Introduction

This Element is organized into six sections, along with an Introduction and a Conclusion.

Section 1 delves into the ongoing global environmental crisis. It analyzes how these problems have emerged as a result of the modern consumerist outlook and uncontrolled economic pursuits that disregard essential human values and responsibilities toward nature and fellow human beings.

Section 2 begins by elucidating the concept and significance of ethics; then it moves on to exploring modern approaches to environmental ethics through seven predominant philosophical perspectives: anthropocentrism, biocentrism, sentiocentrism, ecocentrism, deep ecology, ecofeminism, and social ecology. This section ends with some thoughts about the necessity of a theocentric approach, whose Islamic version will be explored in Sections 4 and 5.

Section 3 looks at classical Islamic works that contain abundant references to nature as well as at nature-related practices and jurisprudence that were developed in premodern times.

Section 4, after an introduction to the three main approaches to Islamic ecotheology adopted in the contemporary debate, offers an overview of the positions advanced by notable authors.

Section 5 forms the major portion of this Element. After a discussion of the distinctive features of Islamic theocentrism as well as of the references to nature in the scriptures of Islam, it explores fundamental environmental ethical principles derived from Islamic sources: "unity" (*tawḥīd*), "stewardship" (*khilāfah*), "trusteeship" (*amānah*) and accountability (*ākhirah*), "balance" (*mīzān*), and "natural disposition" (*fiṭrah*). Additionally, the section offers Islamic environmental guidelines that promote moderation, the avoidance of waste and corruption, the preservation of the Earth's beauty and cleanliness, the recognition of the rights of animals and plants, and the significance of, and respect for, water.

Section 6 highlights various initiatives taken by Muslims today to combat escalating environmental degradation through the lens of the "ecotheological" paradigm. Case studies from Zanzibar, Indonesia, Qatar, Egypt, Africa, the UK, and the US illustrate how Islamic ethics have been harnessed in diverse forms to inspire positive behavioral changes among Muslims toward nature. The section briefly touches upon the interfaith approach as well.

In the Conclusion section, I summarize the key findings of the study and I provide recommendations as practical guidelines to tackle the present environmental crisis and foster sustainable practices.

1 Current Environmental Problems

A universally acknowledged axiom asserts the vital importance of the environment for the existence of any organism. All organisms, including humans, rely on their environment and engage in ongoing interactions with their surroundings, which encompass both the nonliving (abiotic) and living (biotic) domains. However, these spheres continuously struggle with each other for survival. Over time, organisms have evolved and developed strategies to combat threats, though with limitations. As a result, certain significant changes in the environment can present formidable challenges to the survival of organisms. Natural disasters such as floods, fires, or volcanic eruptions are some of the most notable changes that are disastrous to our environment.

While natural processes are beneficial to the environment, natural disasters can cause significant damage to ecosystems, biodiversity, and the environment as a whole (Nelson, 2018; Cleveland Museum of Natural History, 2020). Can these be termed "environmental problems"? Of course, yes, natural disasters are often seen as acts of nature, this may be true for natural hazards, but their classification depends on human impacts, like loss of life or property damage. Over the past many years, mounting evidence suggests that human activities may be causing an increase in certain disasters, like floods (Guha-Sapir, 2004, p. 14). Thus, an environmental problem is characterized as any change in the physical environment's condition arising from human involvement in the environment (Glasbergen & Blowers, 1995, p. 32).

1.1 Glimpses of the Current Environmental Crisis

In the twenty-first century, human beings face unprecedented environmental challenges. This is mainly due to increasing human activity, which has put our survival at stake. The primary three unprecedented yet mutually overlapping challenges are "climate change, biodiversity loss, and overuse of critical natural resources" (Lundburg, 2019).

