

9 | The Environment and Climate Change

The well-being of humans and other species, including animals and plants, depends on a healthy environment. However, our planet is experiencing an alarming environmental crisis because of a number of threats, including climate change, deforestation, pollution, loss of biodiversity, oceanic dead zones, overfishing, and waste disposal. All these risks are interconnected, and they already have a significant impact on the living species, weather, and natural resources of the earth. Air pollution, for example, is considered the largest environmental health threat, causing seven million deaths every year around the world.¹ Pollution because of waste disposal can lead to increased water and marine contamination. Plastic debris can damage the soil's health and composition. It is nonbiodegradable and can stay in the soil for thousands of years, if not forever.

Global authorities have been alarmed by climate change as well. Humans have accelerated the pace of warming because of their activities such as burning fossil fuels (e.g., coal and oil), cutting down forests, and farming livestock. This has dramatically increased the amount of greenhouse gases in the atmosphere. Human-produced greenhouse gases (e.g., carbon dioxide, methane, and nitrous oxide) remain the leading causes of global warming. Because of these gases, heat that radiates from earth toward space is trapped in the atmosphere, which leads to climate change.² The

¹ "Air Pollution and Health," UNECE, accessed February 10, 2021, <https://unece.org/air-pollution-and-health>.

² "The Causes of Climate Change," NASA, accessed February 5, 2022, <https://climate.nasa.gov/causes/>.

decade 2010–20 was recorded as the warmest in history. The global average temperature increased by 1.1°C in 2019. Global warming because of human activities is currently increasing at a rate of 0.2°C per decade. An increase of 2°C will have devastating effects on the climate, the natural environment, and human health. That is why the international community has recognized the need to limit warming well below 2°C, preferably 1.5°C.³ The world is already experiencing some of the consequences of climate change, such as prolonged heat waves, wildfires, droughts, floods, stronger storms and hurricanes, decreases in crop yields, loss of wildlife species, and increases in sea level.

Many major religions make a connection between the natural environment and divinity, and Islam is no exception. In this chapter, I discuss the natural world in relation to God and attempt to develop an Islamic ecological theology as a response to the environmental crisis. I begin with the natural world as a revealed sacred book.

The Natural World as a Revealed Sacred Book

The tradition of viewing the natural world as a sacred book is rooted in the Qur'an. It repeatedly draws the attention of believers to the beauties of the universe. In the scripture, for example, God swears by the olive, fig, stars, mountains, sky, and sun as the signs of God's creation.

One of the most frequently used words in the Qur'an is *aya* (sign; pl. *ayat*). As the verses of the Qur'an are referred to as *ayat*, likewise the creation is also called *ayat*. For this reason, some scholars refer to the creation as a scripture that should be read and contemplated. The creation is regarded as the expanded Qur'an of the world, and

³ "The Paris Agreement," United Nations Climate Change, accessed February 5, 2022, <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>.

the scriptural Qur'an is its translation.⁴ The natural world is a form of revelation.⁵ The Qur'an is sacred, and Muslim scholars often discuss the etiquette of approaching the revealed text and provide a number of criteria for a proper engagement with it. Because of their respect for it, Muslims not only read the Qur'an and embody its messages in their lives; they also elevate the scripture whenever there is a chance – for example, by placing their copy on a high shelf. In addition, before reciting from the Qur'an, Muslims usually perform minor ablutions, physically purifying themselves with water.⁶ Like their approach to the Qur'an, Muslims can look at the natural world in the same vein. Every single creature is a part of the pages of this book. They are sacred and should be valued like the verses of the Qur'an.

The Qur'an persistently invites believers to contemplate the natural world in relation to God:

Indeed, there are signs in the creation of the heavens and the earth, and in the alternation of the night and the day for the people of understanding, who remember God standing, sitting, and lying upon their sides, who reflect on the creation of the heavens and the earth: "Our Lord! You have not created all this in vain. Glory be to You! Protect us from the punishment of the Fire."⁷

This passage indicates that everything that is created in the universe is a "verse" of God. People should contemplate creation as such. In fact, this aspect of the natural world is also emphasized by Muhammad. According to a hadith narrated by his wife Aisha, a pair of visitors asked her to tell them something very important about the Prophet. Aisha told them that one night when the

⁴ Nursi, *Sözler*, 224; and Nursi, *Şualar*, 922.

