing Science Quarterly* 32: 49–53. [CrossRef]
- Said, Abdul Aziz. 1989. The Paradox of Development in the Middle East. *Futures* 21: 619–27. [CrossRef]
- Salem, Milad Abdelnabi, Norlena Hasnan, and Nor Hasni Osman. 2012. Some Islamic views on environmental responsibility. *Dalam IPCBEE* 48: 109–13.
- Salman, Muhammad, and Ishfaq Ahmed. 2021. Transformational Leadership: Mediating Role of Green HRM and Moderating Role of Islamic Work Ethics. *Journal of Management and Research* 8: 131–58. [CrossRef]
- Saputra, Ahmad Sarip, Ida Rohmah Susiani, and Nur Syam. 2021. Hifdh Al-Bi 'ah as part of Maqāṣid Al-Sharī'ah: Yūṣuf Al-Qarḍāwī's perspective on the environment in Ri'āyat al-Bi 'ah fi Sharī'ah al-Islām book. In *AIP Conference Proceedings*. Malang: AIP Publishing LLC, vol. 2353, p. 030106.
- Saujan, Iqbal. 2021. Awareness of Environmental Protection amongst Muslims in Ampara District. *Islāmiyyāt* 43: 27–37.
- Scalsky, Ryan J., Yi-Ju Chen, Zhekang Ying, James A. Perry, and Charles C. Hong. 2022. The Social and Natural Environment's Impact on SARS-CoV-2 Infections in the UK Biobank. *International Journal of Environmental Research and Public Health* 19: 533. [CrossRef] [PubMed]
- Shehu, Muazu Usman. 2020. Islam and the Environment in African Context. In *The Palgrave Handbook of Islam in Africa*. Cham: Palgrave Macmillan, pp. 643–56.
- Siti, Syamimi Omar, Nur Hanim Ilias, Mohd Zulhaili Teh, and Ruwaidah Borhan. 2018. Green mosque: A living nexus. *Environ. Behavioural Processes Journal* 3: 53–63.
- Solikhudin, Muhammad. 2020. Islam as an environmentally friendly religion: Critical analysis of the ecological politics in the establishment of a cement factory in Rembang, Indonesia. *International Journal of Social Science and Religion (IJSSR)* 1: 31–46. [CrossRef]
- Taheri, Zainab, and Fatemeh Bakouei. 2019. The Relationship between Mothers' Empowerment in Breastfeeding with Exclusive Breast Feeding in Infants. *Journal of Babol University of Medical Sciences* 21: 85–92.
- Tamam, Badrul. 2020. Cleanliness is part of the Dhaif Hadith Faith but the Meaning Is Good. Available online: <https://www.voaislam.com/read/ibadah/2018/07/03/58858/kebersihansebagian-dari-iman-hadits-dhaif-tapi-maknanya-baik/> (accessed on 7 September 2020).
- Tan, Bo, Hongwei Wang, Xiaoqin Wang, Suyan Yi, Jing Zhou, Chen Ma, and Xinyan Dai. 2022. The study of early human settlement preference and settlement prediction in Xinjiang, China. *Scientific Reports* 12: 1–18. [CrossRef]
- Taqavi, Mostafa, Mahdi Kafeae, and Rostam Ravanbakhsh. 2021. Islamic alternatives to the ethical maxims of modern technology from the perspective of Mario Bunge. *Technology in Society* 66: 101681. [CrossRef]
- The Islamic Foundation for Ecology and Environmental Sciences. 2016. Islamic declaration on global climate change. International Islamic Climate Change Symposium. Available online: <http://islamicclimatedeclaration.org/islamic-declaration-on-global-climate-change/> (accessed on 13 September 2022).
- Tian, Hong, and Xinyu Liu. 2022. Pro-Environmental Behavior Research: Theoretical Progress and Future Directions. *International Journal of Environmental Research and Public Health* 19: 6721. [CrossRef]
- Umar, Habibu Umar, Mohd Hairul Azrin Besar, and Muhamad Abduh. 2022. Compatibility of the CSR practices of Islamic banks with the United Nations SDGs amidst COVID-19: A documentary evidence. *International Journal of Ethics and Systems*. [CrossRef]
- United Nations Educational Scientific and Cultural Organization. 2009. UNESCO Office in Doha: Quranic Botanic Gardens. Available online: [http://www.unesco.org/new/en/doha/about-this-office/single-view/news/quranic\\_botanic\\_gardens-1/%23.V0c1jU0UXDc](http://www.unesco.org/new/en/doha/about-this-office/single-view/news/quranic_botanic_gardens-1/%23.V0c1jU0UXDc) (accessed on 23 May 2016).
- Wajda, Anna Maria. 2017. Out of concern for mother earth: An overview of the biblical background of the encyclical "laudato si'. *Verbum Vitae* 31: 241–66. [CrossRef]
- Wargadinata, W., W. Wahidmurni, A. Abdussakir, E. N. Wahyuni, and I. Maimunah. 2019. Alternative education in the global era: Study of alternative models of islamic education in tazkia international islamic boarding school Malang. *Library Philosophy and Practice* 2019: 1–12.
- Wersal, Lisa. 1995. Islam and Environmental Ethics: Traditional Responds to Contemporary Challenges. *Zygon* 30: 451–59. [CrossRef]

- Wiryomartono, Bagoes. 2022. Sustainability and the Built Environment: The Search for Ethics Based on Environmental Awareness and Social Responsibility. In *Architectural Humanities in Progress*. Cham: Springer, pp. 229–44.
- World Health Organization. 2006. Preventing Disease through Healthy Environments: Towards an Estimate of the Environmental Burden of Disease. Available online: [http://www.who.int/quantifying\\_ehimpacts/publications/preventingdisease/en/](http://www.who.int/quantifying_ehimpacts/publications/preventingdisease/en/) (accessed on 26 August 2022).
- Xu, Jin, Zhixin Guo, Xiaochun Jiang, Golam Jalal Ahammed, and Yanhong Zhou. 2021. Light regulation of horticultural crop nutrient uptake and utilization. *Horticultural Plant Journal* 7: 367–79. [[CrossRef](#)]
- Yano, Junko, Jan Kern, and Vittal K. Yachandra. 2022. Photosynthesis. In *Reference Module in Chemistry, Molecular Sciences and Chemical Engineering*. [[CrossRef](#)]
- Yasin, Muhammad Khoirul. 2019. Character education for environmental awareness through the adiwiyata program. *Islamic Studies Journal for Social Transformation* 3: 127–45. [[CrossRef](#)]
- Zabidi, F. N. M., N. Abd Rahman, and L. Halim. 2021. Integration of Islamic Values for Environmental Conservation: An Analysis of School Textbooks. *Religions* 12: 509. [[CrossRef](#)]
- Zaidi, Iqtidar H. 1991. On the Ethics of Man's Interaction with the Environment: An Islamic Approach. *Environmental Ethics* 3: 35–47. [[CrossRef](#)]

**Disclaimer/Publisher's Note:** The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.