The Earth's climate change has had a significant detrimental impact on biodiversity, leading to notable instances of mass extinctions (Desjardins, 2013, p. xi). It has changed the way things work in our oceans, lands, and freshwater areas everywhere in the world. This has caused some local animals and plants to disappear, made diseases more common, and led to many plants and animals dying in large numbers. The human population is growing at an exponential rate. Air, water, and soil, the natural resources that sustain life on the Earth, are being exhausted or polluted at alarming rates. Toxic waste that will affect future generations continues to amass on a global scale. Similarly, forests, grasslands, wetlands, and mountains are being

overgrazed and developed. Environmental data reveal the harm we have caused to the Earth. The following information presents a gloomy picture of our planet.

Environmental pollution growth is alarming and could lead to an irreversible change.

(a) Air pollution kills about seven million people every year: According to a WHO report, "[e]very year, exposure to air pollution is estimated to cause seven million premature deaths and result in the loss of millions more healthy years of life" (WHO, 2021). The report further emphasized that air pollution is one of the biggest environmental problems threatening human survival.

(b) Land-based sources account for 80 percent of marine pollution: Against the backdrop of the Rio+20 International Conference on Sustainable Development (2012), aimed at reconciling economic and environmental goals, it was observed that globally "Land-based sources account for approximately 80 percent of marine pollution" (UNESCO, 2012, p. 5). Plastic pollution, along with other causes such as industrial and agricultural wastes, coastal development, overfishing, illegal fishing, and Greenhouse Gas emissions, is responsible for the mass extinction of marine species and health problems for marine life and human beings.

(c) Close to 1.6 billion people globally do not have access to clean water: In 2020, "1 in 4 people globally do not have access to safe drinking water" (WHO & UNICEF, 2021). Millions of lives are lost annually due to contaminated water and poor hygiene and sanitation, especially in developing countries.

(d) We lose around ten million hectares of forest every single year: It is estimated that, on average, we lost nearly 8.3 million acres of tropical forests a year from 2002 to 2019, which is larger than the area of Belgium in a year (Weisse & Goldman, 2020).

(e) There has been a growth of 1.1 percent in global greenhouse gas emissions in 2019: The exponential growth in global greenhouse gas emissions disrupts the Earth's temperature, which leads to global warming and other associated environmental problems. A significant share of these greenhouse gases comes from CO_2 emissions, which consist of 74 percent, followed by other significant shares from methane, nitrous oxide, and fluorinated gases with 17 percent, 5 percent, and 3 percent, respectively (Olivier & Peters, 2020, p. 4).

Humans are the number one cause of environmental degradation, pollution, and exploitation. These statistical data clearly show that human activities, particularly in the postindustrial revolution period, driven by a materialistic outlook, have severely impacted our environment, including land, water, and air.

1.2 Global Problems of Consumer Culture

Every day, new advancements in material production and success are recorded and celebrated in the name of "modernity" and "discovery," even though some/many of these achievements will undoubtedly have an irreversible impact on our environment. The modern lifestyle that is driven by the unending pursuit of material wealth, possessions, and worldly success has taught humans to be in a race to win, regardless of the objectives and consequences. This hysteria all over the world though it thrills for the time being, it presents an alarming picture of our consumerist viewpoint. This section shows how our consumer preferences, behavioral choices, and materialist outlook affect our environment and survival.

Humans' behavior, lifestyle, practices, tastes, and policies connect them to environmental issues. This is predominantly the case with consumption patterns and longings. The following examples show the extent of consumerism's contribution to the burden and exploitation of the environment.

(a) Global Energy Consumption: World energy consumption has shown an increase of 5 percent in 2021 (TEC, 2022). The industrial and energy sectors are typically the largest sources of carbon dioxide (CO_2) emissions into the atmosphere (C2ES, 2023). Approximately 25 percent of such energy consumption is used in the automobile industry (Rodrigue, 2020, p. 124).

(b) Two new cars hit the road every second: The world produced 79.1 million automobiles in 2021, an increase of 1.3 percent compared to 2020 (ACEA, 2022).