⁵ Said Nursi, *İlk Dönem Eserleri* (Istanbul: Söz, 2009), 59.

⁶ For the etiquette of approaching the Qur'an, see al-Ghazali, *Ihya' 'Ulum al-Din* (Cairo: Al-Quds, 2012), 1:450–77.

⁷ Qur'an 3:190–91.

Prophet got up, made ablution (*wudu*), and performed his prayers, she saw him weeping. Tears were falling upon his beard, and his rug had become wet. Bilal, the companion of the Prophet, came for the morning prayers. He asked the Prophet: "Since all of your future and past sins are forgiven, what makes you cry?" The Prophet responded that a revelation came down the previous night, and its message caused him to weep. It would be a great shame, the Prophet said, if one were to recite it yet not engage in contemplation. The Prophet was referring to the verses cited previously. It is reported in another tradition that the Prophet said: "An hour of contemplating the creation of God (*tafakkur*) is better than one year of worship."⁸ Humans are to contemplate the pages and verses of the revealed natural world.

In another verse, the Qur'an points out that everything in the universe glorifies God. There is not a single thing that does not celebrate God, although people do not understand this way of worship.⁹ Because of this Qur'anic approach to the creation, some commentators indicate that "one should never show disrespect to any animal, or indeed any creature, for they too are possessed of spirit and praise."¹⁰

The Natural World as the Manifestation of the Divine Names

The natural world is not only a sacred book of revelation; it is also the manifestation of God's names (*asma al-husna*). Here we examine just three names. First, God is called the Pure One (al-Quddus). The Arabic root of the name (*q-d-s*) has the connotation of being pure, clean, and holy – away from impurity and imperfection. The ecological system in the natural world is the manifestation of

⁸ al-Ghazali, *Ihya' 'Ulum al-Din* (Cairo: Al-Quds, 2012), 4:651.

⁹ Qur'an 17:44.

¹⁰ Dakake, "Commentary on *Surat al-Isra*," 707.

this name of God. Nursi, for example, points out that without the appearance of this name of the Creator, the scene from the natural world would look as follows:

The corpses of a hundred thousand animal species and the debris of two hundred thousand plant species each year on the face of the earth resulting from the alternation and struggles of life and death would have so utterly contaminated the land and the sea that conscious creatures, rather than loving and delighting in the face of the earth, would have felt disgust and aversion at such ugliness and fled to death and non-existence.¹¹

Humans, then, should not only reflect on the manifestation of this name of God in the natural world; they should also strive to preserve and embody it in their lives. One way to do this is to revere and protect the ecosystem of God. Humans must avoid actions that can harm the environment. This way, people will also attract God's love. The Prophet said that cleanliness is half of faith.¹² The Qur'an points out that God loves those who keep themselves pure and clean.¹³

Second, God is called the Preserver (al-Hafiz). The word in classical Arabic means "to protect, guard, take care of, and retain." One of the ways of witnessing the manifestation of al-Hafiz is to look at the seeds of trees, flowers, and plants.¹⁴ They find life in the spring season. The safety and security of beings are the manifestations of this divine name. The Qur'an stresses that God is the guardian over everything.¹⁵ Humans can embody this name by acting responsibly in the natural world and protecting all its creatures. Preserving life is also one of the objectives of Islamic law. Sharia not only forbids killing, including suicide, but also prohibits harmful acts toward fellow humans,

¹¹ Nursi, *Flashes*, 393.

¹² *Sahih Muslim: kitab al-taharah, bab fadl al-wudu'*.

¹³ Qur'an 2:222.

¹⁴ Nursi, *Flashes*, 188.

¹⁵ Qur'an 34:21.

animals, and even plants. It aims to create a safe space for people to live with dignity and in harmony. For violators of this principle, sharia ensures punishment in this world as well as in the hereafter.

Third, God is known as the Just (al-‘Adl). The root of the word is rendered as “to act justly, fairly, keep things in balance, and make things equal.” The balance of the ecological system in the natural world is the manifestation of this name. All the species in the natural world are related to one another with a fine equilibrium and measure that demonstrate the manifestation of God’s name the Just. Humans aim to embody this name by preserving this system. They should be just and frugal in their relations with the natural world. People should not be wasteful of the world’s resources, as they will violate the rights of future generations and become objects of anger and disgust for all beings in the universe.¹⁶ They will be held accountable for their actions on earth. The Qur’an points out that on the day of judgment, the earth will recount everything about what humans did on its surface.¹⁷ They will be shocked by and made to cry from the accounts of the earth.¹⁸

Vicegerency as Responsibility

The Qur’an mentions that God created humans as the *khalifah* on the earth, which is often rendered as vicegerent, successor, or steward.¹⁹ Despite their weakness and vulnerability, humans are privileged in the universe. However, this advantage is not about superiority and the freedom to exploit the natural world; rather, it is about their accountability. In fact, when God offered this designation to other beings such as the heavens, the earth, and the mountains, they

¹⁶ Nursi, *Flashes*, 399.

¹⁷ Qur’an 99:4.

¹⁸ Qur’an 99:3.

¹⁹ Qur’an 2:30.

declined it because it required too much responsibility, and not fulfilling it would have consequences.²⁰ The Qur'an also mentions that humans are often ignorant of the enormity of their obligation.

Muhammad pointed to the vicegerency of humans in relation to the natural world. In one of the hadiths, he said:

The Earth is green and beautiful. God has appointed humans as His stewards over it. The whole earth has been created as a place of worship, pure and clean. Whoever plants a tree and diligently looks after it until it matures and bears fruit is rewarded. If a Muslim plants a tree or sows a field and humans and beasts and birds eat from it, this is a charitable act.²¹

Here the Prophet indicates that as part of their stewardship of the earth, humans should aim to preserve the ecosystem. The natural world was created as clean, green, and beautiful. People should preserve it as such, and God will reward their efforts. Based on these Qur'anic and prophetic approaches, hunting for fun has been mainly impermissible in Islamic law. The natural world should even be preserved during armed conflicts. Islamic law, for example, "prohibits poisoning water supplies, destroying crops, cutting down trees, and demolishing beehives because of the vital role food and water play for all sources of life" in times of war.²²

Environmental Virtue Ethics

Islamic environmental virtue ethics is another area in which to address the environmental crisis. In what follows, I discuss some of the virtues that can be used to tackle the problem.

²⁰ Qur'an 33:73; Qur'an 33:72; Joseph E. B. Lumbard, "Commentary on *Surat al-Ahzab*," in Nasr et al., *Study Quran*, 1040.

²¹ *Sahih al-Bukhari: kitab al-mazara'a, bab fadl al-zar' wa al-gharsh idha 'ukila minhu*.

²² John L. Esposito and Natana J. DeLong-Bas, *Shariah: What Everyone Needs to Know* (Oxford: Oxford University Press, 2018), 264.