(c) The fast fashion industry produces more carbon than international flights and maritime shipping (WB, 2019): Fast fashion refers to the production and promotion of cheap, readily disposable, yet fashionable garments (Anguelov, 2016, p. 3), and it is now a significant source of global carbon emissions, contributing almost 10 percent to the world's total emission. The fashion consumption market surged by 60 percent from 2000 to 2014, putting immense pressure on the environment. The industry's environmental impact stems from its large-scale production, short product lifecycles, extensive global supply chains, and heavy use of synthetic fibers. Unfortunately, the shift in lifestyle choices favors buying new clothes over sustainable actions like recycling and reuse, worsening the environmental consequences due to increased production.

1.3 Impact of Modern Science and Technology on the Environment

Science and technology have been generally seen as offering solutions to practical problems. No doubt, they have brought substantial changes to our lives. The things that were only dreamt of in the preindustrial era are now readily available at the touch of a finger. Today we are entangled with technology. Some scholars

argue that "we are inherently technological beings and that the biological evolution that made us human was inextricably bound with the evolution of our early technology. . . . Technology has been with us as long as we have been human, and any concept of humans without technology is meaningless" (Degregori, 2002, p. xiii). However, the unrestricted use of technology for material pursuit raises serious concerns about what Obeidat (2022) sees as modernity's negative environmental impact. Environmental concerns about modern technologies such as nanotechnology, reengineering, and genetic engineering are still relatively unknown (Watt, 1988, p. 307; Stander, 2011, p. 470).

1.4 Military, War, and Weapons of Mass Destruction (WMD)

Today, humans are equipped with highly sophisticated arms and weapons (chemical and nuclear), which pose a potential threat to their survival. Modern science has created uniquely powerful and destructive military technologies and weapons. Weapons of mass destruction (WMD) come in various sizes, types, and yields, such as nuclear, chemical, biological, and the missile technology. These have put human rights, especially the environmental rights of poor, defenseless people, in danger. What is more surprising and unfortunate is that the ecological destruction brought about by these weapons is often considered a result of military exercises, such as weapon testing and combat practice, often leading to substantial ecological destruction (Thanikodi & Kanagaraj, 2009; Smith, 2017; London & White, 2019). The worst type of weapon is the nuclear weapon, which can cause enormous death and destruction to humans and the environment. Intense heat and radiation produced by a nuclear attack will have a severe effect on the geosphere, the atmosphere, and the biosphere (Westing, 1981, p. 272). Even as the immediate impacts on lives, health, buildings, public facilities, and the means of production die down, "nuclear explosions might drastically alter if not perhaps fatally impair the life support systems of the globe" (London & White, 2019, p. 2), and studies indicate that ill effects could persist for years. Humanity has already witnessed the crippling effects of nuclear weapons on humans and the environment.

1.5 Water Disputes

Water is essential to human survival and a basic requirement of life. Though abundant, freshwater is limited (which is only 2.5 percent, of which two-thirds are locked in the glaciers and ice caps), and worldwide demand for freshwater is rising exponentially due to large-scale urbanization across the globe. In addition, environmental degradation and climate change seriously affect seasonal and regional water availability and quality. Scientists and policymakers agree that

a global freshwater crisis is underway. The magnitude and content of this crisis vary greatly across areas, subregions, and countries, and its causes and reversibility are hotly debated. The crisis' existence, however, is no longer disputed. In contrast, its enormous scope, potentially catastrophic implications, and impending threats to the political stability and security of the world's numerous water crisis-affected countries are now frequent concerns in scholarly literature and worldwide public discourse (Westing, 1986; Wirsing *et al*., 2013, p. 3).

The current international water conflicts occur mainly in the Middle East (disputes over Euphrates and Tigris Rivers among Turkey, Syria, and Iraq; and the Jordan River conflict among Israel, Lebanon, Jordan, and the State of Palestine), Africa (Nile River conflicts among Egypt, Sudan, and Ethiopia), Central Asia (the Aral Sea conflict among Kazakhstan, Uzbekistan, Turkmenistan, Tajikistan, and Kyrgyzstan), South Asia (Indus River conflict between India and Pakistan), North America (Colorado River conflict between US and Mexico), and so on (see, e.g., Just & Netanyahu, 1998; Kameri-Mbote, 2007; Everard, 2013; Wirsing, *et al*., 2013). Though many conferences, bilateral agreements, and cooperation were accomplished to resolve water conflicts and crises, no significant change is observable on the ground.