Frugality (*iqtisad*): One of the most recited passages related to frugality is in the seventh chapter of the Qur'an – "Eat and drink, but do not waste." The same verse then concludes that God does not like those who are wasteful.²³ Frugality is considered a form of thankfulness (*shukr*) in Islamic literature.²⁴ The continuity of the grace and blessings including the natural resources are related to being thankful to God.²⁵ The opposite of frugality is extravagance. The Prophet taught his followers not to be wasteful even when they did their ritual washing (*wudu*) before the prayer. On one occasion, he saw that one of his companions was using more water for his washing ritual than was needed. The Prophet asked him, "Why are you being wasteful?" The companion responded, "Is there a waste in ablution?" The Prophet then said, "Yes, even if you are making your ablution from a river you should not be wasteful."²⁶ Consumerism and greed can be driving forces for wastefulness. The teaching of Islam encourages believers to be content and seek simplicity in their lives. The best example for Muslims is Muhammad. He was remarkably frugal and avoided luxuries. The Prophet lived in a modest house and would sleep on a straw mat that would leave marks on his body. He would eat very little and frequently have only dates and water as his meal. Muhammad would often fast in addition to the month of Ramadan. In one of the traditions, he said: "Humans cannot fill a vessel worse than their stomach, as it is enough for them to take a few bites to straighten their back. But if they want to eat more, they then should leave one-third of their stomach for food, one-third for drink, and one-third should remain empty to breathe."²⁷ He only had two pairs of clothing and would

²³ Qur'an 7:31.

²⁴ Nursi, *Lem'alar*, 239.

²⁵ Qur'an 14:7.

²⁶ *Sunan Ibn Majah: kitab al-tahara, bab ma ja'a fi al-qasd fi al-wudu' wa karahiyah al-ta'addi fihi.*

²⁷ *Sunan Ibn Majah: kitab al-'ad'amah, bab al-iqtisad fi al-'akl wa al-karahiyah al-shiba'.*

repair them when needed. Muhammad also encouraged his followers to live a frugal life, as it is considered part of the faith (*iman*).²⁸

Humility: Being humble and dealing with everything in the universe with kindness and respect is one of the key teachings of Islam. The opposite of this virtue is arrogance. The Qur'an mentions that humans should not walk on the earth arrogantly. They can neither tear the earth apart nor match the mountains in height.²⁹ This verse is a reminder that humans should not regard themselves as superior to other creatures. The fact that so many things are in service to humans does not mean that humankind is greater than other beings; it points to their weakness and dependence. Recognizing this aspect of human nature is a means of receiving God's mercy and grace.

The Qur'an points out that living creatures are communities like human beings: "There is no animal that walks on the earth, nor bird that flies with its wings, but that they are communities like you. We have left out nothing in the Book, then to their Lord they will be gathered."³⁰ In other places, the Qur'an reminds readers that God revealed knowledge to the bees, and it is because of this revelation that they know how to make honey.³¹ In a number of passages, the scripture indicates that there is nothing in heaven or on the earth that does not glorify God.³² The mountains and the birds, among other creatures, sing God's praise along with the prophet David.³³ The implication of these verses is that all the beings on earth are part of the community of God, they are sacred, and they have rights independent of humans. Nonhuman creatures have a conscious relationship with God as well. Therefore, they should enjoy "the right to ethical treatment and consideration" alongside humans.

²⁸ *Sunan Ibn Majah: kitab al-zuhd, bab man yu'bahu lahu.*

²⁹ Qur'an 17:37.

³⁰ Qur'an 6:38.

³¹ Qur'an 16:68–69.

³² Qur'an 17:44; 24:41.

³³ Qur'an 38:18–19.

People should be humble and “must consider what right they have to treat God’s creatures cruelly or without regard for their innate spiritual value or to utterly destroy them by using or consuming them rapaciously, irresponsibly, or wastefully.”³⁴

Compassion: God’s mercy and compassion infuse the natural world.³⁵ The Qur’an repeatedly refers to God as the Most Compassionate (al-Rahman) and the Most Merciful (al-Rahim). In a number of hadiths, the Prophet encouraged his followers to be compassionate toward the creation: “If you are merciful, God is merciful to you too. Have mercy on the creatures on the earth, so those in heaven have mercy on you too.”³⁶ In another hadith, he said: “Whoever is merciful even to a sparrow, God will be merciful to him on the Day of Judgment.” Another hadith reads: “A good deed done to an animal is like a good deed done to a human being, while an act of cruelty to an animal is as bad as cruelty to a human being.” One of the companions of the Prophet asked him if there would be any reward for those who would serve animals. Muhammad replied, “There is reward for serving any living being.”³⁷ A conversation between Nursi and one of his students captures the Islamic teaching of compassion toward the natural world. On one occasion, Nursi learned that one of his students killed a lizard. Nursi was very saddened and told the student that he had committed a grievous mistake. Nursi then sat the student down for a serious lesson:

NURSI: Did the lizard attack you?