1.6 Apathy toward Environment in Non-Muslim Countries and Other International Bodies

There is a consensus among world leaders and policymakers that immediate action is imperative to save the planet from the worst climatic impacts. Over the last thirty years, world leaders and diplomats have been formulating a framework for action to stop human-made climate change. In June 1992, 154 parties signed an international environmental treaty, the United Nations Framework Convention on Climate Change, to adopt environment-friendly policies. However, the parties disagreed on measures to limit emissions of greenhouse gases. Five years later, the parties gathered in 1997 for COP3 in Kyoto (Japan), to complete the framework when diplomats adopted the "Kyoto Protocol," which sets targets and deadlines for thirty-eight industrialized-country parties to cut their collective emissions of six GHGs (CO_2, methane, HFCs, nitrous oxide, perfluorocarbons, and sulphur hexafluoride). The US, which had backed equal reductions for all developed countries, advocated the concept of differentiation to meet the economic burden that affects some states with equal emission reductions. The US delegation said it could not accept emissions unless major developing countries also agreed to binding emission reductions, a condition demanded by the US Senate. This proposal was rejected by China, India, and other developing countries; rather, they endorsed the

principle of "common but differentiated responsibilities" (CBDR) (Chasek, 2018, pp. 170–171). Since the problem was seen as "the tragedy of the commons" (Conca, 2019, p. 19) and given the individual countries' differential potentials and economic concerns, responsibilities were mainly put on developed/industrialized countries with financial obligations because these were seen as the biggest emitters of greenhouse gases.

Similarly, in December 2015, the Paris Agreement was adopted by 196 parties of the UNFCC. The Paris agreement replaced the 1997 Kyoto Protocol, which expired in 2020. The Kyoto Protocol consisted of multiple commitment periods. The initial one spanned from 2008 to 2012, followed by the agreement on a second commitment period, known as the Doha Amendment, in 2012 lasting until 2020. However, the Doha Amendment did not become effective until 2020. The international agreements on limiting climate change have advanced well (see Sachs, *et al*., 2022), but the ratification and implementation of them remain uncertain, rather than being well respected by major developed countries. The US, Canada, Japan, Russia, and New Zealand either pulled out of or did not ratify the Kyoto Protocol because their economic interests were hurt by limiting CO_2 emissions.

The lack of commitment to uphold various international climate agreements raises concerns about the dedication of developed countries toward addressing climate change. Scholarly literature and policymakers are increasingly concerned about the ethical systems and sensitivity of our responsibilities to people who are directly or indirectly affected by our actions (see McKibben, 1999; Brown, 2001). The costs of apathy and a lack of commitment to climate change are far higher. Ultimately, it is all about the free market economy; the pursuit of profit, guided by market forces, tends to prioritize short-term gains and overlook the long-term environmental consequences of economic activities. Consequently, within this economic framework, individuals may find limited incentives or opportunities to actively engage with or prioritize environmental concerns.

1.7 Muslim Apathy toward Environment

Globally, Islam is the world's second-largest religion, with 1.9 billion adherents, as projected by Pew Research (2011), constituting about 24.9 percent of the world's population. There are fifty Muslim-majority countries worldwide, with a majority falling in the MENA (Middle East and North Africa) region. However, the MENA region only represents about 20 percent of the total Muslim population, and more than 60 percent of Muslims are

concentrated in Asia, with Indonesia as the most prominent Muslim populous country (12.6 percent), followed by the Indian Muslim minority (11.1 percent) (Pew Research Centre, 2019).