THE STUDENT: No, it did not.

NURSI: Did it grab anything from you?

THE STUDENT: No, it did not.

NURSI: Did it occupy your own land?

³⁴ Maria Massi Dakake, “Commentary on *Surat al-An‘am*,” in Nasr et al., *Study Quran*, 352–53.

³⁵ Qur’an 30:50.

³⁶ *Jami’ al-Tirmidhi: kitab al-birr wa al-salah, bab ma ja’a fi rahma al-muslimin.*

³⁷ *Sahih al-Bukhari: kitab al-masaqah, bab fadl saqi al-ma’.*

THE STUDENT: No, it did not.

NURSI: Are you the one who provides food for this animal?

THE STUDENT: No, I am not.

NURSI: Did you create this animal?

THE STUDENT: No, I did not.

NURSI: Do you know the purpose and wisdom behind the creation of these animals?

THE STUDENT: No, I do not know.

NURSI: Did God create this animal so that you kill it?

THE STUDENT: No, I do not think so.

NURSI: Then who told you to kill this animal? The wisdom behind the creation of such animals is boundless. Indeed, you committed a grave mistake.³⁸

With these questions and conclusions, Nursi wanted to teach that there is no justification for harming animals. They should be handled with respect and compassion.

Eco-jihad: Jihad is one of the most important teachings of Islam. Today, the term “jihad” is almost always reduced to a fixed meaning in popular literature and often used synonymously with “holy war” or “armed combat.” While seeing jihad as a fight on the path toward God became a dominant approach in some Muslim societies, the concept of jihad has always had larger implications. In reality, it encompasses an entire way of life – living in a way that is pleasing to God. Meeting this goal requires struggle and submission. Following the teachings of the Qur’an and the Sunna of the Prophet Muhammad is jihad. Following through with the five daily prayers may be an important jihad for a believer, as it is not easy to do the prayers in a modern environment with so many distractions. Giving to charity might be another form of jihad. For a social worker, taking care of the needy is a form of jihad. The jihad of a firefighter is to save lives. For a student, seeking knowledge is a jihad. According to a hadith, the

³⁸ Ahmet Akgündüz, *Arşiv Belgeleri Işığında Bediüzzaman Said Nursi ve İlmi Kişiliği* (Istanbul: OSAV, 2013), 2:518.

Prophet said: “On the day of resurrection, the ink of scholars will be compared with the blood of the martyrs on the scales, and the former will prove to be higher in status.”³⁹ Fighting the ego is considered the greatest jihad.⁴⁰ It is believed that there is a spiritual reward for all types of jihad. This key teaching of Islam can be utilized to deal with the environmental crisis. Efforts to address this question can be considered as eco-jihad. In this regard, recycling is jihad, avoiding the exploitation of natural resources is jihad, and overcoming one’s selfish desires and unnecessary consumption is jihad.

Some Initiatives in the Muslim World and the United States

Muslims around the world are making some progress toward putting the teachings of Islam into practice concerning taking care of the environment. For example, the Cambridge Central Mosque, which opened its doors to worshipers in 2019, made major news headlines as the first fully sustainable eco-mosque in Europe with a zero-carbon footprint. The project was spearheaded by two major British Muslims, Yusuf Islam (better known as Cat Stevens) and Timothy Winter, a lecturer in Islamic studies at the University of Cambridge. Concerning the project, Winter remarked, “Islamic civilization has been based on the rejection of waste as an underestimation of God’s blessing, and so in the construction of the new mosque here in Cambridge, we were very much at the forefront of the local environmental movement.”⁴¹

Because mosques are important centers of social life in Muslim societies, they can set the tone for works on environmental protection. The Moroccan government, for example, initiated a Green Mosque Project in 2015. Collaborating with the German

³⁹ Quoted in al-Ghazali, *Ihyā’ ‘Ulūm al-Dīn*, 1:19; and Nursi, *Lem’alar*, 278.

⁴⁰ Ernst, *Sufism*, 104.

⁴¹ Quoted in “The Mosque,” Cambridge Central Mosque, accessed February 3, 2022, <https://cambridgecentralmosque.org/the-mosque/>.

Federal Ministry for Economic Cooperation and Development, they upgraded around 900 mosques for energy efficiency by 2021.⁴² The upgrades included LED lighting, solar thermal water heaters, and photovoltaic systems.

Another interesting initiative came from a group of higher education students in Abu Dhabi. Their project is called the “water-saving mosque initiative.” As part of the practice of the five daily prayers, Muslims have a washing ritual (*wudu*). One Muslim believer can consume up to nine gallons of water a day. A usual mosque can potentially use up to a few million gallons of water annually. The project aims to separate and repurpose the water that is used for the washing rituals in the mosques. By using this green washing method, mosques around the world can save this resource.

Muslims in the United States have also tried to be creative in dealing with the environmental crisis. Because of the possibility of overeating during the breaking of the fast (*iftar*) and generating excessive waste during the month of Ramadan, many Muslim organizations in the United States make efforts to educate the community about having a “green” Ramadan. The motto of one such organization, aptly named Green Ramadan, is “Green your Ramadan with zero-trash *iftar* kits.”⁴³ The same organization has also campaigned for a meatless Ramadan.⁴⁴ An Islamic organization in Chicago issued guidelines for the community during Ramadan to share food with one’s neighbor, not waste food or water, plant trees, recycle materials such as plastic, and not use Styrofoam cups and plates. Ramadan sermons also urge the community to care for the environment, use energy-saving light bulbs, organize

⁴² “Green Mosques and Buildings,” GIZ, accessed February 4, 2022, www.giz.de/en/worldwide/32825.html.

⁴³ “About,” Green Ramadan, accessed April 18, 2020, <http://greenramadan.com/about/>.

⁴⁴ “#MeatLessRamadan with Nana Firman,” Green Ramadan, May 15, 2018, <http://greenramadan.com/tag/meatless/>.

mosque cleanup days, and post signs around the mosque to “go green” for Ramadan.⁴⁵

Many Muslim-majority countries, including Bangladesh, Indonesia, and Sudan, are impacted by climate change the most. Unfortunately, some Muslim-majority countries are also known to be the most polluting states. Qatar, Kuwait, the United Arab Emirates, and Bahrain, for example, remain on the list of the top-ten countries producing carbon dioxide emissions in the world.⁴⁶ Religion is still one of the most important phenomena in Muslim societies. Islamic ecological theology can contribute much to the discourse on the environmental crisis because it teaches that the entire creation is the sacred revelation of God. The creation should be loved, revered, and read like the scriptural Qur’an. The heart of the Islamic view of the natural world is eloquently articulated by Saadi Shirazi (d. 1291). I end this chapter with his words:

I am joyous in the world of nature
 For the world of nature is joyous through Him,
 I am in love with the whole cosmos
 For the whole cosmos comes from Him.⁴⁷

⁴⁵ See Abdullah Mitchell, “Go Green This Ramadan,” Council of Islamic Organizations of Greater Chicago, March 31, 2017, www.ciogc.org/5-31-17-go-green-this-ramadan-2/.

⁴⁶ “Global Historical Emissions,” ClimateWatch, accessed February 12, 2022, www.climatewatchdata.org/ghg-emissions?calculation=PER_CAPITA&end_year=2018&gases=co2&start_year=1990.

⁴⁷ Quoted in S. H. Nasr, *The Need for a Sacred Science* (Albany: State University of New York Press, 1993), 129.