Muslims comprise a disproportionate share of the world's poor, who are vulnerable to and suffer significantly from the impacts of environmental degradation, such as climate change and water shortages. However, like governments in other non-Muslim countries, governments in Muslim societies have been slow to respond to environmental issues, even though most Muslims regard environmental degradation, including climate change, as a serious problem. This disparity in interest or limited engagement toward taking action can be attributed, in part, to the economic challenges – debt burden, trade barriers, economic dependence, structural adjustment programs, resource exploitation, lack of technological transfer, climate change responsibility – imposed by industrialized nations on developing countries.

The economic challenge to Muslim-majority countries is especially worrisome, which is reflected in the prioritization of economic growth and poverty alleviation over climate change mitigation (Koehrsen, 2021, p. 3; Abed & Davoodi, 2003). Based on diverse geography, ecology, availability of natural resources, and economic development, the economies of the MENA region depend largely on the available natural resources, which means more burdens on the environment, and hence rendering the region particularly susceptible to challenges like freshwater crises and escalating heat waves. Furthermore, the adverse consequences of overextracting oil resources compound these environmental issues, exacerbating the overall situation faced by the MENA region. Equally important is the unprecedented urbanization and overdependence on technology at the cost of catastrophic climate change. On the other hand, Asian-Pacific Muslim countries, such as Indonesia, Bangladesh, Pakistan, and others, have faced adverse weather conditions like frequent floods, droughts, heavy rainfall, soil erosion, and sea level rise. Perhaps, deforestation is the single most important cause of radical climate change in the Muslim countries of the Asia-Pacific region.

Muslim perspectives differ on how environmental crises emerge and who is to blame. In addition, Muslims' general apathy for environmental degradation is also attributed to how they interpret climate change. Based on different interpretations, Muslim responses to environmental crises have generated different approaches (discussed in Section 4). According to Koehrsen (2021, p. 3), generally, the interpretations of climate change are summarized into three types: (a) climate change by human-induced actions; (b) spiritual crisis; and (c) Western intervention in the Muslim world. The categories are not mutually exclusive.

2 Environmental Ethics and Contested Frameworks

2.1 The Meaning of Ethics

The word "ethics" comes from the Greek word *ethos*, meaning "habit," "custom," "usage," or "manners" (Zaroug, 1999, p. 46; Tiles, 2000, p. 3). Ethics can be regarded as the study and practice of moral behaviour shaped by societal norms, customs, and habitual patterns of conduct. Generally, however, the term refers to principles and values related to right and wrong conduct or behaviour; according to such a meaning, ethics can be defined as "rules for behavior in accordance with a system of values" (Gillette, 2005, p. 301). In a broader perspective, ethics is the study of right conduct: What we ought to do, how we ought to live, what type of people we should be, and what sort of society we should have, are all examples of ethical questions.

Extending ethics to the natural environment has been a general concern of many ethicists, environmentalists, and other scholars. Environmental ethics deals, as Yang (2006), a noted environmentalist, says, "with the ethical problems surrounding environmental protection, and it aims to provide ethical justification and moral motivation for the issue of global environmental protection." In a similar vein, Brennan (2002) defines environmental ethics as "the discipline that studies the moral relationship of human beings to, and also the value and moral status of, the environment and its nonhuman contents."

2.2 Why Environmental Ethics? Setting the Background

Owing to the pressing and ubiquitous environmental problems, environmentalists were perplexed with the question of whether a new approach to ethics is required to solve the environmental crisis. It is true that environmental ethics has been criticized for being unfeasible and unnecessary in the presence of the already existing discipline of traditional ethics (or interpersonal ethics) (Dickson, 2000; Attfield, 2003; Kawall, 2017). However, scholarly literature identifies environmental ethics as having tremendous potential to mitigate the environmental crisis.

Traditional ethical theory primarily focuses on the relationship between individual fellow humans and behaviors toward and between groups of humans. Moreover, environmental issues also raise multiple social issues such as social justice or unequal exposure to pollution and access to natural resources. Hence, critics often overlook distinguishing between environmental and traditional ethics, which are intertwined and mutually reinforcing, to the extent that it becomes difficult to draw a demarcation between them.